Santiago Canyon College

2015-2016 CATALOG AND ANNOUNCEMENT OF COURSES

SANTIAGO CANYON COLLEGE
8045 East Chapman Avenue
Orange, CA 92869-4512
714-628-4900

ORANGE EDUCATION CENTER
1465 North Batavia Street
Orange, CA 92867-3504
714-628-5900

RANCHO SANTIAGO COMMUNITY COLLEGE DISTRICT OFFICE
2323 North Broadway
Santa Ana, CA 92706-1640
714-480-7300

INTERNET ADDRESSES
RSOCD (all sites) ............................................................................. www.rsccd.edu
SCC .............................................................................................. www.sccollege.edu
Facebook .......................................................... www.facebook.com/SantiagoCanyonCollege
Twitter ................................................................. www.twitter.com/santiagocanyon

CATALOG CONTENT
The Rancho Santiago Community College District and Santiago Canyon College have made every reasonable effort to determine that everything stated in this catalog is accurate. Courses and programs offered, together with other matters contained herein, are subject to change without notice by the administration of the district for reasons related to student enrollment, level of financial support, or for any other reason, at the discretion of the district and the college. The district and the college further reserve the right to add, amend, or repeal any of their rules, regulations, policies, and procedures.

This catalog is available in alternate format to qualified individuals with disabilities. For more information, phone 714-628-4864 or come to the DSPS Center in E-105.

RANCHO SANTIAGO COMMUNITY COLLEGE DISTRICT
2015–2016 • SANTIAGO CANYON COLLEGE

Rancho Santiago Community College District serves residents of Anaheim Hills, Orange, Santa Ana, Villa Park, and a portion of Garden Grove.

ACCREDITED BY THE WESTERN ASSOCIATION OF SCHOOLS AND COLLEGES
Santiago Canyon College is accredited by the Accrediting Commission for Community and Junior Colleges of the Western Association of Schools and Colleges, (10 Commercial Boulevard, Suite 204, Novato, CA 94949, 415-506-0234), an institutional accrediting body recognized by the Commission on Recognition of Postsecondary Accreditation and the U.S. Department of Education.
# Santiago Canyon College Instructional Calendar

## College Credit Classes

### Instructional Calendar 2015-2016

#### Fall Semester 2015
- **August 17-19**: Faculty projects
- **August 20-21**: Common college flex day
- **August 24**: INSTRUCTION BEGINS
- **September 6**: Last date to drop with enrollment fee refund (semester-length courses)
- **September 7**: Labor Day — holiday
- **September 25**: Last date to file Pass/No Pass option (semester-length courses)
- **October 9**: Deadline to submit Petitions for Graduation and Certificates
- **November 11**: Veterans’ Day — holiday
- **November 15**: Last date to drop semester-length courses with a “W” grade
- **November 26-28**: Thanksgiving — holiday
- **December 13**: INSTRUCTION ENDS
- **December 14 – January 3, 2016**: Winter break

#### Spring Semester 2016
- **February 1-3**: Faculty projects
- **February 4-5**: Common college flex days
- **February 8**: INSTRUCTION BEGINS
- **February 12**: Lincoln’s Birthday — holiday
- **February 15**: President’s Day — holiday
- **February 21**: Last date to drop with enrollment fee refund (semester-length courses)
- **March 11**: Deadline to submit Petitions for Graduation and Certificates
- **March 11**: Last date to file Pass/No Pass option (semester-length courses)
- **April 1**: Cesar Chavez Day — holiday
- **April 4-9**: Spring recess
- **May 8**: Last date to drop semester-length classes with “W” grade
- **May 30**: Memorial Day — holiday
- **June 2**: Commencement — Santiago Canyon College
- **June 5**: INSTRUCTION ENDS

#### Summer Session 2016
- **June 13**: INSTRUCTION BEGINS
- **July 4**: Independence Day — holiday
- **August 14**: INSTRUCTION ENDS

#### Continuing Education Division

### Instructional Calendar 2015-2016

#### Fall Semester 2015
- **August 24-28**: Faculty projects
- **August 31**: INSTRUCTION BEGINS
- **September 7**: Labor Day — holiday
- **November 11**: Veterans’ Day — holiday
- **November 24-29**: Thanksgiving recess
- **December 20**: INSTRUCTION ENDS
- **December 21-January 13, 2016**: Winter recess

#### Spring Semester 2016
- **January 6-8**: Faculty projects
- **January 11**: Martin Luther King, Jr. — holiday
- **January 18**: Lincoln’s Birthday — holiday
- **February 12-13**: Cesar Chavez Day — holiday
- **February 15**: President’s Day — holiday
- **April 1**: Non Instructional Day — no class
- **April 2**: OEC Spring recess
- **April 4-9**: Memorial Day — holiday
- **May 30**: OEC Commencement
- **June 2**: INSTRUCTION ENDS

#### Summer Session 2016
- **June 6**: INSTRUCTION BEGINS
- **July 4**: Independence Day — holiday
- **August 6**: INSTRUCTION ENDS

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*OEC Spring recess dates may be adjusted to correspond to unified school district instructional calendar.

**Beginning/ending date could be adjusted*
MESSAGE TO STUDENTS, MISSION STATEMENT, LEARNING OUTCOMES, AND RSCCD INFORMATION

A MESSAGE FROM THE PRESIDENT

Although SCC is one of the newer institutions of higher learning in California, tens of thousands of students already have discovered the high quality of education available at SCC. With degrees and certificates available in almost 50 fields of study, SCC provides clear pathways for university transfer and career technical education. We’re committed to helping students achieve these core outcomes: to learn, to act, to communicate, and to think critically.

If you ask our students what they like about SCC, they’ll tell you that they get personal attention from faculty who are leaders as professors, counselors, and librarians. Caring staff members and administrators work hard to help students reach their goals. Many quality services are available to students, including counseling, financial aid, tutoring, career development, library services, and more. SCC is dedicated to student success.

Sincerely,
John Weispfenning, Ph.D.

SANTIAGO CANYON COLLEGE MISSION STATEMENT

Santiago Canyon College is an innovative learning community dedicated to intellectual and personal growth. Our purpose is to foster student success and to help students achieve these core outcomes: to learn, to act, to communicate and to think critically. We are committed to maintaining standards of excellence and providing accessible, transferable, and engaging education to a diverse community.

INSTITUTIONAL STUDENT LEARNING OUTCOMES

To achieve our mission, SCC has identified Institutional Learning Outcomes with four core competencies: Learn, Communicate, Act, and Think. Students will be able to

Learn—About Self and Others, Academic and Professional Issues
- Take responsibility for one’s own learning and wellbeing.
- Learn about one’s chosen academic major, while creating connections across disciplines.
- Learn about professional conduct, including workplace and community ethics, conflict management, and teamwork.

Communicate—With Clarity and Accuracy and in Diverse Environments
- Communicate ideas in a clear and articulate manner.
- Communicate accurately to diverse audiences.
- Communicate in various formats using diverse technologies.

Act—With Awareness of Self and the Local and Global Community of Persons
- Act to maintain one’s dignity and self-respect.
- Act as a responsible community member who treats others with respect, civility, empathy, honesty and dignity.
- Act to increase the wellbeing of the global community by maintaining cultural literacy, lifelong learning, ethical consideration of each other, and the environment we all share.

Think—Critically, Creatively, and Reflectively
- Critically analyze, evaluate, organize and use quantitative and qualitative data to solve problems and develop logical models, hypotheses and beliefs.
- Creatively use concepts to making learning relevant.
- Reflectively assess one’s values, assumptions, and attitudes.

RANCHO SANTIAGO COMMUNITY COLLEGE DISTRICT

Governed locally by a seven-member Board of Trustees elected by the citizens of the district, Rancho Santiago Community College District (RSCCD) is a part of the California community college system, one of the three segments of the public post-secondary educational systems in the state.

RSCCD, located in central Orange County, encompasses 193 square miles with a population of approximately 770,000. The district’s boundaries include all of the K-12 schools within the Orange and Santa Ana Unified School Districts, as well as a portion of the Garden Grove Unified School District. RSCCD’s boundaries extend from the eastern portion of the city of Garden Grove, around the perimeters of Santa Ana, Orange, Villa Park, and Anaheim Hills, and east to the Riverside County line.

Santiago Canyon College and Santa Ana College

SCC is among the newest community colleges in California. RSCCD was formed in 1971 to serve the cities of Orange, Villa Park and Anaheim Hills. SCC (formerly the Orange Campus) began offering classes in 1985, and became an independently accredited college in January 2000.

Santa Ana College opened in 1915 as an extension of Santa Ana High School, and is the fourth oldest community college in California. Located first on the campus of Santa Ana High School, it moved to downtown Santa Ana, and then to its present location in 1947.

Enrollment in district programs for fall 2014 totaled 55,022 with 39,004 enrolled in college credit courses and 16,018 enrolled in Continuing Education. The Community Services Program serves 1,866 residents district-wide in not for credit, fee-supported classes.

Santiago Canyon College offers 154 degrees and certificates in credit programs including transfer and career majors as well as 27 certificates in Continuing Education programs.
Accreditation
Santiago Canyon College and Santa Ana College are accredited by the Accrediting Commission for Community and Junior Colleges of the Western Association of Schools and Colleges, an institutional body recognized by the Council for Higher Education Accreditation, the U.S. Department of Education, and the Veterans Administration. Santa Ana College is also recognized by the California State Board of Nursing Education and the American Bar Association.

Documents concerning the colleges’ accreditation, licenses and approvals are maintained in the Office of the President of each college. Students wishing to examine these documents may do so by contacting the Office of the President.

District Facilities
Santiago Canyon College is situated on 82 acres at 8045 E. Chapman Avenue in Orange. It opened its first phase of classrooms in fall 1985 under the name of the Orange Campus of Rancho Santiago College. The Child Development Center opened in fall 1991 to provide childcare services.

Santa Ana College is located on approximately 63 acres at 1530 W. 17th Street in Santa Ana. The college opened in 1915 as an extension of Santa Ana High School, and has been located at its present site, in the heart of Santa Ana, since 1947.

The Orange and Centennial Education Centers each house adult continuing education programs, which provide high school diplomas, English as a Second Language and courses that contribute to career advancement.

Metropolitan area television stations also bring classes directly into the homes of many citizens through the Community College Television Consortium.

District Mission
The mission of the Rancho Santiago Community College District is to provide quality educational programs and services that address the needs of our diverse students and communities.

District Opportunity
The Rancho Santiago Community College District provides opportunities for the pursuit of excellence through educational programs and services for local residents. The purpose of these programs and services is to enhance the quality of human life by providing public access to college education. A significant number of classes are scheduled off campus each semester in order to enhance accessibility to students. The map indicates the locations of the major instructional sites within the district.
RANCHO SANTIAGO COMMUNITY COLLEGE DISTRICT INFORMATION

BOARD OF TRUSTEES
President .................................................................................. Lawrence R. “Larry” Labrado
Vice President ........................................................................ Claudia C. Alvarez
Clerk ...................................................................................... John R. Hanna
Member ................................................................................ Arianna P. Barrios
Member ................................................................................ Jose Solorio
Member ................................................................................ Neilda Mendez Yanez
Member ................................................................................ Philip E. Yarbrough
Student Trustee ...................................................................... Raquel Manriquez

RANCHO SANTIAGO COMMUNITY COLLEGE DISTRICT ORGANIZATION

CHANCELLOR’S OFFICE
CHANCELLOR ........................................................................ Debra Gerard
Executive Assistant to the Chancellor ............................................ Judy Chitlik

HUMAN RESOURCES/EDUCATIONAL SERVICES
Executive Vice Chancellor ........................................................... John Didion
Assistant to the Vice Chancellor ................................................... Josie Rodriguez

Human Resources
Assistant Vice Chancellor ............................................................ Judy Chitlik
Employment Services Manager .................................................... Elouise Marasigan
Project Manager ....................................................................... John Birk

Risk Management and Employee Benefits
Risk Manager ........................................................................ Don Maus

Educational Services
Assistant Vice Chancellor ............................................................ Enrique Perez
Director–Early Head Start Program ............................................ My Le Pham
Director–SAC-Child Development Center................................. Maria Castellon & Enriqueta Isais
Director–SAC-Child Development Center East Campus ............ Zeferina Gonzalez
Director–CCE-Child Development Center ................................... Susan Wahl
Director–SAC-Child Development Center ................................... Vacant

Director–Digital Media Center & Deputy Sector Navigator
for ICT/Digital Media–Orange County ........................................ Gustavo Chamorro
Director–Center for International Trade Development & Deputy Sector Navigator for Global Trade & Logistics–Orange County ... Lynn Stewart
Director–ACT Center & Corporate Training & Deputy Sector Navigator for Retail/Hospitality/Tourism–Los Angeles ............. Ruth Cossio-Muniz
Manager–Business and Entrepreneurship Center, Local & Deputy Sector Navigator for Small Business–Orange County .......... Maricela Sandoval
Director–Grants ...................................................................... Sarah Santoyo
Director–Research .................................................................... Nga Pham
Director–Small Business Development Center .......................... Vacant

Public Affairs and Publications
Director–Communications and Publications ............................ Judy Iannaccone
Manager–Graphic Communications .......................................... Eric Harsen
Manager–Publications and Electronic Media ............................ Dean Hopkins

BUSINESS OPERATIONS AND FISCAL SERVICES
VICE CHANCELLOR ................................................................ Peter J. Hardash
Assistant to the Vice Chancellor ................................................... Linda Melendez

Auxiliary Services
Director .................................................................................. Rhonda Langston

Facility Planning and District Construction and Support Services
Assistant Vice Chancellor ............................................................ Carri Matsumoto
Director–Facility Planning .......................................................... Darryl Taylor

Fiscal Services
Assistant Vice Chancellor ............................................................ Adam O’Connor
Manager–Fiscal Services .......................................................... Richard Kudlik
Accounting Manager–Accounts Payable ..................................... Ruby Morallos
Accounting Manager–Paysroll .................................................... Diane Kincheloe
Internal Auditor ....................................................................... Sheena Tran

Information Technologies Services
Assistant Vice Chancellor ............................................................ Lee Krichmar
Director–Academic Support ....................................................... Curtis Childress, Nick Quach
Director–Application Development .......................................... Alfonso Oropeza, Doug Johnson, Stuart Davis

Director–Network and Communications ................................... Phillip Lyle

Purchasing
Director .................................................................................. Tracey Conner-Crabbe

Security/Safety
Interim Director–District Safety/Security ..................................... Alistair Winter

SANTIAGO CANYON COLLEGE

PRESIDENT ............................................................................. John Weispfenning
Assistant to the President ........................................................... Lynn Manzano

ADMINISTRATIVE SERVICES
VICE PRESIDENT .................................................................... Arleen Satele
Manager–Facilities ................................................................. Vacant
Supervisor–Custodial ................................................................. Gabriel Dueñas
Interim Lieutenant–Safety & Security ........................................ Manny Pacheco

ACADEMIC AFFAIRS
VICE PRESIDENT .................................................................... Aracely Mora

Arts, Humanities & Social Sciences
Dean ...................................................................................... Marilyn Flores
American College English (ACE), Chair .................................. Diana Babayan
Communication, Chair ................................................................. Melinda Womack
English, Chair ........................................................................... Elizabeth Elchlepp
Fine Arts, Chair ...................................................................... Robert Miller
History, Chair ........................................................................... Scott Howell
Humanities, Chair ................................................................... Marcelo Pimentel
Modern Languages, Chair ...................................................... Elizabeth Baez
Performing Arts, Chair .............................................................. Binh Vu
Political Science, Chair ............................................................. Nooshan Shekarabi
Reading, Facilitator ................................................................. Amy Freese
Social Sciences, Co-Chairs ....................................................... Cari Cannon, Alexander Taber

Business & Career Technical Education
Dean ....................................................................................... Von Lawson
Associate Dean ...................................................................... Kari Irwin
Apprenticeship
Cosmetology
Criminal Justice
Geomology
Public Works
Real Estate
Surveying & Mapping Sciences
TV/Video & Communications
Water Utility Science
Business, Co-Chairs ................................................................. Steven Deeley, Stewart Myers
Human Development, Chair ..................................................... Regina Lamourelle

Mathematics & Sciences
Dean & Athletic Director ......................................................... Martin Stringer
Astronomy, Chair ..................................................................... Danielle Martino
Biology, Co-Chairs ................................................................. Michael Taylor, Mark Smith
Chemistry, Chair ..................................................................... Denise Bailey
Earth Sciences, Chair ............................................................... Debra Brooks
Kinesiology, Co-Chairs ......................................................... Lisa Camaro, Ian Woodhead
Mathematics, Co-Chairs .......................................................... Darlene Diaz, Alicia Frost, Laney Wright
Physics & Engineering, Chair ................................................... Cynthia Swift

Institutional Effectiveness, Library & Learning Support Services
Dean ....................................................................................... Aaron Voelcker
Library, Chair ........................................................................ Joseph Geissler
Academic Success Center ....................................................... Silvia Lopez
Institutional Effectiveness/Research ........................................... Rudy Tijnahadi
Tutoring Center ....................................................................... Brian Mills
This chart reflects the RSCCD organization as of July 2015.
NONDISCRIMINATION POLICY

The Rancho Santiago Community College District is committed to equal opportunity in educational programs, employment, and all access to institutional programs and activities. The District, and each individual who represents the District, shall provide access to its services, classes, and programs without regard to national origin, religion, age, gender, gender identity, gender expression, race or ethnicity, color, medical condition, genetic information, ancestry, sexual orientation, marital status, physical or mental disability, pregnancy, or military and veteran status, or because he or she is perceived to have one or more of the foregoing characteristics, or based on association with a person or group with one or more of these actual or perceived characteristics. The Chancellor shall establish administrative procedures that ensure all members of the college community can present complaints regarding alleged violations of this policy and have their complaints heard in accordance with the Title 5 regulations and those of other agencies that administer state and federal laws regarding nondiscrimination. No District funds shall ever be used for membership, or for any participation involving financial payment or contribution on behalf of the District or any individual employed by or associated with it, to any private organization whose membership practices are discriminatory on the basis of national origin, religion, age, gender, gender identity, gender expression, race, color, medical condition, genetic information, ancestry, sexual orientation, marital status, physical or mental disability, pregnancy, or military and veteran status, or because he or she is perceived to have one or more of the foregoing characteristics, or because of his or her association with a person or group with one or more of these actual or perceived characteristics. Inquiries regarding compliance and/or grievance procedures may be directed to District’s Title IX Officer and Section 504/ADA Coordinator: John Didion, 2323 N. Broadway, Santa Ana, CA 92706, 714-480-7489.

POLÍTICA DE NO DISCRIMINACION

El Distrito está comprometido a ofrecer la igualdad en oportunidades para programas educativos, empleos, y a todo acceso a los programas institucionales y actividades. El Distrito, y cada persona que representa al Distrito, debe proveer acceso a sus servicios, clases y programas sin importar el lugar de nacimiento, religión, edad, sexo, identidad de género, expresión del género, raza o etnicidad, color, condición médica, información de genética, descendencia familiar, orientación sexual, estado civil, incapacidad física o mental, embarazo, categoría militar o de veterano, o por creer que él o ella tiene una o más de las características mencionadas, o en base a estar relacionado con una persona o grupo que se cree tenga algunas de estas características. El Canciller debe establecer procedimientos administrativos para asegurarse que todos los miembros de la comunidad del colegio puedan presentar quejas sobre supuestas violaciones a esta política y que sus quejas sean escuchadas de acuerdo a los reglamentos señalados en el Título 5 y por aquellos de otras agencias que administran las leyes estatales y federales sobre la no discriminación. Ningún fondo del Distrito debe ser utilizado para la membrecía, o para la participación incluyendo pagos financieros o contribuciones hechas a organizaciones privadas de parte del Distrito o de cualquier individuo empleado por el Distrito o con asociación, cuyas prácticas de membresía son discriminatorias en base a lugar de nacimiento, religión, edad, sexo, identidad de género, expresión del género, raza, color, condición médica, información de genética, descendencia familiar, orientación sexual, estado civil, incapacidad física o mental, embarazo, categoría militar o de veterano, o por creer que él o ella tiene una o más de las características mencionadas, o en base a estar relacionado con una persona o grupo que se cree tenga algunas de estas características. Preguntas sobre el cumplimiento y/o el procedimiento para quejas pueden ser dirigidas al Oficial del Distrito a cargo del Título IX en RSCCD y Coordinador de la Sección 504/ADA de RSCCD: John Didion, 2323 N. Broadway, Santa Ana, CA 92706, 714-480-7489.

CHÍNH SÁCH BỊТ KÝ THỊ

Sở Giáo dục Hệ thống Đại học Rancho Santiago (RSCCD) ha quyết tâm tạo cơ hội bình đẳng trong chương trình giáo dục, trong việc thuê mướn nhân viên, và trong tất cả các chức năng và sinh hoạt thuộc phạm vi Sở. Sở và mỗi cá nhân đại diện cho Sở, sẽ cung cấp dịch vụ, lớp học, và chương trình mà không phân biệt người gốc quốc gia, tôn giáo, tuổi tác, phẩm hạnh, đặc điểm phái tính, cách thể hiện phái tính, chồng tông hoặc dàn tông, màu da, tính trạng sức khỏe, thông tin về di truyền, người gốc tổ tiên, khuynh hướng tính dục, tính trạng hôn nhân, có kỹ thuật hoặc hành chính thẩm quan, có thai, đang trong Quân đội hoặc gia già ngoài, hoặc vì người đó được cho là có một hay hơn một đặc tính kế trên, hoặc dựa vào sự liên đới với một người hoặc nhóm có hoặc được cho là có một hay hơn một đặc tính kế trên. Ví tổng quan trị sẽ đặt ra các trách nhiệm hành chính nhằm bảo đảm rằng mọi thành viên trong trường đại học có thể chịu lại việc vi phạm chính sách này, và có thể phải nhận được mức phạt được tuân theo các quy định thuộc Điều 5 và các quy định của các cơ quan tài chính lực lượngrang và liên bang liên quan đến việc bất kỳ thứ gì. Ngán quấy của Sở sẽ không bao giờ được dùng để làm hại viễn, hoặc tham gia bắt cụ việc gì có tà tiễn hoặc đồng góp trên trong danh nghĩa của Sở hoặc nhân viên làm việc cho Sở hoặc liên độ với Sở, cho bất cứ tổ chức tư nhân nào mà Sở sẽ tiếp nhận trong căn bản người gốc quốc gia, tôn giáo, tuổi tác, phẩm hạnh, đặc điểm phái tính, cách thể hiện phái tính, chồng tông, màu da, tính trạng sức khỏe, thông tin về di truyền, người gốc tổ tiên, khuynh hướng tính dục, tính trạng hôn nhân, có kỹ thuật hoặc hành chính thẩm quan, có thai, đang trong Quân đội hoặc gia già ngoài, hoặc vì người đó được cho là có một hay hơn một đặc tính kế trên, hoặc dựa vào sự liên đới của người đó với một người hoặc nhóm có hoặc được cho là có một hay hơn một đặc tính kế trên. Nếu có thuộc mắc về việc tuân thủ luật lệ và/hoặc về chủ thể kỳ thuật, xin liên lạc với chức chương trình Title IX của Sở và/hoặc điều hợp viên chương trình 504/ADA. Viên chức chương trình Title IX của RSCCD và cũng là điều hợp viên chương trình 504/ADA là John Didion, địa chỉ 2323 N. Broadway, Santa Ana, CA 92706, số điện thoại 714-480-7489.
ADMISSIONS, REGISTRATION, AND RECORDS

Admission Requirements

Who May Attend

High school graduate.

OR

Person in possession of a California high school proficiency certificate or GED

OR

Person 18 years of age or older who can profit from instruction.

OR

High school student qualifying for Career Advanced Placement program.

OR

International Students with a valid Visa.

How and When To Apply

New students and students returning after an absence of one or more semesters must file an application for admission to the college. (Summer is not counted.)

File transcripts of high school(s) and colleges attended with the Admissions and Records Office if pursuing a degree at Santiago Canyon College or receiving financial assistance.

Application dates:

Fall semester ......................... beginning April 1
Spring Intersession ... beginning November 1
Spring semester .......... beginning November 1
Summer session .................. beginning April 1

Applying to the College

New or Former Students

New or former students need to apply. A new student is a student who has never attended Santiago Canyon College or Santa Ana College. A former student is a student who attended SCC or SAC, did not enroll for one full semester, and now wishes to return. All applications are completed on the www.sccollege.edu website. Applications are processed within 24-72 hours. An e-mail will be sent with a student's WebAdvisor Login and other student information. The WebAdvisor Login and student ID for former students will always remain the same. Once you have been assigned a WebAdvisor Login, you may then go online, change your password, and view your registration appointment date and time.

Continuing Students

A continuing student is a student who attended the previous semester. The student may check online for his/her registration date and time and may register online at that time or any time until the Friday before the semester begins. Students are encouraged to meet with a counselor each semester in order to review their academic progress before completing registration.

How To Prepare for Proper Course Placement, Registration and Educational Planning (Student Success and Support Program)

The Student Success and Support Program (SSSP) supports the transition of new students into the college by providing them services that promote academic achievement and successful completion of degrees, transfer preparation, career technical education certificates, or career advancement.

New students are referred to required core services- assessment, orientation, and advisement- and these services must be completed in order to access their priority registration time. During this process, students will receive assistance in completing an abbreviated education plan; however, a course of study (major) and a comprehensive student education plan must be completed by the third semester but no later than completing 15 degree-applicable units. Students may accomplish this requirement by enrolling in a counseling course, attending an educational planning workshop, or scheduling an appointment with a counselor. A request to be exempt from completing one or more core services is available on the Admissions & Records website. Exemption approval requires that students provide sufficient justification for their request.

Assessment and Placement Testing

Students who plan to take courses in English, English as a second language, math, reading and/ or chemistry must take placement tests. SCC uses placement instruments approved by the California Community College State Chancellor's Office, which means that students’ assessment profiles correlate highly with their ability to perform at their placement level.

English Placement: The college has two English programs and therefore two placement instruments, so students need to determine which test is appropriate for them. Taking the correct placement test puts students in the course which offers the kind of instruction they need. Native speakers of English should take the CTEP; non-native speakers/ESL students should take the TELD. Both tests can place students into English 101.

Math Placement: The Math Diagnostic Testing Project (MDTP) has four different levels. Students choose the level they feel best prepared for. Sample questions for each test level are available in the Testing Center, Counseling Center and online.

Disability Accommodations: Students who require disability-related accommodations for placement tests must request them at least two weeks prior to testing and provide disability verification from a qualified professional. To arrange for testing accommodations, contact Disabled Students Programs and Services (DSPS) at 714-628-4860.

Test Results and Coursework from Other Colleges: Recent placement results from other colleges (in the last two years for English or in the last year for math) may be accepted. Students must bring official copies of placement test results to the SCC Counseling Center (D-106) to verify test results and to get registration clearance. Placement test information from other colleges must include the student’s name, name of the test(s), the testing date(s) and the raw score(s) and placement.

Students who have attended another college and have completed the necessary coursework in English, math, reading and/ or chemistry can bring official transcripts to the Counseling Center for verification.

To Register for a Placement Test: To register for a placement test in English, Math and Reading, to see sample questions for each test or to get additional information about these tests, students can go online to www.sccollege.edu/testing.

To register for the chemistry placement test, students must call the Testing Center at 714-628-4985.

Student Photo Identification Card

A student is eligible for a photo identification card after paying for classes and the photo I.D. fee. Photo I.D. is located in the Cashier's Office in E-102. This card facilitates student use of the Library, Student Health and Wellness Services, computer laboratories, the Admissions Office, and a variety of college services. Current fees are listed in the schedule of classes.

Full-Time – Part-Time Definition

Full-time students

(Fall and Spring semesters) = 12 or more units

Part-time students

(Fall and Spring semesters) = Less than 12 units
Residency

All students are classified as either a resident of the State of California or non-resident when applying for admission. “Residents” are students who have residence in the state for more than one year before the initiation of a semester or term (EC 68017), based on the “Residency Determination Date” which is the day immediately preceding the opening of instruction (applies to U.S. citizens, permanent residents, and persons holding certain visas that allow for residence). “Non-residents” are students who have not established residence in the State of California for one year as of the residency determination date.

1. Persons who are 18 years of age or older (adults) establish residency in accordance with EC 68017 above. Adult residency begins after the 18th birthday.

2. Persons who are under 18 years of age (minors) establish residency in accordance with above “resident” definition and the following:
   a. Married minors may establish their own residence.
   b. The residence of the parent with whom an unmarried minor child maintains a place of abode is the residence of the unmarried minor child. When the minor lives with neither parent, residence is that of the parent with whom the minor last resided. The minor may establish residence when both parents are deceased and a legal guardian has not been appointed.
   c. The residency of unmarried minors who have a parent living cannot be changed by their own acts, appointment of legal guardians, or relinquishment of a parent’s right of control (EC 68062).

3. Exceptions apply under certain conditions to active members of the military.

4. Specific residency problems will be answered by the Admissions and Records Office.

5. Non-Citizen Students: Students with a “permanent resident” visa, refugee status, or amnesty approval may establish residency in accordance with above discussion. All visas must be examined by the college to determine residency status.

International Student Admissions

SCC now hosts international students who enter the country on F-1 student visas. Foreign students should contact the International Student Office for application forms and instructions. Applications for fall are accepted beginning July 1 and spring applications begin on November 1. A $25 application fee is required along with the application form. For more information, call 714-628-5050.

Admission Policy of International Students on F-1 Visa Status:

1. The international student must submit a complete, official academic transcript of all high school and previous college work attempted. Transcripts must be officially translated into English, bear the school seal, and be signed by the registrar or another appropriate official. Applicants are considered for admission only if their course grades are above average (C- or higher).

2. International students must have sufficient knowledge of English to enable them to profit from instruction at the college level. Adequacy of English proficiency is determined by a satisfactory score (450+) on the Test of English as a Foreign Language (TOEFL), administered worldwide by the Educational Testing Service, Box 899, Princeton, New Jersey 08540.

3. International students must be at least 18 years of age unless they are graduates of an accredited United States high school.

4. Students on the F-1 Visa must present evidence that they have financial resources to defray costs during the period of attendance at the college. In addition to the regular student fees, approximate annual costs for a student enrolled in 12 units each semester are as follows: non-resident tuition fee – non-resident tuition for the fall 2015 semester is $240 per unit + $46 enrollment per unit = $286 per unit for international students. Health insurance costs $1,500 per year. For living expenses and other costs, such as books, visit the college website at www.sccollege.edu. All tuition, fees, and expenses are subject to change with new state legislation.

5. International student applicants must be in good physical health as certified by a licensed physician on the form provided by the college. Measles and poliomyelitis immunization must be completed. The physical examination by a physician must include a chest x-ray report and indicate that students have no contagious disease.

6. Proof of health insurance is required prior to registration. The college accepts no responsibility for medical expenses incurred by international students.

7. Santiago Canyon College does not provide housing for students; however, placement with an American Host Family is available upon request. A listing of apartments will be made available to all new students and assistance with locating housing will be provided.

Fees and Expenses/ Drop for Non-Payment

Drop for Non-payment Policy: Enrollment fees must be paid in full within 3 days of registration (including weekends and holidays) or all classes will be dropped and released to other students. The day you register is counted as day 1.

1. All students are required to pay enrollment fees of $46 per unit within 3 days of registration.

If classes are not paid within that time, the student will be dropped from all classes and will have to re-register.

In addition to the 3-day non-payment drop policy, there is a final outstanding balance drop date. All fees must be paid in full by the Friday before the start of the semester. No balance will be carried over into the start of the semester. It is the student’s responsibility to drop by the refund deadline to avoid any fees for late adds.

2. A health fee of $19 per semester ($15 for summer session) is charged to all students whether or not they choose to use health services. Health Fee Exemptions (Education Code 76355): (1) Any student who depends exclusively upon prayer for healing in accordance with the teachings of a bona fide religious sect, denomination, or organization, provided that the student presents documentary evidence of an affiliation with such a bona fide religious sect, denomination, or organization. (2) Any student enrolled in an approved Apprenticeship Program. A request for an exemption
may be filed at the Admissions & Records Office.

3. Parking Permits are $20 for fee waiver students and $30 for all other students. All mandatory fees must be paid in order to purchase parking. A permit is required to park on campus at SAC and SCC only. Only one permit is necessary for students who attend both colleges. Motorcycles are exempt in designated parking areas.

4. A Student Service fee of $7.50 is payable at registration for classes. The fee includes $2.50 for a Photo ID for college services: (1) Library, Student and Instructional Services; and (2) $5 for college activities. Photo ID and semester validation is available at Santiago Canyon College. These services and fees are optional.

5. The Santiago Canyon College Student Representation Fee of $1 is charged per semester. The $1 mandatory fee (Education Code 76060.5) is used by the Associated Student Government to represent the view of students with governmental agencies.

Non-Resident Tuition

Non-resident Tuition: $240 per unit in addition to the per enrollment fee for out-of-state residents and for students who are a citizen of a foreign country. Refer residency questions to the Admissions Office.

Visa, MasterCard, Discover and American Express are accepted for all fees.

All tuition, fees, and expenses are subject to change with new state legislation.

Refund of Tuition and Enrollment Fees

Students are eligible for full refunds of fees provided they have officially dropped from classes prior to the refund deadline or their classes have been cancelled by the college. There is no refund for classes added after the refund deadline date. (See current WebAdvisor schedule for refund deadline)

Refunds are based upon the date the student withdraws from the course online.

No refund will be processed until assurance has been given that any check in payment for tuition has been cleared.

Enrollment Fee refunds are granted in accordance with established provisions of the community college education code. Contact the Cashier’s Office or refer to the current class schedule for details of the refund policy and procedures.

There is no refund for variable units not completed.

RSCCD Rates of Student Progress

Student Right-To-Know Act

The rates below are placed here in accordance with the federally mandated Student Right-To-Know Act.

Of the degree, certificate or transfer seeking first-time, full-time freshmen who entered RSCCD colleges in Fall 2011, the “completion rate” represents those students who earned an Associates Degree, Certificate of Achievement, or 60 UC/CSU transferable credits within three years.

2011 COHORT COMPLETION RATE

<table>
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<tr>
<th></th>
<th>State</th>
<th>SAC</th>
<th>SCC</th>
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<tbody>
<tr>
<td>2011</td>
<td>28%</td>
<td>25%</td>
<td>38%</td>
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The “transfer rate” represents non-completer students who transferred to any other two- or four-year institution within three years.

2011 COHORT TRANSFER RATE

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<th>State</th>
<th>SAC</th>
<th>SCC</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>12%</td>
<td>7%</td>
<td>12%</td>
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</table>

These rates do not represent the success rates of the entire student population at RSCCD colleges nor do they account for student outcomes occurring after this three-year tracking period.

Registered Sex Offender Information

Current information concerning registered sex offenders can be obtained by going to: www.meganslaw.com.

“Sex offenders are required to register with the police in the jurisdiction in which they reside and if attending institutions of higher learning in a different jurisdiction, they must register with local police for that area. Sex offenders who may be required to register should do so at the Orange Police Department if attending Santiago Canyon College.”

Right To File a Complaint Regarding the Student Success and Support Program (SSSP)

Any student who feels that she/he has experienced discrimination in any SSSP core service (assessment, orientation, or counseling/advisement) may file a complaint with the SSSP Coordinator by calling 714-628-4775.

Right To Review and Challenge Records

The Family Educational Rights and Privacy Act (FERPA) affords students certain rights with respect to their education records. These rights include:

1. The right to inspect and review the student’s education records within 30 days of the day the college receives a request for access.

Students should submit to the Registrar, or Associate Dean of Admissions, written requests that identify the record(s) they wish to inspect. The College official will make arrangements for access and notify the student of the time and place where the records may be inspected.

2. The right to request the amendment of the student’s education records that the student believes is inaccurate.

Students may ask the college to amend a record that they believe is inaccurate. They should write the college official responsible for the record, clearly identify the part of the record they want changed, and specify why it is inaccurate.

If the college decides not to amend the record as requested by the student, the college will notify the student of the decision and advise the student of his or her right to a hearing regarding the request for amendment. Additional information regarding the hearing procedures will be provided to the student when notified of the right to a hearing.

3. The right to consent to disclosures of personally identifiable information contained in the student’s education records, except to the extent that FERPA authorizes disclosure without consent.

One exception, which permits disclosure without consent, is disclosure to school officials with legitimate educational interests. A school official is a person...
Testing Policy

The following testing policies were developed by the Math, Reading, and English/ACE faculties. Please read instructions carefully, because this may determine when you decide to take the placement tests. If you have any questions, please call the testing office at 714-628-4985.

Photo I.D. is required for all testing

Math Department Testing Policy

1. A student may take a different level math test at any time, but a student may not take the same level test more than one time in any semester (4 months). If a student tested within the last semester, he/she must have permission from a faculty member* to retest at the same level on an alternate form (except level 2). Students who retest will be given the alternate test form, and may only retest once every 4 months.

2. If a student has taken a math placement test at SCC or SAC and does not enroll in a math class for 1 year, he/she must retest.

3. Once a student has been placed in a course sequence he/she must complete the course sequence and may not skip courses by testing. Exceptions may be made on a case-by-case basis by a math faculty member.

American College English (ACE) Department Testing Policy

1. Students shall be allowed to test once per 2-year period.

2. If a student has taken an ACE placement test at SCC and does not enroll in an ACE class for 2 years, he/she must retest.

3. Once a student has been placed in a course sequence he/she must complete the course sequence and may not skip courses by testing. Exceptions may be made on a case-by-case basis by an ACE faculty member.

English Department Testing Policy

1. Students shall be allowed to test once a year.

2. The English test is valid for 2 years.

3. If a student has taken an English placement test at SCC or SAC and does not enroll in an English class for 2 years, he/she must retest.

4. Once a student has been placed in a course sequence, he/she must complete the course sequence and may not skip courses by testing. Exceptions may be made on a case-by-case basis by an English faculty member.

Reading Department Testing Policy

1. Students shall be allowed to test once a year.

2. Test scores will be valid indefinitely. If a student has taken a reading placement test at SCC or SAC, he/she will not be required to retest.

* A faculty member can be a member of the discipline or a counselor.

Textbooks and Supplies

Textbooks, supplies, and athletic equipment must be purchased by the student. Special fees required for certain courses are indicated in the class schedule.

Transcripts

Students may obtain an official transcript of records by submitting a request online or in person at the Admissions and Records Office at Santiago Canyon College. The first two counter transcripts will be issued without charge; thereafter, a $3 charge will be assessed for each additional mailed transcript. Express transcripts and all online transcripts are $8. Fed Ex Next Day Delivery* is available for an additional fee of $16.50 per delivery address. All official transcripts are copies of the student’s permanent record in the Office of Admissions and Records at either college. Only records prepared and issued directly from that office will be considered official or certified for accuracy. Transcripts from other institutions are property of the college and will not be released.

Admissions and Records do not hold transcripts for final grades. It is the student’s responsibility to verify that all grades have been posted via WebAdvisor before requesting transcripts.

*Fed Ex fees subject to change
International Transcripts – Evaluation Practices

Santiago Canyon College may grant credit for college coursework completed outside of the United States. Students must submit their records to a Santiago Canyon College recognized evaluating agency, in order to obtain an equivalency/evaluation report (go to www.naces.org for approved listings of evaluating agencies). Once the Admissions Office at Santiago Canyon College receives the equivalency/evaluation report, an official evaluation will be conducted to determine course applicability.

The following guidelines apply to coursework completed outside of the United States.

- There is no transfer credit limit a student may be granted for coursework completed outside of the United States. However, Santiago Canyon College may only grant credit for lower-division classes.

- College credit may only be granted toward Santiago Canyon College associate degree and certificate programs.

- Coursework may not be used to fulfill the following General Education Requirements: English Composition, American Institutions, Reading, and Oral Communication.

- Courses intended to fulfill major requirements must be submitted to the major department for approval.

- Coursework may not be used to fulfill General Education Certification requirements for CSU-GE or IGETC (with the exception of Area 6 – Language Other Than English).

- Santiago Canyon College may not determine course transferability to other colleges and universities.

Students who have completed coursework outside of the United States are encouraged to meet with a counselor to determine course and program applicability.
Academic Honesty

Academic Honesty must be upheld at all times. Students who violate academic honesty policies will be subject to disciplinary action, which may include suspension or expulsion. Academic Honesty is not an absolute. It must be exercised within the law and the basic ethical responsibilities of the teaching profession. Those responsibilities include:

1. An understanding of our democratic tradition and its methods.
2. A concern for the welfare, growth, maturity, and development of students.
3. The method of scholarship.
4. Application of good taste and judgment in selecting and employing materials and methods of instruction.

Introduction

Students at Santiago Canyon College are expected to be honest and forthright in their academic endeavors. To falsify the results of one's research, to steal the words or ideas of another, or to cheat on an examination corrupts the essential process by which knowledge is advanced. Academic dishonesty is seen as an intentional act of fraud, in which a student seeks to claim credit for the work or efforts of another without authorization or uses unauthorized materials or fabricated information in any academic exercise. We, as an institution, also consider academic dishonesty to include forgery of academic documents, intentionally impeding or damaging the academic work of others, assisting other students in acts of dishonesty or coercing students into acts of dishonesty.

Procedures

In cases where a violation of academic honesty is discovered, the faculty member is encouraged to file an “Academic Honesty Incident Report” form and distribute the form as specified.

There are two categories of sanctions: Limited and College-wide. Limited sanctions include an academic action such as assigning a lower grade or a grade of “F” for the test or project. College-wide sanctions include any sanction that will affect a student's standing with the college-at-large, up to and including suspension or expulsion from the college.

In matters relating to academic honesty violations, the primary responsibility for employing the Limited Sanctions rests with the instructor and the academic division where the violation allegedly occurred. The Associate Dean of Student Development will assist in all College-wide disciplinary sanctions at Santiago Canyon College.

Academic Honors

Academic Honors at Graduation

Academic honors are awarded to students who do outstanding coursework leading to graduation from Santiago Canyon College. The graduate must have completed at least 30 units of coursework within the Rancho Santiago Community College District.

Students with Academic Renewal Without Course Repetition are not eligible for Academic Honors. Rancho Santiago Community College District coursework and all transfer work will be computed in the Honors designated GPA. Graduation honors are awarded as follows:

- **President's Scholar**: See Honors Program and Honors Courses on pages 26-27.
- **With Highest Honors**: The highest honors designation is placed on the transcript and diploma of the graduate who has achieved an overall grade point average (GPA) of 4.0.
- **With High Honors**: The high honors designation is placed on the transcript and diploma of the graduate who has achieved an overall grade point average (GPA) of 3.8. A minimum of 18 units completed within the Rancho Santiago Community College District must be completed with the letter grade of “C” or better.
- **With Honors**: The honors designation is placed on the transcript and diploma of the graduate who has achieved an overall grade point average (GPA) of 3.5. A minimum of 18 units completed within the Rancho Santiago Community College District must be completed with the letter grade of “C” or better.

Departmental Honors: Honors are awarded to students who do outstanding work in their majors. Eligibility is determined by inclusion in the academic honors categories listed above. Selection is made by departmental faculty with the division dean's approval.

Academic and Progress Probation/Dismissal

A student's academic standing and progress is calculated at the end of the fall and spring semesters (calculations are not done after the summer session or intersession), based only on the SCC/SAC units and cumulative (RSCCD Total) grade point average (GPA). Academic and Progress Probation calculations begin after a student has attempted 12 units or more at SCC/SAC.
Students are placed on Academic Probation when their RSCCD Total GPA for all SCC/SAC coursework falls below 2.0. Students are placed on Progress Probation when the percentage of coursework at SCC/SAC has an entry of “W”, “I”, “NP”, and “NC” which reaches or exceeds fifty percent (50%) of the coursework attempted.

**Academic Probation and Dismissal**

A1 Students placed on academic probation for the first time (first semester under a RSCCD Total GPA of 2.0) are required to attend a counseling intervention workshop. An e-mail notification is sent to the student and a registration hold is placed on the student record until the completion of the workshop.

A2 Students who have two consecutive semesters with a RSCCD Total GPA below 2.0 will lose priority registration for the next registration opportunity. Their registration date will be after all new applicants.

AD Academic Dismissal

Students who have three consecutive semesters with a RSCCD Total GPA of below 2.0 at the end of the spring semester are dismissed. Students who are dismissed have a hold placed on their records and an e-mail is sent notifying them of their status. Students cannot register for classes at SCC or SAC for one full semester. When students return after “sitting out” one semester, they will return on academic probation and will continue to lose registration priority until their RSCCD Total GPA is at or above a 2.0.

Students who have three consecutive semesters with a RSCCD Total GPA of 2.0 at the end of the fall semester are “subject to dismissal” and a hold is placed on their student record. Since they have already registered for the spring semester they are given a grace period to improve their RSCCD Total GPA. If the RSCCD Total GPA remains below a 2.0 at the end of the spring semester, they will be academically dismissed and will not be able to register for classes at SCC or SAC for one full semester. When students return after “sitting out” one semester, they will return on academic probation and will continue to lose registration priority until their RSCCD Total GPA is at or above a 2.0.

Students who have three consecutive semesters with a RSCCD Total GPA of 2.0 at the end of the fall semester are “subject to dismissal” and a hold is placed on their student record. Since they have already registered for the spring semester they are given a grace period to improve their RSCCD Total GPA. If the RSCCD Total GPA remains below a 2.0 at the end of the spring semester, they will be academically dismissed and will not be able to register for classes at SCC or SAC for one full semester. When students return after “sitting out” one semester, they will return on academic probation and will continue to lose registration priority until their RSCCD Total GPA is at or above a 2.0.

**Progress Probation and Dismissal**

P1 Students placed on Progress Probation for the first time (first semester where the total of W, NP, or I grades is 50% or more of all grades earned) will be notified and provided intervention services.

P2 Students who have two consecutive semesters of progress probation will lose priority registration for the next registration opportunity. Their registration date will be after all new applicants.

PD Progress Dismissal

Students who have three consecutive semesters with less than 50% of their coursework earning a grade at the end of the spring semester are dismissed. Students who are dismissed have a hold placed on their records and an e-mail is sent notifying them of their status. A student cannot register for classes at SCC or SAC for one full semester. When the student returns after “sitting out” one semester, the student will return on progress probation and will continue to lose registration priority.

Students who have three consecutive semesters with less than 50% of their coursework earning a grade at the end of the fall semester are “subject to dismissal” and a hold is placed on their student record. Since the student has already registered for the spring semester, they are given a grace period to improve their course completion rate. If the percentage of completed coursework remains below 50% at the end of the spring semester, they will be dismissed and will not be able to register for classes at SCC or SAC for one full semester. When the student returns after “sitting out” one semester, the student will return on progress probation and will continue to lose registration priority.

**Important Note:** Registration priority shall be lost at the first registration opportunity after a student is placed on academic or progress probation or any combination thereof for two consecutive terms.

**Attendance and Drops**

Drop for Non-payment Policy: Enrollment fees must be paid in full within 3 days of registration (including weekends and holidays) or all classes will be dropped and released to other students. The day you register is counted as day 1 of the 3 days.

Students are expected to attend all sessions of the classes in which they are enrolled. Students should report absences due to illness to the instructor prior to missing class.

A student may be dropped for not attending the first class meeting or for excessive absences when the total hours of absence exceed 10% of the total scheduled hours of the class.

Under extenuating circumstances, a student may be reinstated by the instructor. A student may also be dropped by the instructor when not appearing at the first class meeting.

It is the student’s responsibility to withdraw officially from a course.

**Auditing**

Santiago Canyon College does not permit auditing of classes.

**Basic Skills Course Limit**

Students are limited to 30 units of basic skills coursework. Basic skills courses include non-degree, basic skill classes in Math, English, ESL, and Reading. Students who reach 30 units of remedial coursework are prevented from further registration. The student must complete a petition form and meet with a counselor who advises the student on an informed education plan or refers the students to continuing education.

A waiver is required beyond 30 units. Students must show a “C” or better or a 2.0 GPA in basic skills courses to qualify for a waiver. Waiver forms are available in Admissions and Counseling.

**Career Advanced Placement (CAP)**

The steps listed below allow high school students to use college credit coursework to meet high school graduation requirements.

1. Download at [www.sccollege.edu](http://www.sccollege.edu) a Career Advanced Placement form and obtain approval from your high school to enroll at Santiago Canyon College.

2. All college class prerequisites must be met.

3. Any student who is not yet 16 years of age must have approval from the Associate Dean of Admissions.

4. Any high school student who registers as a full-time student will be charged the regular community college enrollment fees.

5. CAP students by law do not have priority registration. This occurs 4 days before the start of the semester or session.
Career Technical Education (CTE) Transitions

CTE Transitions (formerly known as Tech Prep) is funded through the Carl D. Perkins Act IV, 2006 and allow students to earn college credit in an identified career pathway while still in high school. CTE Transitions focuses on helping Career Technical Education students’ transition from high school to community college and on to the world of work. There is no cost to high school students enrolling in the CTE transitions program. For more information on which courses articulated with the local Central County Career Technical Education (OCCTE) partnership, please contact the CTE Transitions Coordinator at 714-628-4889.

Classification of Students

Career Advanced Placement - one who is concurrently enrolled in high school.

Freshman - one who has completed 0-29 units.

Sophomore - one who has completed 30 or more units.

Graduate - one who has received an associate degree.

Course Repeatability and Repetition

State regulations (Title 5, sections 55040-55045) restrict the number of times a student may enroll in a course within a community college district. The number of times a student may enroll in a course is based on whether the course is designated “repeatable” or “non-repeatable.” Any student registering to repeat a course not identified as repeatable or repeating a course more often than permitted may be dropped from the course.

Courses may be repeated only under the following circumstances:

Substandard Work for Non-Repeatable Courses: A student has up to three enrollments in the same course (SCC and SAC combined) to receive a satisfactory grade. After three enrollments, the student can no longer register for the course within this college district. After two enrollments, the student loses the ability to register for the class online. A repeat form must be completed in Admissions and reviewed by an Admissions Office administrator. The last grade earned will count in the GPA calculation. Courses repeated under the provisions of this section will be indicated as repeated on the permanent academic record of the student. A student may not repeat a course to change a grade of C or above.

Significant Lapse of Time: Students may re-enroll in a course where the student has received a satisfactory grade of “C” (or Pass) or better in their last enrollment and there has been a significant lapse of time since completion of the course. California Code of Regulations defines a “significant lapse of time” as three (3) calendar years and an institution of higher education to which the student wishes to transfer has established a recency requirement that the student cannot satisfy without repeating the course (Title 5, §55043). Students must submit a petition to the Admissions and Records office to re-enroll in the course.

Repeatable Courses: Repeatable Courses: As of January 2013, only three types of courses are repeatable under state regulations:

1) Courses for which additional enrollments are necessary to meet the major requirements of California State University or University of California for completion of a bachelor’s degree. Such courses may allow for additional enrollments to allow the student to meet the lower division component of these major requirements. The number of maximum enrollments may not exceed four and might be fewer if the transfer institution requires fewer than four enrollments or if the course is related in content to other courses offered at the college

2) Intercolligate athletics. These courses include those in which student athletes are enrolled to participate in an organized competitive sport sponsored by the district or a conditioning course which supports the organized competitive sport. Student athletes are limited to no more than 350 contact hours within a fiscal year (July 1-June 30); they are permitted a maximum of 175 hours in courses dedicated to the sport and 175 hours in courses focusing on skill development and conditioning.

3) Intercolligate academic or vocational competition. Such courses must be designed specifically for students to participate in non-athletic competitive events, the competitions must be between students from different colleges, the competition must be sanctioned by a formal collegiate or industry governing body, and participation in the event must be directly related to the course content.

Students enrolled in these courses are required to participate in the academic or vocational competition.

Repeatable courses are identified in the catalog’s course descriptions. A student may not re-enroll in a course to replace a grade of a course identified as repeatable in the college catalog. All grades earned within the repeatability sequence will count as completed courses regardless of grade earned.

Legally Mandated Training: Students may re-enroll in a course if the repetition is a requirement for continued paid or volunteer employment. Students must complete a petition and submit appropriate documentation to the Admissions and Records Office as evidence that a student is legally mandated to re-enroll in the course. All grades issued under this provision will count towards the students GPA.

Significant Change in Industry or Licensure Standards: Students may be permitted to repeat a previously completed course if there has been a significant change in industry or licensure standards since the student last took the course such that the student could not obtain or maintain his or her employment or license without retaking the course and the student is required to repeat the course for employment or licensure. Students must complete a petition and submit appropriate documentation to the Admissions and Records Office.

Active Participatory Courses: Active participatory courses in physical education, visual arts, or performing arts (including but not limited to Art, Dance, Kinesiology, Music, and Theatre) that are related in content to one or more other courses have additional restriction on repeatability and repetition. Course are defined as being related in content when they have “similar primary educational activities in which skill levels or variations are separated into distinct courses with different student learning outcomes for each level or variation.” Students are limited to four semester enrollments in courses that are related in content; this limitation applies even if an active participatory course is designated as repeatable. Students may repeat active participatory courses in which a substandard grade or W was received, however all enrollments count toward the four enrollment maximum.

Honors Courses: A student who has completed a Santiago Canyon College Honors course and who has received a substandard grade may re-enroll in the
Enrollment Priority

The state of California has adopted a law under Title 5 Regulation 58108, establishing enrollment priorities for students attending California Community Colleges. This regulation will affect the time in which students register for classes. This policy went into effect beginning with registration for Fall Semester 2013.

Loss of Enrollment Priority

Continuing students at Santiago Canyon College will lose their enrollment priority for the following reasons:

1) Student has attempted 12 units and their RSCCD cumulative GPA has fallen below 2.0 for two consecutive semesters and is on academic probation
2) Student has attempted 12 units and the percentage of all coursework at SCC/SAC has an entry of “W”, “I”, “NP”, and “NC” which reaches or exceeds fifty percent (50%). § 55031
3) Student has earned 100 or more degree applicable units from Santiago Canyon and Santa Ana Colleges

Students who have SCC as their home campus can submit a petition for appeal to the Admissions Office at SCC. Students who are not in good academic standing can appeal for one of the following reasons: 1) there were extenuating circumstances (verified cases of accident, illness) and can provide documentation; 2) the student can demonstrate SIGNIFICANT academic improvement in a subsequent term. Students who have earned 100 or more degree applicable units can appeal if they have declared a high unit major and are currently working toward a degree. Forms for these appeals can be obtained in Admissions and Records or downloaded from the college website.

Computer and Network Use

The Rancho Santiago Community College District owns and operates a variety of information resources, including hardware, software, and Internet access. These information resources are provided solely for the use of RSCCD students, faculty, and staff in support of the education, research, academic development, and public service programs of RSCCD.

RSCCD information resources provide access to information content and communication worldwide. Access to, and use of, these information resources is a privilege, which is to be used responsibly. RSCCD information resources users must respect the rights of other users, respect the integrity of the information resources, and observe all relevant RSCCD Board Policies, Administrative Regulations, and federal, state, and local laws. All students, faculty, and staff are responsible for seeing that these RSCCD information resources are used in an appropriate, effective, efficient, ethical, and lawful manner, including but not limited to the illegal downloading and/or unauthorized distribution of copyrighted material, including peer-to-peer file sharing. Violations of Federal copyright laws may subject the violator to civil and criminal penalties as well as disciplinary action.

Administrative regulations establish rules and prohibitions that define acceptable use of RSCCD resources. Unacceptable use is prohibited and is grounds for loss of use of RSCCD information resources, as well as discipline or legal actions as provided for under RSCCD Board Policy and federal, state, and local laws.

Credit By Examination

Eligible Courses

Arts, Humanities & Social Sciences/Library: None
Counseling & Student Support Services: None
Business & Career Technical Education: Water Utility Science 050
Mathematics & Sciences:
Geology 101; Mathematics 060, 070, 080, 140, 160, 170, 180, 219; Physics 150AC, 150BC

1. Applications for credit by examination may be obtained in the Admissions and Records Office at Santiago Canyon College. The student will be advised whether a testing fee is to be charged and where it should be paid. Applicants must be currently enrolled at Santiago Canyon College and be in good standing.

Fee charged for Credit by Examination is enrollment fee + number of units. Financial Aid cannot be used for Credit by Examination. Fee must be paid before exam takes place.

2. A student must not enroll in a course which is to be challenged. In the event a student decides to challenge a course in which he or she is already enrolled, he or she must withdraw from that course prior to the end of the second week of instruction.

3. Credit may be earned only for courses that are: 1) currently listed in the Santiago Canyon College catalog, and 2) specifically listed as eligible for credit by examination. A student may attempt credit by examination only once in a particular course.

4. Students should be aware that some divisions offer credit by examination only on specific dates; therefore, students should obtain examination schedules from the appropriate offices as early in the semester as possible.

5. The dean, in consultation with the department involved, will determine whether a departmental or a standardized examination is to be administered and when and where it will be administered. At this same time, the student will be given a course outline and any other pertinent information detailing subject matter requirements of the course being challenged.

6. Students may apply for credit by examination in sequential courses, but may take examinations for the courses having prerequisites in the sequence only if credit has been earned by examination or coursework in the earlier course(s) of the sequence.

7. Grading of the examination is on a Pass/No Pass basis. Pass represents a grade of “C” or better and will be shown on the transcript as “credit by examination”. Grades less than “C” will be reported to the Admissions and Records Office but not recorded on the transcript. “Pass” grades will be computed as units earned but will not be counted in the grade point average.

8. The examiner shall transmit examination results to the Santiago Canyon College division office. The division dean will review the examination results and will transmit this information to the Admissions and Records Office.

9. Units for which P is given in this category will not be counted in determining the 12 semester hours of credit in residence required for a certificate or an associate degree.
Admissions at any time to opt out of the
However, a student may come to
A student initially agrees or denies a
previous educational institution or agency
athletic team; dates of attendance; degree
officially recognized activities and sports;
of residence; major field; participation in
certain directory information. This consists
make public without student consent only
of 1974, Santiago Canyon College will
Family Education Rights and Privacy Act
As required under the provisions of the
Drug-Free Schools and Communities Act
Amendments of 1989 and in compliance
with other requirements of the Act. Please
refer to Board Policy (BP 3550) for specific
information or contact the Student Health
and Wellness Services at 714-628-4773.

Experimental Courses
The college may offer Experimental courses,
either under 098 (non-transfer) or 198
(transfer) under any discipline listed in the
announcement of courses. Experimental
courses are specialized courses on topics
related to the immediate and changing
needs of students. A student who received
a satisfactory grade in an Experimental
course may not re-enroll in a course with
the same discipline name and number, even
though the topics may be different.

Family Education Rights and Privacy Act (FERPA)
As required under the provisions of the
Family Education Rights and Privacy Act
of 1974, Santiago Canyon College will
make public without student consent only
certain directory information. This consists
of the following: a student's name; city
of residence; major field; participation in
officially recognized activities and sports;
weight, height and age if a member of an
athletic team; dates of attendance; degree
and awards received; and the most recent
previous educational institution or agency
attended by the student.

A student initially agrees or denies a
FERPA release at the point of application.
However, a student may come to
Admissions at any time to opt out of the
FERPA disclosure or agree to the release
directory information. Admissions
Forms: “FERPA Consent to Release” or
“FERPA Consent NOT to Release” directory
information.

All student expulsions will be noted on the
official college transcript.

FERPA Family Education Rights and
Privacy Notification
The Family Education Rights and Privacy
Act of 1974 provides colleges the right to
consent to disclose personally identifiable
information contained in the student’s
education records to third party vendors
who are identified as School Officials
and who have legitimate educational
interests. A school official has a legitimate
educational interest if the official needs
to review an education record in order to
fulfill his/her professional responsibility.

A school official is a person employed
by the College in an administrative,
supervisory, academic or research, or
support staff position (including district
safety personnel and health staff); a person
or company with whom the College has
contracted (such as an attorney, auditor, or
collection agent); a person serving on the
Board of Trustees or a member of an official
college committee.

Santiago Canyon College contracts with the
following School Officials:
Auditors (Vicenti-Lloyd-Stutzman)
Barbering/Cosmetology
Unilateral Training Committee
California/Nevada Training Trust
CCCApply (Unicom)
Credentials (Online transcript request)
Ellucian Colleague
ECS Imaging (optical imaging)
Electrical Training Trust
Image Now (optical imaging)
Medpro and Quest (Health Center)
Metropolitan Water District of
Southern California
Operating Engineers Training Trust
SARS (Counseling center)
Southern California Surveyors
Southwest Carpenters Training Fund
Xerox

Free Expression
Santiago Canyon College supports liberal
policies regarding free speech for individual
students, college staff, nonofficial college
groups, and visiting speakers. Please refer
to Board Policy (BP 3900) for specific
information.

Grades and Grade Point Average
Grades are based upon the quality of work
done, that is, upon actual accomplishment
in courses offered for credit. Credit by
examination, Pass/No Pass, “W’s” and “I’s”
are not figured into grade point averages. The
grade point average is computed by dividing
all other units attempted into all grade points
received. The meaning of each grade and its
value in grade points is as follows:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Grade Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>4 per unit earned</td>
</tr>
<tr>
<td>B</td>
<td>3 per unit earned</td>
</tr>
<tr>
<td>C</td>
<td>2 per unit earned</td>
</tr>
<tr>
<td>D</td>
<td>1 per unit earned</td>
</tr>
<tr>
<td>F</td>
<td>0 per unit attempted</td>
</tr>
<tr>
<td>W</td>
<td>0 (no units earned)</td>
</tr>
<tr>
<td>I</td>
<td>0 (no units earned)</td>
</tr>
<tr>
<td>CIP</td>
<td>0 (no units earned)</td>
</tr>
<tr>
<td>RD</td>
<td>0 (no units earned)</td>
</tr>
<tr>
<td>MW</td>
<td>0 (no units earned)</td>
</tr>
</tbody>
</table>

*Does not satisfy prerequisite requirements.

Grade Grievances
Procedures for Student Grievances
Regarding Grades

Education Code 76224 states:

(a) When grades are given for any course of
instruction taught in a community
college district, the grade given to each
student shall be the grade determined
by the instructor of the course and the
determination of the student’s grade by the
instructor, in the absence of mistake, fraud,
bad faith, or incompetency, shall be final.

Procedure

1. Students may request a grade change
no later than one year following the
awarding of the original grade.

2. Student shall meet with the instructor
to discuss the grade.

3. If the issue is not resolved and the
student believes that the grade is
based on mistake, fraud, bad faith, or
incompetency (EC 76224), he/she may
appeal in writing to the Division Dean.

Forms for the written appeal may be
found in Division offices or by searching
the Santiago Canyon College website.

4. The student may be requested to set up
an appointment with the Division Dean
to discuss the written grievance.
5. The Division Dean will review the allegations and consult with the instructor.

6. The Division Dean will review the issue and will notify the student and instructor in writing of his/her decision.

7. The decision of the Division Dean is final.

**Grade Notification**

Grades are available on WebAdvisor upon grade submission by the instructor. Log into WebAdvisor and select grades under Academic Profile.

**Grievance Procedures**

Rancho Santiago Community College District does not discriminate on the basis of race, color, national origin, ancestry, religion, creed, sex, age or handicap in its employment or in its educational programs and activities. Students may file a grievance when they believe they have been discriminated against in any of these areas.

Students may file a grievance when they believe they have been deprived of a right granted to students by the Board of Trustees in any of the policies or regulations of the Rancho Santiago Community College District. The purpose of these grievance procedures is to resolve differences as fairly and expeditiously as possible while preserving the right of students and staff members.

**Procedure**

1. Students shall first confer with the person who took the action or made the ruling to which they object no later than ten (10) days following the event which prompted the grievance.
   a. The Associate Dean of Student Development will assist the student in arranging an appointment between the student and staff member.

2. If the difference is not satisfactorily resolved, the student shall confer with the person’s supervisor.
   a. The Associate Dean of Student Development will assist the student in arranging an appointment between the student and the staff member’s supervisor.

3. If the grievance is still unresolved, the student may file a written statement setting forth the nature of the grievance on the prescribed form with the Vice President of Student Services, no later than ten (10) days after conferring with the person’s supervisor.

4. The grievance form shall be completed in full and shall include a full description of the grievance, times, dates and pertinent facts and the remedy sought by the student.
   a. A Student Grievance Staff Response form will be sent to both the staff member and a supervisor for completion.

5. The Vice President of Student Services shall select a Student Grievance Panel. The administrator involved then shall forward the completed forms to the panel chair for review and recommendation. The panel shall have the power to make an appropriate investigation of the grievance and shall state the findings and make a recommendation.

6. If the grievance is sustained by the panel, it will recommend appropriate action for relief of the grievance and communicate this in writing to the person(s) to whom the grievance was directed. If the findings of the panel do not sustain the grievance, the panel shall communicate this finding in writing to the student who filed the grievance. The ruling of the Student Grievance Panel is final.

**Student Grievance Panel Structure**

- one non-voting chair (except in situations of a tie vote)
- one student representative
- one classified representative
- one faculty representative
- one administrative representative

Information on student grievance procedures is available at Santiago Canyon College. Grievances should be filed with the Associate Dean of Student Development, in room A-201.

**Harassment (Title IX)**

All forms of harassment are contrary to basic standards of conduct between individuals and are prohibited by state and federal law, as well as this policy, and will not be tolerated. The District is committed to providing an academic and work environment that respects the dignity of individuals and groups. The District shall be free of sexual harassment and all forms of sexual intimidation and exploitation including acts of sexual violence. It shall also be free of other unlawful harassment, including that which is based on any of the following statuses: race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, genetic information, marital status, sex, gender, gender identity, gender expression, age, or sexual orientation of any person, or military and veteran status, or because he or she is perceived to have one or more of the foregoing characteristics.

The District seeks to foster an environment in which all employees and students feel free to report incidents of harassment without fear of retaliation or reprisal. Therefore, the District also strictly prohibits retaliation against any individual for filing a complaint of harassment or for participating in a harassment investigation. Such conduct is illegal and constitutes a violation of this policy. All allegations of retaliation will be swiftly and thoroughly investigated. If the District determines that retaliation has occurred, it will take all reasonable steps within its power to stop such conduct. Individuals who engage in retaliatory conduct are subject to disciplinary action, up to and including termination or expulsion.

Any student or employee who believes that he or she has been harassed or retaliated against in violation of this policy should immediately report such incidents by following the procedures described in AP 3435. Supervisors are mandated to report all incidents of harassment and retaliation that come to their attention.

This policy applies to all aspects of the academic environment, including but not limited to classroom conditions, grades, academic standing, employment opportunities, scholarships, recommendations, disciplinary actions, and participation in any community college activity. In addition, this policy applies to all terms and conditions of employment, including but not limited to hiring, placement, promotion, disciplinary action, layoff, recall, transfer, leave of absence, training opportunities and compensation.

To this end the Chancellor shall ensure that the institution undertakes education and training activities to counter discrimination and to prevent, minimize and/or eliminate any hostile environment that impairs access to equal education opportunity or impacts the terms and conditions of employment.

The Chancellor shall establish procedures that define harassment on campus. The Chancellor shall further establish procedures for employees, students, and other members of the campus community that provide for the investigation and resolution
of complaints regarding harassment and discrimination, and procedures for students to resolve complaints of harassment and discrimination. All participants are protected from retaliatory acts by the District, its employees, students, and agents.

This policy and related written procedures (including the procedure for making complaints) shall be widely published and publicized to administrators, faculty, staff, and students, particularly when they are new to the institution. They shall be available for students and employees in all administrative offices.

Employees who violate the policy and procedures may be subject to disciplinary action up to and including termination. Students who violate this policy and related procedures may be subject to disciplinary measures up to and including expulsion.

**Incomplete Work**

When a student has attended regularly but because of illness or other unavoidable circumstances is unable to complete course work or take the final examination, a grade of “I” may be assigned. If an “I” is issued, the instructor completes the Incomplete Grade Form which includes the condition(s) for removal of the “I”, and the grade to be assigned if the condition(s) are not completed. A student may not re-register in the same class if an Incomplete grade is pending. The work thus missed must be made up no later than one year following the end of the term in which it was assigned. A student may petition the instructor for a time extension due to unusual circumstances. It is the student’s responsibility to contact the instructor in such cases.

A final grade will be assigned when the work stipulated has been completed and evaluated according to the conditions set forth by the instructor or when the time limit for completing the work has passed.

**Independent Study**

Independent study allows students to pursue projects under faculty advisement and supervision. The projects may be directed field experience, research, or development of skills and competencies. Transfer credit is indicated as Independent Study 199.

Independent study projects are normally for one unit of credit and require a minimum of 48 hours of directed work per unit of credit. Within the 48-hour minimum the instructor meets with each student on a weekly basis for at least one hour or a minimum of 16 hours for each one-unit project. The proposed project must be approved by the supervising instructor and the dean, with notification to the Vice President of Academic Affairs. Independent study is offered on a Pass/No Pass basis.

Independent study projects are normally undertaken in the department or division of the student’s academic major. Exceptions to this rule must be approved by both the division dean of the student’s academic major and the division dean to whom the student is applying for exception.

To be eligible for independent study, a student must be concurrently enrolled in at least one other class at either Santiago Canyon College or Santa Ana College and must show evidence of competence in the academic major and in the area of proposed independent study.

**Lost and Found**

In the event of losing an item on campus, please contact Safety and Security either in person in L-107 or by telephone at 714-628-4730. An officer will review the lost and found register to see if your item has been found. If so, you may claim your item with approved identification. In the event the item has not been found, the officer will record a description of the item and your contact information in order to contact you if the item is found. All lost items will be stored until the fourth week of the following semester. Any unclaimed items will be donated to a local thrift store.

**Parking**

The policy of the Rancho Santiago Community College District and Santiago Canyon College is that, unless specifically exempted by statute or regulation, every course, course section, or class, reported for state aid, wherever offered and maintained by the college, shall be fully open to enrollment and participation by any person who has been admitted to the college and who meets such prerequisites as may be established pursuant to section 55003 of division 6 of title 5 of the California Code of Regulations.

**Pass/No Pass**

Pass/No Pass encourages students to explore academic areas outside a major field.

1. Courses in the student’s major field may not be taken under the Pass/No Pass policy except as designated in all Apprenticeship programs, Gemology, Human Development, Real Estate, Women’s Studies, Work Experience,
and through credit by examination or assessment.

2. Every university has a limitation on the number of courses/units that can be taken for Pass/No Pass and applied to graduation and may require General Education taken Pass/No Pass to be retaken for a letter grade. Also, Pass/No Pass grades could have a negative effect on scholarships and international students. In addition, students who plan to pursue graduate or professional studies later are advised to be selective in opting for courses on a Pass/No Pass basis.

3. Except as in item number one above, a maximum of 6 Pass/No Pass units may be carried during any one semester.

4. A maximum of 12 Pass/No Pass units is allowed for any degree program. This does not include units taken under credit by examination or assessment, or in all Apprenticeship courses, Gemology, Human Development, Real Estate, Women's Studies and Work Experience.

5. Pass/No Pass petitions are available at the Admissions and Records Offices. The Pass/No Pass petition must be signed by a counselor and be submitted between the first and fifth week of the fall and spring terms (for full semester classes) or thirty percent (30%) of the class meeting dates (for short term classes), whichever is less. Pass/No Pass status cannot be changed back to a letter grade after the deadline has passed.

6. Pass indicates a “C” or better.

Photography
Santiago Canyon College, a non-profit California Community College, reserves the right to use photography and video images of students and visitors, age 18 and older, taken on our property and at college-sponsored events for marketing and promotional purposes. Objection to the use of an individual’s photography may be made in writing to Public Affairs and Publications, RSCCD District Office, 2323 N. Broadway, Suite 408, Santa Ana, CA 92706.

Prerequisites, Corequisites and Recommended Preparation
Santiago Canyon College has adopted a policy on course prerequisites and corequisites in order to provide for the establishing, reviewing, and challenging of prerequisites and corequisites on recommended preparation, and certain limitations on enrollment in a manner consistent with law and good practice. The policy, which is specified for implementation as an administrative regulation, is established pursuant to regulations contained in section 55003 of Chapter 6 of Title 5 of California Code of Regulations. The RSCCD Board of Trustees recognizes that if these prerequisites, corequisites and limitations are established unnecessarily or inappropriately they constitute unjustifiable obstacles to student access and success and, therefore, the board adopts this policy which calls for caution and careful scrutiny in establishing them. Nonetheless, the board also recognizes that it is as important to have prerequisites in place where they are a vital factor in maintaining academic standards and in assuring the health and safety of students as it is to avoid establishing prerequisites where they are not needed. For these reasons, the board has sought to establish a policy that fosters the appropriate balance between these two concerns.

Important Definitions
It is very important to understand the definitions of the terms Prerequisites, Corequisites and Recommended Preparation. Note that prerequisites and corequisites may be challenged. See Prerequisite Challenge Policy, for more information.

Prerequisite indicates a condition of enrollment that a student is required to meet in order to demonstrate current readiness for enrollment in a course or educational program. A prerequisite represents a set of skills or a body of knowledge that a student must possess prior to enrollment and without which the student is highly unlikely to succeed in the course or program. Students will not be permitted to enroll in such courses and programs without the appropriate prerequisite. All prerequisite courses must be completed with a letter grade of “C” or better.

Corequisite indicates a condition of enrollment consisting of a course that a student is required to simultaneously take in order to enroll in another course. A corequisite represents a set of skills or a body of knowledge that a student must acquire through concurrent enrollment in another course and without which the student is highly unlikely to succeed. Students must concurrently enroll in the corequisite course.

Recommended Preparation indicates that while a course is not required prior to enrollment, it is highly advised in order to strengthen the likelihood of success in subsequent courses.

Prerequisite Policy
Prerequisite means the preparation or previous course work considered necessary for success in the course. The College requires students to complete prerequisites as pre-enrollment preparation. Prerequisites which are listed in the College Catalog include:

1) Courses for which specific prerequisites have been established,
2) Sequential course work in a degree-applicable program, and
3) Courses in which an equivalent prerequisite exists at a four-year transfer college or university.

Questions about prerequisites are best resolved with a counselor or instructor prior to the first day of class.

Prerequisite Challenge Process
A prerequisite challenge requires written documentation, explanation of alternative course work, and/or background or abilities which adequately prepare the student for the course. A Prerequisite Challenge Form can be obtained from the appropriate instructional office. Prerequisites may be challenged for one or more of the following reasons:

1) The college has not developed the prerequisite according to its established procedures or has not developed the prerequisite in accord with existing statutes.
2) The prerequisite is discriminatory or is being applied in a discriminatory fashion.
3) The college has not made the prerequisite course reasonably available.
4) The student has documented knowledge and abilities equivalent to those specified in the prerequisite course.

The challenge will be reviewed by a committee consisting of the dean, or designee, department chair, or designee, and one department or division representative or designee.

If space is available in a course when a student files a challenge to the prerequisite
or corequisite, the district shall reserve a seat for the student and resolve the challenge in a timely manner. If no space is available in the course when a challenge is filed, the challenge shall be resolved prior to the beginning of registration for the next term and, if the challenge is upheld, the student shall be permitted to enroll if space is available when the student registers for that subsequent term.

NOTE: Students who are challenging a course which is a requirement for a degree or certificate may wish to use the Credit by Examination process to receive credit for the challenged course.

Specific regulations and procedures relating to course prerequisites, corequisites, and advisories are on file in the office of the Vice President of Academic Affairs at Santiago Canyon College.

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Student Right to Appeal

A student has the right to appeal an exception to a current Santiago Canyon College academic policy, including academic probation and progress probation, to be made on their behalf. The student must complete and submit a petition. Petitions are obtained and submitted to the Admissions Office. Students must provide valid justification and documentation to support their request. The Exceptions to Academic Regulations Committee will review and make decisions on all requests. Students will be informed of the outcome in a timely manner. Petitions are obtained and submitted to the Admissions Office.

Publicity

All announcements, publicity and advertisements posted on college facilities must be approved by the Administrative Services Office in A-204.

Sequential Courses

Courses arranged in order of a sequence (i.e. beginning, intermediate and advanced) must be taken chronologically. Students may not enroll in a lower level course after passing a higher level version of the same course. (e.g. enrolling in Basic Aerobics after passing Intermediate Aerobics).

Sexual Assault and Other Assaults on Campus (Title IX)

Any sexual assault or physical abuse, including, but not limited to, rape, as defined by California law, whether committed by an employee, student, or member of the public, that occurs on district property, is a violation of district policies and procedures, and is subject to all applicable punishment, including criminal procedures and employee or student discipline procedures. Students, faculty, and staff who may be victims of sexual and other assaults shall be treated with dignity and provided comprehensive assistance. The Chancellor shall establish administrative procedures that ensure that students, faculty, and staff who are victims of sexual and other assaults receive appropriate information and treatment, and that educational information about preventing sexual violence is provided and publicized as required by law.

The procedures shall meet the criteria contained in EC 67385 and 67385.7 and 34 C.F.R.§ 668.46. See Administrative Regulation (AR 3540).

Students who have been the victim of sexual violence should contact SCC Campus Safety and Security at 714-628-4730.

Students can receive care, confidential psychological counseling, and assistance through SCC Student Health and Wellness Services located in T-102, or contact the office by telephone at 714-628-4773.

Additional information and resources can be found at www.rscdd.edu/Departments/Risk-Management/TitleIX/Pages/default.aspx

Smoking and Tobacco Use

Smoking is prohibited in all campus areas including all District owned, rented or leased properties and vehicles, except in designated parking lot areas and within 20 feet of entrances, exits, and operable windows.

Smoking is defined as the use of products containing tobacco and/or nicotine, including but not limited to smokeless tobacco, clove cigarettes, or any other smoking products, and any and all electronic or "e-cigarettes", which are unapproved nicotine delivery devices, unregulated by the FDA.

Public performances in which smoking is an integral and necessary part of the production are excluded from these regulations.

These regulations apply to employees, students, visitors and all other persons who use District owned or rented/leased facilities and vehicles. Failure to comply with these regulations may result in disciplinary action.

It is the responsibility of every District employee to comply with these regulations and report violations to District Safety.

These regulations do not supersede more restrictive policies which may be in force under State and Federal regulations.

Standards of Student Conduct

Guidelines for Student Conduct are set forth in the California Education Code, California Administrative Code, Title V, policies of the Board of Trustees, and all civil and criminal codes. Students enrolling in district educational programs assume an obligation to obey state law and district rules and regulations governing the conduct of students.

Students who enroll in those instructional programs in which the college has affiliations with various outside associations must comply with the college's policies and procedures and also with the outside associations' policies and procedures. This includes but is not limited to students enrolled in the programs of Cosmetology, Fire Academies, Criminal Justice Academies and Nursing.

Guidelines for Student Conduct

The following represent violations for disciplinary action, up to but not limited to expulsion, that may be taken:

A. Dishonesty, cheating, plagiarism, lying, or knowingly furnishing false information to the district or college officials performing their duties.

B. Forgery, alteration, or misuse of district documents, records, or identification.

C. Willful misconduct that results in damage to any real or personal property owned by the district or district employees (damage includes, but not limited to vandalism, such as cutting, defacing, breaking, etc.).

D. Obstruction or disruption of pedestrian or vehicular traffic or of teaching, research, administration, or of other district activities on or off District premises. This includes obstruction or disruption of administration, disciplinary procedures or authorized college activities.

E. Assault, battery, or any threat of force or violence upon a student, college personnel, or campus visitor; willful misconduct which results in injury or death to a student, college personnel, or campus visitor. This includes fighting on district property or at a district sponsored event, on or off district premises.

F. Detention of any person on district-owned or controlled property or
at district-sponsored or supervised functions or other conduct which threatens or endangers the health or safety of another.

G. Theft of any property of the district which includes property of a member of the district community or a campus visitor.

H. Unauthorized entry into or unauthorized use of district property, supplies, equipment, and/or facilities.

I. Misrepresentation of oneself or of an organization to be an agent of the district.

J. Sexual assault or physical abuse, including rape, forced sodomy, forced oral copulation, rape by a foreign object, sexual battery, or threat or assault, or any conduct that threatens the health and safety of the alleged victim, which includes students, college personnel, or campus visitors.

K. Use, possession, distribution, or being under the influence of alcoholic beverage on district property or at any district sponsored event.

L. Use, possession, distribution, or being under the influence of narcotics, other hallucinogenic drugs or substances, or any poison classified as such by Schedule “D” in Section 4160 of the Business and Professions Code on District property or at any District-sponsored event except as expressly permitted by law.

M. Expression which is libelous, slanderous, obscene or which incites students so as to create a clear and present danger of commission of unlawful acts on district premises, or violation of district regulations, or the substantial disruption of the orderly operation of the college.

N. Engaging in lewd, indecent, or obscene behavior on district property or at any district-sponsored function.

O. Possession or use while on the district premises, or a district-sponsored function, of any firearm, knife, explosive, or other dangerous object, including but not limited to any facsimile firearm, knife or explosive. Exceptions include those participating in a criminal justice educational program who are authorized such possession or those who are enrolled in a course which authorizes such possession.

P. Unauthorized preparation, giving, selling, transfer, distribution, or publication, for any commercial purpose, of any contemporaneous recording of an academic presentation in a classroom or equivalent site of instruction, including but not limited to handwritten or typewritten class notes, except as permitted by any district policy or administrative regulation.

Q. Engaging in harassing or discriminatory behavior based on race, sex (i.e., gender), religion, age, national origin, disability, sexual orientation or any other status protected by law.

R. Continuous disruptive behavior or willful disobedience, habitual profanity or vulgarity, open and persistent abuse of college personnel, or open and persistent defiance of the authority of college personnel, which includes physical as well as verbal abuse, including the use of racial epithets and hate speech;

S. Disruptive written or verbal communication, vulgarity, open and persistent abuse of other students which include verbal abuse, racial epithets and hate speech. Engaging in intimidating conduct or bullying against another student through words or actions, including direct physical contact; verbal assaults, such as teasing or name-calling; social isolation or manipulation; and cyberbullying.

T. Willful or persistent smoking in any area where smoking has been prohibited by law or by regulation of the Board of Trustees;

U. Violation of the Computer Usage Policy is applicable to students using computer classrooms, computer labs, the wireless network or other locations on and off district property. A violation is considered any of the following:

(a) Accessing with or without permission or causing to be accessed without authorization, altering, damaging, deleting, hacking, destroying, or otherwise using any data, computer, computer system, computer software and programs, or computer network belonging to or used by the college or any member of the District.

(b) Accessing with or without permission, taking, copying, or making use of any data from a computer, computer system, or computer network, or taking or copying any supporting documentation, whether existing or residing internal or external to a computer, computer system, or computer network belonging to or used by the college or District.

(c) Using or causing to be used, computer services without permission.

(d) Disrupting or causing the disruption of computer services or denying or causing the denial of computer services to an authorized user of a computer, computer system, or computer network belonging to or used by the college or District.

(e) Introducing any computer contaminant or virus into any computer, computer system, or computer network belonging to the college or District.

(f) Sending any message using any computer system or network without authorization or sending any message in the name of another person or entity.

(g) Using any account or password without authorization.

(h) Allowing or causing an account number or password to be used by any other person without authorization.

(i) Accessing or causing to be accessed, downloaded or causing to be downloaded, pornographic or obscene materials except when accessing such material which is part of the instructional process or assignment for a class in which the student is currently enrolled.

(j) Use of systems or networks for personal commercial purposes.

(k) “Cyberstalking”, which is to be understood as any use of the college or district computer system, computer network, or computer programs to stalk another person via excessive messages or inquiries, inappropriate or threatening messages, racially motivated communications, photos or other means of communication.

V. Any act constituting good cause for suspension or expulsion, or violation of district policies or campus regulations.
Disciplinary Action

Violations to any tenets within the standards of student conduct are subject to the following disciplinary actions: warning, reprimand, probation, restitution, removal, suspension or expulsion. Disciplinary actions may be imposed singly or in combination.

Standards of Conduct for Computer Classrooms and Computer Labs

In accordance with Board Policy (BP 3720) and Administrative Regulation (AR 3720) and in an effort to extend the life of the hardware, comply with the copyright laws, and adhere to appropriate computer network conduct and usage, the following standards of conduct are required of all students using computer classrooms, computer labs, and the wireless network.

Failure to comply with the following standards can result in the suspension of a student’s privileges and possibly other sanctions such as removal from class, suspension, expulsion or other disciplinary actions.

The primary use of computer systems/resources is for academic/educational purposes. The following are NOT allowed:

1. Using the Internet to access sexually explicit and/or pornography websites.
2. Sending and receiving any messages that are threatening, racist or inflammatory, abusive towards a specific gender or culture, obscene, or use inappropriate language.
3. Using the network for personal or commercial advertising or political activity.
4. Using the computers or wireless network to play individual games, multiple-user games, or gambling.
5. Using the computer for illegal use.

The SCC Library, each computer lab, computer classroom, and science lab may have additional restrictions to those listed above. It is the student’s responsibility to be aware of these additional guidelines.

Study Load

In order to meet the graduation requirements in four semesters, students should carry an average of 15 units each semester. Students will ordinarily not be allowed to register for more than 18 units.

When individual circumstances may require additional unit demand, an overload program in excess of 18 units may be approved for students who have maintained a 3.0 GPA. Approval for such overloads may be secured from the counseling department.

A summer session load should not exceed the equivalent of one unit per week or approximately nine units for an 8-week session. If over 9 units for summer or over 6 units for intersession, an overload petition must be approved using the same criteria as above.

Transfer Credit

Santiago Canyon College grants credit for coursework completed at regionally accredited institutions of higher education. Official transcripts are required and must be submitted to Admissions and Records Office.

Transfer coursework may be used to meet a major requirement by approval. To seek approval, a Petition to Substitute a Major Requirement must be submitted along with supporting documentation. Petition can be obtained in the Admissions and Records Office.

Transfer coursework may also be used to meet CSU or IGETC Certification. If coursework was completed at an institution outside of the California Community College system, it must be approved through the Course Pass Along process (page 43).

Unit of Credit

Santiago Canyon College is on a semester system and awards college credit in semester-units.

A semester-unit of college credit represents 48 hours of student time. For a 16-week semester, this is generally three hours of work per week per unit. For example, semester-long lecture classes are generally one-hour per week in class and two-hours per week outside preparation. Semester-long laboratory classes are generally three hours per week in the laboratory with minimal outside preparation.

When equaling quarter-units to semester-units the ratio is: one quarter-unit equals two-thirds of a semester unit.

Withdrawal From Class

Students who cannot continue in a course have an obligation to withdraw officially. Students are encouraged to consult with instructors concerning class withdrawals.

Students may officially withdraw on the web through the last day of the 12th week of instruction (or 75 percent of the class meetings, whichever is less) and receive a transcript symbol of “W”.

All instructor-initiated “EA’s” (excessive absence drops) through the 12th week or 75 percent of class meetings, whichever is less, will be assigned a “W”.

The academic record of a student who remains in a class beyond the time allowed by district policy must reflect a symbol other than a “W”, except under extenuating circumstances.

A student who has a withdrawal (grade of “W”) in the same course two or more times loses the privilege of online registration for that course and must receive the approval of the Associate Dean of Admissions or the Registrar to enroll in the same course.

(See also Course Repeatability and Repetition.)

Extenuating Circumstances

Extenuating circumstances are verified cases of accidents, serious illnesses, or other circumstances clearly beyond the control of the student that occur after the withdrawal deadline (12th week). Extenuating circumstances apply to all classes within the same semester/term. If such circumstances are verified by the Associate Dean of Admissions at Santiago Canyon College, the student may be authorized to withdraw which shall be recorded as a “W” on the student’s permanent record.

A student who petitions under this policy shall have verified in writing that:

1. A passing grade (“C” or better), as verified by the instructor or division dean, was being maintained in the class at the time of the extenuating circumstance, and
2. The extenuating circumstance meets the criteria delineated above.

Students should file petitions as soon as possible in which the extenuating circumstance occurred. Petitions will NOT be accepted for consideration if the student has completed the coursework for the class and/or has taken the final examination. Petitions will NOT be accepted for consideration later than one year following the semester in which the extenuating circumstance occurred.
STUDENT AND ACADEMIC SUPPORT SERVICES AND OPPORTUNITIES

Academic Success Center (ASC)
The Academic Success Center is located in SCC D-209 and offers instructional support services to students and faculty. Students can bring digital copies of assignments for their classes, import them into the ASC programs and listen to their writing as it is read to them, allowing them to edit their work as necessary. The ASC also houses instructional software for English as a Second Language learners and for any students who need to review their mathematics skills, English grammar and punctuation, or build reading and study strategies. Faculty can work with the ASC staff to create course-specific assignments to help students prepare for exams, understand the more challenging chapters in their texts, and improve student achievement of learning outcomes through specific ASC-coordinated activities. Political Science, Economics, Anthropology, Counseling, Philosophy, and Earth Science are just some of the faculty who have used the ASC services to design tasks which help students achieve course success.

Associate Degrees, Associate Degrees for Transfer and Certificates
Santiago Canyon College offers more than 60 majors or areas of emphasis leading to an associate degree or an associate degree for transfer. Additionally, the college offers more than 60 programs leading to a certificate of achievement or certificate of proficiency. See pages 55-197 for specific instructional programs leading to degrees and certificates.

Bookstore
The official Santiago Canyon College Hawk Campus Store offers a comprehensive selection of new, used, digital and rental textbooks, along with course materials, supplies and specialty items. For more information, visit the Hawk Campus Store in A-101, call 714-628-4736 or visit www.scccollege.edu/bookstore.

CalWORKs
The CalWORKs program at Santiago Canyon College provides assistance to students who are receiving cash aid. CalWORKs students are provided specialized counseling and support services to help ensure their achievement of educational goals and career readiness. Services include counseling/case management, vocational training, job services, workshops, and student support services. For more information, call 714-628-4915.

Career Services
Career Services assists currently enrolled students with career decision-making and employment preparation. Services include career and employment preparation workshops, guest lecturers from industry, on-campus job fairs, and numerous career and job search resources. Enrolled students and alumni have access to Santiago Canyon College’s Online Job Board College Central Network at www.collegecentral.com/sccollege. For more information, visit Career Services in D-106 or call 714-628-4805.

CAMP
The College Assistance Migrant Program (CAMP) is a federally funded program that provides tailored programs and services to students from migrant and farm working backgrounds. The purpose of CAMP is to support students in making the best of their academic, career and educational goals. After meeting eligibility requirements, CAMP students receive the following programs and services: academic and career counseling, study skills workshops, book vouchers, bus passes, internships, financial aid application support, laptop borrowing privileges, tutoring, peer mentoring, seminars and workshops for CAMP parents and families, family cultural activities and participation in the CAMPlanning Summer Bridge Program.

To learn more about CAMP contact us at 714-628-5034, come by our office in A-212 or visit our website at www.scccollege.edu/camp.

Child Development Centers
Santiago Canyon College operates the child development center to serve students’ childcare needs and train students seeking a career in Human Development. Students’ children between the ages of two and five years are eligible to attend. Fees are based on a sliding scale according to parents’ income. Students eligible for the CalWORKs program may be eligible to receive free childcare services. Spaces are available for college faculty and staff at full cost. Contact the center for hours of operation and more information.

Santiago Canyon College Center
8049 E. Chapman, Orange, 714-628-4890

Community Services
Community Services is a fee-based program that provides classes to the general public for educational, cultural, social and recreational purposes. Classes are not for credit, usually shorter in duration than credit classes, and do not require lengthy preparation or rigorous testing. Participants can choose from a variety of classes that include Creative Arts, Business and Careers, Computer Training, Dance, Health and Fitness, Language, Financial Management, Music, Real Estate, Special Interest and Travel Tours. In addition, academic and recreational College for Kids classes are offered each semester.

For more information call the Community Service office at 714-628-4960.

Continuing Education Program
Santiago Canyon College Continuing Education Division provides noncredit courses and programs. Beyond providing the means for an adult to take classes for a high school diploma, Continuing Education delivers pre-collegiate education in the areas of basic academic skills and English as a Second Language, citizenship, and short-term career technical programs. It also serves the needs of the disabled and parents with special needs, health and safety and older adults. A full range of personal, career and academic counseling services is available to students enrolled in continuing education classes. Classes are located at a number of educational centers throughout the community, to allow accessibility to match varying student needs. Specific information regarding admission and registration policies, services available and description of the courses offered can be found in the Continuing Education section of this Catalog. For more information, call 714-628-5900.

Cooperative Work Experience Education
The Cooperative Work Experience Education program represents a joint educational venture between the student, the employer, and the college. The purpose of these courses is to provide eligible students with supervised on-the-job training as an integral part of the total college education program. This is accomplished through new learning experiences in an occupational setting. Students may earn up to four units per semester and a maximum total of 16 units in Cooperative Work Experience courses. Students must petition each time they wish to re-enroll. Further information will be found in the academic program of the catalog.

Counseling Services
Counseling services, 714-628-4800, are provided by counseling faculty to assist students with successful completion of academic, career, and personal goals.
Counseling services are organized under these major areas:

- **Academic Counseling**
  Counselors can help students select a program of study in relation to their educational objective to include associate degree, university transfer, and/or certificates. Counselors also offer assistance in exploring life goals, and assist students with the development of abbreviated and comprehensive student education plans. Students may access assistance by enrolling in Counseling 101 or 116, attending an educational planning workshop, or by scheduling an appointment with a counselor.

- **Career Planning**
  Counselors can assist students in the development of their career goals and provide information that will indicate the best preparation for reaching these goals. Students are encouraged to enroll in Counseling 116, a three-unit CSU/UC transferable Career/Life Planning & Personal Exploration course for optimal exposure to the world of work and career opportunities.

- **Assessment, Orientation, Advisement, and Follow-Up**
  The Seymour-Campbell Student Success Act of 2012 requires new students to participate in assessment, orientation, and advisement as part of the Student Success and Support Program (SSSP). Through orientation and advisement, counseling faculty assist students with understanding placement test (assessment) results in math, reading and English or American College English, and how these courses fit into the development of their education plan. Counselors also provide academic and progress-probation intervention workshops for students not meeting required academic standards.

- **Personal Counseling**
  Counselors are available to students who need assistance with problems which may be affecting their academic progress. The emphasis is on short-term counseling focused around problem areas or concerns. When appropriate, students may be referred to other campus services for additional assistance.

**Disabled Students Programs and Services (DSPS)**

DSPS provides instructional support services and academic accommodations to students with verifiable disabilities attending SCC. Program services are designed to ensure that students have an equal opportunity to participate in and benefit from all college programs, services, and activities.

Students are responsible for requesting DSPS accommodations at least two weeks before they are needed and for providing disability verification from a qualified professional. To apply for services, students must meet with a DSPS professional to complete a program application and have their needs evaluated. The academic accommodations authorized for students are determined individually based on identified disability-related educational needs.

Assessment for Learning Disabilities (LD) eligibility is available at no cost to students experiencing ongoing academic difficulties that interfere with their educational progress.

To schedule an appointment, phone 714-628-4860 (voice), 714-639-9742 (TTY) or come to the DSPS Center in E-105.

**Distance Education**

Distance Education courses are formal credit courses that use one or more technologies to deliver instruction to students who are separated from the instructor. Online courses are 100% online and hybrid courses have regularly scheduled on-campus class meetings. All Distance Education courses at Santiago Canyon College ensure that there is regular and effective contact from the instructor to the student, from the student to the instructor, and from student to student. A variety of technologies and media are used for communication, assignments, and assessments. At a minimum, Distance Education students must have regular access to a computer with high-speed internet access, word-processing and presentation software, multimedia software (such as QuickTime or Windows Media Player), and any software or hardware listed in the course requirements in the class description.

Please check our Distance Education department website, at [http://sccollege.edu/DistanceLearning](http://sccollege.edu/DistanceLearning), for resources and to check that Ensure Distance Education courses are right for you.

**Extended Opportunity Programs and Services (EOPS)**

Extended Opportunity Program and Services (EOPS) is a state-funded program that provides specialized assistance to students who need additional support due to financial and educational challenges. EOPS provides comprehensive academic, career, and personal counseling. Additional services include summer success program, book services, priority registration, university transfer assistance, financial aid application assistance, and additional resources as needed.

EOPS also offers CARE (Cooperative Agencies Resources for Education) to EOPS single parents receiving cash aid with children under the age of fourteen. CARE services are in addition to EOPS and may include additional book services, transportation assistance, and group support activities.

For more information regarding eligibility call 714-628-4915.

**Financial Aid Services**

Financial aid is available to qualified students to help meet the cost of tuition, books, supplies, and other educational materials. Students may also be eligible to have their enrollment fee waived. Financial aid staff are available to answer questions and help students through the financial aid process. You may contact us in-person in room E-104 or by phone 714-628-4876 for more information. General information such as answers to frequently asked questions and hours of operation can be accessed online.

**High School and Community Outreach**

The High School and Community Outreach Department serves as an integral part of the college and community. Outreach staff members provide detailed information regarding academic programs and student services that are offered at Santiago Canyon College. The Early Decision and Early Welcome programs offer placement testing, priority registration, and counseling orientations to graduating seniors from local high schools for each fall semester. For more information, call 714-628-4808.

**Honors Program and Honors Courses**

The SCC Honors Program is dedicated to providing an enriched learning environment for high academic achievers so that they may fulfill themselves personally and acquire the skills and knowledge necessary to succeed at the Associate degree or Baccalaureate degree level. The Honors Program encourages critical thinking, sound decision making, cultural awareness, and effective communication skills through instructional modes that foster independence and responsibility.
Requirements to enroll in an Honors class

Regularly admitted students who meet the course prerequisites may take an Honors class. Enrollment in an Honors class does not require membership in the Honors Program.

1. First time freshmen need to bring a high school transcript to the Counseling Department to receive a signed prerequisite clearance form prior to enrolling in an Honors class. Students who completed college work while in high school need to use the college GPA and units.

2. Continuing College students need a minimum 3.0 cumulative GPA from all institutions attended. Transfer students will need college transcripts from all previous institutions as well as a signed prerequisite clearance form.

3. Career Advanced Placement (CAP) students must have a minimum 3.0 GPA in any college coursework and have a minimum 3.0 GPA in high school.

Requirements to join the Honors Program

Submit an Honors Program application and requested documentation to Admissions and Records during the fall or spring semester. Applications are not accepted from students who are not currently enrolled. Application, procedures and deadlines are available on the Honors Program website: www.sccollege.edu/honors.

Freshmen:

1. First time freshmen who graduated from high school with a minimum 3.0 GPA may join the program during their first semester at SCC. High School Proficiency cannot be used. Official high school transcripts are required.

2. Qualification for English 101 as indicated by the SCC English placement test or a score of 3 or higher on the AP English test.

3. May not be involved in or found at fault in any disciplinary action as outlined in the SCC catalog.

Continuing College students:

1. Students need a cumulative 3.0 GPA or higher in 6 or more units from all colleges attended.

2. Qualification for English 101 as indicated by the SCC English placement test or a score of 3 or higher on the AP English test.

3. Have no grade lower than a “C” in any college level Honors class.

4. May not be involved in or found at fault in any disciplinary action as outlined in the SCC catalog.

Career Advanced Placement (CAP) students: Current high school CAP students are not eligible to join the Honors Program. GPA in college units completed while in high school could affect future ability to enroll in honors classes and the Honors Program.

Requirements to continue in the Honors Program

1. Maintain a cumulative 3.0 GPA or higher.

2. Earn grades of “C” or above in all Honors classes.

3. Earn grades of “C” or above in all college level classes while in the program.

4. Complete a minimum of two Honors courses per academic year.

5. Complete English 101 during the first year in the Honors Program unless English 101 has already been satisfied. (English 101H is recommended)

6. Remain free of any disciplinary action as outlined in the SCC catalog.

Requirements to complete the Honors Program

1. Submit the Honors Program Completion petition to Admissions and Records. The petition and deadlines are available on the Honors Program website: www.sccollege.edu/honors.

2. Maintain a cumulative 3.0 GPA in all college units.

3. Complete a minimum of 18 Honors units. A minimum of twelve of the 18 Honors units must be completed at Santiago Canyon College, and a minimum of 12 Honors units must be completed after acceptance into the program.

4. Maintain a 3.0 GPA in all Honors units.

5. Earn grades of “C” or above in all college level classes while in the program.

6. Complete a minimum of 30 college units at Santiago Canyon College.

7. Complete Honors courses in two or more semesters.

8. Earn grades of “C” or above in all college level Honors classes. Honors classes must be taken for a letter grade.

9. Remain free of any disciplinary action as outlined in the SCC catalog.

Disqualification from the Honors Program

Students with a cumulative GPA below 3.0 or who receive a “D” or “F” in an Honors class will be disqualified from the program.

Students whose cumulative GPA falls below 3.0 anytime during their enrollment at SCC, or who receive a “D” or “F” in an Honors class will be disqualified from the Honors Program for the duration of their enrollment at SCC. Students may appeal disqualification from the Honors Program to the Honors Program Committee. Contact the Honors Program Counselor.

Students who earn a “D” or “F” in an Honors class may repeat the non-Honors version, but they will not be allowed to complete the Honors program.

President’s Scholar

The President’s Scholar designation is placed on the transcript and diploma of the graduate who has achieved a cumulative grade point average of 3.5 and completed the Honors Program. All letter grades must be “C” or better. Students may not receive the President’s Scholar designation if an associate degree from Santiago Canyon College has already been granted. Students participating in graduation ceremonies will be presented with a medallion.

Completion of the Honors Program

The designation Honors Program Completion is placed on the transcript of students who complete all Honors Program requirements. It is also placed on the diploma of students who earn an associate degree.

Language Lab

Santiago Canyon College offers a state of the art language lab for students enrolled in Spanish, Italian, French and American Sign Language courses. Our main objective in the Language Lab is to provide students with a variety of Directed Learning Activities to supplement and complement classroom instruction and enhance their language learning experience. In addition, we provide a comfortable learning environment where students are able to access other resources such as interactive computer programs, audio, and video materials carefully arranged and selected for students’ specific level to assist them in the development of their listening, speaking, reading and writing proficiency skills.
Library
The Santiago Canyon College Library collection contains over 50,000 books in print format and over 15,000 electronic books as well as DVDs and music CDs. Full-text journal, magazine, and newspaper articles are available through online databases. Remote access to most library resources is available through the Library website.

In addition, the Santiago Canyon College Library offers student computer work stations, laptop computers, a wireless network, group study rooms and an instruction lab. There are black/white and color copiers and printers, scanners, and a Self-Check-Out Center.

The Student Innovation Zone (SIZ) provides students with the opportunity to be creative in their academic work with PC, Apple computers and multimedia editing software.

Research assistance is available in-person and online.

The Library can be reached at 714-628-5001 or online at www.sccollege.edu/library.

Math Study Hall
The Math Study Hall (a.k.a. MaSH), located in U-80, is a service offered by SCC that provides students a chance to supplement learning done in the classroom. Math faculty, Instructional Assistants and tutors are on duty to assist students with questions or concerns from their math class. Additionally, computers are available for students to access mathematical software or do work for an online math class. For further information including services or hours of operation, please visit www.sccollege.edu/Departments/Mathematics.

Online Student Services
The SCC Student Services website, www.sccollege.edu/StudentServices, is designed to inform and assist students with counseling information, sample placement tests, and eAdvising. Students can also request transcripts, apply for financial aid, find scholarships, pay fees, purchase a parking pass, download forms for most programs and services, view transfer workshops and presentations, research careers and find jobs and internships.

Pathways to Teaching Program
The Pathways to Teaching Program is designed to encourage students to pursue an education leading to the teaching profession. Services include academic counseling and transfer assistance, specialized workshops and events, appointments with university representatives, teacher preparation resource information, and the SCC Future Teachers Club. For more information about the Pathways to Teaching Program, call 714-628-4928.

Public Affairs
Information and publicity regarding college programs and activities is disseminated to the news media and the community through the Rancho Santiago Community College District Public Affairs office.

Science Teaching and Resource Center
The Science Teaching and Resource Center (STAR Center) is designed to help students in all science classes (Astronomy, Biology, Chemistry, Geology and Physics) to succeed. The curriculum for the center includes: Question and Answer sessions, Faculty-led workshops, Directed Learning Activities (DLA) and Student-led study groups. All services provided through the STAR Center are geared towards engaging science students and enhancing their success.

Scheduling Options and Definitions
Santiago Canyon College schedules two 16-week semesters (fall and spring) with a summer session, and may offer a spring inter ses sion schedule. Courses may be offered through different modalities such as traditional face-to-face or online. For more information about online learning or classes, see Distance Education page 26.

Term = a period of a time within an academic year when courses are scheduled
Fall, spring, summer, winter inter session
Semester = 16 weeks, scheduled every fall and spring
Summer Session = typically offered within a 4, 6 or 8 week period, can be scheduled after spring but before fall
Spring Inter session = typically offered in 4 weeks, can be scheduled after fall but before spring
In an effort to work with student schedules, Santiago Canyon College offers a variety of scheduling options during the fall and spring semesters:
Short Term = less than 16 weeks
Early Start / Late Start = 8 weeks, spans either the first 8-weeks or second 8-weeks
Weekend = offered Fridays, Saturdays, and/or Sunday

Student Health and Wellness Services
Currently enrolled credit students who have paid their health fees are eligible for Student Health and Wellness Services (SHWS). Walk-in health services are routinely provided by registered nurses. Services of physicians and psychologists are available by appointment only. All services are provided without charge, except nominal fees for medications, laboratory tests and some medical procedures when supplies are used.

Emphasis is on health maintenance and wellness promotion. On site health services include the diagnosis and treatment of acute short-term illnesses, pregnancy testing, emergency contraception, first-aid, short term mental health counseling, birth control, condoms, health maintenance and wellness promotion literature, as well as blood pressure screening, cholesterol monitoring, tobacco cessation counseling, tuberculin skin testing, community referrals, first-aid care, emergency care and accident insurance coverage for course-related injuries.

Refer to the class schedule for Student Health and Wellness Service hours, or call 714-628-4773.

Supplemental Instruction
Supplemental Instruction (SI) is an academic support program that targets historically difficult courses. SI offers regularly scheduled, out-of-class review sessions to all students enrolled in a targeted math or science course. SI study sessions are informal seminars in which students work practice problems, review notes, discuss readings, develop organizational tools, and prepare for examinations. Students learn how to integrate course content with reasoning and study skills. Students attend SI sessions on a voluntary basis and no effort is made to segregate students based upon academic ability. Since SI is introduced on the first day of classes and is open to all students in the class, SI is not viewed as remedial. To learn more about the SI program, and to see a list of courses offering SI, visit our website at www.sccollege.edu/SI.

Testing Center
Placement testing is provided for English, ESLACE, mathematics, reading and chemistry to help determine present skill level for appropriate class placement with the help of a counselor. Career and study skills assessments are offered on a counselor referral basis or through counseling classes. For more information call 714-628-4985.
Transfer Success Center

The Transfer Success Center provides resources and services to assist students in researching, planning, and completing their transfer to a four-year college or university. The Transfer Center coordinates various events throughout the year, including tours of universities, university representative advising appointments, transfer fairs, and a variety of workshops to help students with each step in the transfer process. In addition, the Transfer Center provides many useful resources such as: updates via Facebook and e-mail, university catalogs and guidebooks, computers for use in research and completing applications, a comprehensive website, and expert advice from trained specialists and counselors. For more information, stop by D-104-N, call 714-628-4865, visit www.sccollege.edu/transfer, and follow us at www.facebook.com/SCCTransfer.

Transportation

Some classes may be conducted off campus. Unless students are specifically advised otherwise, students are responsible for arranging for their own transportation to and from the class site. Although the district may assist in coordinating the transportation and/or recommending travel times, routes or caravanning, be advised that the district assumes no liability or responsibility for the transportation, and any person driving a personal vehicle is NOT an agent of the district.

Tutoring Center

The Tutoring Center, in room U-80, offers a variety of tutorial programs and services designed to maximize student learning potential. The following services are offered by the Center: individual and small group tutoring sessions in a variety of subjects, review sessions prior to examinations and computers for student use. For further information call 714-628-4791.

Upward Bound Math and Science

The Upward Bound Math and Science (UBMS) program is designed to strengthen the math and science skills of participating high school students. The goal of the program is to help students recognize and develop their potential to excel in math and science and to encourage them to pursue postsecondary degrees in math and science, and ultimately, careers in the math and science profession. The Santiago Canyon College UBMS program serves students enrolled at El Modena High School and Orange High School. For more information, please call 714-628-5011.

Veterans Services

Students interested in seeking Veterans Services at Santiago Canyon College (SCC) should go to the Scholarships/Veterans Services Office (VSO) in room A-210.

Veterans Services assists qualified veterans with other support services, such as Priority Registration, Educational Counseling, Psychological Services. They support the success of students with disabilities by providing programs and services that promote access, equal opportunity and empowerment. A knowledgeable office staff specializing in veterans affairs is prepared to assist with Veterans Services at SCC (714-628-4793). Rancho Santiago Community College District is approved by the California Bureau for Private Postsecondary and Vocational Education for the training of veterans and eligible persons. Educational and vocational opportunities are available for college credit. Opportunities include associate degrees and certificate programs.

Eligibility

Veterans who qualify to receive benefits under the Veterans Educational Assistance Program (VEAP), Montgomery Bill-Active Duty (Chapter 30), Montgomery Bill-Selected Active Reserve (Chapter 1606/1607), and eligible persons under the Survivors’ and Dependents’ Educational Assistance Program (Chapter 35) are encouraged to take advantage of their educational entitlement.

Veterans with aggregate active duty after 9/10/01 may be eligible for the post 9/11 BIU (Chapter 33). This program includes a basic housing allowance (BAH), book stipend, and tuition/fees.

Veterans with a service-connected disability may be eligible for vocational rehabilitation. This program provides eligible veterans with a monthly allowance as well as payment for tuition, most fees, and necessary books and supplies. War orphans, dependents, and survivors of veterans considered 100% disabled as the result of a service-connected disability, who died from those conditions, or who died while on active duty, may be eligible for benefits. These applicants should seek information regarding eligibility from the VA Regional Office, Los Angeles, 1-800-827-1000 or 1-888-442-4551 or contact the local Orange County Service Center, Santa Ana, 714-567-7450.

Applying for Benefits

Each veteran and eligible person who wishes to enter a college in the Rancho Santiago Community College District must follow the admissions procedures. See index for details on enrolling. A copy of discharge paper—DD214 is required of all new veterans and a copy of DD2384 of new Chapter 1606/1607 reservists who are using their educational benefits for the first time. A birth certificate is usually required of new dependents. All documents must be submitted in person.

Transcripts and Program Approval

VA regulations stipulate that prior credit must be evaluated by the beginning of the third term of attendance. If the required transcripts are not on file, the VSO will not be able to certify payment beyond the second term. With this in mind, the VSO requests that all original transcripts be on file with the Admissions Office by the end of the first term of attendance. This will avoid any delay in payments since transcripts do not always arrive in a timely manner.

Veterans and eligible persons must have each course approved prior to registering for each term. VA requires that the Veterans Services monit or progress towards a specific degree plan. Therefore, for payment purposes, students must select a major and take only those courses on the student educational plan specifically required for that major.

College counselors are available to provide comprehensive counseling services for day and evening students; phone 714-628-4800 at Santiago Canyon College for an appointment. If you have attended previous schools, official transcripts must be on file before a college program can be approved by the counselor.

Military Credit

SCC will only evaluate credit from regionally accredited institutions. Three units for health education and one unit for kinesiology may be granted on the basis of military service. When a veteran petitions for graduation and needs these units for graduation purposes, Veterans Services will verify a request for credit from the DD214. The credit granted can be used in area F under Plan A. Under Plan B, three units of credit are granted in area E. Military credit is not accepted under Plan C.

General Information

The Veterans Administration will only pay educational benefits for the period of time that each course is active as shown by the beginning and ending dates in the term class schedule. Students must be enrolled in at least half time, (6.0 units—regular sessions and 3.0 units—mini and
summer sessions) to be eligible for regular payment, under Chapter 33. Students must be more than 1/2 time to receive the national average of BAH or be more than 1/2 time and have at least one campus based course to receive full BAH. A veteran or eligible student attending less than 1/2 time can be reimbursed tuition and fees, not to exceed the normal monthly rate for a full-time, 3/4 time or 1/2 time student. Veterans and eligible persons who wish to receive benefits must notify the VSO at the beginning of each term by completing a VA benefit request form. Satisfactory progress must be maintained by all VA applicants. A veteran or eligible student may enroll in open circuit television classes. All those collecting VA educational benefits are required to immediately report any changes of classes, both adds and drops, to the VSO.

Veterans and their eligible dependents or spouses must demonstrate academic progress. Academic progress is defined as achieving a minimum GPA of a 2.0 or better and/or successfully completing 50% of the units attempted. Students who fail to make academic progress will be placed on Academic Probation and/or Course Completion Probation accordingly. Students who are on probation for two terms, after failing to demonstrate academic progress towards graduation requirements, will have their VA benefits suspended. In such cases, students must petition for recertification. These students must submit a counselor-approved academic program which indicates what course of action they are required to take in order to maintain satisfactory academic progress towards their graduation requirements.

Writing Center
The primary purpose of the Santiago Canyon College Writing Center is to make our students better writers by helping them develop their skills, their confidence, and their voice. Students enrolled in our foundational/basic skills courses, English N60 and 061, visit the center once a week to practice and fortify the concepts they are learning in the classroom. Professors and Writing Center faculty work closely to coordinate their efforts and provide students with extended support for success. Students taking composition and literature may use the Writing Center’s resources by enrolling in a 0.2 unit Writing Center course, English N91, which allows them to work with English faculty to improve their essays and strengthen their research skills. Finally, the Writing Center serves all disciplines by inviting students who are writing essays for classes such as philosophy, psychology, history, and child development to enroll in an Extended Strategies course, English N92, for assistance from English professors. In addition to these services, the Writing Center hosts a series of 45-minute campus workshops each semester to help all students brush up on their punctuation, grammar, and research techniques.

The SCC Writing Center is a beautiful, spacious student facility located on the second floor of the Humanities Building. It is made up of two large classrooms/work areas, two break-out/conference rooms, and a comfortable lobby. In addition to several round tables, the center contains 56 student computers and 2 printers.
STUDENT LIFE

Associated Student Government (ASG)
The Associated Student Government was established to provide students with government and leadership experience. Opportunities are available to become involved in campus and statewide committees and councils as student representatives. In ASG, students learn firsthand about group dynamics and decision making, program planning, and running effective meetings. Additionally, there are many student clubs and organizations to join. For more information, please call 714-628-4913.

Student Life and Leadership
The office of Student Life and Leadership promotes and supports students’ co-curricular interests and provides excellent opportunities through the Student Leadership Institute (SLI), the Associated Student Government (ASG), and student organizations. The office also provides a variety of services to students, faculty, and staff through assistance with student-focused event planning. For more information, please call 714-628-4912 or visit A-206.

Multicultural and Leadership Resource Library
The Multicultural and Leadership Resource Library was developed to engage students and provide cross-cultural awareness and leadership resources. The library provides a variety of resources in the form of books, audio, and video. For more information, please call 714-628-4912.

Campus Centers
The T-Buildings house the Inter-Club Council office, food services at the Hungry Hawk Cafe, and the Student Health and Wellness Services. To reserve rooms for use, call the Santiago Canyon College facilities office at 714-628-4719.

Student Clubs and Organizations
The Inter-Club Council (ICC) represents all active student clubs and organizations on campus to promote leadership development, networking, communication skills and campus life. For more information and/or to form a new student club, please call 714-628-4917.

Current student organizations include:
- Active Minds
- Breakfast Club
- C.A.M.P. (Care About My Planet)
- Cheer For Charity Club
- Christian Students
- Current Issues Forum
- Dance Club
- English Club
- EOPS Club
- French Club
- Film Institute
- Fine Arts Club
- Forensics Club
- Gay/Straight Alliance
- Girl Up
- Hip Hop Dance Club
- Live Music Club
- Math Club
- Muslim Student Association
- Phi Theta Kappa Honor Society
- Philosophical Society
- SCC International Club
- SCC Teach
- STEM Club
- United Students for Equal Education (USEE)

Intercollegiate Athletics
Santiago Canyon College, home of the Hawks, is proud of its athletic teams and their rich athletic history. The college has fielded teams since 1999 and now offers competitive opportunities for student athletes in seven sports: men's and women's cross country, men's golf, men's and women's soccer, softball, and men's and women's track and field.

The Hawks compete in the highly competitive Orange Empire Conference (OEC) under the auspices of the California Community College Commission on Athletics. SCC's outstanding coaching and teaching staff, combined with an excellent system of academic assistance, has helped eligible students transfer to four-year colleges and universities.

2012 saw the opening of the new athletics and aquatics complex at Santiago Canyon College. The facility includes a fully equipped fitness center, strength lab, aerobics studio, men's and women's locker rooms, athletic training facilities, three indoor courts, a swimming pool and administrative offices.

All prospective student-athletes with questions about eligibility should contact the Director of Athletics at 714-628-4816.

SCC Athletic Achievements
- 2015 Softball State Super Regionals
- 2014 Softball OEC Champions
- 2014 Softball State Final Four
- 2014 Women's Soccer State Championship Finalists
- 2014-2004 Women's Soccer OEC Champions
- 2013 Softball advances to State Super Regionals
- 2013 Women's Soccer State Championship Finalists
- 2012 State Academic Scholar Team
- 2012 Women's Soccer State Academic Champions
- 2012 Women's Soccer State Championship Finalists
- 2011 Golf Team finishes 4th in state
- 2011 Softball Qualified for Southern California Regional Playoffs
- 2011 Women's Soccer OEC Champions
- 2011 Women's Soccer State Championship Finalists
- 2010 Connor Covington State Golf Champion
- 2010 Men's Individual State Golf Champions
- 2010 State Academic Scholar Team
- 2010 Women's Soccer OEC Champions
- 2010 Women's Soccer State Academic Champions
- 2009 Women's Soccer National Champions
- 2009 Women's Soccer OEC Champions
- 2009 Women's Soccer State Champions
- 2008 Women's Soccer OEC Champions
- 2007 Women's Golf OEC Champions
- 2007 Men's Soccer Qualified for Southern California Regional Playoffs
- 2007 Women's Soccer State Championship Finalists
- 2006 Men's Golf OEC Champions
- 2006 Women's Soccer State Champions
**FINANCIAL AID AND SCHOLARSHIPS**

Financial Aid is intended to help students who might not otherwise be able to attend college. Although the primary responsibility for meeting college costs rests with the student and his or her family, it is recognized that many families have limited resources and are unable to meet the cost of a college education. Federal and state financial aid programs have been established to provide assistance to students with documented financial need.

The application process for financial aid begins with the completion of the Free Application for Federal Student Aid (FAFSA) which is available in January for the following academic year. In order to qualify for financial aid a student must be enrolled in an eligible program of study leading to completion of an AA/AS degree, transfer requirements or a certificate program; maintain satisfactory academic progress; for most programs, have demonstrated financial need; be a U.S. citizen or eligible non-citizen; certify compliance with selective service registration requirements; not be in default on any student loan or owe a refund on any grant made under any Title IV program; have a social security number; and have a high school diploma, or GED. Effective July 1, 2012, we are no longer offering the Ability to Benefit test. Students without a High School diploma or GED who passed the Ability to Benefit test or completed 6 college credits toward a degree or a certificate prior to July 1, 2012 are still eligible to continue receiving aid in future years.

For additional information and a Free Application for Federal Student Aid (FAFSA), stop by the Financial Aid Office, located in room E-104, or call 714-628-4876. You may also apply online at www.FAFSA.ed.gov.

**Withdrawals and Repayment of Financial Aid Funds**

Federal aid recipients who withdraw or are dropped from all classes by the instructors are subject to regulations regarding the Return of Title IV funds. Students who withdraw or are dropped from all classes prior to completing more than 60% of the enrollment period are subject to these rules. Based on the date of the complete withdrawal or drop, the Financial Aid Office will determine the amount, if any, of “unearned” federal financial aid received by the student.

If the student received more financial aid than the amount earned, the student will be billed for the overpayment. Financial aid recipients are advised to 1) avoid total withdrawal from all classes, 2) successfully complete at least 6 units during the semester, 3) if completely withdrawn, repay any “unearned” financial aid as soon as possible. Failure to do any of the above may result in the loss of financial aid eligibility.

**Federal PELL Grant**

This grant is a federally funded program designed to be the foundation of financial aid for undergraduates who demonstrate need. The amount of the PELL Grant is based on the cost of attendance, minus the expected calculated family contribution and the student’s enrollment status at the time of payment. Award amounts vary according to eligibility and enrollment. Please check with the Financial Aid Office or visit the website for the maximum and minimum PELL award amounts. PELL Grants are limited to 12 semesters.

**FSEOG and FWS Programs**

These programs below have limited funds and are generally awarded only to those eligible students who meet the Priority Deadline and to those students with the least amount of estimated family contribution (EFC).

**Federal Supplemental Educational Opportunity Grant (FSEOG)**

This federally funded grant is available to undergraduate students who demonstrate exceptional financial need. The awarding of FSEOG funds must be given to maximum PELL Grant recipients.

**Federal Work-Study (FWS)**

This federally funded program provides employment opportunities to students with financial need. Students awarded FWS receive an allocation of funds earned through part-time jobs on campus. FWS provides an excellent learning process through on-the-job training.

**William D. Ford Federal Direct Loan Programs**

**Subsidized Direct Loan**

The federal government pays the interest on this need-based student loan. No payments are required while the student remains actively enrolled in at least six units and at the end of enrollment. The maximum annual loan amounts are $3,500 for freshmen and $4,500 for sophomores.

**Unsubsidized Direct Loan**

There is no income criteria on this non-need based federal student loan for students who are enrolled in at least six units. Interest begins accruing immediately. Interest payments may be made or payments can be deferred. Maximum annual loan amounts are $3,500 for freshmen and $4,500 for sophomores.

**Additional Unsubsidized Direct Loan**

This additional $6,000 loan is available to independent students: $2,000 is available to dependent students who meet the qualification requirements.

**Parent Loans for Undergraduate Students (PLUS)**

This loan is for parents who borrow on behalf of dependent students. The parent’s credit will be checked by the Department of Education. Repayment of principal and interest begins immediately. The amount borrowed cannot exceed the cost of attendance, minus any other financial aid and resources received by the student.

**Chafee Grant**

This grant program is available to former foster youth. Awards are $5,000 per year. Apply using the FAFSA and the separate Chafee Grant application at https://www.chafee.csac.ca.gov/studentapplication.aspx.

**California State Programs**

**Board of Governors Waiver (BOGW)**

A State program for California residents to waive the enrollment fees at community colleges. There are several ways to qualify for a BOGW:

- The student demonstrates financial need according to federal methodology based on completion of the Free Application for Federal Student Aid (FAFSA);
- OR
- The student or the student’s family is receiving CalWORKS, formerly TANF/AFDC, or Supplemental Security Income (SSI), or General Assistance/General Relief, or the student is a disabled veteran or a dependent of a deceased or disabled veteran as certified by the California Department of Veterans Affairs, or the student is a recipient or the child of a recipient of the Congressional Medal of Honor, or the student is a dependent of a victim of the 9/11/01 terrorist attack, or the student is a dependent of deceased law enforcement/fire suppression personnel killed in the line of duty.
- OR
- The student meets specific income criteria based on family size as set by the State of California.

**Dream Act/AB 540 Eligibility**

Several types of state and institutional aid are available to AB 540 students as a result of the California Dream Act such as BOG Fee Waiver or Cal Grant. Please go to www.sccollege.edu and read more about it under financial aid.
Cal Grants
Cal Grant Programs are available to California Residents who qualify. United States citizens, permanent residents or eligible non-citizens may apply for Cal Grants via the Federal Application for Student Aid (FAFSA). AB 540 students may apply via the California Dream Act Application. The deadline to apply is March 2nd each year for all California College Students (maximum opportunity). If you miss the March 2nd deadline AND you plan to attend a community college in the fall, you have until September 2nd (limited number of grants available). Be aware there is also a GPA requirement. The college electronically transmits GPA verifications for certain students. For detailed information go to www.csac.ca.gov.

Cal Grant A
Cal Grant A assists low and middle income students with tuition costs at four-year institutions. Eligibility is based on academic achievement and financial need.

If you qualify for a Cal Grant A and plan to attend a public community college, the Student Aid Commission will put the student’s tuition/fee award on reserve for 2 years until the student transfers to a four-year college, provided that the student continues to qualify financially by demonstrating financial aid need.

Cal Grant B
Cal Grant B provides assistance in meeting living expenses (i.e. books and supplies, housing costs and transportation). Awards range from $412 to $1,648. Eligibility is based on demonstration of substantial financial need and enrollment status. Cal Grant B also funds tuition costs for sophomores at the same rate as Cal Grant A. Students must be actively enrolled in 6 units.

Cal Grant C
Cal Grant C assists vocational students with tuition and training costs in a program of at least 4 months long. Awards range up to $547 for related training costs such as special clothing, tools, equipment, and books and supplies. The Cal Grant C program is for non-transfer majors.

Bureau of Indian Affairs Grant (BIA)
The Bureau of Indian Affairs provides grants to assist eligible American Indian students in meeting educational costs. To be eligible, the applicant must be at least one-fourth American Indian, Eskimo, or Aleut heritage, and must be in good standing at the Bureau of Indian Affairs, be enrolled as a full-time student (12 or more units) and be eligible for financial aid at Santiago Canyon College.

Scholarships
Many community benefactors, including SCC Foundation, SCC faculty and staff, and outside organizations, establish scholarships at Santiago Canyon College to recognize academic achievement and offer needed financial support.

Eligibility varies according to the individual scholarship. There are scholarships available to students taking classes at Santiago Canyon College, those transferring to four-year colleges, and those entering college for the first time upon graduation from high school.

Listings and requirements for the various SCC student scholarships are published each spring in a comprehensive scholarship handbook. Information, applications, and assistance are available in the Scholarship Office on campus.

Applications must be submitted for screening in March, and student recipients will be recognized at a ceremony in May.

For information regarding scholarships that are available for high school seniors, contact the Scholarship Office or the High School and Community Outreach Office.

For applications or more information, please contact the Scholarship Office at 714-628-4793, visit the Scholarship Office located in room A-210 or online at www.sccollege.edu/scholarships.

Honors and Awards
Phi Theta Kappa. Phi Theta Kappa is an international honors society that recognizes academic excellence and achievement of students enrolled in two-year colleges. The society offers a myriad of opportunities for scholarship, intellectual enrichment, personal development and academic recognition.

The Beta Eta Rho Chapter of Phi Theta Kappa was organized at Santiago Canyon College in 1998.

Membership in Phi Theta Kappa is extended each semester by the local chapter to students who have completed a minimum of 12 degree units with a minimum of grade point average of 3.5. Members receive special recognition when they graduate.

Psi Beta. Psi Beta is the national honor society in psychology for community and junior colleges. The mission of Psi Beta is professional development of psychology students through promotion and recognition of excellence in scholarship, leadership, research, and community service.

Membership in Psi Beta is extended each semester by the local chapter to students who have completed one psychology course and 12 semester hours of total college credit and have an overall GPA of 3.25 with at least a “B” average in psychology courses.

Members receive special recognition upon graduation.

Sigma Chi Eta. The purposes of Sigma Chi Eta are (a) to recognize, foster, and reward outstanding scholastic achievement in communication studies; (b) to stimulate interest in the field of communication; (c) to provide an opportunity to discuss and exchange ideas in the field of communication; (d) to establish and maintain closer relationships and mutual understanding between speech communication studies faculty and students; (e) to explore options for community college students who will transfer to a four-year college or university or enter the world of work. The Omicron Chapter at SCC was founded in 2004. Students who qualify may apply for membership by contacting the advisor, Dr. Melinda Womack. In order to become a member of a Sigma Chi Eta chapter, the student must:

- have completed at least 12 semester hours
- have completed at least three communication courses or 9 semester hours (or at least 12 quarter credit hours) of communication study;
- have a cumulative GPA of at least 3.0;
- have a communication studies GPA of at least 3.25;
- be in good standing at the college;
- display commitment to the field of communication.

Foundation
The Santiago Canyon College Foundation is a non-profit organization dedicated exclusively to helping SCC gain the financial resources it needs to insure that every qualified student, regardless of economic background, has access to a high-quality college education. The foundation raises money for scholarships and support programs such as Guardian Scholars (emancipated foster youth) and the Veterans Service Office (VSO), as well as for academic enrichment programs and campus events that enhance the quality of our students’ experience at SCC.

There is no better value in higher education than community college – nor a more cost-effective way to insure that more people in our community have a viable path to become or remain productive citizens.
Your donation to the foundation – in any amount – makes a real difference in the lives of our students. To find out more, please email foundation@sccollege.edu or call 714-628-4790.

**On-Campus Job Placement Office**

The On-Campus Job Placement Office operates under the umbrella of the Student Support Services, aiding students in advancing their leadership skills by placing them in on-campus student work programs. Student employment can assist with education cost and also develop desirable work attitudes and habits while working in a professional environment. Upon determining eligibility, students are matched with departments based on their educational goals. This work experience is intended to compliment the educational process and to enhance future employment.

For more information, call the On-Campus Job Placement Office at 714-628-4867 or visit us in E-104 or go online at www.sccollege.edu/jobplacement.

**Student Consumer Information – Right-To-Know Disclosure Information:**

Federal regulations require all campuses to provide specified information to prospective and current students, staff and the general public. Listed below are those items that must be available for review per federal regulation.

The federal Higher Education Act, the federal Equity in Athletics Disclosure Act (EADA), and regulatory guidance provided in the Code of Federal Regulations (CFR) require direct individual notices of prescribed information to certain target audiences including prospective students; currently enrolled students; current employees; parents, coaches and counselors of prospective student athletes; and the general public. Disclosures are to include crime/security statistics, student completion/graduation rates, FERPA privacy/security rights, financial aid program information, and gender-specific information on athletic participation and financial support.

Please go to www.sccollege.edu and click on ‘About SCC’ to review all the current Student Consumer Information including Gainful Employment disclosures.
EDUCATIONAL OPTIONS

Associate Degrees for Transfer
The Student Transfer Achievement Reform Act (Senate Bill 1440, now codified in California Education Code sections 66746-66749) guarantees admission to a California State University (CSU) campus for any community college student who completes an “associate degree for transfer,” an established variation of the associate degrees traditionally offered at a California community college. The Associate in Arts for Transfer (AA-T) or the Associate in Science for Transfer (AS-T) is intended for students who plan to complete a bachelor’s degree in a similar major at a CSU campus. Students completing these degrees (AA-T or AS-T) are guaranteed admission to the CSU system, but not to a particular campus or major. In order to earn one of these degrees, students must complete a minimum of 60 required semester units of CSU-transferable coursework with a minimum GPA of 2.0. Students transferring to a CSU campus that does accept the AA-T or AS-T will be required to complete no more than 60 units after transfer to earn a bachelor’s degree (unless the major is a designated “high-unit” major). This degree may not be the best option for students intending to transfer to a particular CSU campus or to a university or college that is not part of the CSU system. Students should consult with a counselor when planning to complete the degree for more information on university admission and transfer requirements.

Associate Degrees
The Associate Degree is a certification of the student’s satisfactory completion of a program of study with a specific major or area of specialization. The Associate Degree is normally completed in two years, compared with the Baccalaureate Degree, which is normally completed in four years. Associate Degrees are commonly conferred by community colleges. They are usually of two types, the Associate in Arts and the Associate in Science. The distinction between the Associate in Arts and the Associate in Science degrees lies in the majors. If the major is in the fields of engineering, physical or biology science, or occupational curricula, the degree conferred is usually the Associate in Science. Otherwise the Associate in Arts degree is conferred.

Ordinarily Associate Degrees have one of two major purposes. Either the program of study prepares the individual for transfer to a four-year college or university or the program of study is intended to prepare the student for immediate employment.

Information on academic honors at graduation is listed on page 14.

Information on associate degree requirements is listed on pages 37-39.

Certificate of Proficiency Programs
A certificate is under 18 units and/or is not a state approved program. A certificate is verification of completion in a particular subject matter. A certificate will NOT be included on the official transcript. Certificate programs include only those courses which focus on vocational skills. The certificate has the sole objective of employment in a specialized area and for this reason there are no general education requirements in a certificate program.

Santiago Canyon College certificate programs are described in the catalog section on College Credit Instructional Programs.

Certificate of Achievement Programs
A certificate of achievement (18 or more units or state approved under 18 units) is a verification of achievement in a particular academic or occupational area, and it will be included on the official transcript. Certificate of Achievement programs normally include only those courses which have a direct bearing upon specialized occupational competency since the certificate of achievement has the sole objective of immediate employment in a specialized area. For this reason there is no general education requirement in a certificate of achievement program. Santiago Canyon College certificate of achievement programs are described in the catalog section on College Credit Instructional Programs. To qualify for a certificate of achievement, a candidate must meet the following requirements:

1. Courses: Courses are designated for the specific certificate.

2. Grades: At least a C grade in each course required for the certificate, unless otherwise specified. Credit by Examination may also be used to gain credit for required courses.

3. Pass/No Pass: A Pass/No Pass course is acceptable toward the certificate if it is required for the certificate and (a) offered on a Pass/No Pass basis only or (b) if the Pass/No Pass is earned on the basis of credit by examination.

4. Residency: Twelve units completed at Santiago Canyon College. (Six units of major requirements must be completed at Santiago Canyon College.)

5. Petition: Petition for certificate filed by the student with the Office of Admissions and Records at Santiago Canyon College.
## ASSOCIATE DEGREE AND CERTIFICATE PROGRAMS AT SANTIAGO CANYON COLLEGE (SCC)

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<tr>
<td>* Accounting</td>
<td>AS</td>
<td>Geography</td>
<td>AA-T</td>
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<tr>
<td>Anthropology</td>
<td>AA/AA-T</td>
<td>Geology</td>
<td>AS/AS-T</td>
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<tr>
<td>* Apprenticeship–Carpentry</td>
<td>AS</td>
<td>History</td>
<td>AA-T</td>
</tr>
<tr>
<td>* Apprenticeship–Cosmetology</td>
<td>CA</td>
<td>* Human Development (Child Development)</td>
<td>CP</td>
</tr>
<tr>
<td>* Apprenticeship–Electricity</td>
<td>AS</td>
<td>Kinesiology</td>
<td>AA-T</td>
</tr>
<tr>
<td>* Apprenticeship–Maintenance Mechanic</td>
<td>AS</td>
<td>Liberal Arts</td>
<td>AA/AS</td>
</tr>
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<td>* Apprenticeship–Operating Engineers</td>
<td>AS</td>
<td>* Management</td>
<td>AS</td>
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<td>* Apprenticeship–Power Lineman</td>
<td>AS</td>
<td>* Marketing</td>
<td>AS</td>
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<tr>
<td>* Apprenticeship–Surveying</td>
<td>AS</td>
<td>Mathematics</td>
<td>AS-T</td>
</tr>
<tr>
<td>* Art</td>
<td>AA/AS/AA-T</td>
<td>Modern (Foreign) Languages</td>
<td>AA</td>
</tr>
<tr>
<td>Astronomy</td>
<td>AS</td>
<td>Philosophy</td>
<td>AA/AA-T</td>
</tr>
<tr>
<td>* Biology</td>
<td>AS</td>
<td>Physics</td>
<td>AS-T</td>
</tr>
<tr>
<td>* Business</td>
<td>AS/AS-T</td>
<td>Political Science</td>
<td>AA-T</td>
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<td>Chemistry</td>
<td>AS</td>
<td>Psychology</td>
<td>AA-T</td>
</tr>
<tr>
<td>Communication</td>
<td>AA/AA-T</td>
<td>* Public Works</td>
<td>AS</td>
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<tr>
<td>* Computer Information Systems</td>
<td>AS</td>
<td>* Real Estate</td>
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<td>* Computer Science</td>
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<td>* Cosmetology</td>
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<td>* Sign Language</td>
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<td>Economics</td>
<td>AA/AA-T</td>
<td>Social Science</td>
<td>AA</td>
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<tr>
<td>* Education</td>
<td>AA/AA-T</td>
<td>Sociology</td>
<td>AA/AA-T</td>
</tr>
<tr>
<td>* Electrician</td>
<td>AS</td>
<td>Spanish</td>
<td>AA-T</td>
</tr>
<tr>
<td>English</td>
<td>AA/AA-T</td>
<td>* Survey/Mapping Sciences</td>
<td>AS</td>
</tr>
<tr>
<td>* Gemology</td>
<td>AS</td>
<td>* Television / Video Communications</td>
<td>CP</td>
</tr>
<tr>
<td>General Education (CSU)</td>
<td>CA</td>
<td>* Water Utility Science</td>
<td>AS</td>
</tr>
<tr>
<td>General Education (IGETC)</td>
<td>CA</td>
<td>Women's Studies</td>
<td>AA</td>
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* Career Technical Education (CTE) training opportunities

Degrees and certificates of achievement have State-approved program control numbers and appear on student transcripts. Certificates of proficiency are not State-approved and do not appear on student transcripts.

For information regarding Gainful Employment and our programs, please visit our website at [www.sccollege.edu/gainfulemployment](http://www.sccollege.edu/gainfulemployment)
ASSOCIATE DEGREE REQUIREMENTS • 2015–2016

Associate Degrees
To earn an associate degree, a student must fulfill the requirements listed under I, II and III below.

I. Unit and Residency Requirements
60 UNITS of degree applicable coursework are required, with at least a 2.0 grade point average. At least 12 of the units must be earned at Santiago Canyon College and at least 6 of those units must be in courses required for the major. Units earned at an accredited college or university on a Pass/No Pass basis will be counted toward the degree requirements of the college, to a maximum of 15 units.

II. General Education Requirements
The general education requirements can be met through the completion of one of the following general education plans.

Plan A: Santiago Canyon College
General Education Requirements page 39

Plan B: California State University
General Education Breadth page 45

Plan C: Intersegmental General Education Transfer Curriculum (IGETC) page 47

The general education requirements can be met by submitting a transcript showing completion of a bachelor’s degree from a regionally accredited institution or by submitting a transcript showing completion of an associate of arts or associate of science degree from a regionally accredited California institution within a ten-year period of finishing major requirements at the college.

III. Major Requirements
Each degree and certificate program specifies courses required for the major (a minimum of 18 units). Students must complete these courses with a grade of C or better. For programs of study leading to an associate degree see College Credit Section on pages 55-197.

A course may be used to satisfy a major requirement and meet a general education category requirement. Non degree applicable courses may not be used for graduation requirements.

IMPORTANT NOTE: The list of courses will be subject to change year by year, but students are assured that courses taken to meet General Education requirements will be honored if they are approved for the academic year in which they are taken. Courses on this list are approved beginning Fall 2015 and are valid through Summer 2016.

Associate Degrees for Transfer
To earn an associate degree for transfer, a student must fulfill the requirements listed under I, II and III below.

I. Unit and Residency Requirements
60 UNITS of CSU-transferable semester units are required, with at least a 2.0 grade point average. While a minimum of 2.0 is required for admission to the CSU, some majors may require a higher GPA. Please consult with a counselor for more information. At least 12 of the units must be earned at Santiago Canyon College or Santa Ana College. Completion of a course is determined by a letter grade or with one of the following notations: W, NP, P, I. A student who has an interruption of attendance must use the catalog in effect at the time of first enrollment or any subsequent year.

Continuous enrollment is defined as completing at least one course each catalog year (fall, spring, summer) at Santiago Canyon College or Santa Ana College. Completion of a course is determined by a letter grade or with one of the following notations: W, NP, P, I. A student who has an interruption of attendance must use the catalog in effect at the time of readmission or one of subsequent continuous enrollment.

Commencement
Commencement is held once a year at the end of the spring semester for those students who complete the requirements for a degree during the year or the summer session. Student must submit a Petition to Graduate to participate in commencement.

NOTE: Transcripts from all colleges attended must be on file.

III. Major Requirements
Each degree program specifies courses required for the major (a minimum of 18 units). Students must complete an “AA-T” or “AS-T” major as detailed in the program section of the catalog. Completion of these courses must be done with a grade of C or better or a “P” if the course is taken on a “Pass/No Pass” basis. (Title 5 § 55063)

Petition For Graduation and Catalog Rights:
Students must submit a Petition to Graduate to earn an associate degree, certificate, CSU Certification and/or IGETC Certification. Petitions for graduation should be filed in the Office of Admissions and Records at Santiago Canyon College when a student has completed at least 30 units or one semester prior to the expected semester to graduate. Students who maintain continuous enrollment have the option to meet the associate degree or certificate requirements as listed in the catalog in effect at the time of first enrollment or any subsequent year.

Students who are following Plan C: IGETC and are planning to transfer to a CSU must complete Area 1C: Oral Communication CSU admissions requirement.
GENERAL EDUCATION REQUIREMENTS FOR THE ASSOCIATE DEGREE • PLAN A • 2015–2016

Philosophy

General Education requirements at Santiago Canyon College reflect the conviction that those who receive degrees must possess in common certain basic principles, concepts, and methodologies, both unique to and shared by various disciplines. General Education prepares the college student to comprehend and contribute to the modern world, to understand our regional, national, and international cultural diversity as well as our shared cultural heritage, to reinforce an awareness of self as well as others, and to instill an ongoing intellectual curiosity and commitment to learning.

The subject matter of General Education courses is designed to be general, broad and introductory rather than specialized, narrow, or advanced. General Education courses form a pattern of learning experiences designed to provide educational opportunities that lead to the following outcomes for students:

Learn—About Self and Others, Academic and Professional Issues
• Take responsibility for one’s own learning and wellbeing.
• Learn about one’s chosen academic major, while creating connections across disciplines.
• Learn about professional conduct, including workplace and community ethics, conflict management, and teamwork.

Communicate—With Clarity and Accuracy and in Diverse Environments
• Communicate ideas in a clear and articulate manner.
• Communicate accurately to diverse audiences.
• Communicate in various formats using diverse technologies.

Act—With Awareness of Self and the Local and Global Community of Persons
• Act to maintain one’s dignity and self-respect.
• Act as a responsible community member who treats others with respect, civility, empathy, honesty and dignity.
• Act to increase the wellbeing of the global community by maintaining cultural literacy, lifelong learning, ethical consideration of each other, and the environment we all share.

Think—Critically, Creatively, and Reflectively
• Critically analyze, evaluate, organize and use quantitative and qualitative data to solve problems and develop logical models, hypotheses and beliefs.
• Creatively use concepts to making learning relevant.
• Reflectively assess one’s values, assumptions, and attitudes.

A. Natural Sciences
Courses in the natural sciences examine the physical universe, its life forms, and its natural phenomena. They assist in developing an appreciation and understanding of the scientific method and encourage an understanding of the relationships between science and other human activities. This category includes introductory or integrative courses in astronomy, biology, chemistry, general physical science, geology, physics, physical geography, physical anthropology, and other scientific disciplines.

B. Social and Behavioral Sciences
Courses in the social and behavioral sciences focus on people as members of society. They assist in developing an awareness of the methods of inquiry used by the social and behavioral sciences. Critical thinking is stimulated about the ways people act and have acted in response to their societies, and appreciation is developed of how societies and social groups operate. This category includes introductory or integrative survey courses in cultural anthropology, economics, history, political science, psychology, sociology, cultural geography, and related disciplines.

C. Humanities
Courses in humanities study the cultural activities and artistic expressions of human beings. They assist in developing an awareness of the ways in which people throughout the ages and in different cultures have responded to themselves and the world around them in artistic and cultural creation, and in developing aesthetic understanding and an ability to make value judgments. This category includes introductory or integrative courses in the arts, foreign languages, literature, philosophy and religion.

D. Cultural Breadth
Courses meeting the cultural breadth requirement represent both global and national perspectives and recognize the value of systemic historical and cross-cultural examinations of race, ethnicity, gender, and global issues. Courses meeting this requirement can be identified in two areas.

1. Ethnic Studies/Women’s Studies
Courses meeting the Ethnic Studies/Women’s studies requirement focus on the cultural perspectives of the African American, the Asian American, the Chicano/Latino, and the Native American and women in the United States. They assist students to deal constructively with issues of difficult differences and to develop respect for and become aware of the views, interactions, and contributions of these ethnic groups and women to U.S. society and culture. This category is interdisciplinary and includes introductory courses that incorporate the voices of these historically excluded groups.

2. International Perspective
Courses in International Perspective include an emphasis on global perspectives in a cultural context. All courses need to address not just specific aspects of culture but also a component addressing the basic concepts of culture including how culture influences environment, behavior, structure, and function of society. These courses also include a multi-country perspective.

E. Language and Rationality
Courses in language and rationality develop the principles and applications of language toward logical thought, clear and precise expression and critical evaluation of communication in whatever symbol system the student uses.

F. Lifelong Understanding and Self-Development
The courses in this category are designed to equip human beings for lifelong understanding and development of themselves as integrated physiological and psychological entities. In a social context, students will benefit from study about themselves and how they function at different stages of life. Instruction is intended to include consideration of such matters as human behavior, sexuality, nutrition, health, stress, key relationships of humankind to the social and physical environment, and implications of death and dying. Physical activity courses could be included, provided that they include some components of the above listed topics.
GENERAL EDUCATION REQUIREMENTS FOR THE ASSOCIATE DEGREE • PLAN A • 2015–2016

A. Natural Sciences
(3 units are required)
- Anthropology 101, 101L
- Astronomy 109, 110, 112, 140
- Biology 109 or 109H, 109L, 139, 149, 177, 200, 211, 229, 239, 259
- Chemistry 209, 210, 219/219H
- Earth Science 110, 115
- Environmental Studies 200, 259
- Geography 101
- Geology 101, 101L, 142, 150, 201
- Physical Science 115
- Physics 109, 150A, 210, 250A

B. Social and Behavioral Sciences
(6 units are required)
Select one course from B1 and one course from B2.

B1. American Institutions
- History 118, 120 or 120H, 121 or 121H, 122, 126
- Political Science 101 or 101H

B2. Social Science Elective
- Anthropology 100 or 100H
- Criminal Justice 101
- Economics 101, 102
- Education 101
- Geography 100 or 100H, 102
- History 101 or 101H, 102 or 102H, 126, 240
- Human Development 107, 110
- Political Science 101 or 101H, 230
- Psychology 100 or 100H
- Sociology 100 or 100H

C. Humanities
(3 units are required)
- Anthropology 104
- Art 100 or 100H, 101, 102, 110
- Dance 100
- Foreign Language:
  - French 101, 102, 194, 196, 201, 202
  - Italian 101, 102, 194, 195, 201, 202
  - Spanish 101 or 101H or 101A & 101B, 102 or 102H, 194, 195A, 195B, 201, 202, 213
- Literature:
  - Music 101 or 101H, 102
  - Philosophy 106 or 106H, 108, 112, 115, 118, 120
  - Sign Language 110, 111, 112, 116
  - Television/Video Communications 101, 103, 104, 105
  - Theatre Arts 100

D. Cultural Breadth
(3 units are required)
- Anthropology 100 or 100H, 104
- Chicano Studies 101
- Communication 120 or 120H, 225 or 225H
- English 246, 271, 272, 278
- Ethnic Studies 101
- Geography 100 or 100H, 102
- History 124, 127, 152, 162
- Human Development 221
- Kinesiology 109, 110
- Music 102, 103
- Philosophy 112
- Psychology 170
- Sign Language 116
- Women’s Studies 101, 102

E. Language and Rationality
(6 units are required)
Select one course from E1 and one course from E2.

E1. English Composition
- English 101 or 101H with a grade of “C” or better.

E2. Communication and Analytical Thinking
Includes mathematics, logic, statistics, computer languages and programming and related disciplines.
- Communication 101, 110, 111
- Computer Science 100, 105, 129
- English 102 or 102H , 103 or 103H
- Mathematics 080, 105, 140, 150, 160, 170, 180 or 180H, 185, 219 or 219H, 280, 287, 290, 295
- Philosophy 110 or 110H, 111
- Reading 102, 150
- Social Science 219 or 219H

F. Lifelong Understanding and Self-Development
(3 units are required)
Select one course from F1 and one course from F2.
No more than one unit may be counted from F2.

F1: Business 130
- Communication 102
- Counseling 101, 113, 116, 118
- Interdisciplinary Studies 155
- Kinesiology 100, 101, 102, 104, 110, 111
- Library & Information Studies 100
- Mathematics 030
- Nutrition & Food 115
- Philosophy 111
- Psychology 230
- Reading 097
- Sociology 112


G. Required Proficiencies

G1. Mathematics
1. Completion of Mathematics 080 or any other 3 unit mathematics course numbered above the level of 080. Must be completed with a grade of “C” or better, OR
2. Score on the RSCCD mathematics placement test indicating placement in a mathematics course numbered above the level of 080.

G2. Reading
1. Satisfactory score on the reading skills portion of the SCC/SAC Reading Placement Instrument, OR
2. Successful completion of any Reading course at the 100 level, OR
3. A “C” grade, or better in 9 units of general education courses for the Associate Degree in Areas A (Natural Sciences) - 3 units; B (Social and Behavioral Sciences) - 3 units each in B1 and B2.

G3. Oral Communication
(3 units are required)
- Communication 100/100H, 101, 110, 111, 134

NOTE: Schedules for proficiency examinations are announced each semester in the Schedule of Classes. Applicants must be currently enrolled or completing graduation requirements in order to take the proficiency examinations.
TRANSFER TO OTHER COLLEGES

Transfer Center

The Transfer Center provides resources and services to assist students who are preparing to transfer to four-year colleges or universities. The Transfer Center sponsors various events throughout the year, including tours to universities, university representative advising appointments, transfer fairs, and a variety of workshops to help students with each step in the transfer process. In addition, the Transfer Center provides many useful resources such as updates via Facebook and e-mail, a comprehensive website, limited university catalogs and guidebooks, computers with Internet access, and expert advice from trained specialists and counselors with walk-in and appointment service available. For more information, stop by D-104-N, call 714-628-4865, or visit www.sccollege.edu/transfer.

Transferability of Courses

This section of the catalog is designed to help students plan an academic program for transfer to a four-year college or university. It includes information about the transfer process and general education requirements.

Since transfer requirements change frequently, students should meet with a counselor regularly to plan an academic program which will assure a smooth transition to the transfer institution of their choice.

Four-year colleges and universities often make changes in their requirements. The requirements listed in this section were updated at the time of publication; however, changes may have occurred after publication. Current transfer information and official articulation agreements are available in the Transfer Center and the Counseling Center at Santiago Canyon College. Articulation agreements are also available at www.assist.org.

There are four segments of higher education in California. They are: a) the University of California (UC) system with 10 campuses; b) the California State University (CSU) system with 23 campuses; c) over 119 accredited independent colleges and universities; and, d) the 112 California community colleges.

Santiago Canyon College provides the first two years of a four-year college or university program.

Santiago Canyon College offers courses to meet general education, major or elective requirements. Students can transfer a maximum of 70 units to a UC or CSU campus.

All courses numbered 100 or above will transfer to a CALIFORNIA STATE UNIVERSITY campus. Courses which are transferable to the UNIVERSITY OF CALIFORNIA will be designated on the UC Transferable Course Agreement, which can be found on page 48. Some of the courses which are transferable to the University of California have credit limitations. Check the UC Transferable Course Agreement to review these limitations. This list is available in the Counseling Center, Transfer Center, in this catalog, and at www.assist.org.

Independent and out-of-state colleges and universities usually accept most courses that are transferable to the University of California and many of the courses that are transferable to the California State University.

Begin a Transfer Major at Santiago Canyon College

To obtain a bachelor's degree, students need to select a course of study in which to specialize. This course of study is called a major. Almost every major requires that certain courses be completed during the first and/or second year of college. These are called Lower-Division Major Requirements. Many of these requirements can be completed at SCC prior to transferring. (The highly specific courses in the major are called Upper-Division Requirements and these are completed after transfer). In developing a program for transfer, first consideration in most cases should be given to completing the courses required in the transfer major or as preparation for the major.

Course Requirements for Transfer Students

A student can transfer from Santiago Canyon College to a four-year college or university as a junior without loss of time or credits by completing the following:

1. **Lower-Division Major Requirements.** Most majors at four-year colleges and universities require the completion of one or more lower-division courses as preparation for the upper-division course work in a major. Santiago Canyon College offers courses to meet the lower-division requirements for most majors at four-year colleges and universities. Information about many specific major requirements is available in the Counseling and Transfer Center, or at www.assist.org. Students should meet with a counselor for additional information about major programs and requirements.

2. **General Education Requirements.** These are the courses required of students to obtain a degree regardless of major. They are designed to provide students with the knowledge, skills and understanding which will enable them to function as intelligent and creative members of the community. Courses in writing, critical thinking, mathematics, sciences, arts and humanities and the social sciences are included in general education.

3. **Electives.** These are courses of choice taken in addition to courses for the major and general education requirements.

Students enrolled in a transfer program can complete most of their general education and lower-division major requirements before transferring. Students who are planning to transfer to a four-year college or university should meet with a Santiago Canyon College counselor in the Counseling Center to develop a Comprehensive Student Education Plan which will identify the courses needed to transfer.

Transfer students may also want to complete an associate degree. While not a requirement for transfer, the associate degree is generally recommended, and proper planning should enable students to satisfy both requirements for graduation from SCC and for transfer.

California State University

The California State University has 23 campuses located throughout the state. While each campus within the system has its own unique geographic and curricular character, all campuses offer undergraduate and graduate instruction for professional and occupational goals as well as a broad liberal education. The CSU offers more than 1,800 bachelor’s and master’s degrees in some 240 subject areas. Campuses are located at Bakersfield, Channel Islands, Chico, Dominguez Hills, East Bay, Fresno, Fullerton, Hayward, Humboldt, Long Beach, Los Angeles, Monterey Bay, Northridge, Pomona (Cal Poly), Sacramento, San Bernardino, San Diego, San Francisco, San Jose, San Luis Obispo (Cal Poly), San Marcos, Sonoma, Stanislaus, and Vallejo (California Maritime).
To obtain a bachelor's degree from the CSU system, a student must complete a minimum of 120 semester units (180 quarter units). A maximum of 70 units of transferable credit will be accepted for courses completed at a community college.

Prospective CSU transfer students should consult a counselor regarding CSU admission, as requirements vary depending upon the student's status at the time of high school graduation.

California State University Admissions Requirements for Transfer Students

Upper-Division Transfer

Students are eligible for upper-division transfer if they complete at least 60 transferable semester (90 quarter) units and if they:

1. Earn a college grade point average of 2.0 (C) or better (2.4 for non-California residents) in all transferable units attempted.
2. Are in good standing at the last college or university attended (eligible to enroll).
3. Will complete the four basic subjects in English Composition, College Mathematics, Speech Communication, and Critical Reasoning, which are part of the general education requirements. These four sections of general education must be completed with a grade of “C” or better for each course.
4. Will complete additional general education units that comprise the total CSU general education pattern of 39 units.

NOTE: Some CSU campuses may impose a higher GPA admission standard based on impacted major or impacted campus status.

Lower-Division Transfer

A student may be eligible for lower-division transfer (completion of less than 60 units) if the student has completed all admission requirements required for first-time freshmen. Some CSU campuses may also require completion of general education classes in Mathematics and English, with a "C" or better prior to admission. If the student did not complete all the subject requirements in high school, appropriate college courses may be used to make up the missing subjects. Many CSU campuses will not accept lower-division transfer students. Please see a Santiago Canyon College counselor for more information.

General Education Requirements for California State University

To earn a bachelor's degree from the California State University, each student must complete a program of general education. Santiago Canyon College offers general education programs which will enable students to meet the lower-division general education requirements for all CSU campuses prior to transfer. Students can complete either the CSU General Education Breadth Requirements (Plan B) or the Intersegmental General Education Transfer Curriculum (IGETC/Plan C) for CSU.

Plan B

CSU General Education Breadth Requirements

See page 45 of the Catalog for specific courses which meet these requirements.

A. COMMUNICATION IN THE ENGLISH LANGUAGE AND CRITICAL THINKING — 9 units
B. THE PHYSICAL UNIVERSE AND ITS LIFE FORMS — 9 units
C. ARTS, LITERATURE. PHILOSOPHY, FOREIGN LANGUAGE — 9 units
D. SOCIAL POLITICAL AND ECONOMIC INSTITUTIONS AND BEHAVIOR; HISTORICAL BACKGROUND — 9 units
E. LIFELONG UNDERSTANDING AND SELF DEVELOPMENT — 3 units

All California State Universities have a graduation requirement in U.S. History, Constitution, and American Ideals. This requirement can be satisfied before or after transfer to a CSU by taking coursework in three areas US-1, US-2, and US-3. A student must take one course from each of the three areas. A student may use the same course to satisfy more than one area (US-1, US-2, US-3) if applicable. Courses meeting this requirement may also be counted toward certification in general education.

US-1: Historical Development of American Institution and Ideals:

History 118, 120, 120H, 121, 121H, 122, 124, 127

US-2: U.S. Constitution & Government:

Political Science 101, 101H

US-3: California State & Local Government:

Political Science 101, 101H

Students who complete Plan B are eligible to receive a Certificate of Achievement in General Education (CSU).

University of California

The University of California has ten campuses located throughout the state. Each campus within the system has its own unique geographic and academic character. The University offers bachelor's, master's and doctoral degrees in a variety of subject areas. Campuses of the University are located at Berkeley, Davis, Irvine, Los Angeles, Merced, Riverside, San Diego, San Francisco (Schools of Medicine, Dentistry and Pharmacy), Santa Barbara and Santa Cruz.

To obtain a baccalaureate degree from the UC system, a student must complete a minimum of 120 semester units (180 quarter units). A maximum of 70 units of transferable credit will be accepted for courses completed at a community college.

University of California Admissions Requirements for Transfer Students

Upper-Division Transfer

The vast majority of transfer students enter the University of California at the junior level from a community college. To be eligible for admission as a junior or upper-division transfer student, a student must fulfill both of the following criteria:

1. Complete 60 semester or 90 quarter units of transferable college credit with a grade point average of at least 2.4 (2.8 for nonresidents). No more than 14 semester (21 quarter) units may be taken Pass/Not Pass, and
2. Complete the following course pattern requirements and earn a grade of "C" or better in each course:
   - Two transferable college courses (3 semester or 4-5 quarter units each) in English composition; and
   - One transferable college course (3 semester or 4-5 quarter units) in mathematical concepts and quantitative reasoning; and
   - Four transferable college courses (3 semester or 4-5 quarter units each) chosen from at least two of the following subject areas:
     - arts and humanities
     - social and behavioral sciences
     - physical and biological sciences.

Students who satisfy the Intersegmental General Education Transfer Curriculum (IGETC/Plan C) prior to transferring to UC will satisfy section 2 of the transfer admission requirements listed above.
Lower-Division Transfer
The University of California admits some transfer students before they reach junior or upper-division standing, if they have met specific requirements. Lower-Division transfer admission decisions vary by UC campus, and it is not a common policy for many UC campuses. If a student were to be admitted as a lower-division transfer at a UC campus the following criteria would apply:

If a student was eligible for admission to the University of California when he or she graduated from high school- meaning the student fulfilled the Subject, Scholarship, and Examination Requirements, or was identified by the University of California as eligible in the local context and completed the Subject examination requirements in the senior year, the student is eligible for transfer if he or she has a C (2.0) average in transferable college work.

If a student met the Scholarship Requirement in high school but did not satisfy the Subject requirement, the student must take transferable college courses in the missing subjects, earn a “C” or better in each required course and maintain an overall 2.0 GPA in all transferable coursework to be eligible to transfer.

NOTE: UC campuses may impose a higher GPA admission standard; please see a Santiago Canyon College counselor for more information.

General Education Requirements for the University of California
To earn a bachelor’s degree from the University of California, each student must complete a program of general education. To meet the general education requirements of the University, students can complete either the Intersegmental General Education Transfer Curriculum (IGETC/Plan C) or individual campus general education requirements. Santiago Canyon College strongly recommends that students follow the IGETC rather than the individual campus general education/breadth requirements because this will usually provide more flexibility when applying for transfer. However, some UC campuses may discourage or restrict the use of IGETC for particular majors, especially majors that have many lower-division requirements that can be met at the community college. Students who began at a UC campus and who intend to transfer back to the same campus cannot use IGETC.

Students who enrolled at a UC campus, leave that campus and attend Santiago Canyon College, and plan on transferring to a different UC campus may use the IGETC. Students are strongly encouraged to work with a Santiago Canyon College Counselor to develop an education plan that incorporates major preparation and appropriate general education requirements.

Plan C
Intersegmental General Education Transfer Curriculum (IGETC) for CSU And UC
See page 47 of the Catalog for specific courses which meet these requirements.

1. ENGLISH COMMUNICATION – 9 units (CSU)
   ENGLISH COMMUNICATION – 6 units (UC)
2. MATHEMATICAL CONCEPTS – 3 units (CSU and UC)
3. ARTS AND HUMANITIES – 9 units (CSU and UC)
4. SOCIAL AND BEHAVIORAL SCIENCE – 9 units (CSU and UC)
5. PHYSICAL AND BIOLOGICAL SCIENCES – 7-9 units (CSU and UC)
6. LANGUAGE OTHER THAN ENGLISH – 0-5 units (UC)

California State University also has an American Institutions requirement which can be satisfied prior to transfer by taking Political Science 101 and an approved American History course in Area 4. Completion of these courses is advised for students completing the IGETC pattern and transferring to a CSU campus. See page 47 for specific details.

Students following the IGETC pattern (Plan C) are strongly advised to complete all requirements prior to transfer. Completion of the pattern allows the student to become certified, which means the student has met all lower-division general education requirements. Partial certification is permitted if a student has completed all but two (2) courses on the IGETC pattern. Specific rules apply to how and when the remaining courses must be completed after transfer. Please see a Santiago Canyon College counselor for guidelines.

Students who complete Plan C are eligible to receive a Certificate of Achievement in General Education (IGETC).

Certification of General Education for Transfer to UC or CSU
Upon a student’s request, Santiago Canyon College will verify the completion of lower-division general education requirements for transfer to the University of California or the California State University. Students should request IGETC/Plan C or CSU GE/Plan B certification during the semester prior to the last term of attendance.

Students who transfer without certification will have to meet the general education requirements of the specific UC or CSU campus to which they are transferring. Meeting these requirements usually necessitates taking additional courses.

Students who have taken courses at other colleges can have these courses approved in the certification process. Using the Intersegmental General Education Transfer Curriculum or CSU General Education Breadth, Santiago Canyon College will certify (guarantee) courses taken at other California community colleges in the areas designated by the offering college.

Courses taken at independent or out-of-state colleges/universities that are regionally accredited (which do not maintain a CSU GE Breadth or IGETC certification list) may be approved for certification via a “Pass Along Petition” and after a review by the Santiago Canyon College Articulation Officer. Courses are passed along for IGETC or CSU GE Breadth if they are equivalent to courses on the Santiago Canyon College or another California community college’s IGETC or CSU GE Breadth pattern. Pass Along Petitions are available at the Santiago Canyon College Counseling Department and must be accompanied by the appropriate documentation. Students must make an appointment with a Santiago Canyon College counselor before submitting a Pass Along Petition.

Courses from foreign institutions cannot be used in the certification process.

Students should request IGETC certification from the last California Community College they attend prior to transfer to UC or CSU.

Students requesting CSU GE Breadth certification must complete at least 12 units at Santiago Canyon College.

NOTE: Transcripts from all colleges attended must be submitted to the Admission Office prior to requesting certification.
Independent and Out-of-State Colleges and Universities

In addition to state supported colleges and universities in California, there are many outstanding independent institutions in the state. There are also many colleges, both private and public, located throughout the United States to which Santiago Canyon College students can transfer. Each of these institutions has its own unique requirements for admission. In order to determine eligibility, students should visit the website of the university to view admission requirements or obtain a copy of the university catalog.

Santiago Canyon College has articulated general education requirements and major preparation courses with a number of independent institutions such as Chapman University, The University of San Diego, and the University of Southern California. Students transferring to independent or out-of-state institutions should meet with a Santiago Canyon College counselor in order to determine appropriate general education and major preparation requirements.

California’s fully-accredited independent colleges and universities provide many options at the undergraduate, graduate, and professional levels for students planning to continue their education beyond the community college. For a complete listing of independent colleges and universities in California, please visit www.aiccu.org or the Santiago Canyon College transfer website at www.sccollege.edu/transfer.

Pass Along Procedures

Pass Along permits a student to use courses taken at colleges or universities that are not part of the California Community College system to meet general education requirements on the CSU GE/Plan B or IGETC/Plan C education plan. All completed coursework must come from a regionally accredited institution, meaning that an institution must be accredited by one of the six U.S. regional accrediting associations. The six regional accrediting associations are:

- Middle States Commission on Higher Education
- New England Association of Schools and Colleges, Commission on Institutions of Higher Education
- North Central Association of Colleges and Schools, The Higher Learning Commission
- Northwest Commission on Colleges and Universities
- Southern Association of Colleges and Schools, Commission on Colleges
- Western Association of Schools and Colleges, Accrediting Commission for Community and Junior College
- Western Association of Schools and Colleges, Senior College and University Commission

Pass Along petitions are reviewed in fall and spring only and after the second week of school. To start the Pass Along process students must:

1. Be currently enrolled at Santiago Canyon College.
2. Complete twelve units of Santiago Canyon College coursework.
3. Submit official transcripts from all institutions attended to the SCC Admissions Office in E-101. Electronic transcripts are considered official only if the electronic transcript is sent directly to the SCC Admissions Office. Electronic transcripts sent directly to the student are not considered an official transcript. Students are advised to obtain an extra set of transcripts for their personal files.
4. Make a copy of the course description for each course the student wants a pass along review. The course description copy must be from the catalog year the course was completed. Include a copy of the cover page from the catalog. If a course cannot be located, the student must contact the institution for the appropriate course description. For IGETC pass along approval of Area 1A-English Composition and/or Area 1B-Critical Thinking a course syllabus of the English course must be provided.
5. Make an appointment with an SCC Counselor. Bring copies of the course descriptions/syllabi and official transcripts to the appointment. The counselor will assist the student in filling out the “Pass Along Petition.” Courses submitted for IGETC pass along approval must be completed with a grade of “C” or better. No “C-” grade can be approved for pass along on IGETC.
6. Completed Pass Along petitions are submitted to the Articulation Officer for review and take two to three weeks to process. Students will be notified by mail once a decision is made.

Courses from international institutions cannot be considered for Pass Along.

Associate in Arts for Transfer (AA-T) and Associate in Science for Transfer (AS-T) Reciprocity, Course Substitution, External Exams, and Credit by Exam Policy and Procedures

Students who have taken courses from a California Community College, a regionally accredited institution, completed an external exam such as AP, CLEP (may be used on CSU GE-Plan B only), or IB or Credit by Exam may be granted credit towards an AA-T/AS-T general education and/or major requirement. Courses will be reviewed by one of the following methods.

General Education Courses

- General education courses taken at other California Community Colleges are granted course-to-course reciprocity providing the course in question appears on the CSU-Plan B or IGETC-Plan C at the time the student completed the course.
- Non-California Community College general education courses are reviewed by the Articulation Officer via the pass along process in accordance with the CSU-Plan B or IGETC-Plan C standards.
- Students who completed an external examination such as AP, CLEP or IB are granted credit towards general education consistent with CSU GE and IGETC policies.
- Santiago Canyon College Credit by Exam may be granted for general education only if a course is eligible and listed in the Credit by Exam section of the SCC Catalog.

Major Requirement Courses

- A major requirement with a C-ID number taken at another California Community College (CCC) is granted course-to-course reciprocity and meets the same designated C-ID major requirement found in the SCC’s AA-T/AS-T.
- A major requirement completed at another California Community College that is approved as part of its AA-T or AS-T, will be applied to the corresponding Santiago Canyon College AA-T/AS-T area. Courses completed at other CCCs must be part of their AA-T/AS-T at the time the student completed the course, if the course is not part of the AA-T/AS-T then the course must be
reviewed by the SCC discipline faculty in accordance with the C-ID descriptor. Courses completed at other CCCs prior to the AA-T/AS-T approval, will be “grandfathered”.

• A major requirement without a C-ID number taken at another California Community College, where an AA-T/AS-T does not exist, is reviewed by the SCC discipline faculty in accordance with the C-ID descriptor.

• A non-California Community College major requirement taken at a regionally accredited institution is reviewed by the SCC discipline faculty in accordance with the C-ID descriptor and if comparable, course-to-course substitution is granted.

• Students who completed an external examination such as AP, CLEP or IB are granted credit towards major requirements where exam-to-course comparability exists; if exam-to-course comparability does not exist, the discipline faculty reviews the external exam and determines course comparability if a course is offered (Students should be aware that external exam credit may be awarded/counted differently by the transfer institution).

• Santiago Canyon College Credit by Exam may be granted for major requirement only if a course is eligible and listed in the Credit by Exam section of the SCC Catalog.

It is strongly recommended students make an appointment with a Santiago Canyon College counselor to discuss appropriate credit placement.
### General Education Breadth Requirement Courses for the California State University (CSU) - Plan B - 2015–2016

Students planning to graduate from one of the 23 campuses of the California State University must complete 48 semester units in general education breadth courses. Upon request, Santiago Canyon College will verify the completion (certify) of up to 39 units of lower-division general education requirements. Nine semester units of general education units must be completed at the upper-division level after transfer. Students are strongly encouraged to meet with a Santiago Canyon College counselor when planning to transfer to a CSU campus.

**IMPORTANT NOTE:** The list of certifiable courses is subject to change by year, but students are assured that courses taken to meet General Education-Breadth requirements will be honored if they are approved for the academic year in which they are taken. Courses on this list are approved beginning Fall 2015 and are valid through Summer 2016.

#### A. Communication in the English Language and Critical Thinking

1. **Oral Communication**
   - Communication 100, 101, 110, 111
2. **Written Communication**
   - English 101/101H

#### A3: Critical Thinking

1. **Communication**
   - English 102/102H (F’12), 103/103H
2. **Philosophy**
   - Philosophy 110/110H, 111, 112, 116
3. **Reading**
   - Reading 150

#### B. The Physical Universe and Its Life Forms

1. **Physical Sciences**
   - Astronomy 109, 110, 112
   - Chemistry 209, 210, 219
   - Earth Science 110, 115
   - Geology 101, 130
   - Geology 101, 142 (F’13), 150, 201
   - Physical Science 115
   - Physics 109, 150A, 150B, 210, 211, 250A
2. **Life Science**
   - Anthropology 101
   - Biology 109H, 139, 149, 177, 211, 212, 214, 221, 229, 231, 239, 259, 290
   - Environmental Studies 259
3. **B3: Laboratory Activity**
   - Anthropology 101L
   - Astronomy 140
   - Biology 109L, 139, 149, 211, 212, 214, 221, 229, 231, 239, 259, 290
   - Chemistry 209, 210, 219
   - Earth Science 115
   - Environmental Studies 259
   - Geography 101L
   - Geology 101L, 201
   - Physical Science 115
   - Physics 109, 150A, 150B, 210, 211, 250A
4. **B4: Mathematics/Quantitative Reasoning**
   - Mathematics 105, 140, 150, 160, 170, 180/180H, 203 (F’13), 219/219H, 287
   - Social Science 219/219H

#### C. Arts, Literature, Philosophy, and Foreign Language

1. **Arts**
   - Dance 100
   - English 233A*, 233B*
   - Music 101/101H, 102, 103, 104
   - Television/Video Communications 103, 104
   - Theatre Arts 100

2. **Humanities**
   - French 101, 102, 194, 196, 201, 202
   - History 101/101H*, 102/102H*, 152, 162
   - Italian 101, 102, 194, 195, 201, 202
   - Sign Language 110, 111, 112, 116

**Both courses must be completed for C2 credit.**

#### D. Social, Political, and Economic Institutions and Behavior; Historical Background

1. **Areas A1 and A2**
   - Anthropology 100/100H, 103, 104
   - Economics 101, 102

**Three courses (in bold below) may also be used to meet 6 of the 9 units required for Area D.**

2. **D1: Anthropology and Archeology**
   - Anthropology 100/100H, 103, 104
   - Biological Sciences 101
   - Geology 101, 142 (F’13), 150, 201
   - Physical Science 115
   - Physics 109, 150A, 150B, 210, 211, 250A

3. **D2: Economics**
   - Economics 101, 102
   - Ethics Studies 100
   - Economics 101, 102
   - History 124*
   - Psychology 170*

4. **D4: Gender Studies**
   - Communication 225/225H
   - English 278*
   - History 127*
   - Political Science 221
   - Women’s Studies 101, 102

5. **D5: Geography**
   - Geography 101/101H, 102, 140

6. **D6: History**
   - (No credit for History 122 if taken after History 120/120H or 121/121H)

7. **D7: Interdisciplinary Social or Behavioral Science**
   - Chicano Studies 101*
   - Communication 120/120H
   - Counseling 150
   - Education 101 (F’13)
   - History 240 (F’14)

8. **D8: Political Science, Government, and Legal Institutions**
   - Political Science 101/101H, 200/200H, 201, 220, 221, 222 (F’13), 230

9. **D9: Psychology**
   - Human Development 107*
   - Psychology 100/100H, 157*, 170*, 200, 201, 230*, 240, 250

10. **D10: Sociology and Criminology**
    - Criminal Justice 101
    - Sociology 100/100H, 112*, 140/140H

#### E. Lifelong Understanding and Self-Development

1. **Area E**
   - Communication 102
   - Counseling 101, 116
   - Human Development 107*

2. **E1: Ethnic Studies**
   - anthropology 101, 102, 104, 110, 111
   - Nutrition and Food 115
   - Psychology 157*, 230*
   - Sociology 112*

3. **E2: Interdisciplinary Studies**
   - Sociology 240 (F’14)

**Certification Requirements**

1. No more than 30 semester units may be certified for areas B through D combined.

2. Pass/No Pass grades are accepted for certification in all areas. However, letter grades may be recommended or required for specific courses in a given major. Each CSU campus may also limit the total number of units graded Pass.

3. Grades of “C-” earned in Areas A1, A2, A3, and A4 will not be certified.

4. A single course may not meet more than one general education requirement.

5. Certification of coursework from other colleges will only be granted to students who have completed a minimum of 12 units at Santiago Canyon College.

6. Courses taken at other California Community Colleges will be applied to the subject areas in which they were listed by the institution where the course was completed.

7. Courses taken at other regionally accredited institutions (which do not maintain a CSU certification list) may be approved for certification via a “Pass Along Petition” and after a review by the Santiago Canyon College Articulation Officer. Courses completed at foreign institutions are not acceptable for certification.

8. Requests for certification should be made during the semester prior to the last term of attendance. Please consult the class schedule or the Admissions website at www.sccollege.edu or the Santiago Canyon College Counseling Department for deadline information.

*Courses may be listed in more than one area but will not be certified in more than one area.

**B1, B2, B3: Courses in bold have laboratory activity.**
The Course Identification Numbering System (C-ID) is a statewide numbering system independent from course numbers assigned by local California community colleges. A C-ID number next to a course signal that participating California colleges and universities have determined that courses offered by other California community colleges are comparable in content and scope to courses offered on their own campuses, regardless of their unique titles or local course numbers. Thus, if a schedule of classes or catalog lists a course bearing a C-ID number, for example COMM 110, students at that college can be assured that it will be accepted in lieu of a course bearing the C-ID COMM 110 designation at another community college. In other words, the C-ID designation can be used to identify comparable courses at different community colleges. However, students should always go to www.assist.org to confirm how each college’s course will be accepted at a particular four-year college or university for transfer credit.

The C-ID numbering system is useful for students attending more than one community college and is applied to many of the transferable courses students need as preparation for transfer. Because these course requirements may change and because courses may be modified and qualified for or deleted from the C-ID database, students should always check with a counselor to determine how C-ID designated courses fit into their educational plans for transfer.

Students may consult the ASSIST database at www.assist.org for specific information on C-ID course designations. Santiago Canyon College counselors can always help students interpret or explain this information.

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Completion and certification of all the requirements in the Intersegmental General Education Transfer Curriculum (IGETC) will permit a student to transfer from Santiago Canyon College to a campus in either the CALIFORNIA STATE UNIVERSITY or the UNIVERSITY OF CALIFORNIA system without the need, after transfer, to take additional lower-division, general education courses to satisfy campus general education requirements. Completion of IGETC does not guarantee admission to a UC campus. Students are strongly encouraged to meet with a Santiago Canyon College counselor when planning to transfer to a UC campus.

IMPORTANT NOTE: The list of certifiable courses will be subject to change year by year, but students are assured that courses taken to meet IGETC requirements will be honored if they are approved for the academic year in which they are taken. Courses on this list are approved beginning Fall 2015 and are valid through Summer 2016.

AREA 1—ENGLISH COMMUNICATION

C.S.U.: 3 courses required, one from each group.

U.C.: 2 courses required, one each from Group A and B.

Group A: English Composition
1 course required, minimum 3 semester units. English 101*/101H*

Group B: Critical Thinking-English Composition
1 course required, minimum 3 semester units. English 102*/102H* (F’12), 103*/103H*

Group C: Oral Communication (CSU ONLY)
1 course required, minimum 3 semester units. Communication 100*/100H*, 101, 110, 111

AREA 2A—MATHEMATICAL CONCEPTS & QUANTITATIVE REASONING

1 course required, minimum 3 semester units. Math 105, 140*, 150*, 170*, 190*/190H*, 241, 242, 246, 271, 272, 278

Physics 109*, 110*, 111, 112

Chemistry 209*, 210, 219, 229

Earth Science 110*, 115*

Geography 101, 110

Geology 101, 142 (F’13), 150, 150A*, 150B*, 201

Group B: Biological Sciences
2 courses required, minimum 3 semester units. Anatomy 101, 102

Biochemistry 210*, 219, 229

Chemistry 209*, 210, 219, 229

Earth Science 115

Environmental Studies 249

Group C: Physical Activity (minimum 1 unit)

Physical Education 115, 121*/121H*, 122*, 124, 127, 129

Environmental Studies 249

AREA 3—ARTS & HUMANITIES

3 courses required, minimum 9 semester units, with at least one course from Group A and one course from Group B.

Group A: Arts (minimum 3 units)

Art 100*/100H*, 101, 102

Dance 100

Music 101*/101H*, 102, 103, 104

Television/Video Communications 103, 104

Theatre Arts 100

Group B: Humanities (minimum 3 units)

English 102*/102H* (F’12), 231, 232, 233A, 233B, 241, 242, 246, 271, 272, 278

French 102, 201, 202

History 101*/101H*, 102*/102H*

Italian 102, 201, 202

Philosophy 106*/106H*, 108, 112, 115, 118, 120

Sign Language 111, 112, 116

Spanish 102*/102H*, 195A, 195B, 201, 202

* Indicates that transfer credit may be limited by either UC or CSU or both. Courses with an asterisk may be counted in one area only. Please consult with a counselor for additional information.

** Official High School transcript must be on file in the admissions office.

Area 5A, 5B, 5C: underlined courses have laboratory activity.

AREA 4—SOCIAL & BEHAVIORAL SCIENCES

3 courses required, minimum 9 semester units from at least 2 disciplines or an interdisciplinary sequence.

Anthropology 101*/101H*, 103, 104

Chicano Studies 101

Communication 225*/225H*

Criminal Justice 101

Economics 101, 102

Education 101 (F’13)

Ethnic Studies 101

Geography 101*/101H*, 102, 140

History 101*/101H* (F’13), 102*/102H* (F’13), 118, 120*/120H*, 121*/121H*, 122*, 124, 126, 127, 133, 152, 162, 240 (F’14)

Human Development 107*

Interdisciplinary Studies 155

Political Science 101*/101H*, 200*/200H*, 201, 220, 221, 222 (F’14), 230

Psychology 100*/100H, 157*, 170, 200, 219, 230, 240, 250

Sociology 100*/100H*, 140*/140H*, 240

TV/Videocommunication 105

Women’s Studies 101*, 102

AREA 5—PHYSICAL & BIOLOGICAL SCIENCES

Minimum 7–9 semester units. One Physical Science course and one Biological Science course required. One course must include a corresponding laboratory. Lab courses are underlined.

Group A: Physical Science (minimum 3 units)

Astronomy 101, 110, 112

Chemistry 209*, 210, 219, 229

Earth Science 110*, 115*

Geography 101, 110

Geology 101, 142 (F’13), 150, 201

Physical Science 115

Physics 109*, 120A*, 120B*, 210*, 211*, 250A, 250B*, 250C*

Group B: Biological Science (minimum 3 units)

Anthropology 101

Biology 109*/109H*, 139, 177, 211, 212, 214, 221, 229, 231, 239, 249, 250, 259, 290

Environmental Studies 249

Group C: Laboratory Activity (minimum 1 unit)

Anthropology 101

Environmental Studies 259

Geography 101

Geology 101, 201

Physics 109*, 120A*, 120B*, 210*, 211*, 250A*, 250B*, 250C*

Area 6—Language Other Than English (LOTE) (UC ONLY)

This proficiency may be met by one of the following methods:

Satisfactory completion of a high school course in a language other than English with grades of "C" or better; or

Completion of one of the following: French 101, 102, 201, 202; Italian 101, 102, 201, 202; Spanish 101*/101H*, 102*/102H*, 201, 202; Sign Language 110

OR

satisfactory completion, with "C" grades or better, of two years of formal schooling at the sixth grade level or higher in an institution where the language of instruction is not English;

OR

3 or higher on College Board Advanced Placement Examination, 5 or higher on International Baccalaureate Higher Level Examination; SAT II:

Subject Tests (see counselor for required scores);

grade of A, B, or C on the “O” level exam; or score of 5, 6, or 7 on the “A” level exam

OR

satisfactory completion of an achievement test administered by a college in a language other than English equivalent to two years of high school language; or verification of student competency equivalent to two years of high school language.

AMERICAN INSTITUTIONS REQUIREMENT (AI)

(Not part of IGETC. May be completed prior to transfer.)

CSU has an American Institutions graduation requirement that is separate from IGETC. To meet the CSU requirement, students should take Political Science 101*/101H* and one of the following courses: History 118, 120*/120H*, 121*/121H*, 122*, 124, 127. These courses can be used for 6 of the 9 units required in Area 4 (Social and Behavioral Sciences).

UC requires the completion of a college course or courses with a grade of “C” or better. Requirements vary by UC campus. Check with a Santiago Canyon College counselor to determine which course(s) to take.

CERTIFICATION REQUIREMENTS

1. Complete all courses used for IGETC certification with a minimum grade of C (C minus is not acceptable). A "Pass" is acceptable providing it is equivalent to a grade of C or higher.

2. Request certification from the last California community college you attend prior to transfer to CSU or UC. Requests should be made to the Office of Admissions and Records during the semester prior to the last term of attendance. Please consult the class schedule or the Santiago Canyon College Counseling Department for deadline information.

3. Prior to requesting certification, have official transcripts on file from every high school and college you have attended.

4. Courses taken at other California community colleges will be applied to the subject areas in which they are listed by the institution where the work was completed.

5. A course taken at other regionally accredited institutions (which do not maintain an IGETC certification list) may be approved for certification via a “Pass Along Petition” and after a review by the Santiago Canyon College Articulation Officer. Pass Along Petitions are available from the Santiago Canyon College Counseling Department and must be accompanied by the appropriate documentation.

6. Courses completed at foreign institutions are not acceptable except for certification of competence in a language other than English.

7. Completing IGETC prior to transfer is strongly recommended and can be advantageous in the admissions process. Partial certification is permitted if the student has completed all but two courses on the pattern. Please see a Santiago Canyon College counselor for guidelines.
UNIVERSITY OF CALIFORNIA AND SANTIAGO CANYON COLLEGE
TRANSFER COURSE AGREEMENT 2015–2016

This agreement lists approved Santiago Canyon College courses transferable for unit credit at all UC campuses and explains UC credit provisions. Additional courses for 2015–2016 may be approved after this catalog publication date. Please see an SCC counselor for more information.

Accounting 101, 102
American College English 102*, 116*
*ACE 102 and 116 maximum credit, 8 units
Anthropology 100, 100H, 101, 101L, 103, 104
Art 100, 100H, 101, 102, 110, 111, 130, 131, 139, 141, 149, 195, 230, 231, 232, 233, 241, 242
Astronomy 109, 110, 112, 140
Biology 109*, 109H#, 109L, 139*, 177, 200 (Same as ENVR 200), 211, 212, 214, 221, 229*, 231, 239, 249, 259 (Same as ENVR 259), 290
# No credit for BIOL 109 or 109H if taken after BIOL 211
* BIOL 139 and 229 maximum credit one course
Business 100, 105
Chemistry 209*, 210*, 219, 219H, 229, 249, 259
* No credit for CHEM 209 if taken after 219
* No credit for CHEM 210 if taken after CHEM 249
Chicano Studies 101
Communication 100, 100H, 101, 110, 111, 120, 120H, 134, 135, 225, 225H
Computer Science 100, 105, 112, 120, 121, 129, 131, 205, 213
Counseling 101, 116
Criminal Justice 101
Earth Science 110*, 115+
* No credit for ERTH 110 if taken after GEOL 101 or GEOG 101
+ No credit for ERTH 115 if taken after ERTH 110, GEOG 101 or GEOL 101
Economics 101, 102
Education 101, 200, 210
Engineering 210, 220, 225, 230
Environmental Studies 200
(Same as BIOL 200), 259 (Same as BIOL 259)
Ethnic Studies 101
French 101*, 102, 196, 201, 202
* FREN 101 corresponds to two years of high school study
Geography 100, 101H, 101, 102, 130, 140, 150, 155 (Same as SURV 155)
Geology 101, 101L, 142, 150, 201, 260
History 101, 101H, 102, 102H, 118, 120, 120H, 121, 121H, 122+, 124, 126, 127, 133, 152, 162, 240
+ No credit for HIST 122 if taken after HIST 120/120H or 121/121H
Human Development 107*, 110
* HUD 107 and PSYC 157 maximum credit, one course
Interdisciplinary Studies 155
Italian 101*, 102, 195, 201, 202
* ITAL 101 corresponds to two years of high school study
# KIN 102, 104, 110 maximum credit, one course; non activity courses maximum credit, 8 units
* For any or all activity courses maximum credit, 4 units
+ Any or all of these courses combined maximum credit, 8 units
Library and Information Studies 100, 103
Mathematics 105, 140+, 150*, 170+, 180*, 180H+, 185, 203, 219, 219H (Same as SOC 219, 219H), 280, 287
* MATH 140 and 170 maximum credit, one course
* MATH 150, 180 and 180H maximum credit, one course
Nutrition 115
Physical Science 115
Physics 109+, 150A*, 150AC, 150B*, 150BC, 210*, 211*, 250A*, 250B*, 250C+
+ No credit for PHYS 109 if taken after PHYS 150A or 250A
* Maximum credit, one series; deduct credit for duplication of topics; PHYS 150A, 150B; PHYS 210, 211; or PHYS 250A, 250B, 250C
Political Science 101, 101H, 200, 200H, 201, 220, 221, 222, 230
Psychology 100, 100H, 157*, 170, 200, 219, 230, 240 (Same as SOC 240), 250
* PSYC 157 and HUD 107 maximum credit, one course
Sign Language 110*, 111, 112, 116
* SIGN 110 corresponds to two years of high school study
Social Science 219, 219H
(Same as MATH 219, 219H)
Sociology 100, 100H, 112, 140, 140H, 240
(Same as PSYCH 240)
+ SPAN 101 or 101H correspond to two years of high school study
+ SPAN 101A and 101B combined are equivalent to SPAN 101. Combined correspond to two years of high school study
Surveying/Mapping Sciences 118*, 119*, 155
(Same as GEOG 155)
* SURV 118 and 119 maximum credit, one course
Television/Video Communication 103, 104, 105
Theatre Arts 100, 110, 111, 118, 121, 122
Women’s Studies 101, 102

Note: Duplicate credit will not be awarded for both Honors and regular versions of a course. Credit will be awarded to the first course completed with a “C” or better
Advance Placement Examinations with a score of 3, 4, or 5 can be used to meet Santiago Canyon College Associate degree requirements, CSU admission, CSU GE certification, UC admission, and IGETC certification requirements. However AP credits cannot be used to meet Santiago Canyon College 12 unit residency requirement for the Associate degree. **Students who have earned credit from an AP exam should not take a comparable college course since credit will not be granted for both.** Students using an AP exam for a requirement other than general education, such as major preparation, are strongly advised to check with a Santiago Canyon College counselor and/or the Admissions Office of their transfer campus to determine how the AP exam will be used to meet major and graduation requirements as policies may differ from SCC's. Students should submit official copies of Advance Placement Examination test scores to the Admissions and Record office for evaluation.

<table>
<thead>
<tr>
<th>Advanced Placement Exam</th>
<th>SCC Course/AA Units Awarded</th>
<th>CSU GE Certification Area/Semester Units</th>
<th>CSU Minimum Admission Semester Units</th>
<th>IGETC Certification Area/Semester Units</th>
<th>UC Minimum Admission Semester Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art History</td>
<td>ART 101 and 102 6 units</td>
<td>Area C1 or C2 3 units</td>
<td>6 units</td>
<td>Area 3A or 3B 3 units</td>
<td>5.3 units</td>
</tr>
<tr>
<td>Studio Art: 2-D Design</td>
<td>ART 111 3 units</td>
<td>N/A</td>
<td>3 units</td>
<td>N/A</td>
<td>5.3 units (5.3 unit maximum credit for all three Studio Art exams)</td>
</tr>
<tr>
<td>Studio Art: 3-D Design</td>
<td>ART 110 3 units</td>
<td>N/A</td>
<td>3 units</td>
<td>N/A</td>
<td>5.3 units (5.3 unit maximum credit for all three Studio Art exams)</td>
</tr>
<tr>
<td>Studio Art: Drawing</td>
<td>ART 130 3 units</td>
<td>N/A</td>
<td>3 units</td>
<td>N/A</td>
<td>5.3 units (5.3 unit maximum credit for all three Studio Art exams)</td>
</tr>
<tr>
<td>Biology</td>
<td>BIOL 109 3 units</td>
<td>Area B2 and B3 4 units</td>
<td>6 units</td>
<td>Area 5B and 5C 4 units</td>
<td>5.3 units</td>
</tr>
<tr>
<td>Calculus AB</td>
<td>MATH 180 4 units</td>
<td>Area B4 3 units</td>
<td>3 units</td>
<td>Area 2A 3 units</td>
<td>2.7 units (5.3 units maximum credit for Calculus AB + BC exams)</td>
</tr>
<tr>
<td>Calculus BC</td>
<td>MATH 180 and 185 8 units</td>
<td>Area B4 3 units</td>
<td>6 units</td>
<td>Area 2A 3 units</td>
<td>5.3 units (5.3 units maximum credit for Calculus AB + BC exams)</td>
</tr>
<tr>
<td>Calculus BC/AB Subscore</td>
<td>No Equivalent Course</td>
<td>Area B4 3 units</td>
<td>3 units</td>
<td>Area 2A 3 units</td>
<td>2.7 units (2.7 units maximum credit for Calculus AB + AB Subscore exams)</td>
</tr>
<tr>
<td>Chemistry</td>
<td>CHEM 219 5 units</td>
<td>Area B1 and B3 4 units (6 units prior to F’09)</td>
<td>6 units</td>
<td>Area 5A and 5C 4 units</td>
<td>5.3 units</td>
</tr>
<tr>
<td>Chinese Language and Culture</td>
<td>Plan A Area C 3 units</td>
<td>Area C2 3 units</td>
<td>6 units</td>
<td>Area 3B and 6A 3 units</td>
<td>5.3 units</td>
</tr>
<tr>
<td>Computer Science A</td>
<td>CMPR 121 3 units</td>
<td>N/A</td>
<td>3 units</td>
<td>N/A</td>
<td>1.3 units (2.7 units maximum credit for both CS exams)</td>
</tr>
<tr>
<td>Computer Science AB</td>
<td>CMPR 121 3 units</td>
<td>N/A</td>
<td>6 units</td>
<td>N/A</td>
<td>2.7 units (2.7 units maximum credit for both CS exams)</td>
</tr>
<tr>
<td>Economics: Macroeconomics</td>
<td>ECON 102 3 units</td>
<td>Area D2 3 units</td>
<td>3 units</td>
<td>Area 4 3 units</td>
<td>2.7 units</td>
</tr>
<tr>
<td>Economics: Microeconomics</td>
<td>ECON 101 3 units</td>
<td>Area D2 3 units</td>
<td>3 units</td>
<td>Area 4 3 units</td>
<td>2.7 units</td>
</tr>
<tr>
<td>English: Language and Composition</td>
<td>ENGL 101 4 units</td>
<td>Area A2 3 units</td>
<td>6 units</td>
<td>Area 1A 3 units</td>
<td>5.3 units (5.3 units maximum credit for both English exams)</td>
</tr>
<tr>
<td>Environmental Science</td>
<td>BIOL 200 or ENVR 200 3 units</td>
<td>Area B1 and B3 4 units (B2 and B3 prior to F’09)</td>
<td>4 units</td>
<td>Area 5A and 5C 3 units</td>
<td>2.7 units</td>
</tr>
</tbody>
</table>
## SANTIAGO CANYON COLLEGE ADVANCED PLACEMENT GUIDE AND POLICIES (continued)

Advance Placement Examinations with a score of 3, 4, or 5 can be used to meet Santiago Canyon College Associate degree requirements, CSU admission, CSU GE certification, UC admission, and IGETC certification requirements. However AP credits cannot be used to meet Santiago Canyon College 12 unit residency requirement for the Associate degree. **Students who have earned credit from an AP exam should not take a comparable college course since credit will not be granted for both.** Students using an AP exam for a requirement other than general education, such as major preparation, are strongly advised to check with a Santiago Canyon College counselor and/or the Admissions Office of their transfer campus to determine how the AP exam will be used to meet major and graduation requirements as policies may differ from SCC’s. Students should submit official copies of Advance Placement Examination test scores to the Admissions and Record office for evaluation.

<table>
<thead>
<tr>
<th>Advanced Placement Exam</th>
<th>SCC Course/AA Units Awarded</th>
<th>CSU GE Certification Area/Semester Units</th>
<th>CSU Minimum Admission Semester Units</th>
<th>IGETC Certification Area/Semester Units</th>
<th>UC Minimum Admission Semester Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>French Language and Culture</td>
<td>FREN 101 and 102 10 units</td>
<td>Area C2 3 units (6 units prior to F’09)</td>
<td>6 units</td>
<td>Area 3B and 6A 3 units</td>
<td>5.3 units</td>
</tr>
<tr>
<td>French Literature</td>
<td>Plan A Area C 3 units</td>
<td>Area C2 (prior to F’09) 3 units</td>
<td>6 units</td>
<td>Area 3B and 6A 3 units</td>
<td>5.3 units</td>
</tr>
<tr>
<td>German Language and Culture (Prior to F’11-German Language)</td>
<td>Plan A Area C 3 units</td>
<td>Area C2 3 units (6 units prior to F’09)</td>
<td>6 units</td>
<td>Area 3B and 6A 3 units</td>
<td>5.3 units</td>
</tr>
<tr>
<td>Geography (Human)</td>
<td>GEOG 102 3 units</td>
<td>Area D5 3 units</td>
<td>3 units</td>
<td>Area 4 3 units</td>
<td>2.7 units</td>
</tr>
<tr>
<td>Government and Politics: Comparative</td>
<td>POLT 201 3 units</td>
<td>Area D8 3 units</td>
<td>3 units</td>
<td>Area 4 3 units</td>
<td>2.7 units</td>
</tr>
<tr>
<td>+Government and Politics: United States</td>
<td>POLT 101 3 units</td>
<td>Area D8 and US-2 CSU AI Requirement 3 units</td>
<td>3 units</td>
<td>Area 4 and US-2 CSU AI Requirement 3 units</td>
<td>2.7 units</td>
</tr>
<tr>
<td>History: European</td>
<td>HIST 102 3 units</td>
<td>Area C2 or D6 3 units</td>
<td>6 units</td>
<td>Area 3B or 45 3 units</td>
<td>5.3 units</td>
</tr>
<tr>
<td>+History: US</td>
<td>HIST 120 and 121 6 units</td>
<td>Area C2 or D6 and US-1 CSU AI Requirement 3 units</td>
<td>6 units</td>
<td>Area 3B or 45 and US-1 CSU AI Requirement 3 units</td>
<td>5.3 units</td>
</tr>
<tr>
<td>History: World</td>
<td>History 101 and 102 6 units</td>
<td>Area C2 or D6 3 units</td>
<td>6 units</td>
<td>Area 3B or 45 3 units</td>
<td>5.3 units</td>
</tr>
<tr>
<td>Italian Language and Culture</td>
<td>ITAL 101, 102 10 units</td>
<td>Area C2 3 units</td>
<td>6 units</td>
<td>Area 3B and 6A 3 units</td>
<td>5.3 units</td>
</tr>
<tr>
<td>Japanese Language and Culture</td>
<td>Plan A Area C 3 units</td>
<td>Area C2 3 units</td>
<td>6 units</td>
<td>Area 3B and 6A 3 units</td>
<td>5.3 units</td>
</tr>
<tr>
<td>Latin: Literature</td>
<td>Plan A Area C 3 units</td>
<td>Area C2 (prior to F’09) 3 units</td>
<td>6 units</td>
<td>Area 3B and 6A 3 units</td>
<td>2.7 units</td>
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<tr>
<td>Latin</td>
<td>Plan A Area C 3 units</td>
<td>Area C2 3 units</td>
<td>3 units</td>
<td>Area 3B and 6A 3 units</td>
<td>2.7 units</td>
</tr>
<tr>
<td>Latin: Vergil</td>
<td>Plan A Area C 3 units</td>
<td>Area C2 (prior to F’12) 3 units</td>
<td>3 units</td>
<td>Area 3B and 6A 3 units</td>
<td>2.7 units</td>
</tr>
<tr>
<td>Music Theory</td>
<td>N/A</td>
<td>Area C1 (prior to F’09) 3 units</td>
<td>6 units</td>
<td>N/A</td>
<td>5.3 units</td>
</tr>
<tr>
<td>Physics 1ª</td>
<td>Plan A Area A 4 units</td>
<td>Area B1 and B3 4 unitsª</td>
<td>4 units</td>
<td>Pending Review</td>
<td>Pending Review</td>
</tr>
<tr>
<td>Physics 2ª</td>
<td>Plan A Area A 4 units</td>
<td>Area B1 and B3 4 unitsª</td>
<td>4 units</td>
<td>Pending Review</td>
<td>Pending Review</td>
</tr>
<tr>
<td>Physics 3ª</td>
<td>PHYS 150A and 150B 8 units Area A 4 units</td>
<td>Area B1 and B3 (prior to F’13) 4 unitsª (6 units prior F’09)</td>
<td>6 units (maximum 6 units for all 3 exams)</td>
<td>Area 5A with lab 4 units</td>
<td>5.3 units (5.3 units maximum credit for all 3 exams)</td>
</tr>
</tbody>
</table>
SANTIAGO CANYON COLLEGE ADVANCED PLACEMENT GUIDE AND POLICIES (continued)

Advance Placement Examinations with a score of 3, 4, or 5 can be used to meet Santiago Canyon College Associate degree requirements, CSU admission, CSU GE certification, UC admission, and IGETC certification requirements. However, AP credits cannot be used to meet Santiago Canyon College 12-unit residency requirement for the Associate degree. **Students who have earned credit from an AP exam should not take a comparable college course since credit will not be granted for both.** Students using an AP exam for a requirement other than general education, such as major preparation, are strongly advised to check with a Santiago Canyon College counselor and/or the Admissions Office of their transfer campus to determine how the AP exam will be used to meet major and graduation requirements as policies may differ from SCC’s. Students should submit official copies of Advance Placement Examination test scores to the Admissions and Record office for evaluation.

<table>
<thead>
<tr>
<th>Advanced Placement Exam</th>
<th>SCC Course/AA Units Awarded</th>
<th>CSU GE Certification Area/Semester Units¹</th>
<th>CSU Minimum Admission Semester Units²</th>
<th>IGETC Certification Area/Semester Units³</th>
<th>UC Minimum Admission Semester Units⁴</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Physics C</strong> &lt;br&gt;(Electricity and Magnetism)³</td>
<td>PHYS 250B&lt;br&gt;5 units</td>
<td>Area B1 and B3&lt;br&gt;4 units⁵</td>
<td>4 units (maximum 6 units for all 3 exams)</td>
<td>Area 5A with lab&lt;br&gt;3 units⁵</td>
<td>2.7 units &lt;br&gt;(5.3 units maximum credit for all 3 exams)</td>
</tr>
<tr>
<td><strong>Physics C</strong> &lt;br&gt;(Mechanics)³</td>
<td>PHYS 250A and PHYS 250B&lt;br&gt;4-5 units</td>
<td>Area B1 and B3&lt;br&gt;4 units⁵</td>
<td>4 units (maximum 6 units for all 3 exams)</td>
<td>Area 5A with lab&lt;br&gt;3 units⁵</td>
<td>2.7 units &lt;br&gt;(5.3 units maximum credit for all 3 exams)</td>
</tr>
<tr>
<td><strong>Psychology</strong></td>
<td>PSYCH 100&lt;br&gt;3 units</td>
<td>Area D9&lt;br&gt;3 units</td>
<td>3 units</td>
<td>Area 4&lt;br&gt;3 units</td>
<td>2.7 units</td>
</tr>
<tr>
<td><strong>Seminar</strong></td>
<td>N/A&lt;br&gt;3 units elective credit</td>
<td>N/A&lt;br&gt;0 units</td>
<td>3 units</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Spanish Language and Culture</strong></td>
<td>SPAN 101 and 102&lt;br&gt;10 units</td>
<td>Area C2&lt;br&gt;3 units (6 units prior to F’09)</td>
<td>6 units</td>
<td>Area 3B and 6A&lt;br&gt;3 units</td>
<td>5.3 units</td>
</tr>
<tr>
<td><strong>Spanish Literature</strong></td>
<td>Plan A Area C&lt;br&gt;3 units</td>
<td>Area C2&lt;br&gt;3 units (6 units prior to F’09)</td>
<td>6 units</td>
<td>Area 3B and 6A&lt;br&gt;3 units</td>
<td>5.3 units</td>
</tr>
<tr>
<td><strong>Statistics</strong></td>
<td>MATH 219/SOC 219&lt;br&gt;4 units</td>
<td>Area B4&lt;br&gt;3 units</td>
<td>3 units</td>
<td>Area 2A&lt;br&gt;3 units</td>
<td>2.7 units</td>
</tr>
</tbody>
</table>

1. The AP exams listed above may be incorporated into certification of CSU General Education-breadth requirements. All CSU campuses will accept the minimum units shown if the examination is included in full or subject area certification; individual CSU campuses may choose to accept more units than those specified towards completion of general education breadth requirements.
2. The CSU Minimum Semester Admission unit column reflects what each campus system-wide will minimally accept towards CSU admission.
3. Each AP exam may be applied to one IGETC area, as satisfying one course requirement, with the exception of area 6A – Language Other Than English (LOTE). Exams maybe used regardless of when the exam was taken.
4. The final column reflects what the University of California will award per AP exam for admission to any UC campus.
5. AP exams may be used in either area regardless of where the SCC discipline is located.
6. For Environmental Science, Physics C: Mechanics and Physics C: Electricity/Magnetism, 3 semester or 4 quarter units are applied for IGETC certification; therefore, students who complete these exams will be required to complete at least 4 semester or 5 quarter units to satisfy the minimum required units in Area 5.
7. This AP Examination only partially fulfills the CSU US History, Constitution, and American Ideals graduation requirement but can be used toward the requirement. (Please note that no AP exam fulfills the California State and Local Government portion, US-3) See a counselor for more information.
8. If a student passes more than one AP Physics exam, only 6 units of credit will apply to the baccalaureate degree, and only 4 units may be used for the CSU GE certification.
### Santiago Canyon College

#### College-Level Examination Program (CLEP) Placement Guide and Policies

Santiago Canyon College students who have taken CLEP examinations and have a score of 50 or higher (level II languages require a higher score) can earn credits towards Santiago Canyon College Associate degree general education requirements or electives, CSU admission, and CSU GE certification requirements. However, CLEP credits cannot be used to meet Santiago Canyon College twelve-unit residency requirement for the Associate degree. **Students who have earned credits from a CLEP exam should not take a comparable college course since credit will not be granted for both.** Students are strongly advised to check with an SCC counselor when using CLEP credit for CSU admission or for major requirements. The CSU has grandfathered in this policy the guide CLEP submissions for any year that the CLEP exams were taken. **Students should submit official copies of CLEP test scores to the Admissions and Record office for evaluation. The University of California does not accept CLEP exams to meet requirements for IGETC.**

<table>
<thead>
<tr>
<th>CLEP Exam</th>
<th>Passing Score</th>
<th>SCC GE Area Semester Units Awarded</th>
<th>SCC AA Semester Units Awarded</th>
<th>CSU GE Certification Area/Semester Units Awarded</th>
<th>CSU Minimum Admission Semester Units Awarded</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Government</td>
<td>50</td>
<td>Area B1 or B2 3 units</td>
<td>3 units</td>
<td>Area D8 3 units</td>
<td>3 units</td>
</tr>
<tr>
<td>American Literature</td>
<td>50</td>
<td>Area C 3 units</td>
<td>3 units</td>
<td>Area C2 3 units</td>
<td>3 units</td>
</tr>
<tr>
<td>Analyzing and Interpreting</td>
<td>50</td>
<td>Area C 3 units</td>
<td>3 units</td>
<td>Area C2 3 units</td>
<td>3 units</td>
</tr>
<tr>
<td>Literature</td>
<td></td>
<td>Area A 3 units</td>
<td>3 units</td>
<td>Area B2 3 units</td>
<td>3 units</td>
</tr>
<tr>
<td>Biology</td>
<td>50</td>
<td>Area E2 and G1³ 3 units</td>
<td>3 units</td>
<td>Area B4 3 units</td>
<td>3 units</td>
</tr>
<tr>
<td>Calculus</td>
<td>50</td>
<td>Area A 3 units</td>
<td>3 units</td>
<td>Area B1 3 units</td>
<td>3 units</td>
</tr>
<tr>
<td>Chemistry</td>
<td>50</td>
<td>Area E2 and G1³ 3 units</td>
<td>3 units</td>
<td>Area B4 3 units</td>
<td>3 units</td>
</tr>
<tr>
<td>College Algebra</td>
<td>50</td>
<td>Area E2 and G1³ 3 units</td>
<td>3 units</td>
<td>Area B4 3 units</td>
<td>3 units</td>
</tr>
<tr>
<td>College Algebra-Trigonometry</td>
<td>50</td>
<td>Area E2 and G1³ 3 units</td>
<td>3 units</td>
<td>Area B4 3 units</td>
<td>3 units</td>
</tr>
<tr>
<td>College Mathematics</td>
<td>50</td>
<td>N/A 0 units</td>
<td>0 units</td>
<td>N/A 0 units</td>
<td>0 units</td>
</tr>
<tr>
<td>English Composition with no essay</td>
<td>50</td>
<td>N/A 0 units</td>
<td>0 units</td>
<td>N/A 0 units</td>
<td>0 units</td>
</tr>
<tr>
<td>English Composition with essay</td>
<td>50</td>
<td>N/A 0 units</td>
<td>0 units</td>
<td>N/A 0 units</td>
<td>0 units</td>
</tr>
<tr>
<td>English Literature</td>
<td>50</td>
<td>Area C 3 units</td>
<td>3 units</td>
<td>Area C2 3 units</td>
<td>3 units</td>
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<tr>
<td>Financial Accounting</td>
<td>50</td>
<td>N/A 0 units</td>
<td>3 units</td>
<td>N/A 0 units</td>
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<tr>
<td>French Level I</td>
<td>50</td>
<td>N/A 0 units</td>
<td>6 units⁴</td>
<td>N/A⁴ 0 units</td>
<td>6 units</td>
</tr>
<tr>
<td>French Level II</td>
<td>59</td>
<td>Area C 3 units</td>
<td>12 units⁴</td>
<td>Area C2⁴ 3 units</td>
<td>12 units</td>
</tr>
<tr>
<td>Freshman College Composition</td>
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<td>0 units</td>
<td>N/A 0 units</td>
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<tr>
<td>German Level I</td>
<td>50</td>
<td>N/A 0 units</td>
<td>6 units⁴</td>
<td>N/A 0 units</td>
<td>6 units</td>
</tr>
<tr>
<td>German Level II</td>
<td>60</td>
<td>N/A 0 units</td>
<td>12 units⁴</td>
<td>Area C2⁴ 3 units</td>
<td>12 units</td>
</tr>
<tr>
<td>History, United States I</td>
<td>50</td>
<td>Area B1 3 units</td>
<td>3 units</td>
<td>Area D6 + US-1⁵ 3 units</td>
<td>3 units</td>
</tr>
<tr>
<td>(Partially fulfills CSU AI</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>requirement)</td>
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</tr>
<tr>
<td>History, United States II</td>
<td>50</td>
<td>Area B1 3 units</td>
<td>3 units</td>
<td>Area D6 + US-1⁵ 3 units</td>
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<td>requirement)</td>
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# SANTIAGO CANYON COLLEGE
## COLLEGE-LEVEL EXAMINATION PROGRAM (CLEP) PLACEMENT GUIDE AND POLICIES (continued)

<table>
<thead>
<tr>
<th>CLEP EXAM</th>
<th>Passing Score</th>
<th>SCC GE Area Semester Units Awarded</th>
<th>SCC AA Semester Units Awarded</th>
<th>CSU GE Certification Area/Semester Units Awarded&lt;sup&gt;1&lt;/sup&gt;</th>
<th>CSU Minimum Admission Semester Units Awarded&lt;sup&gt;2&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human Growth &amp; Development</td>
<td>50</td>
<td>Area B2 3 units</td>
<td>3 units</td>
<td>Area E 3 units</td>
<td>3 units</td>
</tr>
<tr>
<td>Humanities</td>
<td>50</td>
<td>Area C 3 units</td>
<td>3 units</td>
<td>Area C2 3 units</td>
<td>3 units</td>
</tr>
<tr>
<td>Information Systems and Computer Applications</td>
<td>50</td>
<td>N/A 0 units</td>
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<td>N/A 0 units</td>
<td>3 units</td>
</tr>
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<td>Introduction to Educational Psychology</td>
<td>50</td>
<td>N/A 0 units</td>
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<td>N/A 0 units</td>
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<tr>
<td>Introductory Business Law</td>
<td>50</td>
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<td>3 units</td>
<td>N/A 0 units</td>
<td>3 units</td>
</tr>
<tr>
<td>Introductory Psychology</td>
<td>50</td>
<td>Area B2 3 units</td>
<td>3 units</td>
<td>Area D9 3 units</td>
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<tr>
<td>Introductory Sociology</td>
<td>50</td>
<td>Area B2 3 units</td>
<td>3 units</td>
<td>Area D10 3 units</td>
<td>3 units</td>
</tr>
<tr>
<td>Natural Sciences</td>
<td>50</td>
<td>Area A 3 units</td>
<td>3 units</td>
<td>Area B1 or B2 3 units</td>
<td>3 units</td>
</tr>
<tr>
<td>Pre-Calculus</td>
<td>50</td>
<td>E2 and G1&lt;sup&gt;3&lt;/sup&gt; 3 units</td>
<td>3 units</td>
<td>Area B4 3 units</td>
<td>3 units</td>
</tr>
<tr>
<td>Principles of Accounting</td>
<td>50</td>
<td>N/A 0 units</td>
<td>3 units</td>
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<td>3 units</td>
</tr>
<tr>
<td>Principles of Macroeconomics</td>
<td>50</td>
<td>Area B2 3 units</td>
<td>3 units</td>
<td>Area D2 3 units</td>
<td>3 units</td>
</tr>
<tr>
<td>Principles of Management</td>
<td>50</td>
<td>N/A 0 units</td>
<td>3 units</td>
<td>N/A 0 units</td>
<td>3 units</td>
</tr>
<tr>
<td>Principles of Marketing</td>
<td>50</td>
<td>N/A 0 units</td>
<td>3 units</td>
<td>N/A 0 units</td>
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<tr>
<td>Principles of Microeconomics</td>
<td>50</td>
<td>Area B2 3 units</td>
<td>3 units</td>
<td>Area D2 3 units</td>
<td>3 units</td>
</tr>
<tr>
<td>Social Sciences and History</td>
<td>50</td>
<td>N/A 0 units</td>
<td>0 units</td>
<td>N/A 0 units</td>
<td>0 units</td>
</tr>
<tr>
<td>Spanish Level I</td>
<td>50</td>
<td>N/A 0 units</td>
<td>6 units&lt;sup&gt;4&lt;/sup&gt;</td>
<td>N/A&lt;sup&gt;4&lt;/sup&gt; 0 units</td>
<td>6 units</td>
</tr>
<tr>
<td>Spanish Level II</td>
<td>63</td>
<td>Area C 3 units</td>
<td>12 units&lt;sup&gt;4&lt;/sup&gt;</td>
<td>Area C2&lt;sup&gt;4&lt;/sup&gt; 3 units</td>
<td>12 units</td>
</tr>
<tr>
<td>Trigonometry</td>
<td>50</td>
<td>Area E2 + G1&lt;sup&gt;3&lt;/sup&gt; 3 units</td>
<td>3 units</td>
<td>Area B4 3 units</td>
<td>3 units</td>
</tr>
<tr>
<td>Western Civilization I</td>
<td>50</td>
<td>Area B2 3 units</td>
<td>3 units</td>
<td>Area C2 or D6 3 units</td>
<td>3 units</td>
</tr>
<tr>
<td>Western Civilization II</td>
<td>50</td>
<td>Area B2 3 units</td>
<td>3 units</td>
<td>Area D6 3 units</td>
<td>3 units</td>
</tr>
</tbody>
</table>

1. The CLEP exams listed above may be incorporated into certification of CSU General Education-Breadth requirements. All CSU campuses will accept the minimum units shown if the examination is included in full or subject area certification; individual CSU campuses may choose to accept more units than those specified towards completion of general education requirements.
2. The CSU Minimum Semester Admission unit column reflects what each campus system-wide will minimally accept toward CSU admission.
3. This CLEP exam satisfies Santiago Canyon College Mathematics Proficiency requirement for Plan A-area G1.
4. If a student passes more than one CLEP exam in the same language other than English (e.g. two exams in French), then only one examination may be applied to the SCC Associate degree or CSU baccalaureate degree. For each of these tests a passing score of 50 earns 6 units of elective credit; higher scores earn more units of placement in Area C for the Associate degree or Area C2 for the CSU GE breadth requirement.
5. This CLEP exam partially fulfills the CSU American Institutions graduation requirement but can be used toward the US-1 requirement.
SANTIAGO CANYON COLLEGE
INTERATIONAL BACCALAUREATE (IB) EXAMINATION GUIDE AND POLICIES

Santiago Canyon College students who have taken IB examinations and have a score of 5 or higher (CSU accepts a score of 4 on some exams) can earn credits towards Santiago Canyon College Associate degree general education requirements, CSU admission, CSU GE certification, UC admission, and IGETC certification requirements. However, IB credits cannot be used to meet Santiago Canyon College twelve-unit residency requirement for the Associate degree. Students who have earned credits from an IB exam should not take a comparable college course since credit will not be granted for both. Students are strongly advised to check with an SCC counselor when using IB credit for CSU/UC admission or for major requirements. Students should submit official copies of IB test scores to the Admissions and Records office for evaluation.

<table>
<thead>
<tr>
<th>INTERNATIONAL BACCALAUREATE (IB) EXAM</th>
<th>SCC GE Area Semester Units Awarded</th>
<th>SCC Minimum AA/AS Semester Units Awarded</th>
<th>CSU GE Certification Area/Semester Units Awarded</th>
<th>CSU Minimum Admission Semester Units Awarded</th>
<th>IGETC Certification Area/Semester Units Awarded</th>
<th>IGETC Minimum Admission Semester Units Awarded</th>
</tr>
</thead>
<tbody>
<tr>
<td>IB Biology HL</td>
<td>Area A 3 units</td>
<td></td>
<td>Area B2 (without lab) 3 units</td>
<td>6 units</td>
<td>Area 5B (without lab) 3 units</td>
<td>5.3 units</td>
</tr>
<tr>
<td>IB Chemistry HL</td>
<td>Area A 3 units</td>
<td></td>
<td>Area B1 (without lab) 3 units</td>
<td>6 units</td>
<td>Area 5A (without lab) 3 units</td>
<td>5.3 units</td>
</tr>
<tr>
<td>IB Economics HL</td>
<td>Area B2 3 units</td>
<td></td>
<td>Area D2 3 units</td>
<td>6 units</td>
<td>Area 4 3 units</td>
<td>5.3 units</td>
</tr>
<tr>
<td>IB Geography HL</td>
<td>Area B2 3 units</td>
<td></td>
<td>Area D5 3 units</td>
<td>6 units</td>
<td>Area 4 3 units</td>
<td>5.3 units</td>
</tr>
<tr>
<td>IB History (any Region) HL</td>
<td>Area B1 or B2 3 units</td>
<td></td>
<td>Area C2 or D6 3 units</td>
<td>6 units</td>
<td>Area 3B or 4 3 units</td>
<td>5.3 units</td>
</tr>
<tr>
<td>IB Language A Literature HL</td>
<td>Area C 3 units</td>
<td></td>
<td>Area C2 3 units</td>
<td>6 units</td>
<td>Pending Review</td>
<td>Pending Review</td>
</tr>
<tr>
<td>IB Language A Language and Literature HL</td>
<td>Area C 3 units</td>
<td></td>
<td>Area C2 3 units</td>
<td>6 units</td>
<td>Pending Review</td>
<td>Pending Review</td>
</tr>
<tr>
<td>IB Language A1 (any language) HL</td>
<td>Area C 3 units</td>
<td></td>
<td>Area C2 (prior to F’13) 3 units</td>
<td>6 units</td>
<td>Area 3B 3 units</td>
<td>5.3 units</td>
</tr>
<tr>
<td>IB Language A1 (any language, except English) HL</td>
<td>Area C 3 units</td>
<td></td>
<td>Area C2 (prior to F’13) 3 units</td>
<td>6 units</td>
<td>Area 3B + 6A 3 units</td>
<td>5.3 units</td>
</tr>
<tr>
<td>IB Language A2 (any language) HL</td>
<td>Area C 3 units</td>
<td></td>
<td>Area C2 (prior to F’13) 3 units</td>
<td>6 units</td>
<td>Area 3B 3 units</td>
<td>5.3 units</td>
</tr>
<tr>
<td>IB Language A2 (any language, except English) HL</td>
<td>Area C 3 units</td>
<td></td>
<td>Area C2 (prior to F’13) 3 units</td>
<td>6 units</td>
<td>Area 3B + 6A 3 units</td>
<td>5.3 units</td>
</tr>
<tr>
<td>IB Language B (any language) HL</td>
<td>Area C 3 units</td>
<td></td>
<td>N/A 0 units</td>
<td>6 units</td>
<td>Area 6A 3 units</td>
<td>5.3 units</td>
</tr>
<tr>
<td>IB Mathematics HL</td>
<td>Area E2 + G1 3 units</td>
<td></td>
<td>Area B4 3 units</td>
<td>6 units</td>
<td>Area 2A 3 units</td>
<td>5.3 units</td>
</tr>
<tr>
<td>IB Psychology HL</td>
<td>Area B2 3 units</td>
<td></td>
<td>Area D9 3 units</td>
<td>3 units</td>
<td>Area 4 3 units</td>
<td>5.3 units</td>
</tr>
<tr>
<td>IB Theatre HL</td>
<td>Area C 3 units</td>
<td></td>
<td>Area C1 3 units</td>
<td>6 units</td>
<td>Area 3A 3 units</td>
<td>5.3 units</td>
</tr>
</tbody>
</table>

1. The IB exams listed above may be incorporated into certification of CSU General Education-Breadth requirements. All CSU campuses will accept the minimum units shown if the examination is included in full or subject area certification; individual CSU campuses may choose to accept more units than those specified towards completion of general education requirements.
2. The column reflects the CSU system-wide minimum units awarded per exam for CSU admission eligibility. Some CSU campuses may award more than the minimum listed in the column, for further information consult each CSU catalog.
3. The column lists how each IB exam may be applied to one IGETC area, as satisfying one course requirement, with the exception of area 6A – Language Other Than English (LOTE). Exams may be used regardless of when the exam was taken.
4. This column reflects the University of California system-wide minimum units awarded per IB exam for UC admissions eligibility.
5. IB Exams may be used in either area regardless of whether the SCC discipline is located.
6. CSU accepts a score of 4 or higher for each of these exams.
7. The IB curriculum offers language at various levels for native and non-native speakers. Language B courses are offered at the intermediate level for non-natives. Language A1 and A2 are advanced courses in literature for native and non-native speakers, respectively.
SCC ACADEMIC PROGRAMS

Departments are listed alphabetically as identified with a program heading. Contact, curricula and courses are listed under each program.

ASSOCIATE DEGREES AND CERTIFICATES

Santiago Canyon College offers a variety of traditional degrees and certificates. Associate degrees are programs of study within a specific major and require general education. Certificates of achievement are programs of study in a particular academic or occupational area and exclude general education. All degrees and certificates of achievement have a State-approved program control number in parentheses which will appear on student transcripts. Certificates of proficiency are specialized vocational areas, excluding general education, which do not appear on student transcripts.

Programs which lead to transfer to universities and four-year colleges do not necessarily reflect the transfer requirements of specific schools. In planning a program for transfer, it should be noted that the transfer requirements for both the major and general education vary widely. Hence it is recommended that the student review the catalog of the school of transfer and consult with the counseling staff at Santiago Canyon College in planning transfer objectives.

ASSOCIATE DEGREES FOR TRANSFER

California Community Colleges are now offering associate degrees for transfer to the CSU. These may include Associate in Arts (AA-T) or Associate in Science (AS-T) degrees. These degrees are designed to provide a clear pathway to a CSU major and baccalaureate degree. California Community College students who are awarded an AA-T or AS-T degree are guaranteed admission with junior standing somewhere in the CSU system and given priority admission consideration to their local CSU campus or to a program that is deemed similar to their community college major. This priority does not guarantee admission to specific majors or campuses.

Students who have been awarded an AA-T or AS-T are able to complete their remaining requirements for the 120-unit baccalaureate degree within 60 semester or 90 quarter units.

To view the most current list of Santiago Canyon College’s Associate Degrees for Transfer and to find out which CSU campuses accept each degree, please go to www.sccollege.edu/transferdegrees.

COURSE DESCRIPTIONS

Course descriptions include the course discipline, number, title, units, class hours, requisites, and any applicable additional information such as cross-listings, C-ID, field trips, material fees, open-entry/open-exit, pass/no pass, repeatability, transferability, and credit by exam.

Course Number

100-299: Courses numbered 100-299 are transferable to California State University (CSU) or University of California (UC) and are applicable to the associate degree. See Transferability of Courses on page 40 for additional information.

Honors: Courses numbered 100 and above followed by the letter “H” are offered as part of the Santiago Canyon College Honors Program. See Honors Program and Honors Courses on pages 26-27.

001-099: Courses numbered 001-099 are not transferable to California State University (CSU) or University of California (UC). They are applicable to the associate degree unless the course number is preceded by the letter “N”.

N01-N99: Courses numbered N01-N99 are not transferable to California State University (CSU) or University of California (UC) and are not applicable to the associate degree. These courses count toward course load.

California State University (CSU) or University of California (CSU/UC): Identifies courses that are transferable to California State University (CSU) or University of California (UC). A credit limitation may exist for some courses that transfer to UC. See page 40 for additional information.

Course Identification Numbering System (C-ID): Identifies a lower-division, transferable course commonly articulated between California Community Colleges and four-year universities. See page 46 for additional information.

Credit by Exam: See Credit by Examination on pages 17-18.


Prerequisites, Corequisites and Recommended Preparation: See section on pages 21-22.

Repeatable Courses: See Course Repeatability and Repetition pages 16-17.

Same as: Identifies an identical course in a different discipline.

The college reserves the right to cancel scheduled classes.
REvised course titles

Apprenticeship Carpentry 034B Solid Surface and Stone Countertops
(formerly Apprenticeship Carpentry 034B, Solid Surface)

Apprenticeship Carpentry 041AJ Powered Industrial Truck Operator - Rough Terrain - Journeyworker
(formerly Apprenticeship Carpentry 041AJ, Powered Industrial Truck Operator - Rough Terrain - Journeyworker)

Apprenticeship Carpentry 041BJ Powered Industrial Truck Operator - Industrial Terrain - Journeyworker
(formerly Apprenticeship Carpentry 041BJ, Powered Industrial Truck Operator - Industrial Terrain - Journeyworker)

Apprenticeship Carpentry 075A Light Gage Welding AWS - A
(formerly Apprenticeship Carpentry 075A, Light Gage Welding AWS)

Apprenticeship Carpentry Pile Driver 021 Orientation
(formerly Apprenticeship Pile Driver 011, Orientation and Safety)

Apprenticeship Carpentry Pile Driver 022 Safety and Health Certifications
(formerly Apprenticeship Pile Driver 011, Orientation and Safety)

Apprenticeship Carpentry Pile Driver 024A Piles and Hammers A
(formerly Apprenticeship Pile Driver 012, Piles and Hammers)

Apprenticeship Carpentry Pile Driver 024B Piles and Hammers B
(formerly Apprenticeship Pile Driver 012, Piles and Hammers)

Apprenticeship Carpentry Pile Driver 025A Pile Caps and Columns A
(formerly Apprenticeship Pile Driver 013, Pile Caps and Columns)

Apprenticeship Carpentry Pile Driver 025B Pile Caps and Columns B
(formerly Apprenticeship Pile Driver 013, Pile Caps and Columns)

Apprenticeship Carpentry Pile Driver 026A Falsework A
(formerly Apprenticeship Pile Driver 015, Falsework)

Apprenticeship Carpentry Pile Driver 026B Falsework B
(formerly Apprenticeship Pile Driver 015, Falsework)

Apprenticeship Carpentry Pile Driver 027A Abutment A
(formerly Apprenticeship Pile Driver 014, Abutments)

Apprenticeship Carpentry Pile Driver 027B Abutment B
(formerly Apprenticeship Pile Driver 014, Abutments)

Apprenticeship Carpentry Pile Driver 028A Bridge and Deck Forms A
(formerly Apprenticeship Pile Driver 016, Bridge and Deck Forms)

Apprenticeship Carpentry Pile Driver 028B Bridge and Deck Forms B
(formerly Apprenticeship Pile Driver 016, Bridge and Deck Forms)

Apprenticeship Carpentry Pile Driver 029A Structural Welding-AWS A
(formerly Apprenticeship Pile Driver 018, Structural Welding-AWS)

Apprenticeship Carpentry Pile Driver 029B Structural Welding-AWS B
(formerly Apprenticeship Pile Driver 018, Structural Welding-AWS)

Apprenticeship Carpentry Pile Driver 030 Print Reading
(formerly Apprenticeship Pile Driver 019, Printreading)

Apprenticeship Carpentry Pile Driver 031A Welding Fabrication A
(formerly Apprenticeship Pile Driver 017, Welding Fabrication)

Apprenticeship Carpentry Pile Driver 031B Welding Fabrication B
(formerly Apprenticeship Pile Driver 017, Welding Fabrication)

Apprenticeship Carpentry Plasterer 025 Basic Plastering
(formerly Apprenticeship Plastering 020, Basic Plastering)

Apprenticeship Carpentry Plasterer 026 Exterior Plastering
(formerly Apprenticeship Plastering 043, Exterior Plastering)

Apprenticeship Carpentry Plasterer 027 Dot and Screed Techniques
(formerly Apprenticeship Plastering 044, Dot and Screed Techniques)

Apprenticeship Carpentry Plasterer 028 Interior Plastering
(formerly Apprenticeship Plastering 046, Interior Plastering)

Apprenticeship Carpentry Plasterer 029 Tender and Plastering Equipment
(formerly Apprenticeship Plastering 021, Plastering Equipment)

Apprenticeship Carpentry Plasterer 030 Exterior Insulation Finish Systems (EIFS)
(formerly Apprenticeship Plastering 045, Exterior Insulation Finish Systems (EIFS))

Apprenticeship Carpentry Plasterer 032 Plastering Equipment Application
(formerly Apprenticeship Plastering 022, Plastering Equipment Application)

Apprenticeship Carpentry Plasterer 033 Finish Applications
(formerly Apprenticeship Plastering 047, Finish Applications)

Apprenticeship Carpentry Plasterer 034 Theme Plastering
(formerly Apprenticeship Plastering 049, Theme Plastering)

Apprenticeship Maintenance Mechanic 054 AC,DC Motors and Motor Control Circuits
(formerly Apprenticeship Maintenance Mechanic 054, Electrical Troubleshooting - Operations and Maintenance Technician IV (Electrical))

Apprenticeship Maintenance Mechanic 057 Electrical Safety/System Troubleshooting
(formerly Apprenticeship Maintenance Mechanic 057, Operations and Maintenance Technician IV (Electrical))

Apprenticeship Modular Furnishings Installation 030 Crew Lead Customer Service Training
(formerly Apprenticeship Modular Furnishings Installation 030, Crew Lead Training)

Art 129 Introduction to Web Design
(formerly Art 129, Graphic Design Concepts for the Web)

Mathematics 295 Differential Equations
(formerly Mathematics 295, Beginning Differential Equations)

Mathematics N60 Elementary Algebra
(formerly Mathematics N60, Elementary Algebra)

Mathematics N60L Beginning Algebra Math Lab
(formerly Mathematics N60L, Beginning Algebra Math Lab)

Surveying/Mapping Sciences 155 Introduction to Geographic Information Systems
(formerly Survey/Mapping Sciences 150, Introduction to Geographic Information Systems)
ACCOUNTING (ACCT)

Division of Business and Career Technical Education

Dean: Von Lawson
Co-Chairs, Business: Steven Deeley, Stewart Myers
Faculty: DeAnna Kirchen

The associate degree and certificate of achievement in accounting prepare students for entry-level positions and promotional opportunities in accounting and administrative departments of businesses in public and private sector areas such as manufacturing, merchandising, financial service, wholesale trades, and government. Specialized training in accounting and finance principles and practices enable students to maintain accounting records and develop financial reports and make effective use of financial information for analysis and decision making. Entry-level employment opportunities include positions in accounts receivable/payable, payroll, income tax preparation, cost accounting, and a number of trainee positions. Promotional opportunities include higher-level responsibilities in these areas and the areas of general ledger, financial statement preparation and financial statement analysis.

Associate in Science

Accounting (11858)

Learning Outcome(s)

Upon successful completion of the major requirements for this degree, students will be able to
• Be prepared for a job or transfer to a four-year institution.

Major requirements* Units
Accounting 101, Financial Accounting 4
Accounting 102, Managerial Accounting 4
Accounting 204, Managerial Cost Accounting OR 3
Accounting 205, Intermediate Accounting Business 222, Business Writing OR 3
Management 122, Business Communications 3
Computer Information Systems 101, Introduction to Microsoft Office 3
Computer Information Systems 106, Microsoft Excel 3

TOTAL 20

Certificate of Achievement

Accounting (21631)

Learning Outcome(s)

Upon successful completion of the requirements for this certificate, students will be able to
• Be prepared for employment.

Certificate requirements Units
Accounting 101, Financial Accounting 4
Accounting 102, Managerial Accounting 4
Accounting 204, Managerial Cost Accounting OR 3
Accounting 205, Intermediate Accounting Business 222, Business Writing OR 3
Management 122, Business Communications 3
Computer Information Systems 101, Introduction to Microsoft Office 3
Computer Information Systems 106, Microsoft Excel 3

TOTAL 14

Students intending to obtain a bachelor’s degree in accounting are advised to meet with a SCC counselor, and to also look at the Business Administration requirements listed in the catalog of the transfer university of their choice. Students planning to transfer to California State University, Fullerton (CSUF) should strongly consider taking Business 222, Business Writing, to meet the communication requirement above and taking Business 150, Introduction to Information Systems and Applications to meet the associate degree requirements for computer skills and knowledge.

Certificate of Proficiency

General Accounting

Learning Outcome(s)

Upon successful completion of the requirements for this certificate, students will be able to
• Be able to get an entry-level job in accounting.

Certificate requirements Units
Accounting 101, Financial Accounting 4
Accounting 102, Managerial Accounting 4
Business 150, Introduction to Information Systems and Applications OR 3
Computer Information Systems 101, Introduction to Microsoft Office Business 222, Business Writing OR 3
Management 122, Business Communications 3

TOTAL 14

Certificate of Proficiency

Computerized Accounting

Learning Outcome(s)

Upon successful completion of the requirements for this certificate, students will be able to
• Be eligible for employment as a bookkeeper, accounting clerk, bank teller and cashier.

Certificate requirements Units
Accounting 035, QuickBooks 2
Accounting 101, Financial Accounting 4
Computer Information Systems 101, Introduction to Microsoft Office OR 3
Computer Science 100, The Computer and Society OR 3
Computer Information Systems 106, Microsoft Excel 3

TOTAL 12

Courses

Accounting 035
QuickBooks
Unit(s): 2.0
Class Hours: 32 Lecture total.
Preparation of accounting records for businesses using the QuickBooks software in the Windows environment. Topics include customer transactions, vendor transactions, bank reconciliations, reports, company file setup, and customization of QuickBooks.

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
Accounting 101
Financial Accounting
Unit(s): 4.0
Class Hours: 64 Lecture total.

The study of accounting as an information system, examining why it is important, and how it is used by investors and creditors to make decisions. Coverage includes the accounting information system and the recording and reporting of business transactions with a focus on the accounting cycle, the application of generally accepted accounting principles, the classified financial statements, and statement analysis. It also includes issues relating to asset, liability, and equity valuation, revenue and expense recognition, cash flow, internal controls and ethics. CSU/UC (C-ID)

Accounting 102
Managerial Accounting
Unit(s): 4.0
Class Hours: 64 Lecture total.
Prerequisite: Accounting 101.

Study of the use and reporting of accounting data for management planning, cost control, and decision making purposes. The course includes broad coverage of concepts, classifications, and behaviors of costs. Topics include cost systems, the analysis and use of cost information, cost-volume-profit analysis, contribution margin, profit planning, standard costs, relevant costs, and capital budgeting. CSU/UC (C-ID)

Accounting 204
Managerial Cost Accounting
Unit(s): 3.0
Class Hours: 48 Lecture total.
Prerequisite: Accounting 102.

Presents the theory of cost behavior, cost accounting, and cost control; the use of accounting information for management planning and decision making: cost systems, budgeting, and financial performance analysis. CSU

Accounting 205
Intermediate Accounting
Unit(s): 3.0
Class Hours: 48 Lecture total.
Prerequisite: Accounting 102.

Second year accounting dealing with conceptual framework, adjustments, and financial statements, present and future value concepts, cash, investments, receivables, cost and valuation procedures for inventories, accounting for plant and intangible assets. CSU

American College English (ACE)
Division of Arts, Humanities and Social Sciences/Library

Dean: Marilyn Flores
Department Chair, ACE: Diana Babayan
Faculty: Diana Babayan, Kay Powell

Courses

American College English N80
Writing Review
Unit(s): 0.5
Class Hours: 8 Lecture total.
Recommended Preparation: Concurrent enrollment in another ACE course is highly recommended.

This course offers individualized practice in creating better paragraphs and short essays emphasizing correct grammar, spelling and punctuation. Students can work on computers in the Academic Success Center and will conference with their instructor regularly. Grade: Pass/No Pass.

American College English N81
Improving Pronunciation
Unit(s): 3.0
Class Hours: 48 Lecture total.

Students will improve pronunciation of vowel and consonant sounds, word stress and intonation. Students will also practice reduced forms and thought groups. Some assignments require students to use the Academic Success Center outside of class hours.

American College English 052
Expanding Academic Writing and Reading
Unit(s): 4.0
Class Hours: 48 Lecture total, 48 Laboratory total.
Prerequisite: Qualifying placement profile

Recommended Preparation: Concurrent enrollment in American College English 053 is strongly advised.

Intermediate students expand their skills in grammar and in writing paragraphs. This course also strengthens students' vocabulary, reading and critical thinking skills. Laboratory is required and includes class assignments, individualized work and writing conferences with the instructor. Lab is part of the scheduled class meeting hours. Some homework will require the use of the Academic Success Center.

American College English 053
Expanding Academic Speaking Skills
Unit(s): 2.0
Class Hours: 32 Lecture total.

Intermediate level students expand their speaking skills in English. They will practice different types of speaking tasks such as expressing and supporting opinions, restating what others have said, and paraphrasing what they have heard or read. This course also strengthens students' vocabulary and critical thinking skills. Some assignments in the Academic Success Center will be required.

American College English 093
Refining Academic Speaking Skills
Unit(s): 2.0
Class Hours: 32 Lecture total.
Recommended Preparation: Concurrent enrollment in ACE 102.

High-intermediate speaking and listening skills course. Students will increase their ability to understand and summarize longer lectures, engage in group discussions and do effective presentations.

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
American College English 102  
Refining Academic Writing and Reading  
Unit(s): 4.0  
Class Hours: 48 Lecture total, 48 Laboratory total.  
Prerequisite: American College English 052 or qualifying placement profile.  
Recommended Preparation: Concurrent enrollment in ACE 093.  
Students receive intensive practice with strategies to improve their writing skills at the paragraph and short essay level. They also expand their vocabulary, reading and critical thinking skills. Laboratory is required and includes class assignments, individualized work and writing conferences with the instructor. Lab is part of the scheduled class meeting hours. **CSU/UC**

American College English 116  
Introduction to Academic Composition  
Unit(s): 4.0  
Class Hours: 48 Lecture total, 48 Laboratory total.  
Prerequisite: American College English 102 or qualifying placement profile.  
Advanced students are introduced to common academic writing tasks such as comparing/contrasting and supporting an argument. Students also produce a short research paper. The course emphasizes control of grammar, punctuation and mechanics within student papers. Students will also strengthen critical reading and vocabulary skills. Laboratory is required and includes class assignments, individualized work and writing conferences with the instructor. Lab is part of the scheduled class meeting hours. **CSU/UC**

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**Santiago Canyon College**

**AMERICAN COLLEGE ENGLISH PROGRAM**

The ACE program is for students who have an English as a Second Language (ESL) background or who had English Language Learner/Development (ELL or ELD) classes in high school.

ACE courses are intensive and emphasize writing, reading and speaking skills development to prepare you for success in all of your college-level courses. Before you can register for ACE, you need to take the TELD placement test. ESL students who take the other English placement test (CTEP) are often placed in English N50 or N60 and might not pass because they lack the necessary fluency in writing. To register for the TELD, go to [http://www.sccollege.edu/Departments/testing](http://www.sccollege.edu/Departments/testing).

The following chart shows the levels in the ACE program. Students who place below ACE 052 can take classes in SCC's Continuing Education ESL program, which can be contacted at (714) 628-5900. Not all ACE courses are offered every semester.

<table>
<thead>
<tr>
<th>ACE COURSE</th>
<th>PREREQUISITE</th>
<th>+ SUPPORT COURSES</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACE 052, Writing/Reading 4 units, 6 hours/week</td>
<td>Placement test profile</td>
<td>Reading 096 (3 units)</td>
</tr>
<tr>
<td>ACE 053, Speaking/Listening 2 units, 2 hours/week</td>
<td>ACE 052 students are strongly advised to also enroll in ACE 053.</td>
<td></td>
</tr>
<tr>
<td>ACE 102*, Writing/Reading 4 units, 6 hours/week</td>
<td>Placement test profile OR “C” or above in ACE 052.</td>
<td>Reading 096 or 097 (3 units)</td>
</tr>
<tr>
<td>ACE 093, Speaking/Listening 2 units, 2 hours/week</td>
<td>ACE 102 students are strongly advised to enroll in ACE 093.</td>
<td></td>
</tr>
<tr>
<td>ACE 116*, Intro to Composition 4 units, 6 hours/week</td>
<td>Placement test profile OR “C” or above in ACE 102.</td>
<td>Reading 097 or 102 (3 units) Counseling 101 (3 units) Counseling 116 (3 units)</td>
</tr>
</tbody>
</table>

*Students who pass ACE 116 can take English 101.*

*ACE 102 AND 116 TRANSFER TO CSU AND UC; English N50, N60 and 061 do not. The TELD placement test is for ESL/ELD students. It can also place ESL students into English 101.*

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*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.*
ANTHROPOLOGY (ANTH)

Division of Arts, Humanities and Social Sciences/Library

Dean: Marilyn Flores
Department Co-Chairs, Social Sciences: Cari Cannon, Alexander Taber
Faculty: Nicholas Magalouzis

Associate in Arts
Anthropology for Transfer (32043)

The Associate in Arts in Anthropology for Transfer is designed to provide students with an understanding of the scientific and humanistic study of past and present cultures, nonhuman primate relatives and archaeology. Courses in this program explore the influence of anthropology on various professional areas such as archeology, ethnography, linguistics, physical anthropology, museology, elementary and secondary social science education, art, economics, history, international relations, music, law, political science, psychology, religion, social work and foreign service. Successful completion of the transfer degree in Anthropology guarantees the student acceptance to a local California State University to pursue a baccalaureate degree in Anthropology or a related field.

Learning Outcome(s)

Upon successful completion of the major requirements for this degree, students will be able to
• Explain cultures past and present and how cultures fit into modern globalization.
• Discuss hominidae biological development over millennium and their social and biological attributes.
• Understand and explain culture in Archaeological terms and try to interpret artifacts into economic, religious, political and social context.

Major requirements*

<table>
<thead>
<tr>
<th>Major requirements*</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anthropology 100/100H, Introduction to Cultural Anthropology</td>
<td>3</td>
</tr>
<tr>
<td>Anthropology 101, Introduction to Physical Anthropology</td>
<td>3</td>
</tr>
<tr>
<td>Anthropology 103, Introduction to Archaeology</td>
<td>3</td>
</tr>
<tr>
<td>Select one (1) course from the following (List A):</td>
<td>3</td>
</tr>
<tr>
<td>Anthropology 104, Language and Culture</td>
<td>3</td>
</tr>
<tr>
<td>Geography 102, Cultural Geography</td>
<td>3</td>
</tr>
<tr>
<td>Geology 101, Introduction to Geology</td>
<td>3</td>
</tr>
<tr>
<td>Select one (1) course from the following (List B):</td>
<td>3-4</td>
</tr>
<tr>
<td>An additional course from List A (3)</td>
<td></td>
</tr>
<tr>
<td>Mathematics 219/219H, Statistics and Probability</td>
<td>4</td>
</tr>
<tr>
<td>Social Science 219/219H, Statistics and Probability</td>
<td>4</td>
</tr>
<tr>
<td>Select one (1) course from the following (List C):</td>
<td>3</td>
</tr>
<tr>
<td>An additional course from Lists A or B (3-4)</td>
<td></td>
</tr>
<tr>
<td>Chicano Studies 101, Introduction to Chicano Studies</td>
<td>3</td>
</tr>
<tr>
<td>Communication 225/225H, Gender Communication</td>
<td>3</td>
</tr>
<tr>
<td>English 271, Survey of World Literature</td>
<td>3</td>
</tr>
<tr>
<td>English 272, Survey of World Literature</td>
<td>3</td>
</tr>
<tr>
<td>Ethnic Studies 101, Introduction to Ethnic Studies</td>
<td>3</td>
</tr>
<tr>
<td>Geography 100/100H, World Regional Geography</td>
<td>3</td>
</tr>
<tr>
<td>History 101/101H, World Civilizations to the 16th Century</td>
<td>3</td>
</tr>
<tr>
<td>History 102/102H, World Civilizations Since the 16th Century</td>
<td>3</td>
</tr>
<tr>
<td>Music 102, World Music</td>
<td>3</td>
</tr>
<tr>
<td>History 124, Mexican-American History in the United States</td>
<td>3</td>
</tr>
<tr>
<td>Philosophy 112, World Religions</td>
<td>3</td>
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<tr>
<td>Psychology 170, Multicultural Psychology</td>
<td>3</td>
</tr>
<tr>
<td>Sociology 100/100H, Introduction to Sociology</td>
<td>3</td>
</tr>
<tr>
<td>Women's Studies 101, Introduction to Women's Studies</td>
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</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>18-19</strong></td>
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</tbody>
</table>

Associate in Arts
Anthropology (11939)

The associate degree in anthropology is designed as a program of basic courses for students considering professional careers as archeologists, ethnographers, linguists, physical anthropologists; for those preparing to become social science teachers in elementary or secondary schools; for such diverse fields as psychology, medicine, law, political science, international relations, economics, or history; and for individuals who plan public service careers in social work, health and welfare programs, foreign service. Students should consult with faculty members for advice in selecting course offerings best suited to the individual’s particular career objectives. The associate of arts degree prepares the student to move into a curriculum at a four-year institution leading to a baccalaureate degree in these careers.

Learning Outcome(s)

Upon successful completion of the major requirements for this degree, students will be able to
• Study culture in Archaeological context and try to interpret artifacts into economic, religious, political and social context.
• Understand cultures past and present and how cultures fit into modern globalization.
• Understand human biological development over millennium and primates and their social and biological attributes.

Major requirements*

<table>
<thead>
<tr>
<th>Major requirements*</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anthropology 100/100H, Introduction to Cultural Anthropology</td>
<td>3</td>
</tr>
<tr>
<td>Anthropology 101, Introduction to Physical Anthropology</td>
<td>3</td>
</tr>
<tr>
<td>Anthropology 103, Introduction to Archaeology</td>
<td>3</td>
</tr>
<tr>
<td>Anthropology 104, Language and Culture</td>
<td>3</td>
</tr>
<tr>
<td>Economics 120, Principles/Macro</td>
<td>3</td>
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<tr>
<td>Ethnics Studies 101, Introduction to Ethnic Studies</td>
<td>3</td>
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<tr>
<td>Geography 100/100H, World Regional Geography</td>
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</tr>
<tr>
<td>Geology 102, Cultural Geography</td>
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</tr>
<tr>
<td>History 101/101H, World Civilizations to the 16th Century</td>
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<tr>
<td>Psychology 100/100H, Introduction to Psychology</td>
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<td>Women's Studies 101, Introduction to Women's Studies</td>
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Select six (6) units from List A (Cultural Anthropology)

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<thead>
<tr>
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<td>Anthropology 100/100H, Introduction to Cultural Anthropology</td>
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<td>Anthropology 101, Introduction to Physical Anthropology</td>
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</tr>
<tr>
<td>Anthropology 103, Introduction to Archaeology</td>
<td>3</td>
</tr>
<tr>
<td>Economics 120, Principles/Macro</td>
<td>3</td>
</tr>
<tr>
<td>Ethnics Studies 101, Introduction to Ethnic Studies</td>
<td>3</td>
</tr>
<tr>
<td>Geography 100/100H, World Regional Geography</td>
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<tr>
<td>History 101/101H, World Civilizations to the 16th Century</td>
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</tr>
<tr>
<td>Psychology 100/100H, Introduction to Psychology</td>
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<tr>
<td>Sociology 100/100H, Introduction to Sociology</td>
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</tr>
<tr>
<td>Women's Studies 101, Introduction to Women's Studies</td>
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Select six (6) units from List B (Physical Anthropology)

<table>
<thead>
<tr>
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<tr>
<td>Anthropology 101L, Physical Anthropology Laboratory</td>
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<tr>
<td>Biology 109/109H, Fundamentals of Biology</td>
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<tr>
<td>Biology 109L, Fundamentals of Biology Laboratory</td>
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<tr>
<td>Biology 149, Human Anatomy and Physiology</td>
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<tr>
<td>Biology 177, Human Genetics</td>
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<tr>
<td>Biology 211, Cellular and Molecular Biology</td>
<td>5</td>
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<tr>
<td>Biology 212, Animal Diversity and Ecology</td>
<td>5</td>
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<tr>
<td>Geology 101, Introduction to Geology</td>
<td>3</td>
</tr>
<tr>
<td>Geology 101L, Introduction to Geology Laboratory</td>
<td>1</td>
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<tr>
<td>Geology 201, Introduction to Historical Geology</td>
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</table>

It is strongly recommended that anthropology majors transferring to the CSU or UC system complete Foreign Language courses at the 201 and 202 level, and Social Sciences 219/219H or Mathematics 219/219H.

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
Courses

Anthropology 100
Introduction to Cultural Anthropology
Unit(s): 3.0
Class Hours: 48 Lecture total.
A cross-cultural survey of the major areas of cultural anthropology including subsistence patterns, economic and political systems, family and kinship, religion, and cultural change. Also includes contemporary issues facing humankind such as the environment, resource depletion, ethnic conflict, globalization, and warfare. Emphasis is on understanding cultural diversity and cultural universals. **CSU/UC (C-ID)**

Anthropology 100H
Honors Introduction to Cultural Anthropology
Unit(s): 3.0
Class Hours: 48 Lecture total.
Prerequisite: A high school or college GPA of 3.0 or above.
This is a seminar style course that is enriched beyond that of ANTH 100, Introduction to Cultural Anthropology. This cross-cultural survey course will focus on the four major fields of Cultural Anthropology as well as Applied Anthropology. Cultural systems over time will be studied such as religion, subsistence patterns, economics, kinship and cultural change. Globalization will be addressed as well as contemporary issues of the environment, warfare, resource depletion and ethnic conflict. Emphasis will be on critical thinking, understanding cultural diversity and cultural universals. **CSU/UC (C-ID)**

Anthropology 101
Introduction to Physical Anthropology
Unit(s): 3.0
Class Hours: 48 Lecture total.
An introduction to humankind's place in nature, including evolutionary theory, principles of genetics, primate evolution and behavior, fossil evidence for human evolution, human biology and variation, growth and adaptability, and biomedical anthropology. Includes practical application of biological anthropology to human problems. **CSU/UC**

Anthropology 101L
Physical Anthropology Laboratory
Unit(s): 1.0
Class Hours: 48 Laboratory total.
Prerequisite: Anthropology 101/101H or concurrent enrollment.
Laboratory exercises and experiments designed to explore and understand the primary areas of physical anthropology: evolutionary theory, principles of genetics, comparative anatomy, physiology, behavior and ecology of vertebrates with an emphasis on nonhuman primates, analysis of fossil evidence for human evolution, human biology and variation, growth and adaptability, and biomedical anthropology. Includes both traditional and virtual laboratory experiences. **CSU/UC**

Anthropology 103
Introduction to Archaeology
Unit(s): 3.0
Class Hours: 48 Lecture total.
This is a survey course in world archaeology. Methods of archaeological survey and excavation will be discussed as well as past and current concepts and theories. Material remains such as lithics, bone, ceramics and ecofacts will be discussed as to how they can be interpreted into social, political, economic, religious and ethnic terms. Optional field trips may be offered. **CSU/UC (C-ID)**

Anthropology 104
Language and Culture
Unit(s): 3.0
Class Hours: 48 Lecture total.
General introduction to the processes of human communication. Includes the relationship between language and culture, acquisition of first and second languages, languages in contact, sociolinguistics and the effects of both language and culture on inter/intra group communication. Languages spoken in the local area are used as the basis of study. **CSU/UC**

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.*
APPRENTICESHIP CARPENTRY (ACA)
Division of Business and Career Technical Education
Dean: Von Lawson

Apprenticeship Carpentry-Acoustical Tile
The associate degree and certificate of achievement in apprenticeship carpentry acoustical tile provide the required related and supplemental instruction for interior systems apprentices in the technical skills required in the trade. Successful completion may result in journeyworker status. Interested apprentices should contact the Carpentry Apprenticeship Committee and the Apprenticeship Office at Santiago Canyon College.

Associate in Science
Acoustical Tile (31107)

Learning Outcome(s)
Upon successful completion of the major requirements for this degree, students will be able to
• Begin a career as a journeyworker acoustical installer.
• Have a basis for further college education.

Major requirements*

Certificate requirements

Apprenticeship Carpentry Concrete (13235)

Learning Outcome(s)
Upon successful completion of the major requirements for this degree, students will be able to
• Have a basis for further college education.
• Begin a career as a journeyworker carpenter.

Total 31.5

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
Apprenticeship Carpentry-Drywall Finisher

The associate degree and certificate of achievement in apprenticeship carpentry drywall finisher are designed to provide related and supplemental instruction including the technical skills required in the trade. Successful completion may result in journeyworker status. Interested apprentices should contact the Carpentry Apprenticeship Committee and the Apprenticeship Office at Santiago Canyon College.

Certificate of Achievement
Drywall Finisher (21663)

Learning Outcome(s)
Upon successful completion of the requirements for this certificate, students will be able to
- Have a basis for further college education.
- Begin a career as a journeyworker drywall finisher.

<table>
<thead>
<tr>
<th>Major requirements*</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apprenticeship Carpentry 071A, Orientation</td>
<td>2</td>
</tr>
<tr>
<td>Apprenticeship Carpentry 071B, Safety and Health Certifications</td>
<td>2</td>
</tr>
<tr>
<td>Apprenticeship Carpentry 072A, Basic Metal Framing</td>
<td>1.5</td>
</tr>
<tr>
<td>Apprenticeship Carpentry 074A, Print Reading</td>
<td>2</td>
</tr>
<tr>
<td>Apprenticeship Carpentry 076A, Basic Hand Finishing</td>
<td>2</td>
</tr>
<tr>
<td>Apprenticeship Carpentry 076B, Automatic Finishing Tools</td>
<td>2</td>
</tr>
<tr>
<td>Apprenticeship Carpentry 077A, Drywall Installation/Finish Trims</td>
<td>2</td>
</tr>
<tr>
<td>Apprenticeship Carpentry 077B, Advanced Hand Finishing</td>
<td>2</td>
</tr>
<tr>
<td>Apprenticeship Carpentry 077C, Advanced Automatic Finishing Tools</td>
<td>2</td>
</tr>
<tr>
<td>Apprenticeship Carpentry 078B, Advanced Metal Framing</td>
<td>2</td>
</tr>
<tr>
<td>Apprenticeship Carpentry 078C, Wet Wall Finishes</td>
<td>2</td>
</tr>
<tr>
<td>Apprenticeship Carpentry 078D, Ceiling and Soffit Finishing</td>
<td>2</td>
</tr>
<tr>
<td>Apprenticeship Carpentry 079A, Drywall/Acoustical Ceilings</td>
<td>2</td>
</tr>
<tr>
<td>Apprenticeship Carpentry 082B, Firestopping Procedures</td>
<td>2</td>
</tr>
<tr>
<td>Apprenticeship Carpentry 082C, Decorative Trims and Textures</td>
<td>2</td>
</tr>
</tbody>
</table>

TOTAL 29.5

Apprenticeship Carpentry-Drywall/Lather

The associate degree and certificate of achievement in apprenticeship carpentry drywall/lather provide the related and supplemental instruction required for interior systems apprentices. Drywall/Lathers install metal stud framing, drywall, and lath according to layout plans, blueprints, and specifications. They frame and construct walls and ceilings to the necessary height and dimensions, and complete the construction for the interior/exterior of a building including the heavy gage framing and application for the exterior of the project. Successful completion may result in journeyworker status. Interested apprentices should contact the Carpentry Apprenticeship Committee and the Apprenticeship Office at Santiago Canyon College.

Certificate of Achievement
Drywall/Lather (11988)

Learning Outcome(s)
Upon successful completion of the requirements for this certificate, students will be able to
- Safely operate tools and equipment used by drywall applicators in the construction industry.
- Interpret prints to determine the appropriate use of construction methods and materials consistent with drywall applicator industry standards.

<table>
<thead>
<tr>
<th>Major requirements*</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apprenticeship Carpentry 071A, Orientation</td>
<td>2</td>
</tr>
<tr>
<td>Apprenticeship Carpentry 071B, Safety and Health Certifications</td>
<td>2</td>
</tr>
<tr>
<td>Apprenticeship Carpentry 072A, Basic Metal Framing</td>
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</tr>
<tr>
<td>Apprenticeship Carpentry 072B, Basic Lathing</td>
<td>1.5</td>
</tr>
<tr>
<td>Apprenticeship Carpentry 072C, Advanced Lathing</td>
<td>1.5</td>
</tr>
<tr>
<td>Apprenticeship Carpentry 073A, Framing Ceilings and Soffts</td>
<td>1.5</td>
</tr>
<tr>
<td>Apprenticeship Carpentry 073B, Framing Suspended Ceilings</td>
<td>1.5</td>
</tr>
<tr>
<td>Apprenticeship Carpentry 073C, Framing Curves and Arches</td>
<td>1.5</td>
</tr>
<tr>
<td>Apprenticeship Carpentry 074A, Print Reading</td>
<td>2</td>
</tr>
<tr>
<td>Apprenticeship Carpentry 075A, Light Gage Welding AWS</td>
<td>1.5</td>
</tr>
</tbody>
</table>

Select six (6) units from the following: 6-6.7
- Apprenticeship Carpentry 030A, Standard First Aid (0.2)
- Apprenticeship Carpentry 074B, Advanced Print Reading (2)
- Apprenticeship Carpentry 075B, Light Gage Welding LAC (1.5)
- Apprenticeship Carpentry 075C, Light Gage Welding AWS - B (1.5)
- Apprenticeship Carpentry 083, Door/Door Frames (1.5)
- Apprenticeship Carpentry 085, Supervisory Training (1.5)
- Apprenticeship Carpentry 086A, Exterior Insulation Finish Systems (EIFS) (1.5)
- Apprenticeship Carpentry 089, Free-form Lathing (1.5)
- Apprenticeship Carpentry 090, Residential Steel Stud Framing (1.5)

TOTAL 22.5-23.2

Certificate of Achievement
Drywall/Lather (21664)

Learning Outcome(s)
Upon successful completion of the requirements for this certificate, students will be able to
- Safely operate tools and equipment used by drywall applicators in the construction industry.
- Interpret prints to determine the appropriate use of construction methods and materials consistent with drywall applicator industry standards.

<table>
<thead>
<tr>
<th>Certificate requirements</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apprenticeship Carpentry 071A, Orientation</td>
<td>2</td>
</tr>
<tr>
<td>Apprenticeship Carpentry 071B, Safety and Health Certifications</td>
<td>2</td>
</tr>
<tr>
<td>Apprenticeship Carpentry 072A, Basic Metal Framing</td>
<td>1.5</td>
</tr>
<tr>
<td>Apprenticeship Carpentry 072B, Basic Lathing</td>
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</tr>
<tr>
<td>Apprenticeship Carpentry 072C, Advanced Lathing</td>
<td>1.5</td>
</tr>
</tbody>
</table>

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
Apprenticeship Carpentry 073A, Framing Ceilings and Soffits 2
Apprenticeship Carpentry 073B, Framing Suspended Ceilings 2
Apprenticeship Carpentry 073C, Framing Curves and Arches 2
Apprenticeship Carpentry 074A, Print Reading 2
Apprenticeship Carpentry 075A, Light Gage Welding AWS 2

Select six (6) units from the following: 6-6.7
Apprenticeship Carpentry 030A, Standard First Aid (0.2)
Apprenticeship Carpentry 074B, Advanced Print Reading (2)
Apprenticeship Carpentry 075B, Light Gage Welding LAC (1.5)
Apprenticeship Carpentry 075C, Light Gage Welding AWS - B (1.5)
Apprenticeship Carpentry 083, Door/Door Frames (1.5)
Apprenticeship Carpentry 085, Supervisory Training (1.5)
Apprenticeship Carpentry 086A, Exterior Insulation Finish Systems (EIFS) (1.5)
Apprenticeship Carpentry 089, Free-form Lathing (1.5)
Apprenticeship Carpentry 090, Residential Steel Stud Framing (1.5)

TOTAL 22.5-23.2

Apprenticeship Carpentry-Finish Carpentry

The associate degree and certificate of achievement in apprenticeship carpentry finish carpentry provide the related and supplemental instruction required in the trade. Finish carpenters cut, shape and assemble wood products, including moldings, panels and furniture. They also fabricate store fixtures, which includes the use of metal, plastics, and glass. Successful completion may result in journeyworker status. Interested apprentices should contact the Carpentry Apprenticeship Committee and the Apprenticeship Office at Santiago Canyon College.

Certificate of Achievement
Finish Carpentry (21658)

Learning Outcome(s)
Upon successful completion of the requirements for this certificate, students will be able to
• Begin a career as a journeyworker carpenter.
• Have a basis for further college education.

Certificate requirements Units
Apprenticeship Carpentry 004C, Print Reading 2
Apprenticeship Carpentry 021A, Orientation 2

TOTAL 25.5-26.5

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
Certificate of Achievement Framing (21659)

Learning Outcome(s)
Upon successful completion of the requirements for this certificate, students will be able to
- Safely operate tools and equipment used by framers in the carpentry trade.
- Interpret prints to determine the appropriate use of construction methods and materials consistent with carpentry industry standards.

Certificate requirements

<table>
<thead>
<tr>
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<th>Units</th>
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<td>Apprenticeship Carpenter 004C, Print Reading</td>
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</tr>
<tr>
<td>Apprenticeship Carpenter 021A, Orientation</td>
<td>2</td>
</tr>
<tr>
<td>Apprenticeship Carpenter 021B, Safety and Health Certifications</td>
<td>2</td>
</tr>
<tr>
<td>Apprenticeship Carpenter 021C, Basic Wall Framing</td>
<td>1.5</td>
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<tr>
<td>Apprenticeship Carpenter 021E, Tool/Equipment Applications</td>
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<tr>
<td>Apprenticeship Carpenter 022A, Commercial Floor Framing</td>
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<tr>
<td>Apprenticeship Carpenter 022B, Basic Stairs</td>
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<tr>
<td>Apprenticeship Carpenter 022D, Exterior Finish Details</td>
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<tr>
<td>Apprenticeship Carpenter 023B, Basic Roof Framing</td>
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<tr>
<td>Apprenticeship Carpenter 024A, Basic Commercial Framing</td>
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<td>Apprenticeship Carpenter 024B, Advanced Commercial Framing</td>
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<td>Apprenticeship Carpenter 025C, Advanced Stairs</td>
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Select four courses from the following: 6-7

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<th>Units</th>
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<tbody>
<tr>
<td>Apprenticeship Carpenter 023C, Advanced Roof Framing (1.5)</td>
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<tr>
<td>Apprenticeship Carpenter 024C, Panelized Roofing (1.5)</td>
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<tr>
<td>Apprenticeship Carpenter 024D, Transit Level/Laser (2)</td>
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<tr>
<td>Apprenticeship Carpenter 025D, Advanced Print Reading (2)</td>
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<td>Apprenticeship Carpenter 026B, Wall Framing (1.5)</td>
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</tr>
<tr>
<td>Apprenticeship Carpenter 072A, Basic Metal Framing (1.5)</td>
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</tr>
</tbody>
</table>

**TOTAL 25.5-26.5**

Apprenticeship Carpenter-Millwrighting

The associate degree and certificate of achievement in apprenticeship carpentry millwrighting provide the required related and supplemental classroom instruction in the technical skills and knowledge required in the trade for state-indentured apprentices. The work of the Millwright involves installing conveyor systems, escalators, giant electrical turbines and generators. Millwrights install and do maintenance on machinery in factories and do much of the precision work in nuclear power plants. Millwrights are skilled construction mechanics who study and interpret blueprints, and then put their knowledge and expertise to work drilling, welding, bolting and doing whatever else is necessary to assure that the cogs of industry are in perfect working order. Interested apprentices should contact the Millwright Apprenticeship and Training Committee and the Apprenticeship Office at Santiago Canyon College.

Associate in Science Millwrighting (11986)

Learning Outcome(s)
Upon successful completion of the major requirements for this degree, students will be able to
- Begin a career as a journeyworker millwright.
- Have a basis for further college education.

Major requirements*

<table>
<thead>
<tr>
<th>Certificate requirements</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apprenticeship Millwright 021, Orientation</td>
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</tr>
<tr>
<td>Apprenticeship Millwright 022, Safety and Health Certifications</td>
<td>2</td>
</tr>
<tr>
<td>Apprenticeship Millwright 023A, Millwright General Skills - A</td>
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</tr>
<tr>
<td>Apprenticeship Millwright 023B, Millwright General Skills - B</td>
<td>1.5</td>
</tr>
<tr>
<td>Apprenticeship Millwright 024, Printreading</td>
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</tr>
<tr>
<td>Apprenticeship Millwright 025, Welding Fabrication</td>
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</tr>
<tr>
<td>Apprenticeship Millwright 026, Cutting and Burning</td>
<td>1.5</td>
</tr>
<tr>
<td>Apprenticeship Millwright 027, Optics and Machinery Alignment</td>
<td>1.5</td>
</tr>
</tbody>
</table>

**TOTAL 31.5**

Apprenticeship Carpenter-Pile Driver

The associate degree and certificate of achievement in apprenticeship carpentry pile driver are designed to provide the required related and supplemental classroom instruction in the technical skills and knowledge required in the trade. Pile drivers work with pile-driving rigs—those big machines that look like cranes, but shake the ground as they drive metal, concrete or wood piling into the earth during the early stages of construction. Usually, pile drivers are the first workers at the construction site. They drive metal sheet piling to hold back the dirt during excavations. They drive concrete and metal piling as part of the foundation system upon which skyscrapers are built, and they drive wood and concrete piling to hold up docks, wharfs and bridges. In some cases they work on off-shore oil rigs and as commercial divers involved in underwater construction. Pile drivers are also required to install heavy timbers and weld or cut large metal beams. Successful

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
completion may result in journeyworker status. Interested apprentices should contact the Carpentry Apprenticeship Committee and the Apprenticeship Office at Santiago Canyon College.

**Associate in Science**  
Pile Driver (31588)

**Learning Outcome(s)**  
Upon successful completion of the major requirements for this degree, students will be able to
- Begin a career as a journeyworker in their chosen field.
- Have a basis for further college education.

**Major requirements**  
<table>
<thead>
<tr>
<th>Course Description</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apprenticeship Pile Driver 011, Orientation and Safety</td>
<td>3</td>
</tr>
<tr>
<td>Apprenticeship Pile Driver 012, Piles and Hammers</td>
<td>3</td>
</tr>
<tr>
<td>Apprenticeship Pile Driver 013, Pile Caps and Columns</td>
<td>3</td>
</tr>
<tr>
<td>Apprenticeship Pile Driver 014, Abutments</td>
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</tr>
<tr>
<td>Apprenticeship Pile Driver 015, Falsework</td>
<td>3</td>
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<tr>
<td>Apprenticeship Pile Driver 016, Bridge and Deck Forms</td>
<td>3</td>
</tr>
<tr>
<td>Apprenticeship Pile Driver 017, Welding Fabrication</td>
<td>3</td>
</tr>
<tr>
<td>Apprenticeship Pile Driver 018, Structural Welding-AWS</td>
<td>3</td>
</tr>
<tr>
<td>Apprenticeship Pile Driver 019, Printreading</td>
<td>1.5</td>
</tr>
</tbody>
</table>

**TOTAL** 25.5

**Certificate of Achievement**  
Pile Driver (31589)

**Learning Outcome(s)**  
Upon successful completion of the requirements for this certificate, students will be able to
- Begin a career as a journeyworker in their chosen field.
- Have a basis for further college education.

**Certificate requirements**  
<table>
<thead>
<tr>
<th>Course Description</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apprenticeship Pile Driver 011, Orientation and Safety</td>
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<tr>
<td>Apprenticeship Pile Driver 012, Piles and Hammers</td>
<td>3</td>
</tr>
<tr>
<td>Apprenticeship Pile Driver 013, Pile Caps and Columns</td>
<td>3</td>
</tr>
<tr>
<td>Apprenticeship Pile Driver 014, Abutments</td>
<td>3</td>
</tr>
<tr>
<td>Apprenticeship Pile Driver 015, Falsework</td>
<td>3</td>
</tr>
<tr>
<td>Apprenticeship Pile Driver 016, Bridge and Deck Forms</td>
<td>3</td>
</tr>
<tr>
<td>Apprenticeship Pile Driver 017, Welding Fabrication</td>
<td>3</td>
</tr>
<tr>
<td>Apprenticeship Pile Driver 018, Structural Welding-AWS</td>
<td>3</td>
</tr>
<tr>
<td>Apprenticeship Pile Driver 019, Printreading</td>
<td>1.5</td>
</tr>
</tbody>
</table>

**TOTAL** 25.5

**Apprenticeship Carpentry-Plastering**

The associate degree and certificate of achievement in apprenticeship carpentry plastering provide the required related and supplemental instruction for apprentice plasterers in the technical skills and knowledge required in the trade. Plasterers apply various wet materials over surfaces on both exterior and interior walls, ceilings and other surfaces in the construction industry. Successful completion may result in journeyworker status. Those interested should contact the Carpentry Apprenticeship Committee and the Apprenticeship Office at Santiago Canyon College.

**Associate in Science**  
Plastering (31705)

**Learning Outcome(s)**  
Upon successful completion of the major requirements for this degree, students will be able to
- Safely operate tools and equipment used by plasterers in the construction industry.
- Interpret prints to determine the appropriate use of construction methods and materials consistent with plastering industry standards.

**Major requirements**  
<table>
<thead>
<tr>
<th>Course Description</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>Apprenticeship Carpenter 071A, Orientation</td>
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</tr>
<tr>
<td>Apprenticeship Carpenter 071B, Safety and Health Certifications</td>
<td>2</td>
</tr>
<tr>
<td>Apprenticeship Carpenter 074A, Print Reading</td>
<td>2</td>
</tr>
<tr>
<td>Apprenticeship Carpenter Plastering 023, Tool/Equipment Applications</td>
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</tr>
<tr>
<td>Apprenticeship Carpenter Plastering 025, Basic Plastering</td>
<td>1.5</td>
</tr>
<tr>
<td>Apprenticeship Carpenter Plastering 026, Exterior Plastering</td>
<td>1.5</td>
</tr>
<tr>
<td>Apprenticeship Carpenter Plastering 027, Dot and Screed Techniques</td>
<td>1.5</td>
</tr>
<tr>
<td>Apprenticeship Carpenter Plastering 028, Interior Plastering</td>
<td>1.5</td>
</tr>
<tr>
<td>Apprenticeship Carpenter Plastering 029, Tender and Plastering Equipment</td>
<td>1.5</td>
</tr>
<tr>
<td>Apprenticeship Carpenter Plastering 030, Exterior Insulation Finish Systems (EIFS)</td>
<td>1.5</td>
</tr>
<tr>
<td>Apprenticeship Carpenter Plastering 031, Ornamental Plastering</td>
<td>1.5</td>
</tr>
<tr>
<td>Apprenticeship Carpenter Plastering 032, Plastering Equipment Application</td>
<td>1.5</td>
</tr>
</tbody>
</table>

**Select four courses from the following:**  
6-7.5  
<table>
<thead>
<tr>
<th>Course Description</th>
<th>Units</th>
</tr>
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<tbody>
<tr>
<td>Apprenticeship Carpenter 072A, Basic Metal Framing</td>
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</tr>
<tr>
<td>Apprenticeship Carpenter 072B, Basic Lathing</td>
<td>1.5</td>
</tr>
<tr>
<td>Apprenticeship Carpenter 074B, Advanced Print Reading</td>
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</tr>
<tr>
<td>Apprenticeship Carpenter 082B, Firestopping Procedures</td>
<td>1.5</td>
</tr>
<tr>
<td>Apprenticeship Carpenter 033, Finish Applications</td>
<td>1.5</td>
</tr>
<tr>
<td>Apprenticeship Carpenter 034, Theme Plastering</td>
<td>1.5</td>
</tr>
<tr>
<td>Apprenticeship Modular Furnishings Installation</td>
<td>2.5</td>
</tr>
</tbody>
</table>

**TOTAL** 25.5-27

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.*
Certificate of Achievement
Plastering (31706)

Learning Outcome(s)
Upon successful completion of the requirements for this certificate, students will be able to
• Safely operate tools and equipment used by plasterers in the construction industry.
• Interpret prints to determine the appropriate use of construction methods and materials consistent with plastering industry standards.

Certificate requirements

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apprenticeship Carpentry 071A, Orientation</td>
<td>2</td>
</tr>
<tr>
<td>Apprenticeship Carpentry 071B, Safety and Health Certifications</td>
<td>2</td>
</tr>
<tr>
<td>Apprenticeship Carpentry 074A, Print Reading</td>
<td>2</td>
</tr>
<tr>
<td>Apprenticeship Carpentry Plastering 023, Tool/Equipment Applications</td>
<td>1.5</td>
</tr>
<tr>
<td>Apprenticeship Carpentry Plastering 025, Basic Plastering</td>
<td>1.5</td>
</tr>
<tr>
<td>Apprenticeship Carpentry Plastering 026, Exterior Plastering</td>
<td>1.5</td>
</tr>
<tr>
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<td>1.5</td>
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<tr>
<td>Apprenticeship Carpentry Plastering 028, Interior Plastering</td>
<td>1.5</td>
</tr>
<tr>
<td>Apprenticeship Carpentry Plastering 029, Tender and Plastering Equipment</td>
<td>1.5</td>
</tr>
<tr>
<td>Apprenticeship Carpentry Plastering 030, Exterior Insulation Finish Systems (EIFS)</td>
<td>1.5</td>
</tr>
<tr>
<td>Apprenticeship Carpentry Plastering 031, Ornamental Plastering</td>
<td>1.5</td>
</tr>
<tr>
<td>Apprenticeship Carpentry Plastering 032, Plastering Equipment Application</td>
<td>1.5</td>
</tr>
</tbody>
</table>

Select four courses from the following: 6-7.5
<table>
<thead>
<tr>
<th>Course Description</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apprenticeship Carpentry 072A, Basic Metal Framing (1.5)</td>
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</tr>
<tr>
<td>Apprenticeship Carpentry 072B, Basic Lathing (1.5)</td>
<td></td>
</tr>
<tr>
<td>Apprenticeship Carpentry 074B, Advanced Print Reading (2)</td>
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</tr>
<tr>
<td>Apprenticeship Carpentry 082B, Firestopping Procedures (1.5)</td>
<td></td>
</tr>
<tr>
<td>Apprenticeship Carpentry Plastering 033, Finish Applications (1.5)</td>
<td></td>
</tr>
<tr>
<td>Apprenticeship Carpentry Plastering 034, Theme Plastering (1.5)</td>
<td></td>
</tr>
<tr>
<td>Apprenticeship Modular Furnishings Installation 030, Crew Lead Customer Service Training (2.5)</td>
<td></td>
</tr>
</tbody>
</table>

TOTAL 25.5-27

Apprenticeship Carpentry-Tilt-Up

The associate degree and certificate of achievement in apprenticeship carpentry tilt-up are designed to provide related and supplemental instruction including the technical skills and knowledge required in the trade. Tilt-up apprentices work with slabs of concrete which, after attaining proper strength, are lifted (tilted) with a crane and set on prepared foundations to form the exterior walls of a building. The erected panels are temporarily braced, connected, and the joints between them caulked. Tilt-up workers may construct and attach the roof structure to the walls to complete the building shell. Tilt-up construction is used for nearly every type of one- to four-story building. Successful completion may result in journeyworker status. Interested apprentices should contact the Carpentry Apprenticeship Committee and the Apprenticeship Office at Santiago Canyon College.

Associate in Science
Tilt-Up (13233)

Learning Outcome(s)
Upon successful completion of the major requirements for this degree, students will be able to
• Safely operate tools and equipment used by carpenters in the tilt-up construction industry.
• Interpret prints to determine the appropriate use of construction methods and materials consistent with tilt-up construction standards.

Major requirements*

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apprenticeship Carpentry 002B, Slabs/Interior-Exterior Footings</td>
<td>1.5</td>
</tr>
<tr>
<td>Apprenticeship Carpentry 003A, Tilt-Up Introduction</td>
<td>1.5</td>
</tr>
<tr>
<td>Apprenticeship Carpentry 004A, Lifting and Bracing Safety</td>
<td>1.5</td>
</tr>
<tr>
<td>Apprenticeship Carpentry 005A, Wall-Column Forms/ Cutting and Burning</td>
<td>1.5</td>
</tr>
<tr>
<td>Apprenticeship Carpentry 005C, Specialized Forms and Rigging</td>
<td>1.5</td>
</tr>
<tr>
<td>Apprenticeship Carpentry 021A, Orientation</td>
<td>2</td>
</tr>
<tr>
<td>Apprenticeship Carpentry 021B, Safety and Health Certifications</td>
<td>2</td>
</tr>
<tr>
<td>Apprenticeship Carpentry 024D, Transit Level/Laser</td>
<td>2</td>
</tr>
<tr>
<td>Apprenticeship Carpentry 027D, Stairs and Ramp Forming</td>
<td>1.5</td>
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</tbody>
</table>

Select six (6) units from the following: 6
<table>
<thead>
<tr>
<th>Course Description</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Apprenticeship Carpentry 004B, Poured-in-Place Wall Forms (1.5)</td>
<td></td>
</tr>
<tr>
<td>Apprenticeship Carpentry 005B, Site Work/Curb and Gutter (1.5)</td>
<td></td>
</tr>
<tr>
<td>Apprenticeship Carpentry 021C, Basic Wall Framing (1.5)</td>
<td></td>
</tr>
<tr>
<td>Apprenticeship Carpentry 022A, Commercial Floor Framing (1.5)</td>
<td></td>
</tr>
<tr>
<td>Apprenticeship Carpentry 022E, Commercial Roof Framing (1.5)</td>
<td></td>
</tr>
<tr>
<td>Apprenticeship Carpentry 025A, Foundations and Flatwork (1.5)</td>
<td></td>
</tr>
<tr>
<td>Apprenticeship Carpentry 026B, Wall Forming (1.5)</td>
<td></td>
</tr>
<tr>
<td>Apprenticeship Carpentry 029A, Rigging (1.5)</td>
<td></td>
</tr>
</tbody>
</table>

TOTAL 21

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
Certificate of Achievement
Tilt-Up (21660)

Learning Outcome(s)
Upon successful completion of the requirements for this certificate, students will be able to
• Safely operate tools and equipment used by carpenters in the tilt-up construction industry.
• Interpret prints to determine the appropriate use of construction methods and materials consistent with tilt-up construction standards.

Major requirements*

Prerequisite: Must be a state-indentured apprentice.

<table>
<thead>
<tr>
<th>Course Details</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apprenticeship Carpentry 002B, Slabs/Interior-Exterior Footings</td>
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</tr>
<tr>
<td>Apprenticeship Carpentry 003A, Tilt-Up Introduction</td>
<td>1.5</td>
</tr>
<tr>
<td>Apprenticeship Carpentry 004A, Lifting and Bracing Safety</td>
<td>1.5</td>
</tr>
<tr>
<td>Apprenticeship Carpentry 005A, Wall-Column Forms/ Cutting and Burning</td>
<td>1.5</td>
</tr>
<tr>
<td>Apprenticeship Carpentry 005C, Specialized Forms and Rigging</td>
<td>1.5</td>
</tr>
<tr>
<td>Apprenticeship Carpentry 021A, Orientation</td>
<td>2</td>
</tr>
<tr>
<td>Apprenticeship Carpentry 021B, Safety and Health Certifications</td>
<td>2</td>
</tr>
<tr>
<td>Apprenticeship Carpentry 024D, Transit Level/Laser</td>
<td>2</td>
</tr>
<tr>
<td>Apprenticeship Carpentry 025A, Foundations and Flatwork</td>
<td>1.5</td>
</tr>
<tr>
<td>Apprenticeship Carpentry 026B, Wall Forming</td>
<td>1.5</td>
</tr>
<tr>
<td>Apprenticeship Carpentry 027D, Stairs and Ramp Forming</td>
<td>1.5</td>
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Select six (6) units from the following:

<table>
<thead>
<tr>
<th>Course Details</th>
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<tbody>
<tr>
<td>Apprenticeship Carpentry 004B, Poured-in-Place Wall Forms</td>
<td>1.5</td>
</tr>
<tr>
<td>Apprenticeship Carpentry 005B, Site Work/Curb and Gutter</td>
<td>1.5</td>
</tr>
<tr>
<td>Apprenticeship Carpentry 021C, Basic Wall Framing</td>
<td>1.5</td>
</tr>
<tr>
<td>Apprenticeship Carpentry 022A, Commercial Floor Framing</td>
<td>1.5</td>
</tr>
<tr>
<td>Apprenticeship Carpentry 022E, Commercial Roof Framing</td>
<td>1.5</td>
</tr>
<tr>
<td>Apprenticeship Carpentry 025A, Foundations and Flatwork</td>
<td>1.5</td>
</tr>
<tr>
<td>Apprenticeship Carpentry 026B, Wall Forming</td>
<td>1.5</td>
</tr>
<tr>
<td>Apprenticeship Carpentry 029A, Rigging</td>
<td>1.5</td>
</tr>
<tr>
<td>Apprenticeship Carpentry 027D, Stairs and Ramp Forming</td>
<td>1.5</td>
</tr>
</tbody>
</table>

TOTAL 21

Courses

Apprenticeship Carpentry 002B
Slabs/Interior-Exterior Footings
Prerequisite: Must be a state-indentured apprentice.

Class Hours: 20 Lecture total, 20 Laboratory total.

Apprenticeship Carpentry 003A
Tilt-Up Introduction
Prerequisite: Must be a state-indentured apprentice.

Class Hours: 20 Lecture total, 20 Laboratory total.

Apprenticeship Carpentry 004A
Lifting, and Bracing Safety
Prerequisite: Must be a state-indentured apprentice.

Class Hours: 20 Lecture total, 20 Laboratory total.

Apprenticeship Carpentry 004B
Poured-in-Place Wall Forms
Prerequisite: Must be a state-indentured apprentice.

Class Hours: 20 Lecture total, 20 Laboratory total.

Apprenticeship Carpentry 005A
Wall-Column Forms/Cutting and Burning
Prerequisite: Must be a state-indentured apprentice.

Class Hours: 20 Lecture total, 20 Laboratory total.

Apprenticeship Carpentry 005B
Print Reading
Prerequisite: Must be a state-indentured apprentice.

Class Hours: 30 Lecture total, 10 Laboratory total.

Apprenticeship Carpentry 005C
Site Work/Curb and Gutter
Prerequisite: Must be a state-indentured apprentice.

Class Hours: 20 Lecture total, 20 Laboratory total.

Apprenticeship Carpentry 021A
Orientation
Prerequisite: Must be a state-indentured apprentice.

Class Hours: 20 Lecture total, 20 Laboratory total.

Apprenticeship Carpentry 021B
Safety and Health Certifications
Prerequisite: Must be a state-indentured apprentice.

Class Hours: 20 Lecture total, 20 Laboratory total.

Apprenticeship Carpentry 022A
Commercial Floor Framing
Prerequisite: Must be a state-indentured apprentice.

Class Hours: 20 Lecture total, 20 Laboratory total.

Apprenticeship Carpentry 022E
Commercial Roof Framing
Prerequisite: Must be a state-indentured apprentice.

Class Hours: 20 Lecture total, 20 Laboratory total.

Apprenticeship Carpentry 024D
Transit Level/Laser
Prerequisite: Must be a state-indentured apprentice.

Class Hours: 20 Lecture total, 20 Laboratory total.

Apprenticeship Carpentry 025A
Foundations and Flatwork
Prerequisite: Must be a state-indentured apprentice.

Class Hours: 20 Lecture total, 20 Laboratory total.

Apprenticeship Carpentry 026B
Wall Forming
Prerequisite: Must be a state-indentured apprentice.

Class Hours: 20 Lecture total, 20 Laboratory total.

Apprenticeship Carpentry 027D
Stairs and Ramp Forming
Prerequisite: Must be a state-indentured apprentice.

Class Hours: 20 Lecture total, 20 Laboratory total.

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
Apprenticeship Carpentry 005C
Specialized Forms and Rigging
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
This course will instruct students in the construction of specialized forms used to create exterior architectural design feature on tilt-up buildings. An emphasis will be placed on interpretation of design feature details on prints, location of rigging points, and building methods for selected forms. In addition to concrete calculations, practical assignments will focus on rigging safety, load formulas, lifting hardware and procedures. Open Entry/Open Exit.

Apprenticeship Carpentry 021A
Orientation
Unit(s): 2.0
Class Hours: 30 Lecture total, 10 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
This course examines fundamental trade skills, employee-employer roles and responsibilities, and safe work practices needed for entry-level performance in the construction industry. While an emphasis will be placed on attaining standard industry safety credentials, the course is designed to provide students with practical experience using construction terminology, mathematical operations and basic measuring techniques, and tool identification and use in preparation for the next level of training. Safety will cover OSHA training for jobsite hazard recognition, accident prevention, and safe tool and equipment operation. Open Entry/Open Exit.

Apprenticeship Carpentry 021B
Safety and Health Certifications
Unit(s): 2.0
Class Hours: 30 Lecture total, 10 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
This course covers the safe and appropriate use of hazardous communication systems, fall protection, fork lifts, and emergency response procedures. Upon successful completion, students will be issued an American Red Cross First Aid/CPR Certification Card, and United Brotherhood of Carpenters (UBC) Fall Protection, Hazard Communication and Chemical Safety, and Forklift Qualification Cards. Open Entry/Open Exit.

Apprenticeship Carpentry 021C
Basic Wall Framing
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
This course presents wall construction theory, methods, and procedures required to frame basic residential walls. Practical experience using proper tool techniques and appropriate materials will provide students with fundamental skill development. An introduction to print reading will prepare students to locate measurements for determining wall lengths and size of openings. Students will perform basic wall layout tasks, use plating procedures, and assemble and brace framing before aligning and completing the selected wall construction project to industry standards. Open Entry/Open Exit.

Apprenticeship Carpentry 021E
Tool/Equipment Applications
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured Carpenter apprentice. Apprenticeship Carpentry 021A and 021B.
This course promotes hand/power tool and equipment skill development for various construction applications. Scaffold building and aerial lift safety and operating procedures will also be covered. Upon successful completion, students will be issued United Brotherhood of Carpenters (UBC) Aerial Lift and Scaffold Erector-Welded Frame Qualification Cards. Open Entry/Open Exit.

Apprenticeship Carpentry 022A
Commercial Floor Framing
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
This course covers floor joist construction and the various installation techniques used in the commercial industry. Students will interpret floor plans for job planning, identify floor joist system, and calculate material take offs. Integration of wall plating, joist layout and floor sheathing methods will be included. Instruction will incorporate measuring skills, use of math operations, specialty hardware applications, and identification of appropriate building codes. Open Entry/Open Exit.

Apprenticeship Carpentry 022B
Basic Stairs
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
This course provides an introduction to stair framing theory, terminology and construction techniques. Students will interpret floor plans and drawing elevations for job planning, and to layout and detail stair stringers. Methods for calculating the number of stairs, landing height, stair threads and riser dimensions will be presented and practiced. Instruction will include measuring skills, mathematical principles, stair and handrail fabrication, assembly and installation. Open Entry/Open Exit.

Apprenticeship Carpentry 022D
Exterior Finish Details
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
This course provides an introduction to exterior finish construction techniques for various types of exterior detail installations will be covered. Students will use plan views and drawing elevations for job planning activities, including calculating dimensions and materials, identifying wall covering types and other exterior construction details. Students will apply the construction techniques presented to complete various exterior detail installations to print specifications. Open Entry/Open Exit.

Apprenticeship Carpentry 022E
Commercial Roof Framing
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
This course provides an introduction to basic gable roof framing, terminology and construction methods. Students will interpret plan and elevation views to determine rafter systems and layout details to complete project assignments. Open Entry/Open Exit.

Apprenticeship Carpentry 023B
Basic Roof Framing
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
This course provides an introduction to basic gable roof framing, terminology, characteristics and construction methods. Students will interpret print views and drawing elevations for job planning, and to determine rafter systems and layout details. Basic rise, run, rafter angles and length calculations will be practiced. Framed wall construction will be incorporate to facilitate the gable roof assembly techniques and installation procedures that are the focus of this training. Open Entry/Open Exit.

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
Apprenticeship Carpentry 023C
Advanced Roof Framing
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.

This course provides the advanced skills used to frame hip roof types, and includes terminology, roof characteristics and construction methods. Students will interpret print views and elevations for job planning to determine hip roof rafter systems and layout details. Students will perform rise, run, rafter angles and length calculations. Framed wall construction will be incorporated to facilitate the hip roof assembly techniques and installation procedures that are the focus of this training. Open Entry/Open Exit.

Apprenticeship Carpentry 024A
Basic Commercial Framing
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.

This course provides an introduction to basic wall framing theory and commercial construction techniques. Floor plan interpretation will be used by students for job planning, design recognition, and to determine materials. Students will layout and detail wall plates for locating basic wall components and door openings typically found on commercial projects. Instruction will include measuring skills, mathematical principles, wall assembly and installation procedures, and detail how structural connections are made. Open Entry/Open Exit.

Apprenticeship Carpentry 024B
Advanced Commercial Framing
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.

This course incorporates advanced commercial wall framing theory and construction techniques with structural hardware and shear panel installation. Students will interpret floor plans for job planning to layout and detail plates for complex wall configurations, rake walls and wall openings. Instruction will include measuring skills, use of mathematical principles, wall construction and installation techniques, and detail how structural connections are made. Open Entry/Open Exit.

Apprenticeship Carpentry 024C
Panelized Roofing
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.

This course covers the structural components and building techniques associated with heavy timber construction and panelized roof systems. The advantages and types of manufactured wood used, and their load carrying strength, span, and spacing will be discussed. A distinction between standard post and beam, and heavy timber construction will be emphasized. Students will interpret floor plan, section views and drawing elevations for job planning to layout and construct a heavy timber post and beam supported panelized roof. Open Entry/Open Exit.

Apprenticeship Carpentry 024D
Transit Level/Laser
Unit(s): 2.0
Class Hours: 30 Lecture total, 10 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.

This course covers the terminology, optical principles, and operating procedures for the transit and laser levels. Open Entry/Open Exit.

Apprenticeship Carpentry 025A
Foundations and Flatwork
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.

This course covers the design and function of several types of foundations and concrete flatwork. The methods, techniques and procedures for formwork layout, elevation, and construction will be presented and applied by students during practical assignments. Job site safety, print interpretation, material identification, and basic use of the builders’ level will be included in the training. Students will construct three selected formwork projects. Open Entry/Open Exit.

Apprenticeship Carpentry 025C
Advanced Stairs
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.

This course is designed to enhance the students’ existing skills in the construction of basic stairs. Students will interpret floor plans and drawing elevations for job planning, and to layout and construct complex stair designs. Stair calculations will be adapted to determine the number of stairs, landing height, stair tread and riser dimensions. In addition to measuring skills, mathematical principles, stair and handrail fabrication and assembly, the installation techniques required for circular and u-shaped stair configurations will be covered. Open Entry/Open Exit.

Apprenticeship Carpentry 025D
Advanced Print Reading
Unit(s): 2.0
Class Hours: 30 Lecture total, 10 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.

In this course, students will analyze multi-view drawings to determine construction type, locate benchmark and building elements; review codes, references, and perform calculations for construction planning. Open Entry/Open Exit.

Apprenticeship Carpentry 026A
Tilt-Up Panel Construction
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.

This course covers the design and function of several types of tilt-up panel construction. Various wall types, position, and sequence for raising panels will be discussed. Students will be able to explain the importance of layout methods in squaring panel formwork. A focus will be placed on identifying specific types of openings and on the location of finish floor and roof lines on prints. Open Entry/Open Exit.

Apprenticeship Carpentry 026B
Wall Forming
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.

This course covers the skills and procedures for forming reinforced concrete walls using single and double waler systems. Students will identify the characteristics and application of built-in-place, pre-fabricated, and specialty forms. Practical exercises will prepare students for locating wall forming information on project plans, calculating layout dimensions, and for estimating material requirements. Basic wall panel forming and reinforcement methods, material preparation, and hardware installation are included in training. Open Entry/Open Exit.

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
Apprenticeship Carpentry 026C
Gang Forms/Columns
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
This course presents the formwork types, applications and construction methods for gang and column forms using built and manufactured forming systems. Discussions will cover heavy timber gang forms and use of taper ties, bracing, and bulkhead tables. The course project will include gang and column formwork construction, assembly, and hardware using selected manufactured products. Related safety, mathematics and print reading will be covered in the training. Open Entry/Open Exit.

Apprenticeship Carpentry 026D
Abutments
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
This course provides formwork construction skills for the abutment support structure used in most bridges and heavy highway projects. Students will identify abutment anatomy and will be instructed on footing layout, form detailing, and construction techniques used in the industry. Terminology, components, form materials, building code requirements and sequence of construction will be presented. Students will work collaboratively to complete an abutment formwork project including keyway, panel, head wall and wing wall construction. Open Entry/Open Exit.

Apprenticeship Carpentry 027C
Beam and Deck Forming
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
This course will introduce the use of various woods, and patented forming systems for construction of concrete beams and decks. Students will identify formwork types and installation techniques including calculating materials and setting beam & deck forms. Metal beam forms and capitals will be highlighted. Additionally, layout and builders level skills will be used in this class. Open Entry/Open Exit.

Apprenticeship Carpentry 027D
Stairs and Ramp Forming
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
Provides related and supplemental instruction for apprentice carpenters in the areas of the various techniques to form stairs and ramp structures; related safety, mathematics, and blueprint reading. Open Entry/Open Exit.

Apprenticeship Carpentry 028A
Bridge Construction
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
This course provides students with an overview of bridge types and the skills required to perform standard bridge construction tasks. Students will be able to describe the purpose and function of exterior and interior girders, edge forms, bulkheads and hinge forms. Bridge formwork project will include panel construction, assembly, and hardware installation tasks. Related safety, math and print reading will be covered in the training. Open Entry/Open Exit.

Apprenticeship Carpentry 028C
Intermediate Commercial Framing
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
This course enhances basic wall framing theory, and wall construction techniques are applied at increased skill levels. A review of basic wall framing and floor plans used for job planning, design recognition, and materials lists is included. Students will layout and detail wall plates for locating basic wall components and door openings. Instruction will include measuring skills, mathematical principles, wall assembly and installation procedures, and detail how structural connections are made. Open Entry/Open Exit.

Apprenticeship Carpentry 029A
Rigging
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
This course presents both lifting theory and practical rigging methods and procedures. The design, characteristics and safety working load of lifting hardware will be discussed. Rigging attachment procedures, lifting equipment, limits of operation and communication practices will be covered. Upon successful completion, students will be issued United Brotherhood Of Carpenters (UBC) Rigging Qualification Cards. Grade: Pass/No Pass.

Apprenticeship Carpentry 029AJ
Rigging - Journeyworker
Unit(s): 2.0
Class Hours: 30 Lecture total, 10 Laboratory total.
Prerequisite: Active Carpenter Union Member.
This course presents both lifting theory and practical rigging methods and procedures. Rigging attachment procedures, lifting equipment, limits of operation and communication practices will be covered. Upon successful completion, a student will be issued United Brotherhood Of Carpenters (UBC) Rigging Qualification Cards. Grade: Pass/No Pass.

Apprenticeship Carpentry 029BJ
Rigging Qualification Studies - Journeyworker
Unit(s): 0.5
Class Hours: 8 Lecture total.
Prerequisite: Active Carpenter Union Member.
This course presents both lifting theory and practical rigging methods and procedures. Rigging attachment procedures, lifting equipment, limits of operation and communication practices will be covered. Upon successful completion, a student will be issued United Brotherhood Of Carpenters (UBC) Rigging Qualification Cards. Grade: Pass/No Pass.

Apprenticeship Carpentry 030A
Standard First Aid
Unit(s): 0.2
Class Hours: 8 Laboratory total.
Prerequisite: Must be a state-indentured apprentice or journeyworker.
Enables carpenters to cope with accidents and emergency situations with the goal of protecting and saving lives. American Red Cross certificate available upon successful completion. Grade: Pass/No Pass. Open Entry/Open Exit.

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.*
Cabinet Millwork and assembly apprenticeship Carpentry 033a
Prerequisite: Must be a state-indentured apprentice.
Class Hours: 20 Lecture total, 20 Laboratory total.
Unit(s): 1.5

Solid Surface and Stone Countertops apprenticeship Carpentry 034b
Prerequisite: Must be a state-indentured apprentice.
Class Hours: 20 Lecture total, 20 Laboratory total.
Unit(s): 1.5

Plastic laminates apprenticeship Carpentry 034a
Prerequisite: Must be a state-indentured apprentice.
Class Hours: 20 Lecture total, 20 Laboratory total.
Unit(s): 1.5

Molding and trims apprenticeship Carpentry 033b
Prerequisite: Must be a state-indentured apprentice.
Class Hours: 20 Lecture total, 20 Laboratory total.
Unit(s): 1.5

Show Case/loose Store Fixtures apprenticeship Carpentry 033c
Prerequisite: Must be a state-indentured apprentice.
Class Hours: 20 Lecture total, 20 Laboratory total.
Unit(s): 1.5

Cabinet installation apprenticeship Carpentry 033d
Prerequisite: Must be a state-indentured apprentice.
Class Hours: 20 Lecture total, 20 Laboratory total.
Unit(s): 1.5

First aid/CPR - Journeyworker apprenticeship Carpentry 030AJ
Prerequisite: Active Carpenter Union Member.
Class Hours: 6 Lecture total, 2 Laboratory total.
Unit(s): 0.4

OSHA 10 Construction Safety - Journeyworker apprenticeship Carpentry 030BJ
Prerequisite: Active Carpenter Union Member.
Class Hours: 10 Lecture total.
Unit(s): 0.6

OSHA 30 Construction Safety - Journeyworker apprenticeship Carpentry 030CJ
Prerequisite: Active Carpenter Union Member.
Class Hours: 30 Lecture total.
Unit(s): 1.8

Construction Fall Protection - Journeyworker apprenticeship Carpentry 030DJ
Prerequisite: Active Carpenter Union Member.
Class Hours: 8 Lecture total.
Unit(s): 0.5

College Credit
*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
Apprenticeship Carpentry 034C
Stair Trim
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
This course covers how various trims are utilized to finish stair construction design features. Product styles, characteristics, applications, and installation methods are included in the discussions. The tools techniques for cutting and installing selected trim types are presented and practiced throughout the training. Open Entry/Open Exit.

Apprenticeship Carpentry 034D
Doors and Door Hardware
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
This course covers the installation process for several types of security and exit door hardware. Discussion of electrical and card reader systems will be included. An emphasis will be placed on print interpretation, codes, door schedules, symbols, and hardware recognition. Students will use the methods and procedures presented to install selected door and hardware systems. Open Entry/Open Exit.

Apprenticeship Carpentry 035C
Exit and Electrical Security Devices
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
This course will highlight the classification, types, models, codes, and uses for accident hazard exit (‘panic’) devices. A range of security products and door hardware used in the industry such as crossbars, latches, flush bolts, and kick plates will be discussed. Proper selection, installation and adjustment techniques for selected devices will be covered. Students will complete installation and adjustment of two types of exit devices. Open Entry/Open Exit.

Apprenticeship Carpentry 040AJ
Scaffold Erector, Welded Frame/Mobile Tower - Journeyworker
Unit(s): 0.6
Class Hours: 8 Lecture total, 8 Laboratory total.
Prerequisite: Active Carpenter Union Member.
This course will cover the basic techniques and procedures associated with the construction and use of frame and mobile tower scaffolds. Upon successful completion, students will be issued an United Brotherhood of Carpenters (UBC) Scaffold Qualification Card. Grade: Pass/No Pass. Open Entry/Open Exit.

Apprenticeship Carpentry 040B
Scaffold Erector, Qualification Studies - Journeyworker
Unit(s): 0.5
Class Hours: 8 Lecture total.
Prerequisite: Active Carpenter Union Member.
This course will cover the industry standards and regulations associated with various types of scaffolds and scaffold applications. Upon successful completion, students will be issued an United Brotherhood of Carpenters (UBC) Scaffold Qualification Card. Grade: Pass/No Pass. Open Entry/Open Exit.

Apprenticeship Carpentry 040CJ
Scaffold Erector, Standard 40 Hour - Journeyworker
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Active Carpenter Union Member.
This course will cover the basic techniques and procedures associated with frame, system, and tube and clamp scaffolds. Upon successful completion, a student will be issued a United Brotherhood Carpenters (UBC) Scaffold Qualification Card. Grade: Pass/No Pass.

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
Apprenticeship Carpenter 041BJ
Powered Industrial Truck Operator - Industrial Terrain - Journeyworker
Unit(s): 0.4
Class Hours: 6 Lecture total, 2 Laboratory total.
Prerequisite: Active Carpenter Union Member.
This course provides an overview of powered rough terrain lift truck design principles, controls, and lift operating functions. An emphasis will be placed on all the up-to-date industrial lift safety: specific operating limitations; accident prevention, worksite and equipment inspection, and maintenance criteria. Students will inspect equipment and demonstrate the safe operation of a typical rough terrain lift truck. Upon successful completion, students will be issued a valid United Brotherhood of Carpenters Powered Rough Terrain Lift Truck Operator Qualification Card. Grade: Pass/No Pass.

Apprenticeship Carpenter 041CJ
Aerial Lifts - Journeyworker
Unit(s): 0.4
Class Hours: 6 Lecture total, 2 Laboratory total.
Prerequisite: Active Carpenter Union Membership.
This course provides an overview safe operation of aerial lifts for the construction industry. Code of Federal Regulations (CFR) regulations and training requirements. Upon successful completion, a student will be issued a United Brotherhood of Carpenters (UBC) Aerial Lift Operator Qualification Cards. Grade: Pass/No Pass.

Apprenticeship Carpenter 061A
Acoustical Ceilings
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
This course provides an introduction to basic acoustical ceiling installation. Acoustical theory, engineering, and applicable building and seismic codes requirements will be covered. Students will install acoustical ceilings to industry standards using the proper techniques and procedures. Open Entry/Open Exit.

Apprenticeship Carpenter 061B
Advanced Acoustical Ceiling Layout
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
This course identifies the advanced layout methods used to complete complex acoustical system installations. Students will use the skills presented to complete selected multifaceted acoustical ceiling layout projects as part of this course. Open Entry/Open Exit.

Apprenticeship Carpenter 061C
Advanced Acoustical Ceiling Installation
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
This course identifies the advanced layout methods used to complete complex acoustical system installations. Students will use the tool and framing techniques presented to complete selected multifaceted acoustical ceiling layout projects. Open Entry/Open Exit.

Apprenticeship Carpenter 062
Standard Acoustical Grids
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
This course covers various grid patterns considered as standard for acoustical ceilings in the interior system construction industry. The methods and procedures used to form the patterns are the key focus of the course. Students will install several standard acoustical grid patterns to print specifications using the proper techniques and procedures. Open Entry/Open Exit.

Apprenticeship Carpenter 063
Suspended Ceilings
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
Provides instruction covering the installation of suspended ceilings in various configurations and will include both radius and square wall drywall suspension methods. Students will complete selected suspended ceiling installations using the techniques presented. Open Entry/Open Exit.

Apprenticeship Carpenter 064
Acoustical Soffits
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
Provides instruction covering the construction of acoustical soffits in various configurations and will include square and slant faced, tapered, concealed, drywall suspension and sloped soffits methods. Students will complete selected acoustical soffit installations using the techniques presented. Open Entry/Open Exit.

Apprenticeship Carpenter 065
Prefab/Sound Panels
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
Provides instruction covering the installation of prefabricated wall and ceiling panel systems. Students will use the proper techniques and manufacturers’ guidelines to install various types of prefabricated wall and ceiling panels. Open Entry/Open Exit.

Apprenticeship Carpenter 066
Concealed/Glue-Up/Staple-Up Systems
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
This course illustrates the design flexibility of concealed, semi-concealed ceilings and soffits using glue-up and staple-up systems. Students will employ the glue-up and staple-up techniques presented to install concealed grid ceiling system. Open Entry/Open Exit.

Apprenticeship Carpenter 067
Designer and Specialty Trims
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
This course covers specialty skills needed to produce professionally finished edges for designer ceiling installations. Students will use the techniques presented to produce multiple ceiling edge contours using the compasso trim system. Open Entry/Open Exit.

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
Apprenticeship Carpentry 068
Metal Pan and Security Systems
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
This course will focus on design, function and installation of metal pan and security systems incorporated into construction of suspended ceilings. Students will demonstrate the ability to installation these components to direct wire and indirect channel suspension ceiling grid systems. Open Entry/Open Exit.

Apprenticeship Carpentry 071A
Orientation
Unit(s): 2.0
Class Hours: 30 Lecture total, 10 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
This course provides an overview of the construction industry, safety, and green building awareness. Upon successful completion, students will receive Occupational Safety and Health Administration (OSHA) 10 Hour and Power Actuated Tool Certifications, and United Brotherhood of Carpenters (UBC) Fall Protection Qualification Card. Open Entry/Open Exit.

Apprenticeship Carpentry 071B
Safety and Health Certifications
Unit(s): 2.0
Class Hours: 30 Lecture total, 10 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
This course covers the safe and appropriate use of scaffolds, aerial lift and fork lift equipment, and emergency response procedures. Upon successful completion, students will be issued American Red Cross First Aid/Cardio-Pulmonary Resuscitation (CPR) Certifications, and United Brotherhood of Carpenters (UBC) Scaffold, Aerial Lift and Forklift Qualification Cards. Open Entry/Open Exit.

Apprenticeship Carpentry 072A
Basic Metal Framing
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
Provides students with an overview of the use of metal framing materials in construction of building interiors. A comparison of metal framing and typical wood framing techniques will be presented. Open Entry/Open Exit.

Apprenticeship Carpentry 072B
Basic Lathing
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
This course presents the basic framing and lathing methods used in the industry for exterior/interior installations. The course will focus on exterior waterproofing, lath, and trim installation procedures. Students will use the skills presented to complete an exterior lathing project as part of this course. Open Entry/Open Exit.

Apprenticeship Carpentry 072C
Advanced Lathing
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured Drywall/Lather apprentice; Apprenticeship Carpentry 021A and 021B.
This course presents advanced methods and application techniques for lath and trim products used on exterior-interior metal framing. Open Entry/Open Exit.

Apprenticeship Carpentry 073A
Framing Ceilings and Soffits
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
This course identifies the materials used and their application for various types of fire rated walls, ceilings and soffits. It presents methods and procedures used for layout and template development. Drywall and trim applications are discussed. The types of tools used and their associated safety, applied math and print reading fundamentals are reviewed. Students will use the skills presented to complete a ceiling and soffit project as part of this course. Open Entry/Open Exit.

Apprenticeship Carpentry 073B
Framing Suspended Ceilings
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
This course identifies the materials used for various types of suspended ceilings and drywall grid systems. The principles of suspension layout, suspension methods, and attachment procedures will be presented. Advanced shapes such as domes and stepped soffits will be covered. The types of tools used and their associated safety, applied math and print reading fundamentals are reviewed. Students will use the skills presented to complete a suspended ceiling project as part of this course. Open Entry/Open Exit.

Apprenticeship Carpentry 073C
Framing Curves and Arches
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
This course provides instruction in framing methods for curves and arches and their related structural limitations. It identifies the various wall and ceiling types and the layout principles, and materials used for each Lath applications and trim are also discussed. Students will use the skills presented to complete a framing project that includes curves and arches. Open Entry/Open Exit.

Apprenticeship Carpentry 074A
Print Reading
Unit(s): 2.0
Class Hours: 30 Lecture total, 10 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
This course introduces basic visualization skills needed for reading and interpreting construction prints. Students will identify the various components of a typical drawing and highlight their significance. Views, elevations, and the role of specifications as they relate to prints will be discussed. Students will complete a basic ceiling layout using information from a typical print for a commercial project. Open Entry/Open Exit.

Apprenticeship Carpentry 074B
Advanced Print Reading
Unit(s): 2.0
Class Hours: 30 Lecture total, 10 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
In this course, students will analyze multi-view drawings to determine acoustical ceiling construction types, locate benchmark and building/wall elements; review codes, references, and perform calculations for construction/ceiling grid planning. Open Entry/Open Exit.
Apprenticeship Carpentry 075A
Light Gage Welding AWS - A
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
This course covers light gage welding methods and techniques. American Welding Society (AWS) welding processes, symbols, materials and safety procedures will be presented. Students will practice setting up equipment and identifying the proper electrode position and speed. Instruction will include an explanation of typical metal frame welding practices. An emphasis on hands-on experience using 6013 electrodes will reinforce proper use of the welding procedures. Open Entry/Open Exit.

Apprenticeship Carpentry 075B
Light Gage Welding LAC
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
This course covers light gage welding methods and techniques. American Welding Society (AWS) welding processes, symbols, materials and safety procedures will be presented. An emphasis on hands-on experience using 6010 electrodes will reinforce proper use of required welding procedures, and ability to perform welding tasks used to complete the Los Angeles City (LAC) certification process. Open Entry/Open Exit.

Apprenticeship Carpentry 075C
Light Gage Welding AWS - B
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
This course covers light gage welding methods and techniques. American Welding Society (AWS) welding processes, symbols, materials and safety procedures will be presented. An emphasis on hands-on experience using 6013 electrodes will reinforce proper use of required welding procedures, and ability to perform welding tasks used to complete AWS certification process. Open Entry/Open Exit.

Apprenticeship Carpentry 075CJ
Welding Certification Studies - Journeyworker
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Active Carpenter Union Member.
This course is designed for students with prior welding experience that are preparing to obtain one or more American Welding Society (AWS) welding certificates. Welding certifications covered include AWS D1.1; AWS D1.3 Structural/Light Gage Welding Code, as well as specific alloy and specialty metal welding processes. Grade: Pass/No Pass.

Apprenticeship Carpentry 076A
Basic Hand Finishing
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
This course is designed to develop basic hand finishing skills using the correct tools and materials. The training will include terminology and description of finishing levels as well as hand tool manipulation techniques, material identification and selection criteria. Manufacturer's guidelines will highlight the environmental conditions for proper mixture preparation and use. Key discussions will draw attention to typical finish issues, causes, and solutions frequently employed. Tool techniques and application sequence will be explained and demonstrated. The importance of mixture consistency, proper coating sequence will be stressed during level four hand finishing exercises. Open Entry/Open Exit.

Apprenticeship Carpentry 076B
Automatic Finishing Tools
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
This course will advance the methods, applications and sequences of the bazooka, skim boxes, nail spotters and angle boxes. Students will be required to demonstrate the ability to tape in different situations and the ability to coat all field and butt joints. The levels of finishing and the various finish trims will be discussed. The operation of automatic taping and finishing machine tools including those newly introduced to the industry will be covered. Open Entry/Open Exit.

Apprenticeship Carpentry 077A
Drywall Installation/Finish Trims
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
This course will introduce drywall handling methods, applications and recommended levels of drywall finish to achieve the desired aesthetics. An emphasis will be placed on trim attachment and finishing techniques. Various types of finish trim will be identified. Students must demonstrate proficiency in the proper use of automatic taping tools. Open Entry/Open Exit.

Apprenticeship Carpentry 077B
Advanced Hand Finishing
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
This course will focus on advanced methods and applications using hand tool techniques. The proper sequence of operation, phases and materials to be used in order to produce a higher level finished product to industry standards. Curved and radius wall characteristics for finish levels will be discussed. The course will cover wall frame components, materials used, surface preparation, and application methods. Students will complete a project to a Level Five standard. Open Entry/Open Exit.

Apprenticeship Carpentry 077C
Advanced Automatic Finishing Tools
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
This course will advance the methods, applications and sequences of the bazooka, skim boxes, nail spotters and angle boxes. Students will be required to demonstrate the ability to tape in different situations and the ability to coat all field and butt joints. The levels of finishing and the various finish trims will be discussed. The operation of automatic taping and finishing machine tools including those newly introduced to the industry will be covered. Open Entry/Open Exit.

Apprenticeship Carpentry 078B
Advanced Metal Framing
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
This course will begin with a quick review of basic metal framing followed by detailed procedures for framing curved, serpentine, and elliptical non load bearing partitions. Using standard light gage components and other materials, students will learn advanced techniques to expedite work processes. Open Entry/Open Exit.

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.*
Apprenticeship Carpentry 078C
Wet Wall Finishes
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
This course presents industry methods, mediums, and typical application of wet wall finishes. The training will include terminology and description of industry standard finishing levels; application tool types and techniques, material identification and selection. Manufacturer's guidelines will highlight the environmental conditions for proper mixture preparation and use. Key discussions will draw attention to typical finish issues, causes for defects, and solutions frequently employed, and emphasize the selection and use of low volatile organic compounds (VOC) products. The importance of mixture consistency, proper coating sequence will be stressed during wet wall finishing exercises. Open Entry/Open Exit.

Apprenticeship Carpentry 078D
Ceiling and Soffit Finishing
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
This course is designed to develop an advanced level of finishing skill for applications with architecturally detailed ceilings and soffits. Students will be required to determine type and quantity of materials for various designs and differentiate between levels of finish. Guided practice with a combination of hand and automatic tool techniques will promote manipulative ability required for a successful result. A variety of finish trims will be integrated into each method of finish. Open Entry/Open Exit.

Apprenticeship Carpentry 079A
Drywall/Acoustical Ceilings
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
This course identifies the materials and methods used for acoustical ceilings combined with drywall installation. Seismic codes, materials, and requirements are also reviewed. Green building rating systems will be applied to selected acoustical and drywall materials. Installation for various grid systems will be discussed. Students will use the skills learned to complete a drywall-acoustical ceiling project. Open Entry/Open Exit.

Apprenticeship Carpentry 079C
Drywall Applications
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
This course presents needed commercial and residential skills to properly handle and install drywall used in specialized applications. Productivity techniques will be discussed and practiced under jobsite conditions. Wall framing and drywall finishing methods will be incorporated into the hands-on activity. Open Entry/Open Exit.

Apprenticeship Carpentry 082B
Firestopping Procedures
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
This course covers various firestop/fireproofing systems and methods used as fire protection and fire control. Key discussions will highlight applicable fire codes and industry standards for testing firestop/fireproof methods. Manufacturer's guidelines will identify application tool anatomy, instruction for job preparation, loading instructions, operating procedures, maintenance and care of equipment. Basic descriptions of penetration types and the materials used, including non-combustibles and B-Expands, will be covered. Students will apply and test firestop/fireproofing material in a controlled environment. Open Entry/ Open Exit.

Apprenticeship Carpentry 082C
Decorative Trims and Textures
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
This course provides advanced hand and automatic tool finishing techniques used to apply decorative trims and special surface textures. Training includes product information for metal, paper, plastics and art beads. Special attention will be given to coating and sanding sequence of field and butt joints for selected surface textures. Open Entry/Open Exit.

Apprenticeship Carpentry 083
Door/Door Frames
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
An introduction to the doors and door frames used in the interior systems industry. The course discussions will incorporate applicable regulations governing door openings and door selection. Hardware, controlling and locking devices, and door layout and installation techniques will be included. Basic math and print reading will be covered as will tool-related safety concerns. Students will use the skills presented to complete a selected door and door frame installation project as part of this course. Open Entry/Open Exit.

Apprenticeship Carpentry 085
Supervisory Training
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
This course covers the supervisor's role and crew leadership skills required for professional development in the construction industry. Typical work processes, communication methods, project considerations, motivational concepts and problem solving techniques will be presented. When exercised these skills lead to efficient and effective management of projects. Various project scenarios will be used to conduct classroom exercises. Open Entry/Open Exit.

Apprenticeship Carpentry 086A
Exterior Insulation Finish Systems (EIFS)
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
This course is an introduction to exterior insulation finish systems including terminology, definitions, specifications, and properties. It will deal with reinforcing mesh installation and the application of insulation board. Application methods and techniques for primers and finishes will be presented. Students will use the skills presented to complete an EIFS installation project as part of this course. Open Entry/Open Exit.

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
Apprenticeship Carpentry 089
Freeform Lathing
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
This course provides a comprehensive study of the theory and techniques used for the development of freeform lathing projects. This course will enable students to interpret gridline drawings; layout and build lath cage work and apply the appropriate lath(s) to achieve the desired or designed form or structure.
Open Entry/Open Exit.

Apprenticeship Carpentry 090
Residential Steel Stud Framing
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
This course provides the related and supplemental instruction required for interior systems apprentices in the new technology of cold-formed light gage steel framing for the residential market.
Methods of constructing a structural floor, wall, and truss system.
Open Entry/Open Exit.

Apprenticeship Carpentry 090J
Mine Safety and Health Administration - New Miner - Journeyworker
Unit(s): 1.5
Class Hours: 24 Lecture total.
Prerequisite: Active Carpenter Union Member.
This course discusses miner’s statutory rights, site-specific hazard recognition, health risks, and emergency response plans. Upon successful completion, students will be issued the Mine Safety and Health Administration (MSHA) 5000-23 Certificate of Training. Grade: Pass/No Pass.

Apprenticeship Carpentry 091J
Mine Safety and Health Administration - New Miner Qualification Studies - Journeyworker
Unit(s): 0.5
Class Hours: 8 Lecture total.
Prerequisite: Active Carpenter Union Member.
This course provides a review, and updates information on miners’ statutory rights, site-specific hazard recognition, health risks, and emergency response plans. Mine Safety and Health Administration (MSHA) 5000-23 Certificate of Training. Grade: Pass/No Pass.

Apprenticeship Carpentry 092J
Safety and Health Certifications - Journeyworker
Unit(s): 2.0
Class Hours: 30 Lecture total, 10 Laboratory total.
Prerequisite: Active Carpenter Union Member.
This course covers the safe and appropriate use of scaffolds, aerial lift equipment, and emergency response procedures. Successful students will be issued United Brotherhood of Carpenters (UBC) Scaffold Erector, Frame and Mobile Tower, Construction Fall Protection, and Aerial Lift Operator Qualifications. First Aid and CPR Certification will be issued upon successful completion of the American Red Cross training provided. Grade: Pass/No Pass.

Apprenticeship Carpentry 093J
Infection Control Risk Assessment (ICRA) Best Practices in Health-Care Construction - Journeyworker
Unit(s): 1.2
Class Hours: 16 Lecture total, 8 Laboratory total.
Prerequisite: Active Carpenter Union Member.
This course describes cross contamination concerns for construction in medical environments and facilities. Training includes hazardous material recognition, work area isolation methods, and heating, ventilation, and air conditioning (HVAC) sealing procedures. Upon successful completion, a student will be issued an United Brotherhood of Carpenters (UBC) Best Practices in Health-Care Construction Qualification Card. Grade: Pass/No Pass.

Apprenticeship Carpentry 094J
Confined Space - Journeyworker
Unit(s): 0.8
Class Hours: 12 Lecture total, 4 Laboratory total.
Prerequisite: Active Carpenter Union Member.
This course covers both CAL-OSHA and Federal Occupational Safety and Health Administration (OSHA) regulation for safe access, entry and monitoring for confined space work. Upon successful completion, a student will be issued United Brotherhood of Carpenters (UBC) Confined Space Qualification Card. Grade: Pass/No Pass.

Apprenticeship Carpentry 095
Water Treatment Facilities
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured Carpenter apprentice. Apprenticeship Carpentry 021A and 021B.
This course provides instruction in the detailing, layout and construction of concrete formwork and waterstop used in water treatment facilities. Open Entry/Open Exit.

Apprenticeship Carpentry 095J
Water treatment Facilities - Journeyworker
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Active Carpenter Union Member.
This course provides instruction for detailing, layout and construction of concrete formwork and waterstop used in water treatment facilities. Grade: Pass/No Pass.

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
APPRENTICESHIP CARPENTRY PILE DRIVER (ACPD)

Courses

Apprenticeship Carpentry Pile Driver 021
Orientation
Unit(s): 2.0
Class Hours: 30 Lecture total, 10 Laboratory total.
Prerequisite: Must be a State-indentured Pile Driver Union Apprentice.

This course examines fundamental trade skills, employee-employer roles and responsibilities, and safe work practices needed for entry level performance for pile drivers in the construction industry. While an emphasis will be placed on attaining standard industry safety standards, the course is designed to provide students with practical experience using construction terminology, math operations and basic measuring techniques, and tool identification and use in preparation for the next level of training. Safety will cover OSHA training for jobsite hazard recognition, accident prevention, and safe tool and equipment operation.

Open Entry/Open Exit.

Apprenticeship Carpentry Pile Driver 022
Safety and Health Certifications
Unit(s): 2.0
Class Hours: 30 Lecture total, 10 Laboratory total.
Prerequisite: Must be a State-indentured Pile Driver Union Apprentice.

This course is designed to increase the pile driver students’ awareness of construction hazard communication systems, proper tool/equipment operation and will emphasize the importance of the individual responsibility for workplace safety and health. The students will discern that the construction environment has a higher potential for injuries and accidents than most workplaces and therefore requires the ability to assess danger, employ prevention measures, and take appropriate action in emergencies. This training will expose students to various health emergencies scenarios, and provide students with ample opportunities to practice the appropriate CPR and first aid response. Because many injuries are the result of improper tool and equipment use, students will be trained on how to correctly select, inspect, use, and operate fall protection systems, tools, and powered lift equipment.

Open Entry/Open Exit.

Apprenticeship Carpentry Pile Driver 024A
Piles and Hammers A
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a State-indentured Pile Driver Union Apprentice and Apprenticeship Carpentry Pile Driver 021 and 022.

This course provides an overview of the types of piles used in construction as load bearing support for commercial buildings, bridges and piers when ground stratum is insufficient in strength. The rigging methods, driving techniques, and pile hammers utilized in the installation process will be presented. Students will use the proper procedures to install a tongue and groove wood sheet pile system during this part of training.

Open Entry/Open Exit.

Apprenticeship Carpentry Pile Driver 024B
Piles and Hammers B
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a State-indentured Pile Driver Union Apprentice and Apprenticeship Carpentry Pile Driver 021 and 022.

This course provides an overview of the types of piles used in construction as load bearing support for commercial buildings, bridges and piers when ground stratum is insufficient in strength. The rigging methods, driving techniques, and pile hammers utilized in the installation process will be presented. Students will use the proper procedures to install a tongue and groove wood sheet pile system during this part of training.

Open Entry/Open Exit.

Apprenticeship Carpentry Pile Driver 025A
Pile Caps and Columns A
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a State-indentured Pile Driver Union Apprentice and Apprenticeship Carpentry Pile Driver 021 and 022.

This course describes the purpose and function of pile caps and columns in the bridge anatomy. Structural and loading considerations will be explained. Formwork sequence of construction for pile caps and various column types will be discussed. Students will focus on the construction and placement of columns/piers during this part of training. Related safety, math and print reading will also be covered.

Open Entry/Open Exit.

Apprenticeship Carpentry Pile Driver 025B
Pile Caps and Columns B
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a State-indentured Pile Driver Union Apprentice and Apprenticeship Carpentry Pile Driver 021 and 022.

This course describes the purpose and function of pile caps and columns in the bridge anatomy. Structural and loading considerations will be explained. Formwork sequence of construction for pile caps and various column types will be discussed. Students will focus on the construction and placement of pile caps during this part of training. Related safety, math and print reading will also be covered.

Open Entry/Open Exit.

Apprenticeship Carpentry Pile Driver 026A
Falsework A
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a State-indentured Pile Driver Union Apprentice and Apprenticeship Carpentry Pile Driver 021 and 022.

As part one of two courses, training will focus on bridge falsework construction. The techniques for bent assemblies, base sub-assemblies, deck soffits and hardware installation will be presented. The procedures presented will include timber construction methods and alignment techniques to install and level base and bent assemblies. Students will develop skills using sand packs, transit levels and rigging procedures to set corbels, beams and posts. Related safety, math and print reading will be covered in the training. Grade: Pass/No Pass.

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.*
Apprenticeship Carpentry Pile Driver 026B  
Falsework B

Unit(s): 1.5  
Class Hours: 20 Lecture total, 20 Laboratory total.  
Prerequisite: Must be a State-indentured Pile Driver Union Apprentice and Apprenticeship Carpentry Pile Driver 021 and 022.  
As part two, this course continues the focus on box girder bridge falsework construction. The techniques for bent assemblies, base sub-assemblies, deck soffits and hardware installation will be reviewed. During this part of the training procedures will include setting and installation of deck soffit assemblies. Students will develop skills using layout and rigging procedures to set and secure cap beams, stringers and joists supports. Related safety, math and print reading will be covered in the training.

Apprenticeship Carpentry Pile Driver 027A  
Abutment A

Unit(s): 1.5  
Class Hours: 20 Lecture total, 20 Laboratory total.  
Prerequisite: Must be a State-indentured Pile Driver Union Apprentice and Apprenticeship Carpentry Pile Driver 021 and 022.  
This course provides students with the skills needed to layout abutment formwork and construction of footings to industry standards. A close look at assembly components will describe key terms and abutment anatomy. The importance of earth strata in the construction of footings, piers and retaining walls will be covered. The techniques for laying out keyway centerline, and footing formwork construction will be the main focus during this part of abutment training. Open Entry/Open Exit.

Apprenticeship Carpentry Pile Driver 027B  
Abutment B

Unit(s): 1.5  
Class Hours: 20 Lecture total, 20 Laboratory total.  
Prerequisite: Must be a State-indentured Pile Driver Union Apprentice and Apprenticeship Carpentry Pile Driver 021 and 022.  
This course provides students with the skills needed to layout, and to construct abutment wall panel formwork to industry standards. A close look at assembly components will describe key terms and abutment anatomy. The importance of earth strata in the construction of footings, piers and retaining walls will be covered. The techniques for layout, and keyway, wing/head wall panel formwork construction will be the main focus during this part of abutment training. Open Entry/Open Exit.

Apprenticeship Carpentry Pile Driver 028A  
Bridge and Deck Forms A

Unit(s): 1.5  
Class Hours: 20 Lecture total, 20 Laboratory total.  
Prerequisite: Must be a State-indentured Pile Driver Union Apprentice and Apprenticeship Carpentry Pile Driver 021 and 022.  
This course provides students with an overview of basic bridge and deck construction. Descriptions for exterior and interior girders; edge forms; bulkheads; hinge and deck forms will be presented. Bridge and deck formwork project will include bridge panel construction, assembly, and hardware attachment tasks. Related safety, math and print reading will be covered in the training. Open Entry/Open Exit.

Apprenticeship Carpentry Pile Driver 028B  
Bridge and Deck Forms B

Unit(s): 1.5  
Class Hours: 20 Lecture total, 20 Laboratory total.  
Prerequisite: Must be a State-indentured Pile Driver Union Apprentice and Apprenticeship Carpentry Pile Driver 021 and 022.  
This course provides students with an overview of basic bridge and deck construction. Descriptions for exterior and interior girders; edge forms; bulkheads; hinge and deck forms will be presented. Bridge and deck formwork project will include bridge panel construction, assembly, and hardware attachment tasks. Related safety, math and print reading will be covered in the training. Open Entry/Open Exit.

Apprenticeship Carpentry Pile Driver 029A  
Structural Welding-AWS A

Unit(s): 1.5  
Class Hours: 20 Lecture total, 20 Laboratory total.  
Prerequisite: Must be a State-indentured Pile Driver Union Apprentice and Apprenticeship Carpentry Pile Driver 021 and 022.  
This course is designed to be compliant with American Welding Society (AWS) D1.1 code requirements and provide workers with industry recognized structural welding credentials. A careful examination of the applicable codes will include terminology, shielded metal arc welding processes (SMAW), equipment and safety requirement, electrode identification and applications, welding positions and deposits. Practical experience will include symbol identification, print interpretation, code citation, safe equipment set-up and operation, and recognition/remediation of welding flaws. This course will focus on the written examination and production of practical test plates required for AWS D1.1 certification. Open Entry/Open Exit.

Apprenticeship Carpentry Pile Driver 029B  
Structural Welding-AWS B

Unit(s): 1.5  
Class Hours: 20 Lecture total, 20 Laboratory total.  
Prerequisite: Must be a State-indentured Pile Driver Union Apprentice and Apprenticeship Carpentry Pile Driver 021 and 022.  
This course provides practical experience for structural welding skills used in commercial and industrial construction. Instruction will include a review of welding terminology, welding processes, welding equipment and safety requirements. Key discussions will be used to identify electrode characteristics and metal inert gas/tungsten inert gas (MIG/TIG) welding applications. Practical experience will include safety procedures, proper equipment set-up and operation, electrode selection, fillet and groove weld formation in three positions, and recognition/remediation of welding flaws. This course will focus on developing the manipulative ability required for producing test plates acceptable for AWS D1.1 certification. Open Entry/Open Exit.

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.*
APPRENTICESHIP CARPENTRY PILE DRIVER (021 and 022)

Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a State-indentured Pile Driver Union Apprentice and Apprenticeship Carpentry Pile Driver 021 and 022.

This course introduces print reading skill as a basic communication tool of the trades. Material covered will focus on the development of the students ability to interpret standard drawing views in such a way to convey the shape and characteristics of construction elements, and provide an overview of the scope of the project. Students will be able to recognize standard drawing methods, pictorial views, and how to read visual and verbal communication cues. Student will develop skills through a series of exercises including identifying parts of drawings, locating building, pier, and heavy highway features, calculating dimensions, and using views to determine construction methods. Open Entry/Open Exit.

APPRENTICESHIP CARPENTRY PILE DRIVER (030)
Print Reading
Unit(s): 2.0
Class Hours: 30 Lecture total, 10 Laboratory total.
Prerequisite: Must be a State-indentured Pile Driver Union Apprentice and Apprenticeship Carpentry Pile Driver 021 and 022.

This course provides an introduction to fabrication skills using oxygen/acetylene torch and welding equipment. A review of torch cutting principles will cover parts identification, gas characteristics, torch accessories and tips, safe operating and inspection criteria, and manufacturer’s guidelines for use and care. Instruction will include inspection, torch set-up, criteria for interchanging of cutting tips and attachments, and identification of applicable symbols and codes. An emphasis will be placed on interpreting fabrication drawings, cutting stock materials, and torch heating and welding of parts. The importance of fire and shop safety, reading and monitoring of gages, and the importance of following project instructions will be stressed during cutting/welding fabrication exercises. Open Entry/Open Exit.

APPRENTICESHIP CARPENTRY PILE DRIVER (031A)
Welding Fabrication A
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a State-indentured Pile Driver Union Apprentice and Apprenticeship Carpentry Pile Driver 021 and 022.

This course provides an introduction to fabrication skills using oxygen/acetylene torch and welding equipment. A review of arc welding principles will cover equipment parts identification, gas characteristics, arc welding accessories and electrodes, safe operating and inspection criteria, and manufacturer’s guidelines for use and care of machinery. Instruction will include inspection, torch set-up, criteria for welding machine settings, applications for electrodes use, and identification of applicable symbols and codes. An emphasis will be placed on interpreting fabrication drawings, cutting stock materials, and torch heating and welding of parts. The importance of fire and shop safety, reading and monitoring of equipment gages and settings, and following project instructions will be stressed during welding fabrication exercises. Open Entry/Open Exit.

APPRENTICESHIP CARPENTRY PILE DRIVER (031B)
Welding Fabrication B
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a State-indentured Pile Driver Union Apprentice and Apprenticeship Carpentry Pile Driver 021 and 022.

This course provides an introduction to fabrication skills using oxygen/acetylene torch and arc welding equipment. A review of arc welding principles will cover equipment parts identification, gas characteristics, arc welding accessories and electrodes, safe operating and inspection criteria, and manufacturer’s guidelines for use and care of machinery. Instruction will include inspection, torch set-up, criteria for welding machine settings, applications for electrodes use, and identification of applicable symbols and codes. An emphasis will be placed on interpreting fabrication drawings, cutting stock materials, and torch heating and welding of parts. The importance of fire and shop safety, reading and monitoring of equipment gages and settings, and following project instructions will be stressed during welding fabrication exercises. Open Entry/Open Exit.

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
Apprenticeship Carpentry Plasterer 029
Tender and Plastering Equipment
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
This course covers the terminology, components and operating procedures for plastering equipment and machinery. Machine maintenance, safety, troubleshooting procedures, limits of operation and communication practices will be covered. Students will inspect and properly set up and clean a plastering pump.

Apprenticeship Carpentry Plasterer 030
Exterior Insulation Finish Systems (EIFS)
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
This course will teach the basic working knowledge and technical skills needed to successfully install Exterior Insulation and Finish Systems (EIFS) to meet industry specifications and standards. Introduction to the proper usage of products and materials will be discussed and used. Open Entry/Open Exit.

Apprenticeship Carpentry Plasterer 031
Ornamental Plastering
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a State-indentured Plasterer Union Apprentice.
This course provides practical experience using applied geometry for plastering ornamental designs. Students will use the plastering skills presented to create molds and complete an ornamental installation to print specifications. Open Entry/Open Exit.

Apprenticeship Carpentry Plasterer 032
Plastering Equipment Application
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
This course identifies the materials, application methods and techniques for operating a plaster pump. Students will complete a three-coat work application to industry standards. An emphasis will be placed on proper pump set-up, washout and maintenance.

Apprenticeship Carpentry Plasterer 033
Finish Applications
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
This course covers the coating techniques for various types of finishing materials used in the plastering industry. Students will review construction drawings and specifications to identify finish materials and surface placement. Instruction will include mixing proportions, consistency, additives, and application procedures. The techniques for cement based, acrylic, and specialty materials will be a focus of the class. Students will coat multiple surfaces using the correct material and finishes detailed on project prints. Open Entry/Open Exit.

Apprenticeship Carpentry Plasterer 034
Theme Plastering
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
This course is designed to encourage development of artistic skills and the ability to plan and execute the plastered imitation of natural rock formations. Students will study the irregular surfaces, cracks, and color variations of real rock formations to aid the creative process. Students will employ specialty tooling and material techniques to replicate live like rock features. Painting, highlighted, and carving skills will be explored and utilized complete assignments. Open Entry/Open Exit.

APPRENTICESHIP COSMETOLOGY (ACS)
Division of Business and Career Technical Education
Dean: Von Lawson

Apprenticeship Cosmetology

The certificate of achievement in apprenticeship cosmetology prepares students to obtain their license. The program is designed to offer the required related and supplemental classroom instruction as outlined by the apprenticeship agreement provided by the Division of Apprenticeship Standards and the State Board of Barbering and Cosmetology. All students must be indentured by the State of California. Interested apprentices should contact the Apprenticeship Office at Santiago Canyon College and the Orange County Barber and Cosmetology Joint Apprenticeship Committee.

Certificate of Achievement

Cosmetology (11991)

Learning Outcome(s)

Upon successful completion of the requirements for this certificate, students will be able to:
- Begin a career as a licensed cosmetologist.
- Have a basis for further college education.

Certificate requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apprenticeship Cosmetology 035, Cosmetology Apprentice</td>
<td>14</td>
</tr>
</tbody>
</table>

TOTAL 14

Courses

Apprenticeship Cosmetology 035
Cosmetology Apprentice
Unit(s): 0.5-14.0
Class Hours: 8-224 Lecture total.
Prerequisite: Must be a state-indentured apprentice.
This course covers the coating techniques for various types of finishing materials used in the plastering industry. Students will review construction drawings and specifications to identify finish materials and surface placement. Instruction will include mixing proportions, consistency, additives, and application procedures. The techniques for cement based, acrylic, and specialty materials will be a focus of the class. Students will coat multiple surfaces using the correct material and finishes detailed on project prints. Grade: Pass/No Pass. Open Entry/Open Exit.

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.*
APPRENTICESHIP ELECTRICITY (AEL)

Division of Business and Career Technical Education

Dean: Von Lawson

Apprenticeship Electricity-Industrial

The associate degree and certificate of achievement in apprenticeship electricity industrial provide the required related and supplemental instruction for state-indentured electrical inside wiremen apprentices. They install conduit, electrical wiring, fixtures and electrical apparatus inside commercial buildings and in a multitude of industrial settings. They use many different kinds of tools, ranging from simple one- and two-hand tools to power-assisted tools. Interested apprentices should contact the Orange County Electrical Apprenticeship Training Committee and the Apprenticeship Office at Santiago Canyon College. Successful completion leads to state journeyworker status. Meets the state requirements as an electrician trainee program.

Associate in Science
Industrial (11985)

Learning Outcome(s)
Upon successful completion of the major requirements for this degree, students will be able to
- Begin a career as a journeyworker electrician.
- Have a basis for further college education.

Major requirements* Units
Apprenticeship Electrician 051, Inside Wireman 1 4.5
Apprenticeship Electrician 052, Inside Wireman 2 4.5
Apprenticeship Electrician 053, Inside Wireman 3 4.5
Apprenticeship Electrician 054, Inside Wireman 4 4.5
Apprenticeship Electrician 055, Inside Wireman 5 4.5
Apprenticeship Electrician 056, Inside Wireman 6 4.5
Apprenticeship Electrician 057, Inside Wireman 7 4.5
Apprenticeship Electrician 058, Inside Wireman 8 4.5
Apprenticeship Electrician 059, Inside Wireman 9 4.5
Apprenticeship Electrician 060, Inside Wireman 10 4.5
Apprenticeship Electrician 061, Electrical Safety and First Aid 1.5

TOTAL 46.5

Certificate of Achievement
Industrial (21661)

Learning Outcome(s)
Upon successful completion of the requirements for this certificate, students will be able to
- Begin a career as a journeyworker electrician.
- Have a basis for further college education.

Certificate requirements Units
Apprenticeship Electrician 051, Inside Wireman 1 4.5
Apprenticeship Electrician 052, Inside Wireman 2 4.5
Apprenticeship Electrician 053, Inside Wireman 3 4.5
Apprenticeship Electrician 054, Inside Wireman 4 4.5
Apprenticeship Electrician 055, Inside Wireman 5 4.5
Apprenticeship Electrician 056, Inside Wireman 6 4.5
Apprenticeship Electrician 057, Inside Wireman 7 4.5
Apprenticeship Electrician 058, Inside Wireman 8 4.5
Apprenticeship Electrician 059, Inside Wireman 9 4.5
Apprenticeship Electrician 060, Inside Wireman 10 4.5
Apprenticeship Electrician 061, Electrical Safety and First Aid 1.5

TOTAL 46.5

Apprenticeship Electrician 061, Electrical Safety and First Aid 1.5
Apprenticeship Electrician 060, Inside Wireman 10 4.5
Apprenticeship Electrician 059, Inside Wireman 9 4.5
Apprenticeship Electrician 058, Inside Wireman 8 4.5
Apprenticeship Electrician 057, Inside Wireman 7 4.5
Apprenticeship Electrician 056, Inside Wireman 6 4.5
Apprenticeship Electrician 055, Inside Wireman 5 4.5
Apprenticeship Electrician 054, Inside Wireman 4 4.5
Apprenticeship Electrician 053, Inside Wireman 3 4.5
Apprenticeship Electrician 052, Inside Wireman 2 4.5
Apprenticeship Electrician 051, Inside Wireman 1 4.5

TOTAL 46.5

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.

Apprenticeship Electricity-Intelligent Transportation Systems Electrician

The associate degree and certificate of achievement in apprenticeship electricity intelligent transportation systems electrician provide related and supplemental instruction for electrical apprentices. The program is designed to train apprentices in the process of planning, installing and maintaining intelligent transportation signal systems beginning with the rudimentary elements of construction housekeeping and safety, and then continuing on through the more advanced techniques of job planning, layout, installation and start-up. Apprentices will learn to use the National Electrical Safety codes, Caltrans installation plans and specifications and IMSA standards and practices. Apprentices will receive hand-on training as well as instruction in electrical theory. Apprentices who successfully complete this program will be eligible for Intelligent Transportation Systems Electrician Journeyworker status. They will have the skills necessary to work for signatory Intelligent Transportation/Traffic Signal contractors and will be qualified to train apprentices.

Associate in Science
Intelligent Transportation Systems Electrician (22271)

Learning Outcome(s)
Upon successful completion of the major requirements for this degree, students will be able to
- Begin a career as a journeyworker electrician.
- Have a basis for further college education.

Major requirements* Units
Apprenticeship Electrician 031, Intelligent Transportation Systems Electrician Apprentice 1 4.5
Apprenticeship Electrician 032, Intelligent Transportation Systems Electrician Apprentice 2 4.5
Apprenticeship Electrician 033, Intelligent Transportation Systems Electrician Apprentice 3 4.5
Apprenticeship Electrician 034, Intelligent Transportation Systems Electrician Apprentice 4 4.5
Apprenticeship Electrician 035, Intelligent Transportation Systems Electrician Apprentice 5 4.5
Apprenticeship Electrician 036, Intelligent Transportation Systems Electrician Apprentice 6 4.5
Apprenticeship Electrician 037, Intelligent Transportation Systems Electrician Apprentice 7 4.5
Apprenticeship Electrician 038, Intelligent Transportation Systems Electrician Apprentice 8 4.5

TOTAL 36

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
Certificate of Achievement
Intelligent Transportation Systems Electrician (22270)

Learning Outcome(s)
Upon successful completion of the requirements for this certificate, students will be able to
• Begin a career as a journeyworker electrician.
• Have a basis for further college education.

Certificate requirements

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apprenticeship Electrician 031, Intelligent Transportation Systems Electrician Apprentice 1</td>
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<tr>
<td>Apprenticeship Electrician 032, Intelligent Transportation Systems Electrician Apprentice 2</td>
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<tr>
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</tr>
<tr>
<td>Apprenticeship Electrician 034, Intelligent Transportation Systems Electrician Apprentice 4</td>
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<tr>
<td>Apprenticeship Electrician 035, Intelligent Transportation Systems Electrician Apprentice 5</td>
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</tr>
<tr>
<td>Apprenticeship Electrician 036, Intelligent Transportation Systems Electrician Apprentice 6</td>
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<tr>
<td>Apprenticeship Electrician 037, Intelligent Transportation Systems Electrician Apprentice 7</td>
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</tr>
<tr>
<td>Apprenticeship Electrician 038, Intelligent Transportation Systems Electrician Apprentice 8</td>
<td>4.5</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>36</strong></td>
</tr>
</tbody>
</table>

Apprenticeship Electricity-Sound Installer

The associate degree and certificate of achievement in apprenticeship electricity-sound installer provide related and supplemental instruction for electrical apprentices who have been recommended by the Joint Apprenticeship Committee. Interested apprentices should contact the committee and the Apprenticeship Office at Santiago Canyon College. Successful completion may lead to state journeyworker certification.

Associate in Science
Sound Installer (19588)

Learning Outcome(s)
Upon successful completion of the major requirements for this degree, students will be able to
• Begin a career as a journeyworker electrician.
• Have a basis for further college education.

Major requirements*

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apprenticeship Electrician 021, Sound and Communication Apprentice 1</td>
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</tr>
<tr>
<td>Apprenticeship Electrician 022, Sound and Communication Apprentice 2</td>
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</tr>
<tr>
<td>Apprenticeship Electrician 023, Sound and Communication Apprentice 3</td>
<td>4.5</td>
</tr>
<tr>
<td>Apprenticeship Electrician 024, Sound and Communication Apprentice 4</td>
<td>4.5</td>
</tr>
<tr>
<td>Apprenticeship Electrician 025, Sound and Communication Apprentice 5</td>
<td>4.5</td>
</tr>
<tr>
<td>Apprenticeship Electrician 026, Sound and Communication Apprentice 6</td>
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</tr>
<tr>
<td><strong>TOTAL</strong></td>
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</tr>
</tbody>
</table>

Certificate of Achievement
Sound Installer (19587)

Learning Outcome(s)
Upon successful completion of the requirements for this certificate, students will be able to
• Begin a career as a journeyworker electrician.
• Have a basis for further college education.

Certificate requirements

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apprenticeship Electrician 021, Sound and Communication Apprentice 1</td>
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<tr>
<td>Apprenticeship Electrician 022, Sound and Communication Apprentice 2</td>
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<tr>
<td>Apprenticeship Electrician 023, Sound and Communication Apprentice 3</td>
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<tr>
<td>Apprenticeship Electrician 025, Sound and Communication Apprentice 5</td>
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</tr>
<tr>
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</tr>
<tr>
<td><strong>TOTAL</strong></td>
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</tbody>
</table>

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
Apprenticeship Electricity-Sound Technician

The associate degree and certificate of achievement in apprenticeship electricity sound technician provides related and supplemental instruction for electrical apprentices who have been recommended by the Joint Apprenticeship Committee. Interested apprentices should contact the committee and the Apprenticeship Office at Santiago Canyon College. Successful completion may lead to state journeyworker certification.

Associate in Science
Sound Technician (19590)

Learning Outcome(s)
Upon successful completion of the major requirements for this degree, students will be able to

• Begin a career as a journeyworker electrician.
• Have a basis for further college education.

Major requirements* Units

<table>
<thead>
<tr>
<th>Course</th>
<th>Unit(s)</th>
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</thead>
<tbody>
<tr>
<td>Apprenticeship Electrician 021,</td>
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<tr>
<td>Sound and Communication Apprentice 1</td>
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<tr>
<td>Apprenticeship Electrician 022,</td>
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<tr>
<td>Sound and Communication Apprentice 2</td>
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<tr>
<td>Apprenticeship Electrician 023,</td>
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<tr>
<td>Sound and Communication Apprentice 3</td>
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<tr>
<td>Apprenticeship Electrician 024,</td>
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<tr>
<td>Sound and Communication Apprentice 4</td>
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<tr>
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<tr>
<td>Sound and Communication Apprentice 5</td>
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<tr>
<td>Apprenticeship Electrician 026,</td>
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</tr>
<tr>
<td>Sound and Communication Apprentice 6</td>
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<tr>
<td>Apprenticeship Electrician 027,</td>
<td>4.5</td>
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<tr>
<td>Sound and Communication Apprentice 7</td>
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<tr>
<td>Apprenticeship Electrician 028,</td>
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</tr>
<tr>
<td>Sound and Communication Apprentice 8</td>
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</tr>
</tbody>
</table>

TOTAL 36

Certificate of Achievement
Sound Technician (19589)

Learning Outcome(s)
Upon successful completion of the requirements for this certificate, students will be able to

• Begin a career as a journeyworker electrician.
• Have a basis for further college education.

Certificate requirements Units

<table>
<thead>
<tr>
<th>Course</th>
<th>Unit(s)</th>
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<tbody>
<tr>
<td>Apprenticeship Electrician 021,</td>
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</tr>
<tr>
<td>Sound and Communication Apprentice 1</td>
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<tr>
<td>Apprenticeship Electrician 022,</td>
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<tr>
<td>Sound and Communication Apprentice 2</td>
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<tr>
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<tr>
<td>Sound and Communication Apprentice 3</td>
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<tr>
<td>Apprenticeship Electrician 024,</td>
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<tr>
<td>Sound and Communication Apprentice 4</td>
<td></td>
</tr>
<tr>
<td>Apprenticeship Electrician 025,</td>
<td>4.5</td>
</tr>
<tr>
<td>Sound and Communication Apprentice 5</td>
<td></td>
</tr>
<tr>
<td>Apprenticeship Electrician 026,</td>
<td>4.5</td>
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<tr>
<td>Sound and Communication Apprentice 6</td>
<td></td>
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<tr>
<td>Apprenticeship Electrician 027,</td>
<td>4.5</td>
</tr>
<tr>
<td>Sound and Communication Apprentice 7</td>
<td></td>
</tr>
<tr>
<td>Apprenticeship Electrician 028,</td>
<td>4.5</td>
</tr>
<tr>
<td>Sound and Communication Apprentice 8</td>
<td></td>
</tr>
</tbody>
</table>

TOTAL 36

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
Apprenticeship Electrician 027  
**Sound and Communication Apprentice 7**  
Unit(s): 4.5  
Class Hours: 68 Lecture total, 12 Laboratory total.  
Prerequisite: Must be a state-indentured apprentice.  

Apprenticeship Electrician 028  
**Sound and Communication Apprentice 8**  
Unit(s): 4.5  
Class Hours: 68 Lecture total, 12 Laboratory total.  
Prerequisite: Must be a state-indentured apprentice.  

Apprenticeship Electrician 031  
**Intelligent Transportation Systems Electrician Apprentice 1**  
Unit(s): 4.5  
Class Hours: 62 Lecture total, 30 Laboratory total.  
Prerequisite: Must be a state-indentured apprentice.  
Provides the related and supplement instruction required for apprentice electricians in the intelligent transportation industry, safety, hand signals, wire construction and insulation properties, Introduction to Caltrans Plans and Specifications. Open Entry/Open Exit.

Apprenticeship Electrician 032  
**Intelligent Transportation Systems Electrician Apprentice 2**  
Unit(s): 4.5  
Class Hours: 62 Lecture total, 30 Laboratory total.  
Prerequisite: Must be a state-indentured apprentice.  
Provides the related and supplement instruction for apprentice electricians in fall protection, rigging tools and equipment, underground installations, basic signal blueprint reading, electron theory, and DC series circuits. Continued study of Caltrans Plans and Specifications. Open Entry/Open Exit.

Apprenticeship Electrician 033  
**Intelligent Transportation Systems Electrician Apprentice 3**  
Unit(s): 4.5  
Class Hours: 62 Lecture total, 30 Laboratory total.  
Prerequisite: Must be a state-indentured apprentice.  
Provides the related and supplement instruction for apprentice electricians in grounding, DC parallel circuits, codeology, excavation, and spans and mastarms. Continued study of Caltrans Plans and Specifications. Open Entry/Open Exit.

Apprenticeship Electrician 034  
**Intelligent Transportation Systems Electrician Apprentice 4**  
Unit(s): 4.5  
Class Hours: 62 Lecture total, 30 Laboratory total.  
Prerequisite: Must be a state-indentured apprentice.  
Provides the related and supplemental instruction for apprentice electricians in proper hoisting of loads, concrete fundamentals, DC combination circuits, test instruments and troubleshooting, magnetism, current, transformers, traffic signal cabinets and equipment. Continued study of Caltrans Plans and Specifications. Open Entry/Open Exit.

Apprenticeship Electrician 035  
**Intelligent Transportation Systems Electrician Apprentice 5**  
Unit(s): 4.5  
Class Hours: 62 Lecture total, 30 Laboratory total.  
Prerequisite: Must be a state-indentured apprentice.  
Provides the related and supplemental instruction required for apprentice electricians in RL circuits, RC circuits, LC circuits, job overhead, time space diagrams, bridge blueprints, sign structures, street lighting, productivity, and controllers. Continued study of Caltrans Plans and Specifications. Open Entry/Open Exit.

Apprenticeship Electrician 036  
**Intelligent Transportation Systems Electrician Apprentice 6**  
Unit(s): 4.5  
Class Hours: 62 Lecture total, 30 Laboratory total.  
Prerequisite: Must be a state-indentured apprentice.  
Provides the related and supplemental instruction required for apprentice electricians in alternative energy sources, fiber optics, testing and certification, video security systems, and traffic signal troubleshooting. Continued study of Caltrans Plans and Specifications. Open Entry/Open Exit.

Apprenticeship Electrician 037  
**Intelligent Transportation Systems Electrician Apprentice 7**  
Unit(s): 4.5  
Class Hours: 62 Lecture total, 30 Laboratory total.  
Prerequisite: Must be a state-indentured apprentice.  
Provides the related and supplemental instruction required for apprentice electricians in preparing for the California State Electrical Certification Exam. Open Entry/Open Exit.

Apprenticeship Electrician 038  
**Intelligent Transportation Systems Electrician Apprentice 8**  
Unit(s): 4.5  
Class Hours: 62 Lecture total, 30 Laboratory total.  
Prerequisite: Must be a state-indentured apprentice.  
Provides the related and supplemental instruction required for apprentice electricians in motor control, supervision/foremanship, and safety. Open Entry/Open Exit.

Apprenticeship Electrician 051  
**Inside Wireman 1**  
Unit(s): 4.5  
Class Hours: 62 Lecture total, 30 Laboratory total.  
Prerequisite: Must be a state-indentured apprentice.  
First semester of a five year program. Provides related and supplemental instruction in tools and fasteners, knot tying, math and materials, building materials and safety, and residential blueprints required for entry-level inside wireman apprentices. Open Entry/Open Exit.

Apprenticeship Electrician 052  
**Inside Wireman 2**  
Unit(s): 4.5  
Class Hours: 62 Lecture total, 30 Laboratory total.  
Prerequisite: Must be a state-indentured apprentice.  
Second semester of a five year program. Provides related and supplemental instruction in Direct Current (DC) theory, the National Electrical Code, safe work practices, series circuits, parallel circuits, combination circuits, principles of magnetism and electromagnetism for inside wireman apprentices. Open Entry/Open Exit.

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
Apprenticeship Electrician 053
Inside Wireman 3
Unit(s): 4.5
Class Hours: 62 Lecture total, 30 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
Third semester of a five year program. Provides related and supplemental instruction in codeology, test instruments and sine waves, three-phase systems, residential and commercial blueprints, mechanical bending for inside wireman apprentices. Open Entry/Open Exit.

Apprenticeship Electrician 054
Inside Wireman 4
Unit(s): 4.5
Class Hours: 62 Lecture total, 30 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
Fourth semester of a five year program. Provides related and supplemental instruction in electrical theory, transformers, and National Electrical Code application for inside wireman apprentices. Open Entry/Open Exit.

Apprenticeship Electrician 055
Inside Wireman 5
Unit(s): 4.5
Class Hours: 62 Lecture total, 30 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
Fifth semester of a five year program. Provides related and supplemental instruction in the National Electric Code, grounding, and NEC Code Calculations for inside wireman apprentices. Open Entry/Open Exit.

Apprenticeship Electrician 056
Inside Wireman 6
Unit(s): 4.5
Class Hours: 62 Lecture total, 30 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
Sixth semester of a five year program. Provides related and supplemental instruction in motors, motor control and code as applied to motor protection for inside wireman apprentices. Open Entry/Open Exit.

Apprenticeship Electrician 057
Inside Wireman 7
Unit(s): 4.5
Class Hours: 62 Lecture total, 30 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
Seventh semester of a five year program. Provides related and supplemental instruction in programmable logic controllers and fire alarm systems for inside wireman apprentices. Open Entry/Open Exit.

Apprenticeship Electrician 058
Inside Wireman 8
Unit(s): 4.5
Class Hours: 62 Lecture total, 30 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
Eighth semester of a five year program. Provides related and supplemental instruction in instrumentation, building automation and lighting systems for inside wireman apprentices. Open Entry/Open Exit.

Apprenticeship Electrician 059
Inside Wireman 9
Unit(s): 4.5
Class Hours: 62 Lecture total, 30 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
Ninth semester of a five year program. Provides related and supplemental instruction in the National Electrical Code in preparation for the California State Electrical Examination for inside wireman apprentices. Prepares for competency exams. Open Entry/Open Exit.

Apprenticeship Electrician 060
Inside Wireman 10
Unit(s): 4.5
Class Hours: 62 Lecture total, 30 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
Final semester of a five year program. Provides related and supplemental instruction in jobsite management, jobsite safety and photovoltaic systems for inside wireman apprentices. Open Entry/Open Exit.

Apprenticeship Electrician 061
Electrical Safety and First Aid
Unit(s): 1.5
Class Hours: 30 Lecture total.
Prerequisite: Must be a state-indentured apprentice.
Provides related and supplemental instruction in Occupational Safety and Health Administration (OSHA) workplace requirements, the identification and use of safe work practices, coping with accidents and emergency situations, and one person CPR for inside wireman apprentices. American Red Cross certification available upon successful completion. Grade: Pass/No Pass. Open Entry/Open Exit.

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.*
APPRENTICESHIP INSULATOR (AIN)

Courses

Apprenticeship Insulator 021
Orientation
Unit(s): 2.0
Class Hours: 30 Lecture total, 10 Laboratory total.
Prerequisite: Must be a state-indentured Insulator apprentice. Apprenticeship Insulator 021.
This course provides an overview of the construction industry, safety, and green building awareness. Upon successful completion, students will receive Occupational Safety and Health Administration (OSHA) 10 hour and Powder Actuated Tool certification, and United Brotherhood of Carpenters (UBC) Fall Protection qualification cards. Open Entry/Open Exit.

Apprenticeship Insulator 022
Safety and Health Certifications
Unit(s): 2.0
Class Hours: 30 Lecture total, 10 Laboratory total.
Prerequisite: Must be a state-indentured Insulator apprentice. Apprenticeship Insulator 022.
This course covers the safe and appropriate use of scaffolds, aerial lift and fork lift equipment, and emergency response procedures. Upon successful completion, students will be issued American Red Cross First Aid and cardiopulmonary resuscitation (CPR) certification and United Brotherhood of Carpenters (UBC) scaffold, Aerial Lift and Forklift Qualification Cards. Open Entry/Open Exit.

Apprenticeship Insulator 023
Insulation Basics
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured Insulator apprentice; Apprenticeship Insulator 021 and 022.
This course provides an introduction into insulation as an energy efficiency technology and covers common types of insulating products and typical industry applications. Job planning, preparation and personal protective equipment will be included in performance exercises. Open Entry/Open Exit.

Apprenticeship Insulator 024
Construction Methods
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured Insulator apprentice. Apprenticeship Insulator 021 and 022.
This course presents the theory, methods, and procedures required to frame basic walls. Hands-on practice using proper tool techniques and appropriate materials will enhance fundamental skill development. Open Entry/Open Exit.

Apprenticeship Insulator 025A
Print Reading
Unit(s): 2.0
Class Hours: 30 Lecture total, 10 Laboratory total.
Prerequisite: Must be a state-indentured Insulator apprentice. Apprenticeship Insulator 021 and 022.
This course introduces basic visualization skills needed for reading and interpreting construction prints. Views, elevations and the role of specifications as they relate to insulation details on prints will be discussed. Open Entry/Open Exit.

Apprenticeship Insulator 025B
Advanced Print Reading
Unit(s): 2.0
Class Hours: 30 Lecture total, 10 Laboratory total.
Prerequisite: Must be a state-indentured Insulator apprentice. Apprenticeship Insulator 021 and 022.
In this course, students will analyze multi-view drawings to determine construction type, locate benchmark and building elements; review codes, references, and perform calculations for construction/insulation planning. Open Entry/Open Exit.

Apprenticeship Insulator 026
Sound Control and Weatherstripping
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured Insulator apprentice. Apprenticeship Insulator 021 and 022.
This course explores building construction systems and materials used to control sound. How sound travels and/or is absorbed by building materials will be presented. Practical experience will be gained during installation of wall systems, weatherstripping, and insulating materials designed to absorb, diffuse, disperse and/or control sound. Open Entry/Open Exit.

Apprenticeship Insulator 027
Flexible Foam Insulation
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured Insulator apprentice. Apprenticeship Insulator 021 and 022.
This course covers the identification of flexible foam materials, installation methods, and industry applications. The procedures and tool techniques used to fabricate and install several types of equipment covers using flexible foam insulation will be presented and practiced shop floor exercises. Open Entry/Open Exit.

Apprenticeship Insulator 031
Green Building and Weatherization
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured Insulator apprentice. Apprenticeship Insulator 021 and 022.
This course explains in detail building envelope science. Audit procedures, as well as testing and reporting mechanisms used to measure inefficiencies will be covered. Training will provide novice workers with fundamental skills to properly install the beneficial [‘green’] and cost effective energy efficient retro-fits for residential buildings. Open Entry/Open Exit.

Apprenticeship Insulator 031J
Green Building and Weatherization - Journeyworker
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Active Carpenter Union Member.
This course provides experienced carpenters with updated building envelope science concepts focused on energy efficiency. Audit procedures, as well as testing and reporting mechanisms used to measure inefficiencies will be covered. Training will provide workers with specialized skills to properly install the beneficial [‘green’] and cost effective energy efficient retro-fits for residential buildings. Grade: Pass/No Pass.

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
**Apprenticeship Insulator 032**  
**Specialty Installations**  
Unit(s): 1.5  
Class Hours: 20 Lecture total, 20 Laboratory total.  
Prerequisite: Must be a state-indentured Insulator apprentice. Apprenticeship Insulator 021 or 022.  
This course describes insulation systems materials and installation methods that usually performed by specialty contractors. Instruction will include refrigeration, curtain walls, plenums, access hatches, and spray systems. Students will calculate and prepare materials, and utilize the proper installation techniques during shop exercises. Open Entry/Open Exit.

**Apprenticeship Insulator 033**  
**Energy Audit**  
Unit(s): 1.5  
Class Hours: 20 Lecture total, 20 Laboratory total.  
Prerequisite: Must be a state-indentured Insulator apprentice. Apprenticeship Insulator 021 and 022.  
This course covers the building envelope-science, audit procedures, testing and reporting mechanisms used to measure inefficiencies and identify beneficial and cost effective energy efficient retro-fits for residential buildings. Open Entry/Open Exit.

**Apprenticeship Insulator 034**  
**Firestop/Fireproofing Procedures**  
Unit(s): 1.5  
Class Hours: 20 Lecture total, 20 Laboratory total.  
Prerequisite: Must be a state-indentured Insulator apprentice. Apprenticeship Insulator 021 and 022.  
This course will focus on the correct methods, technical skills, and firestop/fireproofing materials required in the work place today. Strict building codes mandate the importance of certified training. Open Entry/Open Exit.

**Apprenticeship Insulator 035**  
**Infiltration and Moisture Control**  
Unit(s): 1.5  
Class Hours: 20 Lecture total, 20 Laboratory total.  
Prerequisite: Must be a state-indentured Insulator apprentice. Apprenticeship Insulator 021 and 022.  
This course covers air infiltration and how it affects the energy efficiency of a building, as well as the techniques, strategies and insulation installation skills designed to prevent energy loss, and damage due to condensation and infiltration described as ‘moisture build up’ inside the building envelope. Open Entry/Open Exit.

**Apprenticeship Insulator 036**  
**Loose Fill and Spray Insulation**  
Unit(s): 1.5  
Class Hours: 20 Lecture total, 20 Laboratory total.  
Prerequisite: Must be a state-indentured Insulator apprentice. Apprenticeship Insulator 021 and 022.  
This course presents the differences between batt, ridged, loose-fill, and spray types of thermal insulation. The product distinctions, thermal advantages, and variation of typical installation practices will be covered. An in depth discussion of safety precautions and operating procedures for spray equipment and blow rigs (trucks) used in loose fill applications will be presented. Open Entry/Open Exit.

**Apprenticeship Insulator 037**  
**Rigid Foam and Cellular Glass Insulation Installations**  
Unit(s): 1.5  
Class Hours: 20 Lecture total, 20 Laboratory total.  
Prerequisite: Must be a state-indentured Insulator apprentice. Apprenticeship Insulator 021 and 022.  
This course covers the identification of rigid and cellular glass materials, installation methods, and industry applications. The proper handling and installation techniques for molded and extruded polystyrene foam boards, and cellular glass insulation will be stressed during shop exercises. Open Entry/Open Exit.

**Apprenticeship Insulator 041**  
**Supervisory Training**  
Unit(s): 2.5  
Class Hours: 40 Lecture total.  
Prerequisite: Must be a state-indentured Insulator apprentice. Apprenticeship Insulator 021 and 022.  
This course covers the supervisory and leadership skills required for professional development, including the typical work processes, communication methods, motivational concepts and problem solving techniques, that when employed, result in efficient and effective management of construction projects. Open Entry/Open Exit.

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.*
APPRENTICESHIP MAINTENANCE MECHANIC (AMM)

Division of Business and Career Technical Education

Dean: Von Lawson

The associate degree and certificate of achievement in apprenticeship maintenance mechanic apprentice I and II provide the related and supplemental instruction required for MWD Maintenance Mechanic apprentices who have been selected by the apprenticeship committee. Those interested should contact the Maintenance Mechanic apprenticeship committee or the Apprenticeship Office at Santiago Canyon College.

Apprenticeship Maintenance Mechanic Apprentice I

Associate in Science

Maintenance Mechanic Apprentice I (16839)

Learning Outcome(s)
Upon successful completion of the major requirements for this degree, students will be able to
• Begin a career as a journeyworker maintenance mechanic.
• Have a basis for further college education.

Major requirements*

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Units</th>
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<tbody>
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<tr>
<td>Maintenance Mechanic Apprentice I, Level 2</td>
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<td>Apprenticeship Maintenance Mechanic 043, Level 3</td>
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<td>Maintenance Mechanic Apprentice I, Level 4</td>
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<td>Apprenticeship Maintenance Mechanic 044, Level 5</td>
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<td>Maintenance Mechanic Apprentice I, Level 6</td>
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<tr>
<td>Apprenticeship Maintenance Mechanic 048, Level 7</td>
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<tr>
<td>Job Planning/Advanced Mechanical Maintenance - Operations and Maintenance Technician IV</td>
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</tbody>
</table>

| TOTAL                                               | 36 |

Certificate of Achievement

Maintenance Mechanic Apprentice I (21651)

Learning Outcome(s)
Upon successful completion of the requirements for this certificate, students will be able to
• Begin a career as a journeyworker maintenance mechanic.
• Have a basis for further college education.

Certificate requirements

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
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</tr>
<tr>
<td>Apprenticeship Maintenance Mechanic 043, Level 3</td>
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<tr>
<td>Maintenance Mechanic Apprentice I, Level 4</td>
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<tr>
<td>Apprenticeship Maintenance Mechanic 044, Level 5</td>
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<tr>
<td>Maintenance Mechanic Apprentice I, Level 6</td>
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</tr>
<tr>
<td>Apprenticeship Maintenance Mechanic 048, Level 7</td>
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</tr>
<tr>
<td>Job Planning/Advanced Mechanical Maintenance - Operations and Maintenance Technician IV</td>
<td>4.5</td>
</tr>
</tbody>
</table>

| TOTAL                                               | 36 |

Apprenticeship Maintenance Mechanic-Apprentice II

Associate in Science

Maintenance Mechanic Apprentice II (11982)

Learning Outcome(s)
Upon successful completion of the major requirements for this degree, students will be able to
• Begin a career as a journeyworker maintenance mechanic.
• Have a basis for further college education.

Major requirements*

<table>
<thead>
<tr>
<th>Requirement</th>
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<tbody>
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<td>Apprenticeship Maintenance Mechanic 021, Level 1</td>
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<tr>
<td>Maintenance Mechanic Apprentice I, Level 2</td>
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<tr>
<td>Apprenticeship Maintenance Mechanic 052, Level 3</td>
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<tr>
<td>Introduction to Electricity - Operations and Maintenance Technical IV (Electrical)</td>
<td>4.5</td>
</tr>
<tr>
<td>Apprenticeship Maintenance Mechanic 053, Level 5</td>
<td>4.5</td>
</tr>
<tr>
<td>Industrial Rigging/Reading Blueprints/AC Power Systems and Control - Operations &amp; Maintenance Technician IV (Electrical)</td>
<td>4.5</td>
</tr>
<tr>
<td>Apprenticeship Maintenance Mechanic 054, Level 7</td>
<td>4.5</td>
</tr>
<tr>
<td>Troubleshooting - Operations and Maintenance Technician IV (Electrical)</td>
<td>4.5</td>
</tr>
<tr>
<td>Apprenticeship Maintenance Mechanic 057, Level 9</td>
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<tr>
<td>Operations and Maintenance Technician IV (Electrical)</td>
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<tr>
<td>Apprenticeship Maintenance Mechanic 058, Level 12</td>
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</tr>
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<td>Operations and Maintenance Technician IV (Electrical)</td>
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</tr>
</tbody>
</table>

| TOTAL                                               | 36 |

Certificate of Achievement

Maintenance Mechanic Apprentice II (21653)

Learning Outcome(s)
Upon successful completion of the requirements for this certificate, students will be able to
• Begin a career as a journeyworker maintenance mechanic.
• Have a basis for further college education.

Certificate requirements

<table>
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</tbody>
</table>

| TOTAL                                               | 36 |

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
Courses

**Apprenticeship Maintenance Mechanic 021**
Maintenance Mechanic Apprentice, Level 1
Unit(s): 4.5
Class Hours: 64 Lecture total, 25 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
Provides the related and supplemental instruction required for the first level Maintenance Mechanic Apprentice I in mathematics, industrial safety and health, using hand and portable power tools, basic measurements, basic electricity, and basic mechanics. Open Entry/Open Exit.

**Apprenticeship Maintenance Mechanic 022**
Maintenance Mechanic Apprentice I, Level 2
Unit(s): 4.5
Class Hours: 60 Lecture total, 38 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
Provides the related and supplemental instruction required for the second level Maintenance Mechanic Apprentice I in electrical safety and protection; introductory Metropolitan Water District (MWD) System Operating Orders, building and construction codes; standards and specifications; and blueprints, symbols, drawings, and schematics, diagrams. Open Entry/Open Exit.

**Apprenticeship Maintenance Mechanic 043**
Maintenance Mechanic Apprentice I, Level 3
Unit(s): 4.5
Class Hours: 52 Lecture total, 61 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
Provides the related and supplemental instruction required for the third level Maintenance Mechanic Apprentice I in rigging and hoisting principles and practices, basic pneumatics and hydraulics, mechanical and fluid power transmissions systems, and equipment installation and maintenance. Open Entry/Open Exit.

**Apprenticeship Maintenance Mechanic 044**
Maintenance Mechanic Apprentice I, Level 4
Unit(s): 4.5
Class Hours: 56 Lecture total, 48 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
Provides the related and supplemental instruction required for the fourth level Maintenance Mechanic Apprentice I in pump types and applications; piping systems; pump hydraulics; tubing and hose applications, installation and maintenance; installation and maintenance pipefitting; and troubleshooting skills. Open Entry/Open Exit.

**Apprenticeship Maintenance Mechanic 045**
Maintenance Mechanic Apprentice I, Level 5
Unit(s): 4.5
Class Hours: 62 Lecture total, 30 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
Provides the related and supplemental instruction for the fifth level Maintenance Mechanic Apprentice I in the properties and characteristics of ferrous and nonferrous metals, welding principles, oxy-fuel welding and cutting operations, arc welding operations, welding codes and standards. Open Entry/Open Exit.

**Apprenticeship Maintenance Mechanic 046**
Maintenance Mechanic Apprentice I, Level 6
Unit(s): 4.5
Class Hours: 58 Lecture total, 44 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
Provides the related and supplemental instruction required for the sixth level Maintenance Mechanic Apprentice I in machine shop practices and operations. Open Entry/Open Exit.

**Apprenticeship Maintenance Mechanic 047**
Maintenance Mechanic Apprentice I, Level 7
Unit(s): 4.5
Class Hours: 64 Lecture total, 26 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
Provides the related and supplemental instruction for the seventh level Maintenance Mechanic Apprentice I in the areas of water treatment plant operations and water distribution. Open Entry/Open Exit.

**Apprenticeship Maintenance Mechanic 048**
Job Planning/Advanced Mechanical Maintenance - Operations and Control - Operations & Maintenance Technician IV
Unit(s): 4.5
Class Hours: 64 Lecture total, 25 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
Provides the related and supplemental instruction required for the eighth level Maintenance Mechanic Apprentice I in mechanical systems; maintenance and operations procedures; and project planning, layout, estimating, and scheduling. Open Entry/Open Exit.

**Apprenticeship Maintenance Mechanic 052**
Introduction to Electricity - Operations and Maintenance Technical IV (Electrical)
Unit(s): 4.5
Class Hours: 64 Lecture total, 26 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
Provides the related and supplemental instruction required for the second level Maintenance Mechanic Apprentice II in basic electrical circuits; Direct Current (DC) circuits and batteries; electromagnetism, inductance and capacitance; transformers and Alternating Current (AC) circuits, electrical measuring instruments; electrical safety in the workplace (NFPA 70E), electrical protective devices and introduction to the National Electric Code. Open Entry/Open Exit.

**Apprenticeship Maintenance Mechanic 053**
Industrial Rigging/Reading Blueprints/AC Power Systems and Controls - Operations & Maintenance Technician IV (Electrical)
Unit(s): 4.5
Class Hours: 64 Lecture total, 25 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
Provides the related and supplemental instruction required for the third level Maintenance Mechanic Apprentice II in reading blueprints, schematics, symbols, drawings and diagrams; rigging principles and practices for electricians; AC/DC equipment and controls; AC generation, transmission and distribution; Over-current protective devices; Continuing Education with the NEC and NFPA 70E Workplace Electrical Safety. Open Entry/Open Exit.

**Apprenticeship Maintenance Mechanic 054**
AC,DC Motors and Motor Control Circuits
Unit(s): 4.5
Class Hours: 64 Lecture total, 25 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
Provides the related and supplemental instruction required for the fourth level Maintenance Mechanic Apprentice II in the application of code requirements, intermediate electricity, single phase motors, three phase systems, and electrical troubleshooting skills. Open Entry/Open Exit.

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.*
Apprenticeship Maintenance Mechanic 055
VFDs, Circuit measurements and Troubleshooting
Unit(s): 4.5
Class Hours: 58 Lecture total, 25 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
Provides the related and supplemental instruction required for the fifth level Maintenance Mechanic Apprentice II in the application of code requirements, variable frequency drives (VFD), VFD faults and troubleshooting, input/output devices, semi-conductors, and power supplies. Open Entry/Open Exit.

Apprenticeship Maintenance Mechanic 056
PLCs/Motor Control/Troubleshooting
Unit(s): 4.5
Class Hours: 48 Lecture total, 25 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
Provides the related and supplemental instruction required for the sixth level Maintenance Mechanic Apprentice II in the application of code requirements, conserving energy in electrical systems, process controls, introductory programming, programmable logic controllers and advanced electricity. Open Entry/Open Exit.

Apprenticeship Maintenance Mechanic 057
Electrical Safety/System Troubleshooting
Unit(s): 4.5
Class Hours: 64 Lecture total, 25 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
Provides the related and supplemental instruction required for the seventh level Maintenance Mechanic Apprentice II in water treatment plant and water distribution system operations and advanced electricity and electrical systems. Open Entry/Open Exit.

Apprenticeship Maintenance Mechanic 058
Predictive Maintenance/Troubleshooting and Lighting
Unit(s): 4.5
Class Hours: 64 Lecture total, 25 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
Provides the related and supplemental instruction required for the eighth level Maintenance Mechanic Apprentice II in the application of code requirements; advanced electricity and electrical systems; maintenance and operations procedures; project planning, layout, estimating and scheduling. Open Entry/Open Exit.

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.

APPRENTICESHIP MILLWRIGHT (AMW)

Courses

Apprenticeship Millwright 021
Orientation
Unit(s): 2.0
Class Hours: 30 Lecture total, 10 Laboratory total.
Prerequisite: Must be a state-indentured Millwright apprentice.
This course provides an overview of the construction industry for millwrights, 16-hour safety, and green building awareness. Successful students will receive Occupational Safety and Health Administration (OSHA) 10 Certification and United Brotherhood of Carpenters (UBC) Millwright 16-Hour Safety Qualification Cards. Open Entry/Open Exit.

Apprenticeship Millwright 022
Safety and Health Certifications
Unit(s): 2.0
Class Hours: 30 Lecture total, 10 Laboratory total.
Prerequisite: Must be a state-indentured Millwright apprentice. Apprenticeship Millwright 021.
This course covers the safe and appropriate use of forklift, aerial lift equipment in industrial setting, and emergency response procedures. Upon successful completion, students will be issued First Aid and CPR Certification and UBC Scaffold, Aerial Lift and Forklift Qualification Cards. Open Entry/Open Exit.

Apprenticeship Millwright 023A
Millwright General Skills - A
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured Millwright apprentice. Apprenticeship Millwright 021 and 022.
Students will identify and use hand and power tools, machining equipment and precision instruments at a fundamental level. Students will complete various bench layout tasks using shop drawings. Open Entry/Open Exit.

Apprenticeship Millwright 023B
Millwright General Skills - B
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured Millwright Apprentice. Apprenticeship Millwright 021 and 022.
Building on basic machine shop skills, students will use hand and power tools, shop equipment and precision instruments to complete various machining operations. Open Entry/Open Exit.

Apprenticeship Millwright 024
Printreading
Unit(s): 2.0
Class Hours: 30 Lecture total, 10 Laboratory total.
Prerequisite: Must be a state-indentured Millwright apprentice. Apprenticeship Millwright 021 and 022.
This course introduces basic visualization skills needed for reading and interpreting construction prints. Views, elevations and the role of specifications as they relate to prints will be discussed. Open Entry/Open Exit.

Apprenticeship Millwright 025
Welding Fabrication
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured Millwright apprentice. Apprenticeship Millwright 021 and 022.
This course is designed as an introduction to layout, and basic welding and fabrication. The students will be introduced to the basic skills of measuring, equipment set-up and cutting, shaping, grinding, welding, filing, heating and bending of metal parts. Open Entry/Open Exit.
Apprenticeship Millwright 026
Cutting and Burning
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured Millwright apprentice. Apprenticeship Millwright 021 and 022.
This course provides safety instruction, equipment operation, and basic skills needed for successful layout and fabrication of metal parts using an oxy-acetylene torch. Open Entry/Open Exit.

Apprenticeship Millwright 027
Optics and Machinery Alignment
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured Millwright apprentice. Apprenticeship Millwright 021 and 022.
This course covers the terms, characteristics, and operating principles for the transit and laser levels. Procedures for establishing machinery and equipment elevation and alignment will be demonstrated and practiced. Open Entry/Open Exit.

Apprenticeship Millwright 028
Machinery Shaft Alignment
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured Millwright apprentice. Apprenticeship Millwright 021 and 022.
This course covers the terms, characteristics, and methods for aligning machine shafts. Conventional dial indicator and computer aided methods will be included in the training. Open Entry/Open Exit.

Apprenticeship Millwright 029A
Structural Welding - AWS A
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured Millwright apprentice. Apprenticeship Millwright 021 and 022.
This course is designed to prepare the student to obtain an American Welding Society (AWS) structural welding certificate per AWS D1.1 Structural Welding Code, the welding of plates that are 1/8" to unlimited thickness. Open Entry/Open Exit.

Apprenticeship Millwright 029B
Structural Welding - AWS B
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured Millwright apprentice. Apprenticeship Millwright 021 and 022.
This course is designed to prepare the student to obtain an AWS structural welding certificate per AWS D1.1 Structural Welding Code, the welding of plates that are 1/8" to unlimited thickness. Practical assignments will include metal inert gas (MIG) and tungsten inert gas (TIG) welding. Open Entry/Open Exit.

Apprenticeship Millwright 030
Rigging Hardware and Procedures
Unit(s): 1.5
Class Hours: 30 Lecture total, 10 Laboratory total.
Prerequisite: Must be a state-indentured Millwright apprentice. Apprenticeship Millwright 021 and 022.
This course presents both lifting theory and practical rigging methods and procedures. Rigging attachment procedures, lifting equipment, limits of operation and communication practices will be covered. Successful students will receive United Brotherhood of Carpenters (UBC) Rigging Qualification Cards. Open Entry/Open Exit.

Apprenticeship Millwright 031
Turbine Familiarization
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured Millwright apprentice. Apprenticeship Millwright 021 and 022.
Students will explore the machines and auxiliary equipment used in the power production industry. This course will highlight the function and performance of a typical gas turbine, and will include hydraulic bolting procedures. Open Entry/Open Exit.

Apprenticeship Millwright 032
Pumps
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured Millwright apprentice. Apprenticeship Millwright 021 and 022.
This course will cover the identification, application, and installation skills for typical systems found in the petro-chemical industry. Demonstrations and practice exercises will focus on pump types, gaskets, seals and fans. Open Entry/Open Exit.

Apprenticeship Millwright 033
Conveyor Systems
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured Millwright apprentice. Apprenticeship Millwright 021 and 022.
This class will cover proper installation, alignment procedures, belt splicing, and explain how improper installation affects the maintenance and lifespan of equipment and conveyor systems. Open Entry/Open Exit.

Apprenticeship Millwright 034
Drives, Pulleys and Belts
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured Millwright apprentice. Apprenticeship Millwright 021 and 022.
This class will cover proper installation, alignment procedures, belt splicing, and explain how improper installation affects the maintenance and lifespan of equipment and conveyor systems. Shop projects will focus on belt, chain and gear drive installations. Open Entry/Open Exit.

Apprenticeship Millwright 036A
Machinery Installation and Erection - A
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured Millwright apprentice. Apprenticeship Millwright 021 and 022.
As an introduction, students will explore the machinery used in the manufacturing and package handling industry. Component descriptions and machine drawings illustrate the complex details and important considerations for assembly/disassembly tasks. Open Entry/Open Exit.

Apprenticeship Millwright 036B
Machinery Installation and Erection - B
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured Millwright apprentice. Apprenticeship Millwright 021 and 022.
This course will enhance machinery installation skills used in manufacturing applications. Exercises will focus on the importance of machine drawings to identify component tolerances and installation requirements and alignment of parts. Open Entry/Open Exit.

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
Apprenticeship Millwright 037
Turbine Maintenance
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured Millwright apprentice. Apprenticeship Millwright 021 and 022.
   Students will use machinery maintenance skills and techniques for disassembly/assembly of a typical gas turbine. Couplings, bearings, and rotors will be inspected, and tolerances verified to complete onsite hands-on tasks. Open Entry/Open Exit.

Apprenticeship Millwright 038
Concentrated Photovoltaic Installations
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured Millwright apprentice. Apprenticeship Millwright 021 and 022.
   This course covers the design, function and grid parity of typical concentrated photovoltaic system. The history, technology, types, challenges and costs associated with this renewable energy source installation will be presented. Open Entry/Open Exit.

Apprenticeship Millwright 039
Compressor Theory and Maintenance
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured Millwright apprentice. Apprenticeship Millwright 021 and 022.
   This course will cover the compressor operating principles, safety, assembly, and maintenance skills for industrial compressors. Exercises will focus on the disassembly, inspection, and reassembly of compressor components. Open Entry/Open Exit.

Apprenticeship Millwright 040
Wind Turbine Installations
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured Millwright apprentice. Apprenticeship Millwright 021 and 022.
   This course covers the design and function and installation of wind turbine equipment. The methods, sequences and procedures for housings, bolting, power, drive assembly and other components will be presented. Open Entry/Open Exit.

Apprenticeship Millwright 041J
Millwright 16 Hour Safety - Journeyworker
Unit(s): 1.0
Class Hours: 16 Lecture total.
Prerequisite: Active Millwright Union Member.
   This course provides an overview of the safety awareness in the millwright construction industry. Upon successful completion, students will be issued OSHA 10 Certification and UBC Millwright 16-Hour Safety Qualification Cards. Grade: Pass/No Pass.

Apprenticeship Millwright 042J
Human Performance - Journeyworker
Unit(s): 0.5
Class Hours: 8 Lecture total.
Prerequisite: Active Millwright Union Member.
   This course provides an overview of personal and performance awareness for millwright in the construction industry. Upon successful completion, students will be issued OSHA 10 Certification and UBC Human Performance Qualification Cards. Grade: Pass/No Pass.

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
APPRENTICESHIP MODULAR FURNISHINGS INSTALLATION (AMF)

Courses

Apprenticeship Modular Furnishings Installation 021
Orientation
Unit(s): 2.0
Class Hours: 30 Lecture total, 10 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
This course provides an overview of the construction industry, safety, and green building awareness. Upon successful completion, students will receive Occupational Safety and Health Administration (OSHA) 10 Hour and Powder Actuated Tool Certifications, and United Brotherhood of Carpenters (UBC) Fall Protection Qualification Card. Open Entry/Open Exit.

Apprenticeship Modular Furnishings Installation 022
Safety and Health Certifications
Unit(s): 2.0
Class Hours: 30 Lecture total, 10 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
This course covers the safe and appropriate use of scaffolds, aerial lift and fork lift equipment, and emergency response procedures. Upon successful completion, students will be issued American Red Cross First Aid/CPR Certifications, and United Brotherhood of Carpenters (UBC) Scaffold, Aerial Lift and Fork-lift Qualification Cards. Open Entry/Open Exit.

Apprenticeship Modular Furnishings Installation 023
Modular Cabinets, Doors and Drawers
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
This course details cabinetry fabrication from design and function through the complete production process. Students will use the methods and procedures presented to build a typical base unit. Open Entry/Open Exit.

Apprenticeship Modular Furnishings Installation 023C
Tool/Equipment Applications
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured Carpenter apprentice. Apprenticeship Modular Furnishings Installation 021 and 022.
This course promotes hand/power tool and equipment skill development for various construction applications used in the installation of modular furnishings. Scaffold building and Aerial lift safety and operating procedures will also be covered. Upon successful completion, students will be issued United Brotherhood of Carpenters (UBC) Aerial Lift and Scaffold Erector-Welded Frame Qualification Cards. Open Entry/Open Exit.

Apprenticeship Modular Furnishings Installation 024
Introduction to Modular Furnishing
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
This course introduces the students to modular furnishing design concepts. Students will identify the elements that are incorporated into a basic educational design for functionality, productivity and durability. Open Entry/Open Exit.

Apprenticeship Modular Furnishings Installation 025
Educational and Seismic Installations
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
This course showcases modern modular furnishing designs for creating interactive educational spaces. In addition, students will be presented with state and local seismic codes, and those that are site specific for schools, hospitals and/or required by building engineers. Open Entry/Open Exit.

Apprenticeship Modular Furnishings Installation 026
Hospital Modular Installations
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
Modular furnishing design concepts for hospital environments will be a focus of this course. Students will identify job planning and ‘best practices’ procedures to facilitate special requirements for installations in the healthcare industry. Multi-Station layouts, components, specialty accessories, and finishes will be included. Open Entry/Open Exit.

Apprenticeship Modular Furnishings Installation 029
Wall and Overhead Attachments
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
This course will highlight the use of various wall and overhead attachments and explain how they are integrated into the modular designed space. Students will identify the wall and overhead elements that are incorporated into a multi-station design using selected manufacturers’ products. Open Entry/Open Exit.

Apprenticeship Modular Furnishings Installation 030
Crew Lead Customer Service Training
Unit(s): 2.5
Class Hours: 40 Lecture total.
Prerequisite: Must be a state-indentured apprentice.
This course covers the supervisory and crew leadership skills required for professional development in the modular furnishing industry. An emphasis will be placed on the importance of providing excellent customer service. Open Entry/Open Exit.

Apprenticeship Modular Furnishings Installation 031
Modular Glass: Handling and Installation
Unit(s): 1.5
Class Hours: 20 Lecture total, 20 Laboratory total.
Prerequisite: Apprenticeship Modular Furnishings Installation 021 and 022 Must be a state-indentured Modular Furnishing Installer apprentice.
This course covers the applications, methods, and procedures required to install modular glass products. Learn hands-on practice using proper tools, product handling techniques and appropriate sequence of installation will provide students with fundamental skills. Open Entry/Open Exit.

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
APPRENTICESHIP OPERATING ENGINEERS (AOE)

Division of Business and Career Technical Education

Dean: Von Lawson

Apprenticeship Operating Engineers-Construction Safety Inspector

The associate degree and certificate of achievement in apprenticeship operating engineers construction safety inspector provide the related and supplemental instruction required for state-indentured operating engineer apprentices. Construction Safety Inspectors perform the equipment and jobsite inspections that ensure safe and proper procedures and regulations are being followed. Interested apprentices should contact the Operating Engineers Joint Apprenticeship and Training Committee and the Apprenticeship Office at Santiago Canyon College. Successful completion may lead to journeyworker status.

Associate in Science
Construction Safety Inspector (31503)

Learning Outcome(s)
Upon successful completion of the major requirements for this degree, students will be able to
• Begin a career as a journeyworker operating engineer.
• Have a basis for further college education.

Major requirements*  

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<tr>
<th>Course</th>
<th>Units</th>
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<tbody>
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<td>Apprenticeship Operating Engineers 011, Construction Safety Inspector Apprentice 1</td>
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</tr>
<tr>
<td>Apprenticeship Operating Engineers 012, Construction Safety Inspector Apprentice 2</td>
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<tr>
<td>Apprenticeship Operating Engineers 013, Construction Safety Inspector Apprentice 3</td>
<td>4</td>
</tr>
<tr>
<td>Apprenticeship Operating Engineers 014, Construction Safety Inspector Apprentice 4</td>
<td>4</td>
</tr>
<tr>
<td>Apprenticeship Operating Engineers 015, Construction Safety Inspector Apprentice 5</td>
<td>4</td>
</tr>
<tr>
<td>Apprenticeship Operating Engineers 016, Construction Safety Inspector Apprentice 6</td>
<td>4</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>24</td>
</tr>
</tbody>
</table>

Certificate of Achievement
Construction Safety Inspector (31574)

Learning Outcome(s)
Upon successful completion of the requirements for this certificate, students will be able to
• Begin a career as a journeyworker operating engineer.
• Have a basis for further college education.

Certificate requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apprenticeship Operating Engineers 011, Construction Safety Inspector Apprentice 1</td>
<td>4</td>
</tr>
<tr>
<td>Apprenticeship Operating Engineers 012, Construction Safety Inspector Apprentice 2</td>
<td>4</td>
</tr>
<tr>
<td>Apprenticeship Operating Engineers 013, Construction Safety Inspector Apprentice 3</td>
<td>4</td>
</tr>
<tr>
<td>Apprenticeship Operating Engineers 014, Construction Safety Inspector Apprentice 4</td>
<td>4</td>
</tr>
<tr>
<td>Apprenticeship Operating Engineers 015, Construction Safety Inspector Apprentice 5</td>
<td>4</td>
</tr>
<tr>
<td>Apprenticeship Operating Engineers 016, Construction Safety Inspector Apprentice 6</td>
<td>4</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>24</td>
</tr>
</tbody>
</table>

Apprenticeship Operating Engineers-Heavy Duty Repairer

The associate degree and certificate of achievement in apprenticeship operating engineers heavy duty repairer provide the required related and supplemental instruction for state-indentured operating engineer apprentices. Interested apprentices should contact the Operating Engineers Joint Apprenticeship and Training Committee and the Apprenticeship Office at Santiago Canyon College. Successful completion may lead to journeyworker status.

Associate in Science
Heavy Duty Repairer (17687)

Learning Outcome(s)
Upon successful completion of the major requirements for this degree, students will be able to
• Begin a career as a journeyworker operating engineer.
• Have a basis for further college education.

Major requirements*  

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apprenticeship Operating Engineers 031, Heavy Duty Repairer 1</td>
<td>4</td>
</tr>
<tr>
<td>Apprenticeship Operating Engineers 032, Heavy Duty Repairer 2</td>
<td>4</td>
</tr>
<tr>
<td>Apprenticeship Operating Engineers 033, Hydraulics</td>
<td>4</td>
</tr>
<tr>
<td>Apprenticeship Operating Engineers 034, Advanced Hydraulics</td>
<td>4</td>
</tr>
<tr>
<td>Apprenticeship Operating Engineers 035, Heavy Duty Repairer 5</td>
<td>4</td>
</tr>
<tr>
<td>Apprenticeship Operating Engineers 036, Disassembly and Assembly</td>
<td>4</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>24</td>
</tr>
</tbody>
</table>

Certificate of Achievement
Heavy Duty Repairer (21654)

Learning Outcome(s)
Upon successful completion of the requirements for this certificate, students will be able to
• Begin a career as a journeyworker operating engineer.
• Have a basis for further college education.

Certificate requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apprenticeship Operating Engineers 031, Heavy Duty Repairer 1</td>
<td>4</td>
</tr>
<tr>
<td>Apprenticeship Operating Engineers 032, Heavy Duty Repairer 2</td>
<td>4</td>
</tr>
<tr>
<td>Apprenticeship Operating Engineers 033, Hydraulics</td>
<td>4</td>
</tr>
<tr>
<td>Apprenticeship Operating Engineers 034, Advanced Hydraulics</td>
<td>4</td>
</tr>
<tr>
<td>Apprenticeship Operating Engineers 035, Heavy Duty Repairer 5</td>
<td>4</td>
</tr>
<tr>
<td>Apprenticeship Operating Engineers 036, Disassembly and Assembly</td>
<td>4</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>24</td>
</tr>
</tbody>
</table>

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
**Apprenticeship Operating Engineers - Heavy Equipment/Landscape Operator Engineer**

The associate degree and certificate of achievement for the apprenticeship operating engineers heavy equipment/landscape operator engineer provide the related and supplemental instruction required for state-indentured apprentices. Heavy Equipment/Landscape Operator Engineers are highly trained, skilled professionals who operate heavy construction equipment on high-rise buildings, roads, and freeways. Interested apprentices should contact the Operating Engineers Apprenticeship Training Trust and the Apprenticeship Office at Santiago Canyon College. Successful completion leads to journeyworker status.

**Associate in Science Heavy Equipment/Landscape Operator Engineer (11983)**

**Learning Outcome(s)**

Upon successful completion of the major requirements for this degree, students will be able to:

- Begin a career as a journeyworker operating engineer.
- Have a basis for further college education.

**Major requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apprenticeship Operating Engineers 041</td>
<td>4</td>
</tr>
<tr>
<td>Apprenticeship Operating Engineers 042, Grade Checking</td>
<td>4</td>
</tr>
<tr>
<td>Apprenticeship Operating Engineers 043, Equipment Operator 3</td>
<td>4</td>
</tr>
<tr>
<td>Apprenticeship Operating Engineers 044, Plan Reading</td>
<td>4</td>
</tr>
<tr>
<td>Apprenticeship Operating Engineers 045, Equipment Operator 5</td>
<td>4</td>
</tr>
<tr>
<td>Apprenticeship Operating Engineers 046, Hazmat 6</td>
<td>4</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>24</strong></td>
</tr>
</tbody>
</table>

**Certificate of Achievement Heavy Equipment/Landscape Operator Engineer (21655)**

**Learning Outcome(s)**

Upon successful completion of the requirements for this certificate, students will be able to:

- Begin a career as a journeyworker operating engineer.
- Have a basis for further college education.

**Certificate requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apprenticeship Operating Engineers 041, Introduction to Apprenticeship</td>
<td>4</td>
</tr>
<tr>
<td>Apprenticeship Operating Engineers 042, Grade Checking</td>
<td>4</td>
</tr>
<tr>
<td>Apprenticeship Operating Engineers 043, Equipment Operator 3</td>
<td>4</td>
</tr>
<tr>
<td>Apprenticeship Operating Engineers 044, Plan Reading</td>
<td>4</td>
</tr>
<tr>
<td>Apprenticeship Operating Engineers 045, Equipment Operator 5</td>
<td>4</td>
</tr>
<tr>
<td>Apprenticeship Operating Engineers 046, Hazmat 6</td>
<td>4</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>24</strong></td>
</tr>
</tbody>
</table>

**Apprenticeship Operating Engineers-Plant Equipment/Rock, Sand and Gravel**

The associate degree and certificate of achievement in apprenticeship operating engineers plant equipment/rock, sand and gravel provide the required related and supplemental instruction for state-indentured operating engineer apprentices. Interested apprentices should contact the Operating Engineers Joint Apprenticeship and Training Committee and the Apprenticeship Office at Santiago Canyon College. Successful completion may result in journeyworker status.

**Associate in Science Plant Equipment/Rock, Sand and Gravel (17686)**

**Learning Outcome(s)**

Upon successful completion of the major requirements for this degree, students will be able to:

- Begin a career as a journeyworker operating engineer.
- Have a basis for further college education.

**Major requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apprenticeship Operating Engineers 021, Plant Equipment Operator 1</td>
<td>4</td>
</tr>
<tr>
<td>Apprenticeship Operating Engineers 022, Plant Equipment Operator 2</td>
<td>4</td>
</tr>
<tr>
<td>Apprenticeship Operating Engineers 023, Plant Equipment Operator 3</td>
<td>4</td>
</tr>
<tr>
<td>Apprenticeship Operating Engineers 024, Plant Equipment Operator 4</td>
<td>4</td>
</tr>
<tr>
<td>Apprenticeship Operating Engineers 025, Plant Equipment Operator 5</td>
<td>4</td>
</tr>
<tr>
<td>Apprenticeship Operating Engineers 026, Plant Equipment Operator 6</td>
<td>4</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>24</strong></td>
</tr>
</tbody>
</table>

**Certificate of Achievement Plant Equipment/Rock, Sand and Gravel (21656)**

**Learning Outcome(s)**

Upon successful completion of the requirements for this certificate, students will be able to:

- Begin a career as a journeyworker operating engineer.
- Have a basis for further college education.

**Certificate requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apprenticeship Operating Engineers 021, Plant Equipment Operator 1</td>
<td>4</td>
</tr>
<tr>
<td>Apprenticeship Operating Engineers 022, Plant Equipment Operator 2</td>
<td>4</td>
</tr>
<tr>
<td>Apprenticeship Operating Engineers 023, Plant Equipment Operator 3</td>
<td>4</td>
</tr>
<tr>
<td>Apprenticeship Operating Engineers 024, Plant Equipment Operator 4</td>
<td>4</td>
</tr>
<tr>
<td>Apprenticeship Operating Engineers 025, Plant Equipment Operator 5</td>
<td>4</td>
</tr>
<tr>
<td>Apprenticeship Operating Engineers 026, Plant Equipment Operator 6</td>
<td>4</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>24</strong></td>
</tr>
</tbody>
</table>

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.*
Apprenticeship Operating Engineers-Special Inspector

The associate degree and certificate of achievement in apprenticeship operating engineers special inspector provide the required related and supplemental instruction for state-indentured operating engineer apprentices. Interested apprentices should contact the Operating Engineers Joint Apprenticeship and Training Committee and the Apprenticeship Office at Santiago Canyon College. Successful completion leads to journeyworker status.

Associate in Science Special Inspector (17688)

Learning Outcome(s)

Upon successful completion of the major requirements for this degree, students will be able to
• Begin a career as a journeyworker operating engineer.
• Have a basis for further college education.

Major requirements*  

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apprenticeship Operating Engineers 075A, Soils Inspection and Testing</td>
<td>4</td>
</tr>
<tr>
<td>Apprenticeship Operating Engineers 076A, Structural Plan Reading for Inspectors</td>
<td>4</td>
</tr>
<tr>
<td>Select four (4) courses from the following:</td>
<td>16</td>
</tr>
<tr>
<td>Apprenticeship Operating Engineers 071A, Reinforced Concrete (4)</td>
<td></td>
</tr>
<tr>
<td>Apprenticeship Operating Engineers 072A, Prestressed Concrete (4)</td>
<td></td>
</tr>
<tr>
<td>Apprenticeship Operating Engineers 073A, Structural Steel/Welding (4)</td>
<td></td>
</tr>
<tr>
<td>Apprenticeship Operating Engineers 074A, Structural Masonry (8)</td>
<td></td>
</tr>
<tr>
<td>Apprenticeship Operating Engineers 077A, ICC Soils Special Inspector (4)</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>24</td>
</tr>
</tbody>
</table>

Certificate of Achievement Special Inspector (21665)

Learning Outcome(s)

Upon successful completion of the requirements for this certificate, students will be able to
• Begin a career as a journeyworker operating engineer.
• Have a basis for further college education.

Certificate requirements  

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apprenticeship Operating Engineers 075A, Soils Inspection and Testing</td>
<td>4</td>
</tr>
<tr>
<td>Apprenticeship Operating Engineers 076A, Structural Plan Reading for Inspectors</td>
<td>4</td>
</tr>
<tr>
<td>Select four (4) courses from the following:</td>
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</tr>
<tr>
<td>Apprenticeship Operating Engineers 071A, Reinforced Concrete (4)</td>
<td></td>
</tr>
<tr>
<td>Apprenticeship Operating Engineers 072A, Prestressed Concrete (4)</td>
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</tr>
<tr>
<td>Apprenticeship Operating Engineers 073A, Structural Steel/Welding (4)</td>
<td></td>
</tr>
<tr>
<td>Apprenticeship Operating Engineers 074A, Structural Masonry (8)</td>
<td></td>
</tr>
<tr>
<td>Apprenticeship Operating Engineers 077A, ICC Soils Special Inspector (4)</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>24</td>
</tr>
</tbody>
</table>

Courses

Apprenticeship Operating Engineers 011 Construction Safety Inspector Apprentice 1  
Unit(s): 4.0  
Class Hours: 48 Lecture total, 48 Laboratory total.  
Prerequisite: Must be a state-indentured apprentice.  
Provides the related and supplemental instruction required for operating engineer apprentices in CPR, first aid, safety and safety forms. Open Entry/Open Exit.

Apprenticeship Operating Engineers 012 Construction Safety Inspector Apprentice 2  
Unit(s): 4.0  
Class Hours: 48 Lecture total, 48 Laboratory total.  
Prerequisite: Must be a state-indentured apprentice.  
Provides the related and supplemental instruction required for operating engineer apprentices in OSHA, Hazwoper, confined space, and lockout tagout procedures. Open Entry/Open Exit.

Apprenticeship Operating Engineers 013 Construction Safety Inspector Apprentice 3  
Unit(s): 4.0  
Class Hours: 48 Lecture total, 48 Laboratory total.  
Prerequisite: Must be a state-indentured apprentice.  
Provides the related and supplemental instruction required for operating engineer apprentices in asbestos, fall protection, heat stress and cold stress. Open Entry/Open Exit.

Apprenticeship Operating Engineers 014 Construction Safety Inspector Apprentice 4  
Unit(s): 4.0  
Class Hours: 48 Lecture total, 48 Laboratory total.  
Prerequisite: Must be a state-indentured apprentice.  
Provides the related and supplemental instruction required for operating engineer apprentices in respiratory competency training, trenching, shoring and excavation, crane regulations, wire rope and rigging, and man lift safety. Open Entry/Open Exit.

Apprenticeship Operating Engineers 015 Construction Safety Inspector Apprentice 5  
Unit(s): 4.0  
Class Hours: 48 Lecture total, 48 Laboratory total.  
Prerequisite: Must be a state-indentured apprentice.  
Provides the related and supplemental instruction for operating engineer apprentices in the MSHA (Mine Safety and Health Administration), equipment safety inspection, and homeland security. Open Entry/Open Exit.

Apprenticeship Operating Engineers 016 Construction Safety Inspector Apprentice 6  
Unit(s): 4.0  
Class Hours: 48 Lecture total, 48 Laboratory total.  
Prerequisite: Must be a state-indentured apprentice.  
Provides the related and supplemental instruction for operating engineer apprentices in safety program protocol, emergency response protocol, and the duties and responsibilities of the safety inspector. Open Entry/Open Exit.

Apprenticeship Operating Engineers 021 Plant Equipment Operator 1  
Unit(s): 4.0  
Class Hours: 40 Lecture total, 72 Laboratory total.  
Prerequisite: Must be a state-indentured apprentice.  
Provides the related and supplemental instruction required for Operating Engineer Apprentices in safety, first aid, industry terminology, operation and maintenance of equipment used in the aggregate processing industry; emphasis on preventive maintenance. Open Entry/Open Exit.

Apprenticeship Operating Engineers 021J Plant Equipment Operator 1 - Journeyworker  
Unit(s): 4.0  
Class Hours: 40 Lecture total, 72 Laboratory total.  
Prerequisite: Active Union Member.  
Provides journeyworkers instruction required for Operating Engineers in safety, first aid, industry terminology, operation and maintenance of equipment used in the aggregate processing industry; emphasis on preventive maintenance. This course explores advanced topics and focuses on specific types of equipment used in various situations. Grade: Pass/No Pass.

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
Apprenticeship Operating Engineers 022
Plant Equipment Operator 2
Unit(s): 4.0
Class Hours: 40 Lecture total, 72 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
Provides the related and supplemental instruction required for Operating Engineer Apprentices in the safe use of oxyacetylene cutting equipment, the technique of brazing and electric arc welding. Open Entry/Open Exit.

Apprenticeship Operating Engineers 022J
Plant Equipment Operator 2 - Journeyworker
Unit(s): 4.0
Class Hours: 40 Lecture total, 72 Laboratory total.
Prerequisite: Active Union Member.
Provides journeymen instruction required for Operating Engineers in the safe use of oxyacetylene cutting equipment, the technique of brazing and electric arc welding. This course explores advanced topics and focuses on specific types of equipment used in various situations. Grade: Pass/No Pass.

Apprenticeship Operating Engineers 023
Plant Equipment Operator 3
Unit(s): 4.0
Class Hours: 40 Lecture total, 72 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
Provides the related and supplemental instruction required for Operating Engineers in safety practices, pre-shift inspection, lubrication, maintenance and heavy equipment operation. Introduce the Apprentice to Green Technologies pertaining to this field. Emphasizes practical experience in performing the work processes. Open Entry/Open Exit.

Apprenticeship Operating Engineers 023J
Plant Equipment Operator 3 - Journeyworker
Unit(s): 4.0
Class Hours: 40 Lecture total, 72 Laboratory total.
Prerequisite: Active Union Member.
Provides the journeymen instruction required for Operating Engineers in safety practices, pre-shift inspection, lubrication, maintenance and heavy equipment operation. Introduce the Journeyworker to Green Technologies pertaining to this field. Emphasizes practical experience in performing the work processes. This course explores advanced topics and focuses on specific types of equipment used in various situations. Grade: Pass/No Pass.

Apprenticeship Operating Engineers 024
Plant Equipment Operator 4
Unit(s): 4.0
Class Hours: 40 Lecture total, 72 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
Provides the related and supplemental instruction required for Operating Engineer Apprentices in pneumatics, power hydraulics, filtration, piping/sealing devices and electricity, emphasizing troubleshooting three phase industrial motor control systems. Open Entry/Open Exit.

Apprenticeship Operating Engineers 024J
Plant Equipment Operator 4 - Journeyworker
Unit(s): 4.0
Class Hours: 40 Lecture total, 72 Laboratory total.
Prerequisite: Active Union Member.
Provides the Journeyworker instruction required for Operating Engineer in pneumatics, power hydraulics, filtration, piping/sealing devices and electricity, emphasizing troubleshooting three phase industrial motor control systems. This course explores advanced topics and focuses on specific types of equipment used in various situations. Grade: Pass/No Pass.

Apprenticeship Operating Engineers 025
Plant Equipment Operator 5
Unit(s): 4.0
Class Hours: 40 Lecture total, 72 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
Provides the related and supplemental instruction required for Operating Engineer Apprentices in disassembly, diagnosis, repair, assembly/adjustment of cone crushers, screens, separators and belt conveyors. Open Entry/Open Exit.

Apprenticeship Operating Engineers 025J
Plant Equipment Operator 5 - Journeyworker
Unit(s): 4.0
Class Hours: 40 Lecture total, 72 Laboratory total.
Prerequisite: Active Union Member.
Provides the journeyworker instruction required for Operating Engineers in disassembly, diagnosis, repair, assembly/adjustment of cone crushers, screens, separators and belt conveyors. This course explores advanced topics and focuses on specific types of equipment used in various situations. Grade: Pass/No Pass.

Apprenticeship Operating Engineers 026
Plant Equipment Operator 6
Unit(s): 4.0
Class Hours: 40 Lecture total, 72 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
Provides the related and supplemental instruction required for Operating Engineer Apprentices in the operation of asphalt/concrete plants, material handling, storage, batching tolerances and electrical controls. Ability to identify and service gasoline and diesel engines. Open Entry/Open Exit.

Apprenticeship Operating Engineers 026J
Plant Equipment Operator 6 - Journeyworker
Unit(s): 4.0
Class Hours: 40 Lecture total, 72 Laboratory total.
Prerequisite: Active Union Member.
Provides the journeyworker instruction required for Operating Engineer in the operation of asphalt/concrete plants, material handling, storage, batching tolerances and electrical controls. Ability to identify and service gasoline and diesel engines. This course explores advanced topics and focuses on specific types of equipment used in various situations. Grade: Pass/No Pass.

Apprenticeship Operating Engineers 031
Heavy Duty Repairer 1
Unit(s): 4.0
Class Hours: 48 Lecture total, 48 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
Provides the related and supplemental instruction required for operating engineer apprentices in safe work practices and principles when working around or operating heavy equipment, the purposes of organized labor, labor history, first aid, Local 12 structure, Labor-Management Agreement, Local 12 By-Laws, International Union of Operating Engineers (IUOE) Constitution, basic machinery maintenance. Open Entry/Open Exit.

Apprenticeship Operating Engineers 032
Heavy Duty Repairer 2
Unit(s): 4.0
Class Hours: 48 Lecture total, 48 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
Provides the related and supplemental instruction required for operating engineer apprentices in the basic safety practices and principles in the use of oxyacetylene cutting equipment, the technique of brazing, and electric arc welding. Open Entry/Open Exit.

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
Apprenticeship Operating Engineers 033
Hydraulics
Unit(s): 4.0
Class Hours: 48 Lecture total, 48 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
Provides the related and supplemental instruction required for operating engineer apprentices in the principles of hydraulics, how a hydraulic system works, and the practical uses of hydraulics. Open Entry/Open Exit.

Apprenticeship Operating Engineers 034
Advanced Hydraulics
Unit(s): 4.0
Class Hours: 48 Lecture total, 48 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
Provides the related and supplemental instruction required for operating engineer apprentices in hydraulic systems, pneumatic systems, and electrical/electronic systems used on heavy equipment and trucks. Open Entry/Open Exit.

Apprenticeship Operating Engineers 035
Heavy Duty Repairer 5
Unit(s): 4.0
Class Hours: 48 Lecture total, 48 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
Provides the related and supplemental instruction required for operating engineer apprentices in the basic safety practices and proper maintenance procedures when working around gasoline and/or diesel engines. Specific topics include: internal combustion engine theory for both diesel and gasoline engines; use of appropriate hand tools needed for engine repair; applying proper procedures for engine disassembly and assembly; and troubleshooting and diagnosing engine failures. Open Entry/Open Exit.

Apprenticeship Operating Engineers 036
Disassembly and Assembly
Unit(s): 4.0
Class Hours: 52 Lecture total, 52 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
Provides the related and supplemental instruction required for operating engineer apprentices in hydraulic systems, pneumatic systems, and electrical/electronic systems used on heavy equipment. Specific components include: clutches, mechanical transmissions, differentials, final drives, crawler tractor undercarriage, and crawler tractor truck assemblies. Open Entry/Open Exit.

Apprenticeship Operating Engineers 037
Introduction to Apprenticeship
Unit(s): 4.0
Class Hours: 52 Lecture total, 52 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
Provides related and supplemental instruction for state-indentured apprentices employed full-time in the operating engineers trade. Covers basic safety procedures when working around heavy equipment; proper attitudes and ethics; procedures for setting a stringline; work practices for cranes; proper maintenance procedures on heavy equipment; history of organized labor; inner workings and benefits of being a member of a local union. Open Entry/Open Exit.

Apprenticeship Operating Engineers 038
Grade Checking
Unit(s): 4.0
Class Hours: 52 Lecture total, 52 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
Provides related and supplemental instruction for state-indentured apprentices employed full-time in the operating engineers field. Covers reading and interpreting grading plans for highways, streets and subdivisions. Open Entry/Open Exit.

Apprenticeship Operating Engineers 039
Equipment Operator 3
Plan Reading
Unit(s): 4.0
Class Hours: 52 Lecture total, 52 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
Provides related and supplemental instruction for state-indentured apprentices employed full-time in the operating engineers field. Covers reading and interpreting grading plans for highways, streets and subdivisions. Open Entry/Open Exit.

Apprenticeship Operating Engineers 040
Equipment Operator 5
Hazmat 6
Unit(s): 4.0
Class Hours: 52 Lecture total, 52 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
Provides related and supplemental instruction for state-indentured apprentices employed full-time in the operating engineers field. Covers reading and interpreting grading plans for highways, streets and subdivisions. Open Entry/Open Exit.

Apprenticeship Operating Engineers 041
Operating Engineers Hazmat 40
Hazmat 6
Unit(s): 2.0
Class Hours: 28 Lecture total, 12 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
Provides related and supplemental instruction for state-indentured apprentices employed full-time in the operating engineers field. Covers basic safety for a worker on a hazardous materials project, first aid/CPR, OSHA safety topics. Apprentices successfully completing this course will receive three certifications: HAZWOPER, Red Cross First Aid/CPR, OSHA Safety. Open Entry/Open Exit.
**Apprenticeship Operating Engineers 048**
**Disaster Site Worker**

Unit(s): 0.5  
Class Hours: 8 Lecture total, 4 Laboratory total.  
Prerequisite: Must be a state-indentured apprentice.  

**Apprenticeship Operating Engineers 049**
**OSHA Construction Training**

Unit(s): 0.5-9.0  
Class Hours: 10-150 Lecture total.  
Prerequisite: Must be a state-indentured apprentice.  
Provides instruction and training for operating engineers in construction safety and health issues including hazard identification, avoidance, control, and prevention. Grade: Pass/No Pass. Open Entry/Open Exit.

**Apprenticeship Operating Engineers 051**
**Operating Engineers Hazmat 8**

Unit(s): 0.5-12.5  
Class Hours: 8-200 Lecture total.  
Prerequisite: Must be a state-indentured apprentice.  
Refresher courses in hazmat for mandatory certification required to work hazardous waste sites as specified by 29th code of Federal Regulations 1910.120 as approved by National Institute of Environmental Safety and Health for International Union of Operating Engineers. Grade: Pass/No Pass. Open Entry/Open Exit.

**Apprenticeship Operating Engineers 052**
**Mobile Cranes**

Unit(s): 1.0-15.0  
Class Hours: 20-240 Lecture total.  
Prerequisite: Must be a state-indentured apprentice.  
Pre-operational inspections, operational inspections, capacity charts, setting up cranes, rigging, signals, common operational hazards, public awareness, professional responsibility. Prepares students for Operating Engineers Crane Operators' Performance test. Grade: Pass/No Pass. Open Entry/Open Exit.

**Apprenticeship Operating Engineers 053**
**Special Inspector Education**

Unit(s): 1.0-12.0  
Class Hours: 16-192 Lecture total.  
Prerequisite: Must be a state-indentured apprentice.  

**Apprenticeship Operating Engineers 054**
**Tower Crane**

Unit(s): 1.0  
Class Hours: 16 Lecture total, 16 Laboratory total.  
Prerequisite: Must be a state-indentured apprentice or journeyworker.  
Provides instruction and training for operating engineers in tower cranes. Covers terminology, basic principles, regulatory agencies, and safety involved with tower crane operation. Grade: Pass/No Pass. Open Entry/Open Exit.

**Apprenticeship Operating Engineers 055**
**Prestressed Concrete**

Unit(s): 4.0  
Class Hours: 40 Lecture total, 74 Laboratory total.  
Prerequisite: Must be a state-indentured apprentice.  
Provides related and supplemental instruction for apprentices in the Operating Engineers field in concrete transportation construction inspections. Covers transportation systems and applications, preliminary testing, pre-placement inspection, placement inspection, post-placement inspection. Open Entry/Open Exit.

**Apprenticeship Operating Engineers 056**
**Concrete Transportation Construction Inspector**

Unit(s): 4.0  
Class Hours: 40 Lecture total, 74 Laboratory total.  
Prerequisite: Must be a state-indentured apprentice.  
Provides related and supplemental instruction for apprentices in the Operating Engineers field in structural concrete. Open Entry/Open Exit.

**Apprenticeship Operating Engineers 057**
**Asphalt Inspection**

Unit(s): 4.0  
Class Hours: 40 Lecture total, 74 Laboratory total.  
Prerequisite: Must be a state-indentured apprentice.  
Provides related and supplemental instruction for apprentices in construction safety and health issues including hazard identification, avoidance, control, and prevention. Grade: Pass/No Pass. Open Entry/Open Exit.

**Apprenticeship Operating Engineers 058**
**ACI Laboratory Testing Technician I**

Unit(s): 4.0  
Class Hours: 40 Lecture total, 74 Laboratory total.  
Prerequisite: Must be a state-indentured apprentice.  
Provides related and supplemental instruction for apprentices in laboratory testing on aggregates used for structural concrete. Open Entry/Open Exit.

**Apprenticeship Operating Engineers 059**
**ACI Laboratory Testing Technician II**

Unit(s): 4.0  
Class Hours: 40 Lecture total, 74 Laboratory total.  
Prerequisite: Must be a state-indentured apprentice.  
Provides related and supplemental instruction for apprentices in laboratory testing on aggregates used for structural concrete. Open Entry/Open Exit.

**Apprenticeship Operating Engineers 060**
**Reinforced Concrete**

Unit(s): 4.0  
Class Hours: 40 Lecture total, 72 Laboratory total.  
Prerequisite: Must be a state-indentured apprentice.  
Provides related and supplemental instruction for apprentices in laboratory testing on aggregates used for structural concrete. Open Entry/Open Exit.

**Apprenticeship Operating Engineers 061**
**Concrete Transportation Construction Inspector**

Unit(s): 4.0  
Class Hours: 40 Lecture total, 74 Laboratory total.  
Prerequisite: Must be a state-indentured apprentice.  
Provides related and supplemental instruction for apprentices in the Operating Engineers field in concrete transportation construction inspections. Covers transportation systems and applications, preliminary testing, pre-placement inspection, placement inspection, post-placement inspection. Open Entry/Open Exit.

**Apprenticeship Operating Engineers 062**
**Asphalt Inspection**

Unit(s): 4.0  
Class Hours: 40 Lecture total, 74 Laboratory total.  
Prerequisite: Must be a state-indentured apprentice.  
Provides related and supplemental instruction for apprentices in the Operating Engineers field in asphalt inspection. Covers materials inspection, mix design, plant operations, placing operations, compaction, report writing, plan reading, and grade checking. Open Entry/Open Exit.

**Apprenticeship Operating Engineers 063A**
**ACI Laboratory Testing Technician I**

Unit(s): 4.0  
Class Hours: 40 Lecture total, 74 Laboratory total.  
Prerequisite: Must be a state-indentured apprentice.  
Provides related and supplemental instruction for apprentices in laboratory testing on aggregates used for structural concrete. Open Entry/Open Exit.

**Apprenticeship Operating Engineers 064A**
**ACI Laboratory Testing Technician II**

Unit(s): 4.0  
Class Hours: 40 Lecture total, 74 Laboratory total.  
Prerequisite: Must be a state-indentured apprentice.  
Provides related and supplemental instruction for apprentices in laboratory testing on aggregates used for structural concrete. Open Entry/Open Exit.

**Apprenticeship Operating Engineers 071A**
**Reinforced Concrete**

Unit(s): 4.0  
Class Hours: 40 Lecture total, 72 Laboratory total.  
Prerequisite: Must be a state-indentured apprentice.  
Provides related and supplemental instruction for apprentices in laboratory testing on aggregates used for structural concrete. Open Entry/Open Exit.

**Apprenticeship Operating Engineers 072A**
**Prestressed Concrete**

Unit(s): 4.0  
Class Hours: 40 Lecture total, 72 Laboratory total.  
Prerequisite: Must be a state-indentured apprentice.  
Provides related and supplemental instruction for apprentices in laboratory testing on aggregates used for structural concrete. Open Entry/Open Exit.

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.*
Apprenticeship Operating Engineers 073A
Structural Steel/Welding
Unit(s): 4.0
Class Hours: 40 Lecture total, 72 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
Provides the required related and supplemental instruction for operating engineer apprentices in codes and duties, welding, report writing, people skills, gunite applications. Apprentices will gain the knowledge, research skills and confidence needed to pass their written and oral exams. Open Entry/Open Exit.

Apprenticeship Operating Engineers 074A
Structural Masonry
Unit(s): 4.0
Class Hours: 40 Lecture total, 72 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
Provides the required related and supplemental instruction for operating engineer apprentices in codes and duties, reinforcing steel, plan changes, people skills, jobsite etiquette and protocol, Specialty Inspector. Apprentices will gain the knowledge, research skills and confidence needed to pass their written and oral exams. Open Entry/Open Exit.

Apprenticeship Operating Engineers 075A
Soils Inspection and Testing
Unit(s): 4.0
Class Hours: 40 Lecture total, 74 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
Provides the required related and supplemental instruction for operating engineer apprentices in codes and duties, calibration procedures, soil identification, methods of moisture determination, maximum density tests, sand cone testing, nuclear density testing, people skills, sieve analysis, proper vehicle setup. Apprentices will gain the knowledge, research skills and confidence needed to pass their written and oral exams. Open Entry/Open Exit.

Apprenticeship Operating Engineers 076A
Structural Plan Reading for Inspectors
Unit(s): 4.0
Class Hours: 40 Lecture total, 74 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
Provides the related and supplemental instruction required for operating engineer apprentices in structural plan reading, interpretation of structural layout and design engineering for inspectors. Design, printing, and preparation guidelines as detailed in the Uniform Building Code (UBC). Open Entry/Open Exit.

Apprenticeship Operating Engineers 077A
ICC Soils Special Inspector
Unit(s): 4.0
Class Hours: 40 Lecture total, 72 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
Provides the required related and supplemental instruction required for operating engineer apprentices in the general requirements, laboratory testing, grading plans, site preparation, and fill monitoring techniques used for International Code Council (ICC) Soils Inspections. Open Entry/Open Exit.

Apprenticeship Operating Engineers 079
Certified Welding Inspector
Unit(s): 3.0
Class Hours: 36 Lecture total, 36 Laboratory total.
Prerequisite: Must be a state-indentured apprentice or journeyworker.
Provides the instruction necessary to become a Certified Welding Inspector. Topics include welding processes, heat control, welding inspections and flaws, definitions and terminology, utilization of specifications and drawings, safety, testing methods. Open Entry/Open Exit.

Apprenticeship Operating Engineers 080
Structural Concrete Plan Reading
Unit(s): 3.0
Class Hours: 36 Lecture total, 36 Laboratory total.
Prerequisite: Must be a state-indentured apprentice or journeyworker.
Provides instruction for operating engineers in the design and engineering requirements of structural buildings and the fundamentals of structural concrete. Open Entry/Open Exit.

Apprenticeship Operating Engineers 081
Structural Reinforced Concrete for Inspectors
Unit(s): 3.0
Class Hours: 36 Lecture total, 36 Laboratory total.
Prerequisite: Must be a state-indentured apprentice or journeyworker.

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.*
APPRENTICESHIP POWER LINEMAN (APL)

Division of Business and Career Technical Education

Dean: Von Lawson

Apprenticeship-Power Lineman

The associate degree and certificate of achievement in apprenticeship for Power Lineman provide the required related and supplemental instruction for power lineman apprentices. The work of the power lineman involves installing and maintaining power poles, erecting steel towers, stringing wire, building substations, climbing power poles and installing underground and street lighting systems. It's highly skilled work that requires a great deal of concentration, dexterity, and knowledge. Interested apprentices should contact the California-Nevada Joint Apprentice Training Committee and the Apprenticeship Office at Santiago Canyon College.

Associate in Science
Power Lineman (11981)

Learning Outcome(s)

Upon successful completion of the major requirements for this degree, students will be able to

• Begin a career as a journeyworker power lineman.
• Have a basis for further college education.

Major requirements* Units

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apprenticeship Power Lineman 020, Orientation</td>
<td>3</td>
</tr>
<tr>
<td>Apprenticeship Power Lineman 021, Power Lineman Apprentice 1</td>
<td>3</td>
</tr>
<tr>
<td>Apprenticeship Power Lineman 022, Power Lineman Apprentice 2</td>
<td>3</td>
</tr>
<tr>
<td>Apprenticeship Power Lineman 023, Power Lineman Apprentice 3</td>
<td>3</td>
</tr>
<tr>
<td>Apprenticeship Power Lineman 024, Power Lineman Apprentice 4</td>
<td>3</td>
</tr>
<tr>
<td>Apprenticeship Power Lineman 025, Power Lineman Apprentice 5</td>
<td>3</td>
</tr>
<tr>
<td>Apprenticeship Power Lineman 026, Power Lineman Apprentice 6</td>
<td>3</td>
</tr>
<tr>
<td>Apprenticeship Power Lineman 041, Work Methods Training</td>
<td>1</td>
</tr>
<tr>
<td>Apprenticeship Power Lineman 042, Rubber Gloves Training</td>
<td>1</td>
</tr>
<tr>
<td>Apprenticeship Power Lineman 043, Hot Sticks Training</td>
<td>1</td>
</tr>
</tbody>
</table>

TOTAL 24

Certificate of Achievement
Power Lineman (21652)

Learning Outcome(s)

Upon successful completion of the requirements for this certificate, students will be able to

• Begin a career as a journeyworker power lineman.
• Have a basis for further college education.

Certificate requirements Units

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apprenticeship Power Lineman 020, Orientation</td>
<td>3</td>
</tr>
<tr>
<td>Apprenticeship Power Lineman 021, Power Lineman Apprentice 1</td>
<td>3</td>
</tr>
<tr>
<td>Apprenticeship Power Lineman 022, Power Lineman Apprentice 2</td>
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<tr>
<td>Apprenticeship Power Lineman 023, Power Lineman Apprentice 3</td>
<td>3</td>
</tr>
<tr>
<td>Apprenticeship Power Lineman 024, Power Lineman Apprentice 4</td>
<td>3</td>
</tr>
<tr>
<td>Apprenticeship Power Lineman 025, Power Lineman Apprentice 5</td>
<td>3</td>
</tr>
<tr>
<td>Apprenticeship Power Lineman 026, Power Lineman Apprentice 6</td>
<td>3</td>
</tr>
<tr>
<td>Apprenticeship Power Lineman 041, Work Methods Training</td>
<td>1</td>
</tr>
<tr>
<td>Apprenticeship Power Lineman 042, Rubber Gloves Training</td>
<td>1</td>
</tr>
<tr>
<td>Apprenticeship Power Lineman 043, Hot Sticks Training</td>
<td>1</td>
</tr>
</tbody>
</table>

TOTAL 24

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
Apprenticeship Power Lineman 041
Work Methods Training
Unit(s): 1.0
Class Hours: 8 Lecture total, 24 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
Provides the required related and supplemental instruction for apprentice power lineman in safety, tools, guys and anchors, pole setting and handling, underground tools and equipment. Grade: Pass/No Pass.

Apprenticeship Power Lineman 042
Rubber Gloves Training
Unit(s): 1.0
Class Hours: 8 Lecture total, 32 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
Provides the required related and supplemental instruction for apprentice power linemen in tools, accident prevention rules, rubber glove guidelines and rules. Grade: Pass/No Pass.

Apprenticeship Power Lineman 043
Hot Sticks Training
Unit(s): 1.0
Class Hours: 8 Lecture total, 32 Laboratory total.
Prerequisite: Must be a state-indentured apprentice.
Provides the required related and supplemental instruction for apprentice power linemen in history, development, manufacture and care of hot line tools. Grade: Pass/No Pass.

APPRENTICESHIP SURVEYING (ASV)
Division of Business and Career Technical Education
Dean: Von Lawson

Apprenticeship Surveying-Chainman
The associate degree and certificate of achievement in apprenticeship surveying chainman prepare students for a career in surveying and provide the related and supplemental instruction required for apprentice surveyors. Successful completion leads to journeyworker certification. Employers include land surveying and civil engineering firms, and general construction contractors throughout Southern California. Those interested should contact the Southern California Surveying Apprenticeship Committee and the Apprenticeship Office at Santiago Canyon College.

Associate in Science
Chainman (13230)

Learning Outcome(s)
Upon successful completion of the major requirements for this degree, students will be able to
- Begin a career as a journeyworker chainman surveyor.
- Have a basis for further college education.

Major requirements*  Units
Apprenticeship Surveying 030, Labor Relations 0.5
Apprenticeship Surveying 040, Standard First Aid 0.1
Apprenticeship Surveying 101, Chainman Apprentice 1 5
Apprenticeship Surveying 102, Chainman Apprentice 2 5
Apprenticeship Surveying 103, Chainman Apprentice 3 5
Apprenticeship Surveying 104, Chainman Apprentice 4 5
Apprenticeship Surveying 105, Chainman Apprentice 5 5
TOTAL 25.6

Certificate of Achievement
Chainman (21667)

Learning Outcome(s)
Upon successful completion of the requirements for this certificate, students will be able to
- Begin a career as a journeyworker chainman surveyor.
- Have a basis for further college education.

Certificate requirements Units
Apprenticeship Surveying 030, Labor Relations 0.5
Apprenticeship Surveying 040, Standard First Aid 0.1
Apprenticeship Surveying 101, Chainman Apprentice 1 5
Apprenticeship Surveying 102, Chainman Apprentice 2 5
Apprenticeship Surveying 103, Chainman Apprentice 3 5
Apprenticeship Surveying 104, Chainman Apprentice 4 5
Apprenticeship Surveying 105, Chainman Apprentice 5 5
TOTAL 25.6

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
Apprenticeship Surveying-Chief of Party

The associate degree and certificate of achievement in apprenticeship surveying chief of party prepare students for career advancement in surveying. If combined with appropriate field experience, completion of the program may lead to employment as party chief and eventually to professional California state licensing as a land surveyor. The Chief of Party leads the work of a survey party in surveying Earth’s surface to determine precise locations and measurements. They are responsible for checking the accuracy of the survey party’s work, making accurate measurements, and solving survey problems. Those interested should contact the Southern California Surveying Apprenticeship Committee and the Apprenticeship Office at Santiago Canyon College.

Certificate of achievement

Upon successful completion of the course requirements, students will be able to
• Begin a career as a journeyworker party chief surveyor.
• Have a basis for further college education.

Certificate requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apprenticeship Surveying 121, Plane Surveying and Coordinate Geometry</td>
<td>3</td>
</tr>
<tr>
<td>Apprenticeship Surveying 122, Advanced Coordinate Geometry</td>
<td>3</td>
</tr>
<tr>
<td>Apprenticeship Surveying 123, Laptop Surveying/Aerial Photogrammetry</td>
<td>3</td>
</tr>
<tr>
<td>Apprenticeship Surveying 124, Plan Reading and Subdivision Surveying</td>
<td>3</td>
</tr>
<tr>
<td>Apprenticeship Surveying 125, Major Project Plans and Survey Layout</td>
<td>3</td>
</tr>
<tr>
<td>Apprenticeship Surveying 126, Control and Geodetic Surveying</td>
<td>3</td>
</tr>
<tr>
<td>Apprenticeship Surveying 127, U.S. Public Land Surveys</td>
<td>3</td>
</tr>
<tr>
<td>Apprenticeship Surveying 128, Property Surveys and Legal Descriptions</td>
<td>3</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>24</strong></td>
</tr>
</tbody>
</table>

Associate in Science

Chief of Party (11990)

Learning Outcomes

Upon successful completion of the major requirements for this degree, students will be able to
• Begin a career as a journeyworker party chief surveyor.
• Have a basis for further college education.

Major requirements*

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apprenticeship Surveying 121, Plane Surveying and Coordinate Geometry</td>
<td>3</td>
</tr>
<tr>
<td>Apprenticeship Surveying 122, Advanced Coordinate Geometry</td>
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</tr>
<tr>
<td>Apprenticeship Surveying 123, Laptop Surveying/Aerial Photogrammetry</td>
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</tr>
<tr>
<td>Apprenticeship Surveying 124, Plan Reading and Subdivision Surveying</td>
<td>3</td>
</tr>
<tr>
<td>Apprenticeship Surveying 125, Major Project Plans and Survey Layout</td>
<td>3</td>
</tr>
<tr>
<td>Apprenticeship Surveying 126, Control and Geodetic Surveying</td>
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</tr>
<tr>
<td>Apprenticeship Surveying 127, U.S. Public Land Surveys</td>
<td>3</td>
</tr>
<tr>
<td>Apprenticeship Surveying 128, Property Surveys and Legal Descriptions</td>
<td>3</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>24</strong></td>
</tr>
</tbody>
</table>

Certificate of Achievement

Chief of Party (21666)

Learning Outcomes

Upon successful completion of the course requirements for this certificate, students will be able to
• Begin a career as a journeyworker party chief surveyor.
• Have a basis for further college education.

Certificate requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apprenticeship Surveying 121, Plane Surveying and Coordinate Geometry</td>
<td>3</td>
</tr>
<tr>
<td>Apprenticeship Surveying 122, Advanced Coordinate Geometry</td>
<td>3</td>
</tr>
<tr>
<td>Apprenticeship Surveying 123, Laptop Surveying/Aerial Photogrammetry</td>
<td>3</td>
</tr>
<tr>
<td>Apprenticeship Surveying 124, Plan Reading and Subdivision Surveying</td>
<td>3</td>
</tr>
<tr>
<td>Apprenticeship Surveying 125, Major Project Plans and Survey Layout</td>
<td>3</td>
</tr>
<tr>
<td>Apprenticeship Surveying 126, Control and Geodetic Surveying</td>
<td>3</td>
</tr>
<tr>
<td>Apprenticeship Surveying 127, U.S. Public Land Surveys</td>
<td>3</td>
</tr>
<tr>
<td>Apprenticeship Surveying 128, Property Surveys and Legal Descriptions</td>
<td>3</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>24</strong></td>
</tr>
</tbody>
</table>

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
Apprenticeship Surveying 104  
**Chainman Apprentice 4**  
Unit(s): 5.0  
Class Hours: 72 Lecture total, 30 Laboratory total.  
Prerequisite: Must be a state-indentured apprentice.  
Provides the required related and supplemental instruction for apprentice surveyors in coordinate geometry; horizontal and vertical curves; traverse surveys. Open Entry/Open Exit. CSU

Apprenticeship Surveying 105  
**Chainman Apprentice 5**  
Unit(s): 5.0  
Class Hours: 72 Lecture total, 18 Laboratory total.  
Prerequisite: Must be a state-indentured apprentice.  
Provides the related and supplemental instruction for apprentice surveyors in safety procedures; U.S. public land surveys; property surveys; subdivisions surveyors; topographic and photogrammetry surveys; staking procedures; heavy construction surveys; ALTA surveys; total stations; public relations; scope of profession and the Chief of Party program. Open Entry/Open Exit. CSU

Apprenticeship Surveying 121  
**Plane Surveying and Coordinate Geometry**  
Unit(s): 3.0  
Class Hours: 54 Lecture total.  
Prerequisite: Must be a state-indentured apprentice.  
Advanced field surveying principles and mathematical surveying principles including introduction and review of survey mathematics, measuring systems, coordinate geometry, and modern calculation systems. Open Entry/Open Exit. CSU

Apprenticeship Surveying 122  
**Advanced Coordinate Geometry**  
Unit(s): 3.0  
Class Hours: 54 Lecture total.  
Prerequisite: Must be a state-indentured apprentice.  
Advanced field surveying methods and calculation principles involving coordinate geometry, including omitted measurements, intersection problems, three-point resection problems, area calculation problems, complex circular curves, vertical curves, and spiral curves. Open Entry/Open Exit. CSU

Apprenticeship Surveying 123  
**Laptop Surveying/Aerial Photogrammetry**  
Unit(s): 3.0  
Class Hours: 54 Lecture total.  
Prerequisite: Must be a state-indentured apprentice.  
Advanced field surveying methods and principles involving laptop surveying, photogrammetry, and topographic surveying. Open Entry/Open Exit. CSU

Apprenticeship Surveying 124  
**Plan Reading and Subdivision Surveying**  
Unit(s): 3.0  
Class Hours: 54 Lecture total.  
Prerequisite: Must be a state-indentured apprentice.  
A study of plan reading and subdivision surveying principles and practices including plan reading basics; typical and unique subdivision plans; survey control; layout and staking of subdivisions; locating plan, calculation and specification errors. Open Entry/Open Exit. CSU

Apprenticeship Surveying 125  
**Major Project Plans and Survey Layout**  
Unit(s): 3.0  
Class Hours: 54 Lecture total.  
Prerequisite: Must be a state-indentured apprentice.  

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.*
ART (ART)

Division of Arts, Humanities and Social Sciences/Library

Dean: Marilyn Flores  
Department Chair, Fine Arts: Robert Miller

Associate in Arts  
Studio Arts for Transfer (31715)

The Associate in Arts in Studio Arts for Transfer provides students with an opportunity to explore studio arts both conceptually and aesthetically by utilizing critical analysis and experimental practice. Possible careers in fine arts are studio artist, art educator, art designer, gallery personnel, museum technician, illustrator, digital media artist, animator and related fields. Successful completion of the transfer degree in studio arts guarantees the student acceptance to a California State University to pursue a baccalaureate degree in studio arts or a related field.

Learning Outcome(s)

Upon successful completion of the major requirements for this degree, students will be able to
• Demonstrate critical analysis of works of art in historical and cultural context.
• Demonstrate the ability to create works of art using a variety of materials and techniques, visual elements and principles of design.

Major requirements*  

<table>
<thead>
<tr>
<th>Major requirements*</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art 101, Survey of Western Art History I: Prehistory Through the Middle Ages</td>
<td>3</td>
</tr>
<tr>
<td>Art 102, Survey of Western Art History II: Renaissance Through the Twentieth Century</td>
<td>3</td>
</tr>
<tr>
<td>Art 110, Two-Dimensional Design</td>
<td>3</td>
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<tr>
<td>Art 111, Three-Dimensional Design</td>
<td>3</td>
</tr>
<tr>
<td>Art 130, Introduction to Drawing</td>
<td>3</td>
</tr>
</tbody>
</table>

Select three (3) courses from the following (List B):  

| Art 128, Introduction to Illustration (3)            |       |
| Art 131, Beginning Life Drawing (3)                  |       |
| Art 141, Beginning Painting (3)                      |       |
| Art 149, Introduction to Digital Photography (3)     |       |
| Art 195, Introduction to Digital Media Arts (3)      |       |
| Art 230, Intermediate Drawing (3)                    |       |
| Art 231, Intermediate Life Drawing (3)               |       |
| Art 232, Advanced Life Drawing (3)                   |       |
| Art 241, Intermediate Painting (3)                   |       |
| Art 242, Advanced Painting (3)                       |       |

TOTAL 24

Associate in Arts  
Art (11911)

The associate degree in art provides students with an opportunity for individual creative stimulus and development. Completion of the associate in arts degree also prepares students to transfer to a four-year institution leading to a baccalaureate degree or into a professional art school. Possible careers in fine arts are art education, interior design, gallery operation, art merchandising, studio artist, illustration, art criticism, computer graphics and animation and related fields.

Learning Outcome(s)

Upon successful completion of the major requirements for this degree, students will be able to
• Demonstrate the ability to create works of art using a variety of materials and techniques, visual elements and principles of design.
• Demonstrate critical analysis of works of art in historical and cultural context.

Major requirements*  

<table>
<thead>
<tr>
<th>Major requirements*</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Art 100/100H, Introduction to Art Concepts</td>
<td>3</td>
</tr>
<tr>
<td>Art 101, Survey of Western Art History I: Prehistory Through the Middle Ages</td>
<td>3</td>
</tr>
<tr>
<td>Art 102, Survey of Western Art History II: Renaissance Through the Twentieth Century</td>
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</tr>
<tr>
<td>Art 110, Two-Dimensional Design</td>
<td>3</td>
</tr>
<tr>
<td>Art 111, Three-Dimensional Design</td>
<td>3</td>
</tr>
<tr>
<td>Art 130, Introduction to Drawing</td>
<td>3</td>
</tr>
<tr>
<td>Art 131, Beginning Life Drawing</td>
<td>3</td>
</tr>
<tr>
<td>Art 141, Beginning Painting</td>
<td>3</td>
</tr>
</tbody>
</table>

Select six (6) units from the following:  

| Art 128, Introduction to Illustration (3)            |       |
| Art 139, Experimental Mixed-Media Painting (3)       |       |
| Art 149, Introduction to Digital Photography (3)     |       |
| Art 159, Introduction to Mobile Application Development and Design (3) |       |
| Art 183, Beginning Stained Glass (2)                 |       |
| Art 186, Intermediate Stained Glass (2)              |       |
| Art 195, Introduction to Digital Media Arts (3)      |       |
| Art 228, Intermediate Illustration (3)               |       |
| Art 230, Intermediate Drawing (3)                    |       |
| Art 231, Intermediate Life Drawing (3)               |       |
| Art 233, Advanced Drawing (3)                        |       |
| Art 241, Intermediate Painting (3)                   |       |
| Art 242, Advanced Painting (3)                       |       |
| Art 249, Intermediate Digital Photography (3)        |       |
| Art 250, Advanced Studio Concepts (3)                |       |
| Art 259, Advanced Mobile Application Development and Design (3) |       |

TOTAL 30

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
Associate in Science
Graphic Design (11921)

The associate degree in graphic design prepares students for entry into the broad field of visual communication, with an emphasis on the development of problem solving in the practical application of graphic design. These applications include design for the print media, advertising, architectural and environmental graphics, packaging, logos, corporate identity, the web and other electronic media, using both digital media tools as well as traditional hand skills. It also enables students to enter a four-year institution leading to a baccalaureate degree or into a professional art school with a graphic design emphasis.

**Learning Outcome(s)**
Upon successful completion of the major requirements for this degree, students will be able to
- Demonstrate the use of tools and techniques to create graphic design images using visual elements and principles of design.
- Demonstrate critical analysis of works of art in historical and cultural context.

**Major requirements**

<table>
<thead>
<tr>
<th>Major requirements</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art 100/100H, Introduction to Art Concepts</td>
<td>3</td>
</tr>
<tr>
<td>Art 110, Two-Dimensional Design</td>
<td>3</td>
</tr>
<tr>
<td>Art 111, Three-Dimensional Design</td>
<td>3</td>
</tr>
<tr>
<td>Art 122, Graphic Design I</td>
<td>3</td>
</tr>
<tr>
<td>Art 129, Graphic Design Concepts for the Web</td>
<td>3</td>
</tr>
<tr>
<td>Art 130, Introduction to Drawing</td>
<td>3</td>
</tr>
<tr>
<td>Art 131, Beginning Life Drawing</td>
<td>3</td>
</tr>
<tr>
<td>Art 195, Introduction to Digital Media Arts</td>
<td>3</td>
</tr>
<tr>
<td>Marketing 112, Principles of Advertising</td>
<td>3</td>
</tr>
</tbody>
</table>

Select one (1) course from the following:

| Art 101, Survey of Western Art History I: Prehistory Through the Middle Ages | 3     |
| Art 102, Survey of Western Art History II: Renaissance Through the Twentieth Century | 3     |
| Art 128, Introduction to Illustration                                           | 3     |
| Art 149, Introduction to Digital Photography                                    | 3     |
| Art 159, Introduction to Mobile Application Development and Design             | 3     |
| Art 221, Graphic Design II                                                       | 3     |
| Art 228, Intermediate Illustration                                               | 3     |
| Art 229, Multimedia Applications for the Web                                   | 3     |
| Art 230, Intermediate Drawing                                                    | 3     |
| Art 231, Intermediate Life Drawing                                              | 3     |
| Art 232, Advanced Life Drawing                                                   | 3     |
| Art 233, Advanced Drawing                                                        | 3     |
| Art 241, Intermediate Painting                                                   | 3     |
| Art 242, Advanced Painting                                                       | 3     |
| Art 249, Intermediate Digital Photography                                          | 3     |
| Art 250, Advanced Studio Concepts                                                | 3     |
| Art 259, Advanced Mobile Application Development and Design                     | 3     |
| Computer Science 105, Visual BASIC Programming                                  | 3     |

**Digital Media Arts Certificates**

The certificate programs in digital arts reflect the industry standard in the field of advertising/graphic design for printed media, the web, and digital imaging. The programs are designed with a combination of courses from fine art, digital media, computer science, and marketing to develop technical skills and creativity in digital media. Graduates of these programs will find entry into the profession at various levels with employment opportunities in the fields of advertising, graphic design, web design, application design, and digital imaging.

**Certificate of Achievement**

**Digital Media Arts: Graphic Design (21670)**

**Learning Outcome(s)**
Upon successful completion of the requirements for this certificate, students will be able to
- Demonstrate the ability to create graphic design images using digital media tools and techniques to create graphic design images.
- Demonstrate the use of a variety of digital media tools and techniques to create graphic design images.

**Certificate requirements**

<table>
<thead>
<tr>
<th>Certificate requirements</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art 100/100H, Introduction to Art Concepts</td>
<td>3</td>
</tr>
<tr>
<td>Art 110, Two-Dimensional Design</td>
<td>3</td>
</tr>
<tr>
<td>Art 122, Graphic Design I</td>
<td>3</td>
</tr>
<tr>
<td>Art 129, Graphic Design Concepts for the Web</td>
<td>3</td>
</tr>
<tr>
<td>Art 130, Introduction to Drawing</td>
<td>3</td>
</tr>
<tr>
<td>Art 131, Beginning Life Drawing</td>
<td>3</td>
</tr>
<tr>
<td>Art 195, Introduction to Digital Media Arts</td>
<td>3</td>
</tr>
<tr>
<td>Marketing 112, Principles of Advertising</td>
<td>3</td>
</tr>
</tbody>
</table>

Select one (1) course from the following:

| Art 101, Survey of Western Art History I: Prehistory Through the Middle Ages | 3     |
| Art 111, Three-Dimensional Design                                              | 3     |
| Art 128, Introduction to Illustration                                          | 3     |
| Art 130, Introduction to Drawing                                              | 3     |
| Art 139, Experimental Mixed-Media Painting                                    | 3     |
| Art 141, Beginning Painting                                                    | 3     |
| Art 149, Introduction to Digital Photography                                  | 3     |
| Art 221, Graphic Design II                                                     | 3     |
| Art 228, Intermediate Illustration                                            | 3     |
| Art 230, Intermediate Drawing                                                  | 3     |
| Art 231, Intermediate Life Drawing                                            | 3     |
| Art 232, Advanced Life Drawing                                                 | 3     |
| Computer Science 105, Visual BASIC Programming                              | 3     |
| Marketing 112, Principles of Advertising                                       | 3     |

**TOTAL** 21

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.*
Certificate of Achievement
Digital Media Arts: Mobile Application Development and Design (11922)

Learning Outcome(s)
Upon successful completion of the requirements for this certificate, students will be able to
• Demonstrate the ability to create web designs using visual elements and principles of design.
• Demonstrate the ability to create web designs using a variety of digital media tools and techniques.

Certificate requirements

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art 100/100H, Introduction to Art Concepts</td>
<td>3</td>
</tr>
<tr>
<td>Art 110, Two-Dimensional Design</td>
<td>3</td>
</tr>
<tr>
<td>Art 129, Graphic Design Concepts for the Web</td>
<td>3</td>
</tr>
<tr>
<td>Art 195, Introduction to Digital Media Arts</td>
<td>3</td>
</tr>
<tr>
<td>Art 229, Multimedia Applications for the Web</td>
<td>3</td>
</tr>
<tr>
<td>Computer Science 105, Visual BASIC Programming</td>
<td>3</td>
</tr>
</tbody>
</table>

Select one (1) course from the following:

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art 122, Graphic Design I (3)</td>
<td></td>
</tr>
<tr>
<td>Art 128, Introduction to Illustration (3)</td>
<td></td>
</tr>
<tr>
<td>Art 130, Introduction to Drawing (3)</td>
<td></td>
</tr>
<tr>
<td>Art 131, Beginning Life Drawing (3)</td>
<td></td>
</tr>
<tr>
<td>Art 141, Beginning Painting (3)</td>
<td></td>
</tr>
<tr>
<td>Art 149, Introduction to Digital Photography (3)</td>
<td></td>
</tr>
<tr>
<td>Art 159, Introduction to Mobile Application Development and Design (3)</td>
<td></td>
</tr>
<tr>
<td>Art 221, Graphic Design II (3)</td>
<td></td>
</tr>
<tr>
<td>Art 228, Intermediate Illustration (3)</td>
<td></td>
</tr>
<tr>
<td>Art 250, Advanced Studio Concepts (3)</td>
<td></td>
</tr>
<tr>
<td>Computer Science 100, The Computer and Society (3)</td>
<td></td>
</tr>
<tr>
<td>Marketing 112, Principles of Advertising (3)</td>
<td></td>
</tr>
</tbody>
</table>

TOTAL 21

Courses

Art 100
Introduction to Art Concepts
Unit(s): 3.0
Class Hours: 48 Lecture total.
A study of the visual arts in relation to both personal and cultural expressions. Fundamentals of visual organization, color theory, terminology, historical art movements and concepts will be studied. Required for art majors. CSU/UC (C-ID)

Art 100H
Honors Introduction to Art Concepts
Unit(s): 3.0
Class Hours: 48 Lecture total.
Prerequisite: A high school or college GPA of 3.0 or above.
Enriched exposure to a study of the visual arts in relation to personal and cultural expression with an emphasis on critical thinking and writing. Fundamentals of visual organization, color theory, terminology, historical art movements and concepts will be studied in a seminar format. Students are required to visit an art museum or gallery. CSU/UC (C-ID)

Art 101
Survey of Western Art History I: Prehistory Through the Middle Ages
Unit(s): 3.0
Class Hours: 48 Lecture total.
Recommended Preparation: English 101/101H or concurrent enrollment.
The study of art from Prehistory through the Middle Ages. Cultures and civilizations are studied through visual imagery, lectures, class discussion, reading, research and field trips. CSU/UC (C-ID)

Art 102
Survey of Western Art History II: Renaissance Through the Twentieth Century
Unit(s): 3.0
Class Hours: 48 Lecture total.
The study of Western art history from the Renaissance through the 20th century. Art movements and individual painters, sculptors, architects and printmakers will be presented within the context of the social, political and intellectual histories of their respective periods. Required for art majors. CSU/UC

Art 110
Two-Dimensional Design
Unit(s): 3.0
Class Hours: 32 Lecture total, 64 Laboratory total.
Introduction to terminology, historical concepts, and aesthetic techniques associated with two-dimensional art and composition, including the study and application of visual elements and principles of design. Application of concepts will be executed through creative projects. Required for art majors. CSU/UC (C-ID)

Art 111
Three-Dimensional Design
Unit(s): 3.0
Class Hours: 32 Lecture total, 64 Laboratory total.
Fundamentals of visual organization as applied to objects in-the-round. Visual space problems, structure and dimensional terminology through creative projects in various media. Required for art majors. CSU/UC (C-ID)

Art 122
Graphic Design I
Unit(s): 3.0
Class Hours: 32 Lecture total, 64 Laboratory total.
Recommended Preparation: Art 110, Art 195 or an understanding of Photoshop and Illustrator software.
Introduction to basic graphic design concepts, techniques and practices resulting in the production of effective visual communications. Projects combine text with images, using current industry standards in print media, interactive technologies, and other design applications. CSU

Art 128
Introduction to Illustration
Unit(s): 3.0
Class Hours: 32 Lecture total, 64 Laboratory total.
Prerequisite: Art 130.
Book illustration, cartooning, descriptive rendering, editorial illustration and fashion drawing are introduced. Focus is on developing technical and conceptual expertise. Course examines master works by contemporary and historic artists. CSU

Art 129
Introduction to Web Design
Unit(s): 3.0
Class Hours: 48 Lecture total, 16 Laboratory total.
Introduction to the development and design of web sites with an emphasis on the elements and principles of design as they relate to web interfaces. Includes learning the technical requirements for colors, fonts, file optimization, effects, image resolution, and special effects. Includes creative Web design projects. CSU

Art 130
Introduction to Drawing
Unit(s): 3.0
Class Hours: 32 Lecture total, 64 Laboratory total.
Introductory course in expressive drawing, exploring line, form, composition, and a variety of media. Drawing from man-made objects and natural forms. Required for art majors. CSU/UC (C-ID)

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.*
Art 131
Beginning Life Drawing
Unit(s): 3.0
Class Hours: 32 Lecture total, 64 Laboratory total.
Recommended Preparation: Art 130.
Introduction to drawing the human form by observing live models for studies in anatomy, structure, and composition. Exposure to traditional and contemporary figurative drawing while exploring media and methods. Required for art majors.  

Art 139
Experimental Mixed-Media Painting
Unit(s): 3.0
Class Hours: 32 Lecture total, 64 Laboratory total.
Recommended Preparation: Art 130.
Fundamentals of creating multi-layered images by hand, using primarily water-based media. Explores a variety of techniques and materials including transparent dyes, watercolor, acrylics, markers and photo transfer processes. CSU/UC

Art 141
Beginning Painting
Unit(s): 3.0
Class Hours: 32 Lecture total, 64 Laboratory total.
Recommended Preparation: Art 110 and 130.
Introduction to acrylic and/or oil painting as a creative art form with exposure to historical, traditional and contemporary painting styles. Course includes principles of composition and color theory, materials selection, tools, terminology, and techniques. Students develop basic skills painting a variety of subjects. Required of art majors. CSU/UC

Art 149
Introduction to Digital Photography
Unit(s): 3.0
Class Hours: 48 Lecture total, 16 Laboratory total.
An introductory course in digital photography and imaging including basic camera functions, natural and artificial lighting, computer imaging, and image editing techniques. Aesthetics and concepts of digital photography will be analyzed in both fine art and commercial applications. Students must provide their own digital cameras. CSU/UC

Art 159
Introduction to Mobile Application Development and Design
Unit(s): 3.0
Class Hours: 48 Lecture total, 16 Laboratory total.
Introduction to the development of mobile applications for smart phones and similar devices. Emphasis will be placed on graphic design standards as they apply to interactive media. Industry-standard multi-platform software will be employed to develop applications that will run on a variety of platforms with an emphasis on iOS. CSU

Art 183
Beginning Stained Glass
Unit(s): 2.0
Class Hours: 16 Lecture total, 48 Laboratory total.
The craft of stained glass including design, glass cutting, soldering, lead came, and copper foil techniques. Student purchase of tools and supplies required. CSU

Art 186
Intermediate Stained Glass
Unit(s): 2.0
Class Hours: 16 Lecture total, 48 Laboratory total.
Prerequisite: Art 183.
Continued instruction in the craft of stained glass including reinforcing and installation of large leaded glass windows. Construction of three dimensional copper foil pieces. Student purchase of tools and supplies required. CSU

Art 195
Introduction to Digital Media Arts
Unit(s): 3.0
Class Hours: 48 Lecture total, 16 Laboratory total.
Introduction to digital media arts for artists, photographers, web designers, programmers, and animation artists. Includes an overview of Photoshop, Illustrator, InDesign, digital graphics terminology, careers, market applications and design components. Work in computer lab with scanners, printers, CD ROM's and the Web. CSU (C-ID)

Art 221
Graphic Design II
Unit(s): 3.0
Class Hours: 48 Lecture total, 64 Laboratory total.
Prerequisite: Art 122.
Intermediate level study of concepts in graphic design to assist the artist/designer in formulating aesthetic and purposeful visual communications from roughs through finished art. Creative development of solutions to problems in common print media and other design applications. Explores the combination of images and text, using hand skills, digital technology and current graphics industry standards and practices. CSU

Art 228
Intermediate Illustration
Unit(s): 3.0
Class Hours: 32 Lecture total, 64 Laboratory total.
Prerequisite: Art 128.
Further development of conceptual and technical expertise in book illustration, descriptive rendering, editorial illustration and fashion drawing. Course examines master works by contemporary and historic artists. Emphasis on developing individual creative style. CSU

Art 229
Multimedia Applications for the Web
Unit(s): 3.0
Class Hours: 48 Lecture total, 16 Laboratory total.
Prerequisite: Art 129.
Introduction to the use of multimedia components, images, typography, motion and audio, for designing websites. Software may include Photoshop, Dreamweaver, SoundEdit 16 and Flash. Projects include conceptualizing, storyboarding, and designing Web page layout. Application of design elements to Web page creation. CSU

Art 230
Intermediate Drawing
Unit(s): 3.0
Class Hours: 32 Lecture total, 64 Laboratory total.
Prerequisite: Art 130.
Continued study in drawing with additional opportunities in graphic expression. Further exploration of media, including colored pencils, oil pastel, charcoal, ink, and mixed media. Continuation of composition concepts with emphasis on individual expression. Field trip for en plein air style of drawing may be required. CSU/UC (C-ID)

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
Art 231  
**Intermediate Life Drawing**  
Unit(s): 3.0  
Class Hours: 32 Lecture total, 64 Laboratory total.  
Prerequisite: Art 131.  
Continued experience in drawing from the live model with opportunity for development of self-expression. Further exploration of media and techniques. Projects vary each semester. **CSU/UC**

Art 232  
**Advanced Life Drawing**  
Unit(s): 3.0  
Class Hours: 32 Lecture total, 64 Laboratory total.  
Prerequisite: Art 231.  
Intensive study of the figure with further development of drawing skills, composition, technique and media utilizing the live model. Projects vary each semester. **CSU/UC**

Art 233  
**Advanced Drawing**  
Unit(s): 3.0  
Class Hours: 32 Lecture total, 64 Laboratory total.  
Prerequisite: Art 230 or portfolio review.  
To further develop individual graphic expression. Students will plan a series of drawing problems to be executed during the semester under the instructor’s direction. A further exploration of new materials and techniques that are in line with creative concepts. Field trip for en plein air style of drawing may be required. **CSU/UC**

Art 241  
**Intermediate Painting**  
Unit(s): 3.0  
Class Hours: 32 Lecture total, 64 Laboratory total.  
Prerequisite: Art 141.  
An intermediate level class designed to promote and advance the creative development of those with basic skills in painting. Opportunity for further study of historical and contemporary references and to increase experience with new media, methods and techniques. Emphasis on artistic expression and individual creative problems. **CSU/UC**

Art 242  
**Advanced Painting**  
Unit(s): 3.0  
Class Hours: 32 Lecture total, 64 Laboratory total.  
Prerequisite: Art 241.  
An advanced level studio course providing opportunity for further refinement of painting skills with increasing exposure to contemporary styles. Emphasis on research and individual creative problems in painting. Exploration into a personal mode of expression through development of media, technique and style. **CSU/UC**

Art 249  
**Intermediate Digital Photography**  
Unit(s): 3.0  
Class Hours: 48 Lecture total, 16 Laboratory total.  
Prerequisite: Art 149.  
An intermediate course in digital photography and imaging that allows students to take the technical information received from Art 149 and apply it to a variety of concepts. This course focuses on projects that explore photographic subjects including portrait, landscape, still life, and commercial photography. Students must provide their own digital camera with manual controls. **CSU**

Art 250  
**Advanced Studio Concepts**  
Unit(s): 3.0  
Class Hours: 32 Lecture total, 64 Laboratory total.  
Intensive study in visual arts for majors with studio emphasis. This class offers art majors exposure to contemporary art directions, trends and job markets. Students will be given different studio problems each semester which will help them build a personal portfolio. Field trips are required. **CSU**

Art 256  
**Advanced Studio - Stained Glass**  
Unit(s): 2.0  
Class Hours: 16 Lecture total, 48 Laboratory total.  
Intensive study in visual arts for majors with studio emphasis. Exposure to contemporary art directions, trends and job markets. Different studio problems each semester. **CSU**

Art 259  
**Advanced Mobile Application Development and Design**  
Unit(s): 3.0  
Class Hours: 48 Lecture total, 16 Laboratory total.  
Prerequisite: Art 159.  
Advanced topics in the graphic design of mobile applications viewed on smart phones and similar devices. Industry standard multi platform software will be employed to develop applications that will run on a variety of platforms with a focus on iPads and iPhones. Students will work in development teams to map and storyboard advanced application designs. **CSU**

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.*
ASTRONOMY (ASTR)

Division of Mathematics and Sciences

Dean: Martin Stringer
Department Co-Chairs, Astronomy: Danielle Martino
Faculty: Morrie Barembaum, Danielle Martino

Associate in Science
Astronomy (33223)

The associate degree in astronomy provides a foundation in astronomy and physics for students planning to transfer into a baccalaureate program in astronomy, astrophysics or astronomy education leading to a career in astronomy and/or physics research, education, or technology and programming.

Learning Outcome(s)
Upon successful completion of the requirements for this certificate, students will be able to

- Demonstrate an understanding that science is based on observations of the universe and how it is used to understand some basic phenomena of our world.

Major requirements* Units

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Astronomy 109, Introduction to the Solar System</td>
<td>3</td>
</tr>
<tr>
<td>OR</td>
<td></td>
</tr>
<tr>
<td>Astronomy 112, Introduction to Cosmology</td>
<td>3</td>
</tr>
<tr>
<td>Astronomy 110, Introduction to Stars and Galaxies</td>
<td>3</td>
</tr>
<tr>
<td>Astronomy 140, Astronomy Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>Physics 250A, Physics for Scientists and Engineers I</td>
<td>5</td>
</tr>
<tr>
<td>Physics 250B, Physics for Scientists and Engineers II</td>
<td>5</td>
</tr>
<tr>
<td>Physics 250C, Physics for Scientists and Engineers III</td>
<td>5</td>
</tr>
<tr>
<td>Computer Science 120, Introduction to Programming</td>
<td>3</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>25</strong></td>
</tr>
</tbody>
</table>

Some colleges, including San Diego State University, also recommend taking Chemistry 209.

Courses

Astronomy 109
Introduction to the Solar System
Unit(s): 3.0
Class Hours: 48 Lecture total.
Surveys history of astronomy, recent research and space flight observations of the planets, moons, and other solar system objects. Explores light and gravity to understand formation, properties and motion of Solar System objects. **CSU/UC**

Astronomy 110
Introduction to Stars and Galaxies
Unit(s): 3.0
Class Hours: 48 Lecture total.
Surveys the development of astronomy, current research and observations of stars, galaxies and large-scaled structures in the universe. Explores light and gravity to understand the properties and evolution of stars, neutron stars, black holes, galaxies and the universe structures and changes. **CSU/UC**

Astronomy 112
Introduction to Cosmology
Unit(s): 3.0
Class Hours: 48 Lecture total.
Recommended Preparation: Concurrent enrollment in Astronomy 140.
An introduction to the origin, structure, and evolution of the universe with an emphasis on major cosmological models. Discussions will include fundamental concepts of light and matter and their connections to current research including dark matter and dark energy and their implications for the fate of the universe. **CSU/UC**

Astronomy 140
Astronomy Laboratory
Unit(s): 1.0
Class Hours: 48 Laboratory total.
Prerequisite: Astronomy 109, 110, or 112 or concurrent enrollment.
Explores techniques used to study properties of celestial objects and astronomical phenomena. Field trips to local planetaria and dark sky locations may be included. **CSU/UC**

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
**BIOLOGY (BIOL)**

Division of Mathematics and Sciences

Dean: Martin Stringer
Department Co-Chairs, Life Science: Michael Taylor, Mark Smith
Faculty: Denise Foley, Robert Houkska, Anson Lui, Charleen Powers, Mark Smith, Michael Taylor

**Associate in Science Biology (11856)**

The associate degree in biology prepares students for transfer to a four-year institution leading to a baccalaureate degree in biology or disciplines such as microbiology, botany, zoology, and careers in teaching, medicine and health sciences.

**Learning Outcome(s)**

Upon successful completion of the major requirements for this degree, students will be able to

- Demonstrate an understanding of the basic theories of biology.
- Demonstrate a knowledge of and an ability to apply and effectively communicate the scientific method.

**Major requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology 211, Cellular and Molecular Biology</td>
<td>5</td>
</tr>
<tr>
<td>Biology 212, Animal Diversity and Ecology</td>
<td>5</td>
</tr>
<tr>
<td>OR Biology 221, Animal Diversity and Evolution</td>
<td></td>
</tr>
<tr>
<td>OR Biology 214, Plant Diversity and Evolution</td>
<td>5</td>
</tr>
<tr>
<td>OR Biology 231, Plant Diversity and Ecology</td>
<td></td>
</tr>
<tr>
<td>Chemistry 219/219H, General Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>Chemistry 229, General Chemistry and Qualitative Analysis</td>
<td>5</td>
</tr>
</tbody>
</table>

**TOTAL 25**

**Certificate requirements**

- Biology 190, Introduction to Biotechnology 3
- Biology 191, Biotechnology A: Basic Lab Skills 4
- Biology 192, Biotechnology B: Proteins 4
- Biology 211, Cellular and Molecular Biology 5
- Chemistry 219/219H, General Chemistry 5

**TOTAL 21**

**Certificate of Achievement Biotechnology Biomanufacturing Technician (32598)**

The certificate of achievement in biotechnology biomanufacturing technician is designed for students who wish to obtain the skills required to gain employment in industries influenced by biotechnology as well as for incumbent workers seeking career opportunities. Upon completion of this certificate program, students will be eligible to obtain employment as laboratory assistants, biomanufacturing technicians, or research and development technicians.

**Learning Outcome(s)**

Upon successful completion of the requirements for this certificate, students will be able to

- Demonstrate an understanding of and follow workplace safety guidelines.
- Demonstrate proficiency in following standard operating procedures (SOPs).
- Properly maintain a laboratory notebook.
- Understand and correctly operate laboratory equipment.

**Certificate requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology 190, Introduction to Biotechnology</td>
<td>3</td>
</tr>
<tr>
<td>Biology 191, Biotechnology A: Basic Lab Skills</td>
<td>4</td>
</tr>
<tr>
<td>Biology 192, Biotechnology B: Proteins</td>
<td>4</td>
</tr>
<tr>
<td>Biology 193, Biotechnology C: Nucleic Acids</td>
<td>4</td>
</tr>
<tr>
<td>Biology 194, Quality and Regulatory Compliance in Biosciences</td>
<td>2</td>
</tr>
<tr>
<td>Biology 211, Cellular and Molecular Biology</td>
<td>5</td>
</tr>
<tr>
<td>Chemistry 209, Introductory Chemistry</td>
<td>4</td>
</tr>
<tr>
<td>Chemistry 219/219H, General Chemistry</td>
<td>5</td>
</tr>
</tbody>
</table>

**TOTAL 5-9**

**Select a minimum of five (5) units from the following:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology 139, Health Microbiology (4)</td>
<td>4</td>
</tr>
<tr>
<td>Biology 229, General Microbiology (5)</td>
<td>5</td>
</tr>
<tr>
<td>Biology 197, Science, Technology, Engineering &amp; Mathematics (STEM) Internship (1-4)</td>
<td></td>
</tr>
</tbody>
</table>

**TOTAL 34-38**

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
Certificate of Achievement
General Biotechnology Technician (32602)

The certificate of achievement in biotechnology laboratory technician is designed for students who wish to obtain the skills required to gain employment in industries influenced by biotechnology as well as for incumbent workers seeking career opportunities. Upon completion of this certificate program, students will be eligible to obtain employment as laboratory assistants, biomanufacturing technicians, or research and development technicians.

Learning Outcome(s)
Upon successful completion of the requirements for this certificate, students will be able to:
- Demonstrate an understanding of and follow workplace safety guidelines.
- Demonstrate proficiency in following standard operating procedures (SOPs).
- Properly maintain a laboratory notebook.
- Understand and correctly operate laboratory equipment.

Certificate requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology 190, Introduction to Biotechnology</td>
<td>3</td>
</tr>
<tr>
<td>Biology 191, Biotechnology A: Basic Lab Skills</td>
<td>4</td>
</tr>
<tr>
<td>Biology 192, Biotechnology B: Proteins</td>
<td>4</td>
</tr>
<tr>
<td>Biology 193, Biotechnology C: Nucleic Acids</td>
<td>4</td>
</tr>
<tr>
<td>Biology 194, Quality and Regulatory Compliance in Biosciences</td>
<td>2</td>
</tr>
<tr>
<td>Biology 211, Cellular and Molecular Biology</td>
<td>5</td>
</tr>
<tr>
<td>Chemistry 219/219H, General Chemistry</td>
<td>5</td>
</tr>
</tbody>
</table>

Select a minimum of seven (7) units from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology 139, Health Microbiology</td>
<td>4</td>
</tr>
<tr>
<td>OR</td>
<td></td>
</tr>
<tr>
<td>Biology 229, General Microbiology</td>
<td>5</td>
</tr>
<tr>
<td>Biology 177, Human Genetics</td>
<td>3</td>
</tr>
<tr>
<td>Biology 197, Science, Technology, Engineering &amp; Mathematics (STEM) Internship (1-4)</td>
<td>5</td>
</tr>
<tr>
<td>Biology 290, Biochemistry and Molecular Biology</td>
<td>5</td>
</tr>
<tr>
<td>Chemistry 229, General Chemistry and Qualitative Analysis</td>
<td>5</td>
</tr>
</tbody>
</table>

TOTAL 34-37

Certificate of Proficiency
Biotechnology Lab Assistant

The certificate of proficiency in biotechnology lab assistant is designed for students who wish to obtain the skills required to gain employment in industries influenced by biotechnology as well as for incumbent workers seeking career opportunities. Upon completion of this certificate program, students will be eligible to obtain employment as laboratory assistants.

Learning Outcome(s)
Upon successful completion of the requirements for this certificate, students will be able to:
- Develop knowledge necessary to select and develop Science, Technology, Engineering & Mathematics (STEM) careers.

Certificate requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology 190, Introduction to Biotechnology</td>
<td>3</td>
</tr>
<tr>
<td>Biology 191, Biotechnology A: Basic Lab Skills</td>
<td>4</td>
</tr>
<tr>
<td>Chemistry 209, Introductory Chemistry</td>
<td>4</td>
</tr>
</tbody>
</table>

TOTAL 11

Courses

Biology 109
Fundamentals of Biology
Unit(s): 3.0
Class Hours: 48 Lecture total.
Recommended Preparation: Concurrent enrollment in Biology 109L.
- Principles of biology stressing the relationship of all organisms from anatomical, physiological and ecological points of view.
- Includes cell machinery, genetics, reproduction, embryology, animal behavior, botany, ecology, evolution and human physiology.
- Designed for non-biology majors. CSU/UC

Biology 109H
Honors Fundamentals of Biology
Unit(s): 3.0
Class Hours: 48 Lecture total.
Prerequisite: A high school or college GPA of 3.0 or above.
Recommended Preparation: Concurrent enrollment in Biology 109L.
- Traditional Biology enriched in breadth and depth by extensive outside reading assignments and guest lecture presentations.
- Emphasis is on individual preparation for discussion and analysis of pertinent topics using critical oral and written expression.
- Designed for non-biology majors. Field trips may be required. CSU/UC

Biology 109L
Fundamentals of Biology Laboratory
Unit(s): 1.0
Class Hours: 48 Laboratory total.
Prerequisite: Biology 109/109H or concurrent enrollment.
- Laboratory experiments to identify and illustrate significant organisms and their structures. Emphasis is placed on the relationship of all organisms from an anatomical, physiological, and ecological framework. Content correlates to Biology 109/109H lecture material. Field trips required. CSU/UC

Biology 139
Health Microbiology
Unit(s): 4.0
Class Hours: 48 Lecture total, 64 Laboratory total.
Recommended Preparation: Biology 109 or 149.
- Presents practical and theoretical aspects of medical microbiology to meet the needs of those in allied health professions.
- Provides basic knowledge of the microbial world by covering diversity, structure, metabolic and genetic characteristics, cultivation and control. Emphasis is placed on human-microbe interactions especially infectious diseases. Laboratory deals with identification, growth, and control of microorganisms. Field trips may be required. CSU/UC

Biology 149
Human Anatomy and Physiology
Unit(s): 4.0
Class Hours: 48 Lecture total, 48 Laboratory total.
- Human anatomy and physiology stressing the interrelationships between normal structure and function. Laboratory may include the dissection of mammalian tissues. Designed for students in the allied health sciences, particularly those desiring the 2-year registered nurse (RN) degree. May not meet requirements for kinesiology or Bachelor of Science in Nursing (BSN) majors. CSU

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.*
Class Hours: 48 Lecture total.

Introduction to the field of biotechnology including a history of its origin and development, a survey of modern industrial applications and accomplishments, ethical considerations, and career paths. Field trips may be required. **CSU**

**Biology 191 Biotechnology A: Basic Lab Skills**

Unit(s): 4.0

Class Hours: 48 Lecture total, 48 Laboratory total.

Recommended Preparation: Mathematics 080.

Skills include maintenance of an industry standard notebook; preparation and sterilization of solutions, reagents, and media; utilization of good aseptic technique, proper use and maintenance of laboratory equipment, adherence to quality control protocols, and laboratory safety regulations. Compliance with industry standards and regulations will be incorporated into course procedures. **CSU**

**Biology 192 Biotechnology B: Proteins**

Unit(s): 4.0

Class Hours: 48 Lecture total, 48 Laboratory total.

Prerequisite: Biology 191.

Fundamental skills in applied biotechnology necessary for any biotechnology laboratory but particularly focused on downstream manufacturing processes in biomanufacturing. Skills include maintenance of an industry standard notebook, preparation and sterilization of solutions, reagents and media; utilization of good aseptic technique, proper use and maintenance of laboratory equipment, adherence to quality control protocols, lab safety regulations, in vitro translation, large scale expression, purification, modification, western blot analysis, enzyme-linked immunosorbent assay (ELISA), antibody tagging, and fluorescent microscopy. Compliance with industry standards and regulations will be incorporated into course procedures. **CSU**

**Biology 193 Biotechnology C: Nucleic Acids**

Unit(s): 4.0

Class Hours: 48 Lecture total, 48 Laboratory total.

Prerequisite: Biology 191.

This course introduces the fundamental skills in any biotechnology laboratory focusing on the upstream research and development process. Skills include the maintenance of an industry standard notebook, preparation and sterilization of solutions, reagents, and media, utilization of good aseptic technique, proper use and maintenance of laboratory equipment, adherence to quality control protocols, lab safety regulations, DNA/RNA extraction and purification, bioinformatics, polymerase chain reaction, electrophoresis, DNA sequencing, recombinant DNA technology, DNA cloning, fluorescence in situ hybridization, and Southern blot analysis. Compliance with industry standards and regulations will be incorporated into course procedures. **CSU**

**Biology 194 Quality and Regulatory Compliance in Biosciences**

Unit(s): 2.0

Class Hours: 32 Lecture total.

Recommended Preparation: Biology 190 or a general knowledge of the specific industries identified as biotechnology.

This course will cover quality assurance and regulatory compliance for the biosciences industries. Topics will span quality control and Federal Drug Administration (FDA) regulations for the biotechnology, biopharmaceutical, biomedical device and food industries. Theories and application of quality assurance and quality control will be presented and several different quality systems will be discussed such as GMP (good manufacturing practices), ISO9000 (International Standards Organization), Six Sigma and Lean. **CSU**

**Biology 196 Food Safety and Microbiology**

Unit(s): 2.0

Class Hours: 32 Lecture total.

Recommended Preparation: Biology 190 or 229.

This course will cover the regulatory agencies that oversee and the methodologies prescribed to ensure a safe food supply. The Food Safety Modernization Act, hazard analysis critical control points (HACCP), product traceability, food allergens, and food contaminants including microorganisms will be presented. Discussion of illnesses known to result from ingestion of contaminated foods will occur. **CSU**

**Biology 197 Science, Technology, Engineering and Mathematics (STEM) Internship**

Unit(s): 1.0-4.0

Class Hours: 60-240 Laboratory total.

Prerequisite: Successful completion of 10 units within the Biotechnology Program.

This is an Internship of supervised paid or unpaid work experience in the student’s major which could include new or expanded responsibilities. 75 hours paid work or 60 hours of unpaid work equals one unit. A maximum of 4 units is allowed per semester. Limitation of 16 units in occupational cooperative education courses. May be repeated. Grade: Pass/No Pass. **CSU**

**Biology 200 Environment of Man**

Unit(s): 3.0

Class Hours: 48 Lecture total.

A biological and physical science introduction to environmental problems such as energy, resources, pollution, land use, population and food, including economic and political factors. A natural science elective. (Same as Environmental Studies 200.) **CSU/UC**

**Biology 211 Cellular and Molecular Biology**

Unit(s): 5.0

Class Hours: 48 Lecture total, 96 Laboratory total.

Prerequisite: Mathematics 080.

Recommended Preparation: Chemistry 209 or equivalent.

An investigation into the molecular and cellular basis of life, including the evolution of cells, cell structure and function, energy and information flow, cellular reproduction, genetics, and the molecular basis of inheritance. Required of majors in Biology, Medicine, Forestry, and Agriculture. **CSU/UC**
Biology 212
Animal Diversity and Ecology
Unit(s): 5.0
Class Hours: 48 Lecture total, 96 Laboratory total.
Prerequisite: Biology 211.
A study of ecological principles, and relationships between animal diversity and ecosystems. Habitat, populations, ecological interactions, and environmental influences are stressed while surveying animal diversity and addressing structure, function, behavior, and adaptation of major taxonomic groups. Required of majors in biology, medicine, forestry and agriculture. Field trips required. CSU/UC

Biology 214
Plant Diversity and Evolution
Unit(s): 5.0
Class Hours: 48 Lecture total, 96 Laboratory total.
Prerequisite: Biology 211.
Principles and processes of evolution leading to biodiversity. Survey of the Bacteria, Archaea, and the Eukarya domains, emphasizing the kingdoms Protista, Fungi, and Plantae with a detailed view of the evolutionary adaptations of the anatomy, physiology, and life cycles of these organisms. Field trips required. CSU/UC

Biology 221
Animal Diversity and Evolution
Unit(s): 5.0
Class Hours: 48 Lecture total, 96 Laboratory total.
Prerequisite: Biology 211.
This course is intended for biology majors and surveys the diversity, structure, function, evolution and taxonomy of the major animal phyla. Topics also include behavior, development, comparative anatomy, and evolutionary relationships with an emphasis on the principles and mechanisms of microevolution and macroevolution accentuating molecular and morphological phylogeny. Field trips are required. CSU/UC (C-ID)

Biology 229
General Microbiology
Unit(s): 5.0
Class Hours: 48 Lecture total, 96 Laboratory total.
Prerequisite: Biology 109/109H and 109L, 139, 149, 211, 239, 249 or Chemistry 209.
Introduction to microorganisms, their classification, structure, biochemistry, growth, control and their interactions with other organisms and the environment. Designed for biology, preprofessional, and prenursing (BSN) majors. This course may also include an optional field trip. CSU/UC

Biology 231
Plant Diversity and Ecology
Unit(s): 5.0
Class Hours: 48 Lecture total, 96 Laboratory total.
Prerequisite: Biology 211.
This course is intended for biology majors and surveys the diversity, structure, function and taxonomy of the kingdoms Protista, Fungi, and Plantae. Topics include development, morphology, physiology, taxonomy and systematics, and the principles of population, community, and ecosystem ecology. Field trips required. CSU/UC (C-ID)

Biology 239
General Human Anatomy
Unit(s): 4.0
Class Hours: 48 Lecture total, 48 Laboratory total.
Structure of the human body. Systems, organs, and tissues are studied from human skeletons, models, charts, slides and CD-ROM programs. Laboratory includes the dissection of a cat and periodic demonstrations of a prospected cadaver as available. CSU/UC

Biology 249
Human Physiology
Unit(s): 4.0
Class Hours: 48 Lecture total, 48 Laboratory total.
Prerequisite: Biology 239.
Microscopic, macroscopic and dynamic view of the human physiological processes. The lecture portion includes a thorough consideration of both ‘cell and systems’ physiology. Laboratory work includes the use of techniques used in basic research, an introduction to the use of standard medical equipment, and the performance of medical lab tests. Non-invasive experiments are performed on students enrolled in the class. CSU/UC

Biology 259
Environmental Biology
Unit(s): 4.0
Class Hours: 48 Lecture total, 48 Laboratory total.
Prerequisite: Biology 211 and Chemistry 209.
Introduction to Environmental Biology includes study of ecosystems, population dynamics, classification, diversity of plant and animal species, effects of pollutants at both the cellular and organismal levels, and principles of ecology. (Same as Environmental Studies 259.) CSU/UC

Biology 290
Biochemistry and Molecular Biology
Unit(s): 5.0
Class Hours: 48 Lecture total, 48 Laboratory total.
Prerequisite: Biology 211 and Chemistry 209.
Introduction to biochemistry and molecular biology. Included are discussions of biological macromolecules, energy production, metabolic pathways and regulation, genetic code, genomics, DNA replication, transcription and RNA processing, translation, and gene regulation. Laboratory activities will include use of visible and UV spectroscopy, chromatography, cell fractionation, ultracentrifugation, protein purification, electrophoresis, and recombinant DNA methods. This course is designed for biology majors, health pre-professionals, and biotechnology majors. CSU/UC

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
BUSINESS (BUS)

Division of Business and Career Technical Education

Dean: Von Lawson
Department Co-Chairs, Business: Steven Deeley, Stewart Myers
Faculty: Lynda Armbruster, Steven Deeley, Stewart Myers, Andy Salcido

Associate in Science

Business Administration for Transfer (31365)

The Associate in Science in Business Administration for Transfer provides students with a comprehensive business education in the principles and practices of all phases of business. A student graduating with an Associate in Science in Business for Transfer may transfer to a four-year institution to complete a Bachelor’s Degree. Completion of the requirements guarantees students the ability to transfer to any CSU school in any area of business. Students will be accepted to a California State University campus to pursue a baccalaureate degree and preparation to pursue a career in the field of business, industry or government.

Learning Outcome(s)

Upon successful completion of the major requirements for this degree, students will be able to
- Transfer to a four-year institution.
- Have a broad background in the fundamentals of business leading to a career in management, finance, teaching or entrepreneurship.

Major requirements* Units

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting 101, Financial Accounting</td>
<td>4</td>
</tr>
<tr>
<td>Accounting 102, Managerial Accounting</td>
<td>4</td>
</tr>
<tr>
<td>Business 105, Legal Environment of Business</td>
<td>3</td>
</tr>
<tr>
<td>Economics 101, Principles/Micro</td>
<td>3</td>
</tr>
<tr>
<td>Economics 102, Principles/Macro</td>
<td>3</td>
</tr>
<tr>
<td>Select one (1) course from the following (List A):</td>
<td>4</td>
</tr>
<tr>
<td>Mathematics 150, Calculus for Biological, Management and Social Sciences</td>
<td>4</td>
</tr>
<tr>
<td>Mathematics 219/219H, Statistics and Probability</td>
<td>4</td>
</tr>
<tr>
<td>OR Social Science 219/219H, Statistics and Probability</td>
<td>4</td>
</tr>
<tr>
<td>Select two (2) courses from the following (List B):</td>
<td>6-7</td>
</tr>
<tr>
<td>An additional course from List A (may not be a course used to satisfy the requirements of List B)</td>
<td></td>
</tr>
<tr>
<td>Business 100, Fundamentals of Business</td>
<td>3</td>
</tr>
<tr>
<td>OR Business 222, Business Writing</td>
<td>3</td>
</tr>
<tr>
<td>Business 150, Introduction to Information Systems and Applications</td>
<td>3</td>
</tr>
<tr>
<td>OR Computer Science 100, The Computer and Society</td>
<td>3</td>
</tr>
<tr>
<td>TOTAL</td>
<td>26-27</td>
</tr>
</tbody>
</table>

California State University campuses have preferences on which courses should be chosen.

California State University, Fullerton prefers students take Math 150, Business 150 and Business 222.
California State University, Long Beach prefers both Math 150 and 219 and either Business 150 or Computer Science 100.
California Polytechnic University, Pomona prefers both Math 150 and 219 and Computer Science 100.

Students are advised to check with their college of choice for any other specific course information.

Associate in Science

Business Administration (11857)

The associate degree in business administration enables students to transfer to a four-year institution leading to a baccalaureate degree. Career opportunities exist in many areas of business administration such as accounting, financial planning and analysis, financial service specialties, management, marketing and sales, production and logistics, and systems and technology development.

Learning Outcome(s)

Upon successful completion of the major requirements for this degree, students will be able to
- Transfer to a four-year institution.

Major requirements* Units

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting 101, Financial Accounting</td>
<td>4</td>
</tr>
<tr>
<td>Accounting 102, Managerial Accounting</td>
<td>4</td>
</tr>
<tr>
<td>Business 105, Legal Environment of Business</td>
<td>3</td>
</tr>
<tr>
<td>Business 150, Introduction to Information Systems and Applications</td>
<td>3</td>
</tr>
<tr>
<td>Business 222, Business Writing</td>
<td>3</td>
</tr>
<tr>
<td>Economics 101, Principles/Micro</td>
<td>3</td>
</tr>
<tr>
<td>Economics 102, Principles/Macro</td>
<td>3</td>
</tr>
<tr>
<td>Select one (1) course from the following:</td>
<td>3-4</td>
</tr>
<tr>
<td>Business 100, Fundamentals of Business</td>
<td>3</td>
</tr>
<tr>
<td>Business 120/Management 120, Principles of Management</td>
<td>3</td>
</tr>
<tr>
<td>Marketing 113, Principles of Marketing</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics 150, Calculus for Biological, Management and Social Sciences</td>
<td>4</td>
</tr>
<tr>
<td>TOTAL</td>
<td>26-27</td>
</tr>
</tbody>
</table>

Students planning for university transfer should be aware that some universities only accept Business 101 for the transfer major (e.g. California State University, Long Beach) while others only accept Business 105 (e.g. California State University, Fullerton) for the transfer major.

Students planning for university transfer should be aware that California State University, Fullerton and many other universities require Math 150 for the Business Administration degree.

Numerous California State University campuses and private colleges and universities offer baccalaureate degrees in Business Administration. In the University of California system, UC Berkeley and UC Riverside offer this degree.

Consult the Transfer Planning Guide and meet with a counselor for information about specific programs and transfer requirements.
Associate in Science
Business Management (11859)
The associate degree in business management is designed to enable students to handle basic problems encountered in managing within a business environment including the managing of a marketing program, the making of decisions and problem solving, the coordinating of activities, the influencing of staff, and the understanding of finance. Entry-level careers include management trainees and assistant managers or supervisors.

Learning Outcome(s)
Upon successful completion of the major requirements for this degree, students will be able to
• Prepare for a job or to transfer to a four-year institution.

Major requirements* Units
Accounting 101, Financial Accounting 4
Business 100, Fundamentals of Business 3
Business 120/Management 120, Principles of Management 3
Business 222, Business Writing 3
Marketing 113, Principles of Marketing 3
Select two (2) courses from the following: 6
Business 105, Legal Environment of Business (3)
Business 121/Management 121, Human Relations and Organizational Behavior (3)
Business 127, Introduction to E-Commerce (3)
Business 150, Introduction to Information Systems and Applications (3)
Management 135, Human Resource Management (3)

Total 22

Students intending to obtain a bachelor’s degree in Business Management should consult the major requirements for upper-division standing listed under the Business Administration major. For other related majors, look under Management.

Certificate of Proficiency
Business Management
The certificate in business management is designed to enable students to handle basic problems encountered in managing within a business environment. Entry-level careers include management trainees and assistant managers or supervisors.

Learning Outcome(s)
Upon successful completion of the requirements for this certificate, students will be able to
• Secure entry-level job skills.

Certificate requirements Units
Accounting 101, Financial Accounting 4
Business 150, Introduction to Information Systems and Applications OR 3
Computer Science 100, The Computer and Society Business 222, Business Writing OR 3
Management 122, Business Communications
Select one (1) course from the following: 3
Business 100, Fundamentals of Business (3)
Business 120/Management 120, Principles of Management (3)

Total 13

Certificate of Achievement
Entrepreneurship (21635)
Learning Outcome(s)
Upon successful completion of the requirements for this certificate, students will be able to
• Create a small business.

Certificate requirements Units
Accounting 101, Financial Accounting 4
Business 170, Principles of Small Business Management 3
Business 171, Business Plan for Small Business 3
Business 175, Online Entrepreneurship 3
Marketing 172, Small Business Marketing and Advertising 3
Select one (1) course from the following: 2-3
Accounting 035, QuickBooks (2)
Business 127, Introduction to E-Commerce (3)
Computer Information Systems 126, Website Development for Business (3)

Total 18-19

Courses

Business 090 Principles of Project Management
Unit(s): 3.0
Class Hours: 48 Lecture total.
Utilizing project planning tools and techniques, learn how to define, plan, execute and deliver projects of all types and sizes. Emphasizes practical application using case studies to organize, schedule and manage projects effectively. Industry guest speakers included. (Same as Public Works 080.)

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
Business 100
Fundamentals of Business
Unit(s): 3.0
Class Hours: 48 Lecture total.
An introduction to the basic fundamentals of business. A survey of marketing management, production, accounting, finance, and economics and how they interrelate in the business environment. CSU/UC (C-ID)

Business 103
Cooperative Work Experience Education
Unit(s): 1.0-4.0
Class Hours: 16-64 Lecture total.
Supervised paid or volunteer experience in student's major including new or expanded responsibilities. One credit for each 5 hours worked per week to a maximum of 4 units for 20 hours worked per week each semester. Limitation of 16 units in general cooperative education courses. Students must be enrolled in a minimum of 7 units up to 4 units for Business 103. May be repeated. Grade: Pass/No Pass. CSU

Business 105
Legal Environment of Business
Unit(s): 3.0
Class Hours: 48 Lecture total.
A study of the courts, torts (including product liability), crimes, contracts, employment, partnerships, corporations, government regulation, and international law. CSU/UC

Business 120
Principles of Management
Unit(s): 3.0
Class Hours: 48 Lecture total.
Principles, methods, and procedures essential to the successful management of human and financial resources. Planning, decision making, staffing, directing, motivating, leading, communicating, controlling, and the application of managerial skills. (Same as Management 120.) CSU

Business 121
Human Relations and Organizational Behavior
Unit(s): 3.0
Class Hours: 48 Lecture total.
The role of the manager and management's relationship to employees. Includes the application of motivational theories, communications, leadership, and organizational structure. (Same as Management 121.) CSU

Business 127
Introduction to E-Commerce
Unit(s): 3.0
Class Hours: 48 Lecture total.
Electronic commerce from a managerial perspective focusing on the retailing, business-to-business and service industries. Topics include: E-Commerce infrastructure, intranets and extranets, electronic payment systems, marketing research, advertising, E-Commerce strategies, and privacy issues. CSU

Business 150
Introduction to Information Systems and Applications
Unit(s): 3.0
Class Hours: 48 Lecture total.
Introduction to computer concepts and management information systems. Application software used to solve business problems. CSU (C-ID)

Business 170
Principles of Small Business Management
Unit(s): 3.0
Class Hours: 48 Lecture total.
Practical business skills needed to start and operate a small business. Includes information on risk management, site location, legal aspects, financing, budgeting, merchandising, promotion, and management techniques. CSU

Business 171
Business Plan for Small Business
Unit(s): 3.0
Class Hours: 48 Lecture total.
Recommended Preparation: Concurrent enrollment in Business 170. Business planning for the opening or continued successful operation of a small business through the preparation of a written business plan. CSU

Business 175
Online Entrepreneurship
Unit(s): 3.0
Class Hours: 48 Lecture total.
This class is designed to help potential online entrepreneurs develop startup procedures, explore ideas and implement plans. Students will learn how to build and implement a business strategy for the Internet, including business specific considerations, online marketing and Ecommerce strategies. CSU

Business 222
Business Writing
Unit(s): 3.0
Class Hours: 48 Lecture total.
Prerequisite: English 101/101H.
Overview of oral and written communication skills used in business; emphasizes guidelines for improving writing and speaking skills, common solutions to common communication problems, ethical issues facing business communicators today, instructions on how to identify areas of legal vulnerability, and tested techniques for communicating successfully in today's high-tech, international business environment. CSU (C-ID)
CHEMISTRY (CHEM)

Division of Mathematics and Sciences

Dean: Martin Stringer
Department Chair, Chemistry: Denise Bailey
Faculty: Denise Bailey, Nahla El-Said, Nicole Torneo, Jeffrey Wada

Associate in Science Chemistry (11933)

The associate degree in chemistry provides basic courses for a wide variety of occupations, or prepares the student to enter a curriculum in a four-year institution leading to a baccalaureate degree. The major fields of chemistry are inorganic and organic chemistry, biochemistry, and chemical engineering. These fields provide career opportunities in industry, research, and teaching, and also entry into graduate or professional programs such as medicine, pharmacy and other related health fields.

Learning Outcome(s)

Upon successful completion of the major requirements for this degree, students will be able to

- Solve problems that embody the intellectual principles of Chemistry.
- Critically analyze, and interpret data to draw valid scientific conclusions and communicate those conclusions in a clear and articulate manner.

Major requirements*

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemistry 219/219H, General Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>Chemistry 229, General Chemistry and Qualitative Analysis</td>
<td>5</td>
</tr>
<tr>
<td>Chemistry 249, Organic Chemistry I</td>
<td>5</td>
</tr>
<tr>
<td>Chemistry 259, Organic Chemistry II</td>
<td>5</td>
</tr>
<tr>
<td>Mathematics 180/180H, Analytical Geometry and Calculus</td>
<td>4</td>
</tr>
<tr>
<td><strong>TOTAL</strong>                                           <strong>24</strong></td>
<td></td>
</tr>
</tbody>
</table>

Courses

Chemistry 209

Introduction to Chemistry

Unit(s): 4.0

Class Hours: 48 Lecture total, 48 Laboratory total.

Prerequisite: Mathematics 080.

This course prepares students for Biology and Chemistry 219 by exploring the basic concepts of matter such as: atomic structure, formulas, equation writing, nomenclature, gases, and kinetic theory. Properties of solutions and the mole concept in quantitative chemistry will be emphasized. **CSU/UC**

Chemistry 210

General, Organic, and Biochemistry

Unit(s): 5.0

Class Hours: 44 Lecture total, 48 Laboratory total.

Prerequisite: Chemistry 209 or a passing score on current chemistry placement test and Mathematics 080.

An introduction to the fundamental concepts of general, organic and biochemistry for majors in nursing, and other allied health majors. Includes atomic structure, nuclear chemistry, bonding, solutions, acids and bases, organic nomenclature, hydrocarbons, alcohols, aldehydes, ketones, carboxylic acids, carbohydrates, proteins, lipids, nucleic acids and metabolism. **CSU/UC**

Chemistry 219

General Chemistry

Unit(s): 5.0

Class Hours: 48 Lecture total, 96 Laboratory total.

Prerequisite: Chemistry 209 or a passing score on current chemistry placement test and Mathematics 080.

This is the first semester of a year-long sequence covering the fundamental principles and concepts of chemistry and is intended for students studying physical science, life science, and engineering. The topics are to include, but not limited to, atomic structure, quantum theory, periodic properties, stoichiometry, oxidation-reduction, molecular structure and bonding, gas laws, states of matter, solutions, chemical kinetics and chemical equilibrium. This course is a requirement to earn a degree in the physical science, life science, and engineering majors. **CSU/UC (C-ID)**

Chemistry 219H

Honors General Chemistry

Unit(s): 5.0

Class Hours: 48 Lecture total, 96 Laboratory total.

Prerequisite: Chemistry 209 or a passing score on current chemistry placement test and Mathematics 080 and a high school or college GPA of 3.0 or above.

An in-depth Honors study of the fundamental principles and concepts of chemistry. This course is intended for students studying physical science, life science, and engineering. The topics are to include, but not limited to, atomic structure, quantum theory, periodic properties, stoichiometry, oxidation-reduction, molecular structure and bonding, gas laws, states of matter, solutions, chemical kinetics and chemical equilibrium. This course is a requirement to earn a degree in the physical science, life science, and engineering majors. **CSU/UC**

Chemistry 229

General Chemistry and Qualitative Analysis

Unit(s): 5.0

Class Hours: 48 Lecture total, 96 Laboratory total.

Prerequisite: Chemistry 219.

Continuation of Chemistry 219, including but not limited to ionic equilibrium, acid and base equilibrium, thermodynamics, electrochemistry, nuclear chemistry, organic chemistry and descriptive chemistry. **CSU/UC (C-ID)**

Chemistry 249

Organic Chemistry I

Unit(s): 5.0

Class Hours: 48 Lecture total, 96 Laboratory total.

Prerequisite: Chemistry 229.

This course is the first semester of a year of organic chemistry. This course will cover: structure and bonding, nomenclature, descriptive chemistry, reaction mechanisms, synthetic methods and IR spectroscopy for different functional groups including alkanes, alkenes, alkynes, alkyl halides, organometallics, alcohols, and ethers. Laboratory will include: separations/purifications identification, and simple syntheses. **CSU/UC (C-ID)**

Chemistry 259

Organic Chemistry II

Unit(s): 5.0

Class Hours: 48 Lecture total, 96 Laboratory total.

Prerequisite: Chemistry 249.

This course is the second semester of a year of organic chemistry (continuation of Chemistry 249). It includes units on structure elucidation, aromatic compounds, carbonyl compounds, carboxylic acids and their derivatives, amines, and classes of biologically important compounds. More complex synthetic routes are explored. Laboratory work includes multi-step syntheses and unknown identification. Reaction mechanisms and use of spectroscopic techniques continue to be emphasized. **CSU/UC (C-ID)**

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
**CHICANO STUDIES (CHST)**
Division of Arts, Humanities and Social Sciences/Library

**Dean:** Marilyn Flores  
**Department Chair, Humanities:** Marcelo Pimentel

**Courses**

Chicano Studies 101  
Introduction to Chicano Studies  
Unit(s): 3.0  
Class Hours: 48 Lecture total.

An interdisciplinary survey of Chicano society from a sociological, economic, political, philosophical, and cultural perspective from pre-Columbian civilizations to contemporary society. This course is designed to present a foundation in Chicano history. CSU/UC

**COMMUNICATION (COMM)**
Division of Arts, Humanities and Social Sciences/Library

**Dean:** Marilyn Flores  
**Department Chair, Communication:** Melinda Womack  
**Faculty:** Michael DeCarbo, Jared Kubicka-Miller, Tara Kubicka-Miller, Melinda Womack

**Associate in Arts**  
**Communication Studies for Transfer (30558)**

The Associate in Arts in Communication Studies for Transfer provides training to build and maintain personal and professional relationships through effective communication. Completion of the transfer degree in Communication prepares students to:
1. Communicate with clarity and accuracy in diverse environments,
2. Act with awareness of self amongst local and global communities,
3. Think critically, creatively and reflectively, and
4. Learn about the self in professional and interpersonal relationships. Successful completion of the transfer degree in Communication guarantees the student acceptance to a California State University to pursue a baccalaureate degree, in preparation to pursue a career in the field of business, industry, government, social service, and/or education in such areas as teaching, public speaking, consulting, law, announcing, and public relations.

**Learning Outcome(s)**
Upon successful completion of the major requirements for this degree, students will be able to:
- Better manage apprehension in communication settings.
- Present the self appropriately and effectively through verbal and nonverbal communication.

**Major requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication 110, Public Speaking</td>
<td>3</td>
</tr>
<tr>
<td>Select two (2) courses from the following (List A):</td>
<td>6</td>
</tr>
<tr>
<td>Communication 100/100H, Introduction to Interpersonal Communication</td>
<td>3</td>
</tr>
<tr>
<td>Communication 101, Group Dynamics</td>
<td>3</td>
</tr>
<tr>
<td>Communication 111, Argumentation and Debate</td>
<td>3</td>
</tr>
<tr>
<td>Select two (2) courses from the following (List B):</td>
<td>6</td>
</tr>
<tr>
<td>An additional course from List A (3)</td>
<td></td>
</tr>
<tr>
<td>(may not be a course used to satisfy the requirements in List A)</td>
<td></td>
</tr>
<tr>
<td>Communication 120/120H, Introduction to Intercultural Communication</td>
<td>3</td>
</tr>
<tr>
<td>Communication 134, Oral Interpretation</td>
<td>3</td>
</tr>
<tr>
<td>Select one (1) course from the following (List C):</td>
<td>3-4</td>
</tr>
<tr>
<td>An additional course from List A or B (3)</td>
<td></td>
</tr>
<tr>
<td>(may not be a course used to satisfy the requirements in List A or B)</td>
<td></td>
</tr>
<tr>
<td>Communication 135, Reader's Theatre</td>
<td>3</td>
</tr>
<tr>
<td>Communication 225/225H, Gender Communication</td>
<td>3</td>
</tr>
<tr>
<td>English 102/102H, Literature and Composition</td>
<td>4</td>
</tr>
<tr>
<td>English 103/103H, Critical Thinking and Writing</td>
<td>4</td>
</tr>
</tbody>
</table>

**TOTAL 18-19**

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.*
Associate in Arts
Communication (11929)

The associate degree in communication provides training for communicating and dealing with people. Completion of the associate in arts degree in communication prepares students to: (1) Communicate with clarity and accuracy, and in diverse environments, (2) Act with awareness of self and both the local and global communities of persons, (3) Think critically, creatively and reflectively, and (4) Learn about self and others, academic and professional issues. The associate in arts in communication degree prepares the student to move into a curriculum at a four-year institution leading to a baccalaureate degree, and then into careers in the field of business, industry, government, social service, or education in such areas as teaching, public speaking, consulting, law, announcing, public speaking and public relations.

Learning Outcome(s)
Upon successful completion of the major requirements for this degree, students will be able to
• Present the self appropriately and effectively through verbal and nonverbal communication.
• Better manage apprehension in communication settings.

Major requirements* Units

<table>
<thead>
<tr>
<th>Relationship Emphasis, select three (3) units from the following:</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication 100/100H, Introduction to Interpersonal Communication (3)</td>
<td></td>
</tr>
<tr>
<td>Communication 101, Group Dynamics (3)</td>
<td></td>
</tr>
<tr>
<td>Delivery Emphasis, select three (3) units from the following:</td>
<td>3</td>
</tr>
<tr>
<td>Communication 110, Public Speaking (3)</td>
<td></td>
</tr>
<tr>
<td>Communication 111, Argumentation and Debate (3)</td>
<td></td>
</tr>
<tr>
<td>Diversity Emphasis, select three (3) units from the following:</td>
<td>3</td>
</tr>
<tr>
<td>Communication 120/120H, Introduction to Intercultural Communication (3)</td>
<td></td>
</tr>
<tr>
<td>Communication 225/225H, Gender Communication (3)</td>
<td></td>
</tr>
<tr>
<td>Performance Emphasis, select three (3) units from the following:</td>
<td>3</td>
</tr>
<tr>
<td>Communication 130, Forensics Team (4-6)</td>
<td></td>
</tr>
<tr>
<td>Communication 131, Individual Events (2)</td>
<td></td>
</tr>
<tr>
<td>Communication 132, Team Events (2)</td>
<td></td>
</tr>
<tr>
<td>Communication 133, Voice and Diction for Effective Communication (3)</td>
<td></td>
</tr>
<tr>
<td>Communication 134, Oral Interpretation (3)</td>
<td></td>
</tr>
<tr>
<td>Communication 135, Reader’s Theatre(3)</td>
<td></td>
</tr>
<tr>
<td>Communication 230, Advanced Forensics Team (4-6)</td>
<td></td>
</tr>
<tr>
<td>Communication 231, Individual Events (2)</td>
<td></td>
</tr>
<tr>
<td>Communication 232, Team Events (2)</td>
<td></td>
</tr>
<tr>
<td>Select six (6) units from the following:</td>
<td>6</td>
</tr>
<tr>
<td>Any of the above courses not already completed, but no more than 2 additional units of Communication 130, Communication 131, Communication 132, Communication 230, Communication 231, or Communication 232 (2-6)</td>
<td></td>
</tr>
<tr>
<td>Communication 102, Listening (1.5)</td>
<td></td>
</tr>
<tr>
<td>Library and Information Studies 103, Advanced Internet Research (1)</td>
<td></td>
</tr>
</tbody>
</table>

TOTAL 18

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
Communication 120H
Honors Introduction to Intercultural Communication
Unit(s): 3.0
Class Hours: 48 Lecture total.
Prerequisite: A high school or college GPA of 3.0 or above.
Enriched for honors students. In-depth, seminar format examination of sociological, psychological, and communication patterns of major cultural groups. Methods, skills, and techniques for effective intercultural communication. Stress analytical thinking and argumentation. CSU/UC (C-ID)

Communication 130
Forensics Team
Unit(s): 4.0-6.0
Class Hours: 48 Lecture total, 48-144 Laboratory total.
Prerequisite: Communication 130.
Recommended Preparation: Communication 100, 100H, 101, 110 or 111.
Enriched approach in application, techniques and in-depth analysis of male and female communication regarding language usage, biological and social influences, mass media, marriage, organizations, same-sex/cross-sex friendships and education. Students will be required to do individual/group professor-guided research. CSU/UC

Communication 131
Individual Events
Unit(s): 2.0
Class Hours: 96 Laboratory total.
Individual Forensics events training for intercollegiate speech competition. Instruction and direction for the preparation, creation and performance of interpretation of literature programs, limited preparation speeches, readers' theater, public debate, and general public address. Students are required to participate in off-campus forensics events. May be repeated. CSU

Communication 132
Team Events
Unit(s): 2.0
Class Hours: 96 Laboratory total.
Team Forensics events training for intercollegiate speech competition. Instruction and direction for the creation and performance of readers' theater. Preparation for current event debates and limited preparation parliamentary debate. Students are required to participate in community and civil debates. May be repeated. CSU

Communication 133
Voice and Diction for Effective Communication
Unit(s): 3.0
Class Hours: 48 Lecture total.
Basic speech and voice production. Anatomy and physiology related to respiration (breathing/loudness), phonation (sound/pitch) and articulation (diction/clarity). Practice in improving vocal skills for effective communication. Designed for individuals who have special demands on vocal production in their vocation. CSU

Communication 134
Oral Interpretation
Unit(s): 3.0
Class Hours: 48 Lecture total.
Performance of prose, poetry, and drama; practice in speaking, interpretation, and analysis of literature, with training in the principles of effective delivery. CSU/UC (C-ID)

Communication 135
Reader's Theatre
Unit(s): 3.0
Class Hours: 48 Lecture total.
Research, construct, rehearse, and perform interpretation of literature in an ensemble theatrical setting. Learn basic elements of choral reading, singing, and movement. CSU/UC

Communication 225
Gender Communication
Unit(s): 3.0
Class Hours: 48 Lecture total.
Prerequisite: Communication 100, 100H, 101, 110 or 111.
Recommended Preparation: Communication 100, 100H, 101, 110 or 111.
Practical application, techniques and in-depth analysis of male and female communication regarding language usage, biological and social influences, mass media, marriage, organizations, same-sex/cross-sex friendships and education. CSU/UC

Communication 225H
Honors Gender Communication
Unit(s): 3.0
Class Hours: 48 Lecture total.
Prerequisite: A high school or college GPA of 3.0 or above.
Recommended Preparation: Communication 100, 100H, 101, 110 or 111.
Enriched approach in application, techniques and in-depth analysis of male and female communication regarding language usage, biological and social influences, mass media, marriage, organizations, same-sex/cross-sex friendships and education. Students will be required to do individual/group professor-guided research. CSU/UC

Communication 230
Advanced Forensics Team
Unit(s): 4.0-6.0
Class Hours: 48 Lecture total, 48-144 Laboratory total.
Prerequisite: Communication 130.
This course is designed to prepare students to participate at an advanced level in intercollegiate speech competition. Includes instruction and direction for the junior competition of: interpretation of literature programs, limited preparation speeches, readers' theater, public debate, and general public address. Focuses on mentoring and coaching novice members. Students are required to participate in off-campus forensics events. May be repeated. CSU

Communication 231
Individual Events
Unit(s): 2.0
Class Hours: 96 Laboratory total.
Individual Forensics events training for intercollegiate speech competition. Instruction and direction for the preparation, creation and performance of interpretation of literature programs, limited preparation speeches, and general public address. Students are required to participate in off-campus forensics events. May be repeated. CSU

Communication 232
Team Events
Unit(s): 2.0
Class Hours: 96 Laboratory total.
Team Forensics events training for Junior intercollegiate speech competition. Instruction and direction for the creation and performance of: interpretation of literature programs, limited preparation speeches, readers' theater, public debate, and general public address. Students are required to participate in off-campus forensics events. May be repeated. CSU

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
COMPUTER INFORMATION SYSTEMS (CIS)

Division of Business and Career Technical Education

Dean: Von Lawson
Department Co-Chairs, Business: Steven Deely, Stewart Myers
Faculty: Ronald Kessler, Stewart Myers, Andy Salcido

The associate degree and certificate of achievement in computer information systems are concerned with the development of procedures which are effective and efficient, computer languages suitable for starting these procedures, and systems for executing the procedures. This may include the ability to write programs in Visual BASIC, C++ or Java and applications such as Excel. Graduates of the program are prepared for employment as trainees in information systems, computer programming, and systems analysis. Completion of the degree provides background for curriculum at a four-year institution such as the California State University system at Fullerton or Pomona. Students intending to obtain a bachelor’s degree in Computer Information Systems should consult the major requirements for upper-division standing listed under the Business Administration major at the school of their choice.

Associate in Science

Computer Information Systems (11902)

Learning Outcome(s)

Upon successful completion of the major requirements for this degree, students will be able to

• Demonstrate knowledge and practice of CIS systems and computer science.

Major requirements* Units

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting 101, Financial Accounting</td>
<td>4</td>
</tr>
<tr>
<td>Business 150, Introduction to Information Systems and Applications</td>
<td>3</td>
</tr>
<tr>
<td>Computer Information Systems 106, Microsoft Excel</td>
<td>3</td>
</tr>
<tr>
<td>Computer Science 105, Visual BASIC Programming</td>
<td>3</td>
</tr>
<tr>
<td>Computer Science 112, Java Programming</td>
<td>3</td>
</tr>
<tr>
<td>Computer Science 120, Introduction to Programming</td>
<td>3</td>
</tr>
<tr>
<td>Select one (1) course from the following:</td>
<td>3-4</td>
</tr>
<tr>
<td>Accounting 102, Managerial Accounting</td>
<td></td>
</tr>
<tr>
<td>Computer Information Systems 103, Microsoft Word</td>
<td>3</td>
</tr>
<tr>
<td>Computer Information Systems 108, Microsoft Access</td>
<td>3</td>
</tr>
<tr>
<td>Computer Information Systems 110/Public Works 110, Introduction to Microsoft Project</td>
<td>3</td>
</tr>
<tr>
<td>Computer Information Systems 130, HTML and JavaScript (3)</td>
<td></td>
</tr>
<tr>
<td>Computer Information Systems 132, JavaScript (3)</td>
<td></td>
</tr>
<tr>
<td>Computer Information Systems 203, Windows 8 Store Applications with JavaScript (3)</td>
<td></td>
</tr>
<tr>
<td>Computer Science 121, Programming Concepts (3)</td>
<td></td>
</tr>
<tr>
<td>Computer Science 205, Advanced Visual Basic (3)</td>
<td></td>
</tr>
<tr>
<td>Computer Science 213, C# Programming (3)</td>
<td></td>
</tr>
</tbody>
</table>

TOTAL 22-23

Certificate of Achievement

Computer Information Systems (21647)

Learning Outcome(s)

Upon successful completion of the requirements for this certificate, students will be able to

• Demonstrate knowledge and practice of CIS systems and computer science.
• Demonstrate knowledge of software applications.
• Have knowledge to gain employment.

Certificate requirements Units

<table>
<thead>
<tr>
<th>Course</th>
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</tr>
<tr>
<td>Computer Information Systems 106, Microsoft Excel</td>
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<tr>
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<tr>
<td>Computer Science 112, Java Programming</td>
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<tr>
<td>Computer Science 120, Introduction to Programming</td>
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</tr>
<tr>
<td>Select one (1) course from the following:</td>
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</tr>
<tr>
<td>Accounting 102, Managerial Accounting</td>
<td></td>
</tr>
<tr>
<td>Computer Information Systems 103, Microsoft Word</td>
<td>3</td>
</tr>
<tr>
<td>Computer Information Systems 108, Microsoft Access</td>
<td>3</td>
</tr>
<tr>
<td>Computer Information Systems 110/Public Works 110, Introduction to Microsoft Project</td>
<td>3</td>
</tr>
<tr>
<td>Computer Information Systems 130, HTML and JavaScript (3)</td>
<td></td>
</tr>
<tr>
<td>Computer Information Systems 132, JavaScript (3)</td>
<td></td>
</tr>
<tr>
<td>Computer Information Systems 203, Windows 8 Store Applications with JavaScript (3)</td>
<td></td>
</tr>
<tr>
<td>Computer Science 121, Programming Concepts (3)</td>
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<tr>
<td>Computer Science 205, Advanced Visual Basic (3)</td>
<td></td>
</tr>
<tr>
<td>Computer Science 213, C# Programming (3)</td>
<td></td>
</tr>
</tbody>
</table>

TOTAL 22-23

Courses

Computer Information Systems 101
Introduction to Microsoft Office
Unit(s): 3.0
Class Hours: 48 Lecture total.
Learn the basics of Microsoft Office, a suite of applications for Windows (Word, Excel, Access and PowerPoint). Acquire skills for creating, formatting, printing and editing business documents. CSU

Computer Information Systems 103
Microsoft Word
Unit(s): 3.0
Class Hours: 48 Lecture total.
Recommended Preparation: Ability to type.
Step-by-step procedures are taught for creating, editing, and printing business documents with Microsoft Word. CSU

Computer Information Systems 105
Introduction to Microsoft Excel
Unit(s): 1.5
Class Hours: 24 Lecture total.
Introduction to Excel spreadsheets including formatting, graphics, and formulas common to business applications. Prepares student for MS Excel Certification. CSU

Computer Information Systems 106
Microsoft Excel
Unit(s): 3.0
Class Hours: 48 Lecture total.
Introduction to Microsoft Excel and how it facilitates solving business problems. Covers data management and reporting using spreadsheets, charts, database tools and macros. CSU

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
Computer Information Systems 108
Microsoft Access
Unit(s): 3.0
Class Hours: 48 Lecture total.
Relational Database Management using Microsoft Access. Includes design, creation and maintenance of a Relational Database Management System (RDBMS), reports and form generation, queries, importing and exporting data, macros and modules using Access. 

Computer Information Systems 110
Introduction to Microsoft Project
Unit(s): 3.0
Class Hours: 48 Lecture total.
How to plan a project, identify and create tasks, estimate workloads and durations, setup project schedules, maintain the schedule, assign resources, connect resources to tasks, setup a project budget, track progress utilize reports and close a project using Microsoft Project. (Same as Public Works 110.)

Computer Information Systems 124
Adobe Photoshop
Unit(s): 3.0
Class Hours: 48 Lecture total.
Students learn how to use the capabilities of Adobe Photoshop, an image editing program, to enhance the creativity and production of desktop projects. Previous class in scanning is advisable.

Computer Information Systems 126
Website Development for Business
Unit(s): 3.0
Class Hours: 48 Lecture total.
Learn the basic concepts of website design, development and publishing using HTML (Hypertext Markup Language). Students will design and create a functional web site incorporating hyper-links, tables, frames, forms, and digital graphics images.

Computer Information Systems 130
HTML and JavaScript
Unit(s): 3.0
Class Hours: 48 Lecture total.
Introduction to Hypertext Markup Language (HTML) and JavaScript (JS) and the creation of Hypertext documents. Topics will include the specification of the form and function of documents, inclusion of hypertext links, images, tables, forms, JavaScript functions, and new features of HTML and JS as they relate to web programming.

Computer Information Systems 132
JavaScript
Unit(s): 3.0
Class Hours: 48 Lecture total.
Students will be introduced to the syntax of JavaScript, the methods used to incorporate JavaScripts into HTML documents, and using JavaScripts to create interactive forms. Students will also learn to enhance Web Pages through the use of Interactive Programming utilizing Forms, Frames, Documents, Windows, Loops, Strings, and Cookies.

Computer Information Systems 159
Introduction to iOS/iPhone Mobile App Development
Unit(s): 3.0
Class Hours: 48 Lecture total.
Introduction to mobile application development for iPhones and other iOS devices using beginning programming concepts and skills.

Computer Information Systems 203
Windows 8 Store Applications with JavaScript
Unit(s): 3.0
Class Hours: 48 Lecture total.
Recommended Preparation: Computer Science 213 or experience with C# is strongly recommended.
Students will be introduced to the Windows 8 store applications model which use HyperText Markup Language (HTML) 5 and JavaScript to create applications. Students will use Extensible Application Markup Language (XAML), JavaScript, Extensible Markup Language (XML) and Cascading Style Sheets (CSS) to create interactive apps suitable for uploading to the Windows store.

Computer Information Systems 259
Advanced iOS/iPhone Mobile App Development
Unit(s): 3.0
Class Hours: 48 Lecture total.
Recommended Preparation: Computer Information Systems 159 or similar programming experience.
Advanced techniques for mobile application development for iPhones and other iOS devices using Objective-C programming.

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
COMPUTER SCIENCE (CMPR)

Division of Business and Career Technical Education

Dean: Von Lawson
Department Co-Chairs, Business: Steven Deeley, Stewart Myers
Faculty: Ronald Kessler, Stewart Myers

Computer science courses are designed to meet the varying goals of students interested in employment or education in the computer field. There are courses on specific languages for professionals who want to supplement their skills with the knowledge of a current programming language (PC assembler, C++, Visual BASIC, Java). A certificate in computer science can be earned by those students desiring to enter the workplace at entry-level positions. Also, an associate degree can be earned by those students desiring to transfer to a four-year institution with a major in Computer Science.

The computer science courses provide instruction in low level and high level languages, intermediate and advanced techniques in programming, and hardware organization.

Associate in Science
Computer Science (11903)

Learning Outcome(s)
Upon successful completion of the major requirements for this degree, students will be able to

• Demonstrate knowledge and practice of CIS systems and computer science.

Major requirements*

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer Science 100, The Computer and Society</td>
<td>3</td>
</tr>
<tr>
<td>Computer Science 120, Introduction to Programming</td>
<td>3</td>
</tr>
<tr>
<td>Computer Science 121, Programming Concepts</td>
<td>3</td>
</tr>
<tr>
<td>Computer Science 129, Introduction to Computer Organization</td>
<td>4</td>
</tr>
<tr>
<td>Computer Science 131, Data Structures Concepts</td>
<td>3</td>
</tr>
<tr>
<td>Select one (1) course from the following:</td>
<td>3</td>
</tr>
<tr>
<td>Computer Science 112, Java Programming (3)</td>
<td></td>
</tr>
<tr>
<td>Computer Science 205, Advanced Visual Basic (3)</td>
<td></td>
</tr>
<tr>
<td>Computer Science 213, C# Programming (3)</td>
<td></td>
</tr>
<tr>
<td>Select two (2) courses from the following:</td>
<td>7-8</td>
</tr>
<tr>
<td>Computer Science 105, Visual BASIC Programming (3)</td>
<td></td>
</tr>
<tr>
<td>Mathematics 180/180H, Analytical Geometry and Calculus (4)</td>
<td></td>
</tr>
<tr>
<td>Mathematics 185, Analytic Geometry and Calculus (4)</td>
<td></td>
</tr>
</tbody>
</table>

TOTAL 26-27

Certificate of Achievement
Computer Science (21649)

Learning Outcome(s)
Upon successful completion of the requirements for this certificate, students will be able to

• Demonstrate knowledge and practice of CIS systems and computer science.

Certificate requirements

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer Science 100, The Computer and Society</td>
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</tr>
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<td>Computer Science 131, Data Structures Concepts</td>
<td>3</td>
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<tr>
<td>Select one (1) course from the following:</td>
<td>3</td>
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<tr>
<td>Computer Science 112, Java Programming (3)</td>
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<tr>
<td>Computer Science 205, Advanced Visual Basic (3)</td>
<td></td>
</tr>
<tr>
<td>Computer Science 213, C# Programming (3)</td>
<td></td>
</tr>
<tr>
<td>Select two (2) courses from the following:</td>
<td>7-8</td>
</tr>
<tr>
<td>Computer Science 105, Visual BASIC Programming (3)</td>
<td></td>
</tr>
<tr>
<td>Mathematics 180/180H, Analytical Geometry and Calculus (4)</td>
<td></td>
</tr>
<tr>
<td>Mathematics 185, Analytic Geometry and Calculus (4)</td>
<td></td>
</tr>
</tbody>
</table>

TOTAL 26-27

Certificate of Proficiency
Applied Robotics and Embedded Programming

The certificate of proficiency in applied robotics and embedded programming will lead to entry-level employment in computer science, engineering and other areas where high aptitude in computer programming is recognized. The program prepares students for careers as robotics technicians, engineering technicians, and junior programmers.

Learning Outcome(s)
Upon successful completion of the requirements for this certificate, students will be able to

• Demonstrate and apply knowledge of common microprocessors and design software applications which can be used in industry-standard embedded devices.

Certificate requirements

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer Science 112, Java Programming</td>
<td>3</td>
</tr>
<tr>
<td>Computer Science 157, Introduction to Robotics Programming</td>
<td>3</td>
</tr>
<tr>
<td>Computer Science 205, Advanced Visual Basic</td>
<td>3</td>
</tr>
<tr>
<td>Computer Science 213, C# Programming</td>
<td>3</td>
</tr>
<tr>
<td>Computer Science 257, Applied Robotics and Embedded Programming</td>
<td>3</td>
</tr>
</tbody>
</table>

TOTAL 15

Courses

Computer Science 100
The Computer and Society
Unit(s): 3.0
Class Hours: 48 Lecture total.

An introduction to the area of computers and their relationship to today's information society. Examines a broad overview of topics including: hardware, software, networking, information technology, and the internet. The student will explore the implication and effect of technology on society, careers and ethics. *CSU/UC

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
Computer Science 105
Visual BASIC Programming
Unit(s): 3.0
Class Hours: 48 Lecture total.
Introduction to programming and Visual BASIC. Emphasis on programming fundamentals and the creation of applications with Visual BASIC. No previous programming experience required. **CSU/UC**

Computer Science 112
Java Programming
Unit(s): 3.0
Class Hours: 48 Lecture total.
Study of the Java language, its features and applications. Previous structured programming experience recommended. **CSU/UC**

Computer Science 120
Introduction to Programming
Unit(s): 3.0
Class Hours: 48 Lecture total, 16 Laboratory total.
Prerequisite: Mathematics 080.
Introduction to programming concepts including data types, mathematical operations, elementary input/output, and the basic control structures of sequence, selection, iteration and functions. Program design techniques utilizing structured and object-oriented methodologies will be emphasized. **CSU/UC**

Computer Science 121
Programming Concepts
Unit(s): 3.0
Class Hours: 48 Lecture total, 16 Laboratory total.
Prerequisite: Computer Science 120.
Continuing introduction to programming concepts, development of algorithms utilizing functions, classes and the primary control structures. Program I/O; strings and arrays; data types: classes and objects. Documentation techniques. **CSU/UC**

Computer Science 129
Introduction to Computer Organization
Unit(s): 4.0
Class Hours: 64 Lecture total.
Recommended Preparation: Computer Science 120 or equivalent.
Presents the organization and structure of computers at hardware and software levels: analysis and synthesis of combinatorial and sequential logic, data representation and manipulation, language structures and translation, and process administration and management. **CSU/UC**

Computer Science 131
Data Structures Concepts
Unit(s): 3.0
Class Hours: 48 Lecture total.
Prerequisite: Computer Science 121.
Application of simple Data Structures Concepts (ADT’s) including linked structures, stacks, queues and trees. Use of pointers, recursion, sorting algorithms, classes and object-oriented programming to implement Data Structures. **CSU/UC**

Computer Science 157
Introduction to Robotics Programming
Unit(s): 3.0
Class Hours: 48 Lecture total.
Introduction to Robotics Programming using the LEGO Mindstorms platform. Basic mechanical, electronics, and control issues in Robotics are discussed, including the design and implementation of robotic systems. Students program a robot using several programming languages including the LEGO “NXT-G” programming language, as well as RobotC, Not Exactly C (NXC), and Visual Basic. **CSU**

Computer Science 205
Advanced Visual Basic
Unit(s): 3.0
Class Hours: 48 Lecture total.
Prerequisite: Computer Science 105.
Advanced programming for those seeking to further develop their skills using Visual Basic programming language. Course will cover the advanced features of Visual Basic programming language, data structures and advanced programming techniques available with Visual Basic. **CSU/UC**

Computer Science 213
C# Programming
Unit(s): 3.0
Class Hours: 48 Lecture total.
Recommended Preparation: Computer Science 121.
Study of C# programming. Topics covered include the .NET environment, object-oriented programming, relational databases, and creation of graphical user interfaces. **CSU/UC**

Computer Science 257
Applied Robotics and Embedded Programming
Unit(s): 3.0
Class Hours: 48 Lecture total.
Introduction to microprocessors for devices used in robotics, telephones, tablet PC’s, the automotive industry, and home automation. The Basic Stamp and Propeller microprocessors and Single-Board Computers (SBC) will be used to design and implement robotic systems using PBasic and RobotC programming languages. **CSU**

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.*
COSMETOLOGY (COSM)

Division of Business and Career Technical Education

Dean: Von Lawson

The associate degree and certificate of achievement in cosmetology are designed to exceed minimum Board of Cosmetology standards. A combination of lecture and laboratory instruction includes personal hygiene and grooming; salesmanship and skills in serving the public; antisepsis, bacteriology, sterilization, and principles of sanitation; use of electrical appliances and principles of electricity; safety requirements in operation of cosmetic materials; laws and administrative regulations. Proficiencies to be developed include hairdressing, chemical waving and straightening, haircutting and shaping, hair coloring, scalp and hair treatments, facials, manicuring, and operation of a beauty salon.

The student may enroll at any time. Students should be prepared to purchase a basic cosmetology kit. Courses are offered on an open enrollment basis.

Associate in Science Cosmetology (11948)

Learning outcome(s)
Upon successful completion of the major requirements for this degree, students will be able to
- Pass the California State Board Cosmetology/Barbering/Esthetician written and manipulative exams and score at least an 80% on a mock exam given at the training site.
- Provide services to clients, in a clinical setting, in a safe, professional and ethical manner that is satisfactory to the clients surveyed with a minimum of 90% satisfaction on an evaluation of their experience.

Certificate of Achievement Cosmetology (21674)

Learning outcome(s)
- Pass the California State Board Cosmetology/Barbering/Esthetician written and manipulative exams and score at least an 80% on a mock exam given at the training site.
- Provide services to clients, in a clinical setting, in a safe, professional and ethical manner that is satisfactory to the clients surveyed with a minimum of 90% satisfaction on an evaluation of their experience.

Certificate of Proficiency Esthetician

The certificate of proficiency in esthetician is designed to exceed minimum California State Board of Cosmetology standards. A combination of lecture and laboratory instruction includes personal hygiene and grooming; salesmanship and skills in serving the public; bacteriology, sterilization and sanitation; use of electrical machines and appliances and principles of electricity; safety requirements in operation of a skin care salon; fundamentals of physiology; principles of chemistry and composition of cosmetic materials; fundamentals of nutrition; laws and administrative regulations; skin care techniques; make up.

The student may enroll at any time. Students should be prepared to purchase basic skin care tools. Courses are offered on an open enrollment basis.

Learning Outcome(s)
- Pass the California State Board Cosmetology/Barbering/Esthetician written and manipulative exams and score at least an 80% on a mock exam given at the training site.
- Provide services to clients, in a clinical setting, in a safe, professional and ethical manner that is satisfactory to the clients surveyed with a minimum of 90% satisfaction on an evaluation of their experience.

Certificate requirements Units
Cosmetology 080, Esthetician 13
TOTAL 13

Certificate of Proficiency Manicuring

The certificate of proficiency in manicuring is designed to exceed minimum California State Board of Cosmetology standards. A combination of lecture and laboratory instruction includes personal hygiene and grooming; salesmanship and skills in serving the public; antisepsis, bacteriology, sterilization, and principles of sanitation; use of electrical appliances and principles of electricity; safety requirements in operation of a nail salon; fundamentals of physiology; principles of chemistry and composition of cosmetic materials; laws and administrative regulations.

The student may enroll at any time. Students should be prepared to purchase a basic manicuring kit. Courses are offered on an open enrollment basis.

Learning Outcome(s)
Upon successful completion of the requirements for this certificate, students will be able to
- Pass the California State Board Cosmetology/Barbering/Esthetician written and manipulative exams and score at least an 80% on a mock exam given at the training site.
- Provide services to clients, in a clinical setting, in a safe, professional and ethical manner that is satisfactory to the clients surveyed with a minimum of 90% satisfaction on an evaluation of their experience.

Certificate requirements Units
Cosmetology 050, Manicuring 8
TOTAL 8

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
Courses

Cosmetology 040
Cosmetology
Unit(s): 0.5-38.0
Class Hours: 9-680 Lecture total, 12-920 Laboratory total.
Principles and practices in cosmetology. Preparation for Board Examination for licensing by the State of California Board of Barbering and Cosmetology. Laboratory participation includes student demonstration that all performance objectives have been met. Basic cosmetology kit at student's expense. Open Entry/Open Exit.

Cosmetology 050
Manicuring
Unit(s): 0.5-8.0
Class Hours: 3-50 Lecture total, 22-350 Laboratory total.
Complete instruction of nail care as required by State Board of Barbering and Cosmetology for licensure preparation to operate a nail salon. Nail sculpture included. All phases of artificial nails covered. Student must purchase basic manicuring tools. Open Entry/Open Exit.

Cosmetology 070
Barbering
Unit(s): 0.5-35.0
Class Hours: 8-525 Lecture total, 14-975 Laboratory total.
Instruction in the theory of barbering as required by the State Board of Barbering and Cosmetology and licensor preparation. Barbering kit at student's expense. Open Entry/Open Exit.

Cosmetology 080
Esthetician
Unit(s): 0.5-13.0
Class Hours: 3-75 Lecture total, 20-525 Laboratory total.
Instruction in the theory and practical applications of an esthetician as required by the State of California Barbering and Cosmetology Board. Basic skin care tools at student's expense. Open Entry/Open Exit.

COUNSELING (CNSL)

Division of Counseling and Student Support Services
Dean: Ruth Babeshoff
Department Co-Chairs, Counseling: Phillip Crabill, Jennifer Coto
Faculty: Leonor Aguilera, Nena Baldizon-Rios, Rudy Carrion, Maria Chairez, Phillip Crabill, Jennifer Coto, Dora Escobar, Rosemarie Enriquez, Song Graham, Lacy Hedenberg, Janis Perry, Barry Resnick, Judy Strother

The Counseling Department offers counseling classes that provide students an opportunity to discover their interests, values, personality and skills. These courses allow students to learn more about themselves as they explore careers and majors and to develop comprehensive student education plans to help them reach their educational goals.

Courses

Counseling 101
Educational, Personal, Cultural, and Career Exploration
Unit(s): 3.0
Class Hours: 48 Lecture total.
Designed to promote academic and career success by exploring student development from an educational, sociological, psychological and physiological perspective. Exploration of higher education opportunities, potential career interests and a focus on educational planning. Recommended for students planning to complete an associate degree, and/ or to transfer to a university. CSU/UC

Counseling 106
Inquiries Into Higher Education
Unit(s): 1.0
Class Hours: 16 Lecture total.
A comprehensive and advanced study of selecting and completing an academic plan, developing goals and objectives and choosing a college major. Topics include: study techniques, assessing interests and skills and planning a major. Grade: Pass/No Pass. CSU

Counseling 110
University Transfer Research
Unit(s): 0.5-2.0
Class Hours: 8-32 Lecture total.
Development and enhancement of decision-making strategies for transfer students. Identification of education/career goals. Analysis, comparison, and evaluation of university entrance, major, and post-graduate requirements and student services. On-site research/field study at universities. CSU

Counseling 111
Learning Skills Development
Unit(s): 1.0
Class Hours: 16 Lecture total.
Application of educational/psychological principles in the development of effective learning skills for college courses. Topics also include identifying diversities of cultural influence, learning style, time management, textbook study/comprehension, note-taking, research preparation and testing. CSU

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
Counseling 113
Learning Strategies for College Success
Unit(s): 3.0
Class Hours: 48 Lecture total.
Students will develop learning strategies that will help them to succeed in college level courses. Students will learn to establish effective study habits suited to individual learning styles by focusing on technique and practice. Learning Strategies surveyed will include: time management, listening, notetaking, textbook study, exam preparation, memory techniques, library skills and critical reading. Students will be introduced to lifestyle techniques that promote a healthy work/life balance for busy college students and working adults. CSU

Counseling 116
Career/Life Planning and Personal Exploration
Unit(s): 3.0
Class Hours: 48 Lecture total.
The course is designed to assist students in successfully establishing and achieving education, career and life goals. Students are guided through a reflective process that focuses on values, interests, personality, skills, and learning styles. Career and education options are researched. Students are exposed to college resources and support services. Decision making models and goal setting techniques are examined and will be used to develop short and long term education, career and life plans. Materials fee required. CSU/UC

Counseling 118
Self Exploration and the Teaching Profession
Unit(s): 2.0
Class Hours: 32 Lecture total.
An exploration of 'self' through a reflective process that focuses on values, interests, skills and personality as applied to the teaching profession and alternate professional choices. Topics include personal effectiveness, increasing cultural sensitivity, psychological and sociological forces within the workplace, career ladders and options, and academic preparation required for employment. Decision making models and goal setting techniques are examined and will be used to develop short and long term education, career and life plans. Materials fee required. CSU

Counseling 150
Introduction to Human Services
Unit(s): 3.0
Class Hours: 48 Lecture total.
The history and philosophy of human services including theoretical frameworks, the function and orientation of human services organizations and the roles and qualifications of human services workers. A study of the target populations served by the human services and the professional, ethical and cultural issues facing the human services field. CSU

CRIMINAL JUSTICE (CJ)

Division of Business and Career Technical Education
Dean: Von Lawson

Courses

Criminal Justice 101
Introduction to Criminal Justice
Unit(s): 3.0
Class Hours: 48 Lecture total.
A survey of the philosophy and history of the criminal justice system (law enforcement, courts, corrections); processes of justice from detection of crime to parole; evaluation of modern criminal justice delivery systems. CSU/UC

DANCE (DNCE)
Division of Arts, Humanities and Social Sciences/Library
Dean: Marilyn Flores
Department Chair, Performing Arts: Binh Vu

Courses

Dance 100
Dance History and Appreciation
Unit(s): 3.0
Class Hours: 48 Lecture total.
The development of dance in Western Europe and the U.S. from ancient times to the present. Explores dance as an emerging art form from the Renaissance to the 21st century. Emphasizes the contemporary dance heritage of the United States. CSU/UC

Dance 106A
Introduction to Modern Dance
Unit(s): 1.0
Class Hours: 8 Lecture total, 24 Laboratory total.
An introduction to modern dance emphasizing movement technique, dance vocabulary, and creative individual expression. Includes an introduction to choreographic principles and the historical/cultural context of American modern dance. For the student with little or no dance experience. CSU/UC

Dance 106B
Introduction to Modern Dance
Unit(s): 1.0
Class Hours: 8 Lecture total, 24 Laboratory total.
This course further explores the technical and expressive elements of modern dance. Students will practice floor exercises, axial/positional movements and locomotor patterns at an intermediate level. Deepening an understanding of historical significance, dance vocabulary and creative individual expression. Strengthening an understanding of choreographic principles and cultural context of American modern dance. CSU/UC

Dance 108A
Introduction to Ballet
Unit(s): 1.0
Class Hours: 8 Lecture total, 24 Laboratory total.
Introduction to basic ballet emphasizing movement technique, dance vocabulary, and creative individual expression. Students learn basic ballet barre exercises, center work, and short dance works. Includes an introduction to choreographic principles and cultural context of ballet. For the student with little or no dance experience. CSU/UC

Dance 108B
Introduction to Ballet
Unit(s): 1.0
Class Hours: 8 Lecture total, 24 Laboratory total.
This course further explores the technical and expressive elements of ballet technique, dance vocabulary, and creative individual expression. Students will practice ballet barre exercises, center work, and short dance works at an intermediate level. Strengthening an understanding of historical significance, choreographic principles and cultural context of ballet. CSU/UC

Dance 115A
Introduction to Tap Dance
Unit(s): 1.0
Class Hours: 8 Lecture total, 24 Laboratory total.
Introduction to basic tap dance technique. Focuses on the mastery of basic tap steps and simple dance combinations. Recommended for theatre and dance majors. For the student with little or no dance experience. CSU/UC

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
Dance 115B
Introduction to Tap Dance
Unit(s): 1.0
Class Hours: 8 Lecture total, 24 Laboratory total.
Recommended Preparation: Dance 115A.

This course further explores the technical and expressive elements of tap dance. Students will practice skills necessary for execution of traditional tap dance steps and sequences at an intermediate level. Strengthening intermediate steps leading to combination work in complete dances. **CSU/UC**

Dance 119A
Introduction to Jazz Dance
Unit(s): 1.0
Class Hours: 8 Lecture total, 24 Laboratory total.

Introduction to jazz dance technique emphasizing elementary movement technique, vocabulary and creative expression. Includes an introduction to composition and cultural context of jazz. For students with little or no dance experience. **CSU/UC**

Dance 119B
Introduction to Jazz Dance
Unit(s): 1.0
Class Hours: 8 Lecture total, 24 Laboratory total.

This course further explores the technical and expressive elements of jazz dance. Students will practice body alignment, locomotor movements, hitch kicks and leaps. Deepening an understanding of jazz dance, movement technique, vocabulary and creative expression. Strengthening an understanding of composition and cultural context of traditional and contemporary jazz dance forms. **CSU/UC**

**EARTH SCIENCE (ERTH)**

Division of Mathematics and Sciences

Dean: Martin Stringer
Department Chair, Earth Sciences: Debra Brooks
Faculty: Debra Brooks, Eric Hovanitz

**Courses**

Earth Science 110
Introduction to Earth Science
Unit(s): 3.0
Class Hours: 48 Lecture total.

A study of the processes that shape and form Earth and define its place in the solar system. Introduction to the sciences of geology, oceanography, meteorology, and astronomy. Not open to students who are enrolled in or have credit in Geology 101 or Geography 101. **CSU/UC**

Earth Science 115
Earth Science for Educators
Unit(s): 4.0
Class Hours: 48 Lecture total, 48 Laboratory total.

The study of the dynamic forces shaping Earth, including its oceans and atmosphere, as well as an introduction to the solar system. This class is open to all majors but is oriented towards enhancing the Earth science knowledge of future teachers. Not open to students who are enrolled in or have credit in Earth Science 110, Geology 101, or Geography 101. **CSU/UC**

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.*
ECONOMICS (ECON)

Division of Arts, Humanities and Social Sciences/Library

Dean: Marilyn Flores
Department Co-Chairs, Social Sciences: Cari Cannon, Alexander Taber
Faculty: Alexander Taber

Associate in Arts
Economics for Transfer (32968)

Economics is the social science that studies how individuals, businesses, and governments make choices to cope with scarcity and the incentives that influence and reconcile those choices. The Associate in Arts in Economics for Transfer degree provides students with a program of basic courses which enables students to experience a seamless transition into a curriculum at a four-year institution leading to a baccalaute degree with career opportunities in economic research, consulting, accounting, and marketing in the areas of business, teaching, and public policy.

Learning Outcome(s)
Upon successful completion of the major requirements for this degree, students will be able to
- Identify and explain the fundamental economic problem of allocating scarce resources and the role of positive economics in explaining choices.
- Communicate using basic economic terminology, interpret relevant economic data, and follow and construct fundamental economic arguments.

Major requirements* Units

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economics 101, Principles/Micro</td>
<td>3</td>
</tr>
<tr>
<td>Economics 102, Principles/Macro</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics 219/219H, Statistics and Probability OR</td>
<td>4</td>
</tr>
<tr>
<td>Social Science 219/219H, Statistics and Probability Mathematics 150, Calculus for Biological, Management and Social Sciences OR</td>
<td>4</td>
</tr>
<tr>
<td>Mathematics 180/180H, Analytic Geometry and Calculus</td>
<td></td>
</tr>
</tbody>
</table>

Select one (1) course from the following (List A):
- Accounting 101, Financial Accounting (4)
- Mathematics 185, Analytic Geometry and Calculus (4)

Select one (1) course from the following (List B):
- Accounting 102, Managerial Accounting (4)
- Business 150, Introduction to Information Systems and Applications (3)
- Business 222, Business Writing (3)
- Mathematics 280, Intermediate Calculus (4)
- Mathematics 287, Introduction to Linear Algebra and Differential Equations (5)
- Mathematics 290, Linear Algebra (3)

TOTAL 21-22

Mathematics course chosen should be determined by the requirements of the intended upper division school of the student’s choice.

Courses

Economics 101 Principles/Micro
Unit(s): 3.0
Class Hours: 48 Lecture total.
Prerequisite: Mathematics 080.
Introduction to microeconomics, including basic economic concepts, analysis of markets, efficiency, consumer and firm behavior, industry structures, market failure, and resource markets.

Economics 102 Principles/Macro
Unit(s): 3.0
Class Hours: 48 Lecture total.
Prerequisite: Mathematics 080.
Introduction to macroeconomics, including basic economic concepts, analysis of markets, national income accounting, employment, short run business cycle fluctuations, long run growth trends, monetary and fiscal policies, and international economic issues. Intended for economics, business, and certain engineering/computer science majors. CSU/UC (C-ID)
EDUCATION (EDUC)

Division of Counseling and Student Support Services

Dean: Ruth Babeshoff
Department Chair, Education: Janis Perry

Education/Teaching

Students planning to teach in the elementary and secondary schools may begin preparation at Santiago Canyon College. The college offers programs of study which fulfill lower-division requirements for most university teacher credential programs.

Suggested Elementary Teaching Emphasis

Liberal Studies and Child Development are the two most common university majors of students who are planning to enter teacher preparation programs for an elementary teaching credential. However, any transfer major leading to a bachelor’s degree will fulfill admission requirements for teacher credential programs. Students should work with an SCC Counselor to assist them in choosing general education courses that will support their subject matter competency. Some universities offer students the option of obtaining a bachelor’s degree and a credential simultaneously. These types of programs are called “integrated” teaching programs and are best for students who have decided early to pursue a teaching credential. Planning for this type of program involves specific courses for the major and general education. Students are advised to work with an SCC counselor to plan this course of study.

Santiago Canyon College offers an elementary education degree, shown below, that has been designed to assist students in meeting the course requirements for most transfer elementary teaching programs and prepares them for California subject matter requirements. Santiago Canyon College also offers two courses, Counseling 118, Self-Exploration and the Teaching Profession and Education 110, The Teaching Experience: Exploration that have been developed to assist students in making career decisions related to teaching, inform students about the process of entering the profession and/or to investigate alternate career choices.

Associate in Arts

Elementary Teacher Education for Transfer (31735)

The Associate in Arts in Elementary Teacher Education for Transfer is designed to prepare students for transfer to a California State University traditional or integrated teacher preparation program, most commonly found in the Liberal Studies major. It incorporates the elementary subject matter competency requirements as established by the California Teacher Credentialing Commission. The AA-T degree program requirements and the recommended electives prepare students in content areas for the California Subject Examinations for Teachers (CSET) of Multiple Subjects. Additionally, the degree curriculum may also serve as preparation for paraprofessional positions in the K-12 classroom, meeting unit requirements for paraprofessionals as established by the No Child Left Behind Act.

Learning Outcome(s)

Upon successful completion of the major requirements for this degree, students will be able to:

• Identify elements of diversity and diverse learning styles in student populations and discover how teachers and schools can promote learning for all students.
• Demonstrate proficiency in 14 content areas required for subject matter competency for elementary teachers.

Major Requirements*  Units

| Education 200, Introduction to Elementary Classroom Teaching | 3 |
| Biology 109/109H, Fundamentals of Biology | 3 |
| Biology 109L, Fundamentals of Biology Laboratory | 1 |
| Communication 110, Public Speaking | 3 |
| English 101/101H, Freshman Composition | 4 |
| English 102/102H, Literature and Composition | 4 |
| Earth Science 115, Earth Science for Educators | 4 |
| Geography 100/100H, World Regional Geography | 3 |
| History 101/101H, World Civilizations to the 16th Century | 3 |
| History 120/120H, The United States to 1865 | 3 |
| Human Development 107, Child Growth and Development (DS1) | 3 |
| Mathematics 203, Fundamental Concepts of Elementary Mathematics | 4 |
| Political Science 101/101H, Introduction to American Governments | 3 |
| Physical Science 115, Concepts in Physical Sciences for Educators | 4 |

Select one (1) course from the following (List A):

| English 103/103H, Critical Thinking and Writing | 4 |
| Philosophy 110/110H, Critical Thinking | 4 |

Select one (1) course from the following (List B):

| Art 100/100H, Introduction to Art Concepts | 3 |
| Dance 100, Dance History and Appreciation | 3 |
| Music 101/101H, Music Appreciation | 3 |
| Theatre Arts 100, Introduction to Theatre | 3 |

Select eight (8) units from the following (List C):

| Education 101, American Schools and Society | 3 |
| Education 204, Proficiency in Educational Technologies for Secondary Teachers | 3 |
| Anthropology 104, Language and Culture | 3 |
| English 231, Survey of English Literature | 3 |
| English 232, Survey of English Literature | 3 |
| English 241, Survey of American Literature 1600-1865 | 3 |
| English 242, Survey of American Literature, 1865-Present | 3 |
| English 270, Children’s Literature | 3 |
| English 271, Survey of World Literature | 3 |
| English 272, Survey of World Literature | 3 |
| Ethnic Studies 101, Introduction to Ethnic Studies | 3 |
| French 102, Elementary French II | 5 |
| History 133, History of California | 3 |
| Mathematics 105, Mathematics for Liberal Arts Students | 3 |
| Mathematics 219/219H, Statistics and Probability | 4 |
| OR | 3 |
| Social Science 219/219H, Statistics and Probability | 4 |
| Philosophy 106/106H, Introduction to Philosophy | 3 |
| Philosophy 108, Ethics | 3 |
| Philosophy 112, World Religions | 3 |
| Spanish 102/102H, Elementary Spanish II | 5 |

TOTAL 60

California State University campuses have preferences on which List C courses should be chosen.

California State University Fullerton prefers one of the following: Anthropology 104 or English 270 or English 231, 232, 241, or 242
California State University Long Beach prefers these courses: Ethnic Studies 101, Education 204, and Philosophy 106 or 108 or 112
At SCC Mathematics 105 is a prerequisite to Mathematics 203 and may reduce the number of elective units in List C to 5 units.

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
Associate in Arts
Education Elementary Education (17759)

The associate degree in elementary education is designed to prepare students for transfer to a four-year university traditional or integrated elementary teacher education program. It incorporates elementary teaching subject matter requirements for preparation in subject matter competency as established by the California Teacher Credentialing Commission. The degree program requirements, and the general education recommended electives below, prepare students in content areas for the California Subject Examinations for Teachers (CSET) of Multiple Subjects. Additionally, the degree curriculum may also serve as preparation for paraprofessional positions in the K-12 classroom meeting unit requirements for paraprofessionals as established by the No Child Left Behind Act.

Learning Outcome(s)
Upon successful completion of the major requirements for this degree, students will be able to

- Identify elements of diversity and diverse learning styles in student populations and discover how teachers and schools can promote learning for all students.
- Demonstrate proficiency in academic content areas required for subject matter competency for elementary teachers.

Major requirements*

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Counseling 118</td>
<td>Self-Exploration and the Teaching Profession (2)</td>
<td>2-3</td>
</tr>
<tr>
<td>Education 110</td>
<td>The Teaching Experience: Exploration (3)</td>
<td>3</td>
</tr>
<tr>
<td>Education 101</td>
<td>American Schools and Society</td>
<td>3</td>
</tr>
<tr>
<td>Education 200</td>
<td>Introduction to Elementary Classroom Teaching</td>
<td>3</td>
</tr>
<tr>
<td>English 270</td>
<td>Children's Literature</td>
<td>3</td>
</tr>
<tr>
<td>Human Development 107</td>
<td>Child Growth and Development (DS1)</td>
<td>3</td>
</tr>
<tr>
<td>Earth Science 115</td>
<td>Earth Science for Educators</td>
<td>4</td>
</tr>
<tr>
<td>Physical Science 115</td>
<td>Concepts in Physical Sciences for Educators</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics 105</td>
<td>Mathematics for Liberal Arts Students (3)</td>
<td>3-4</td>
</tr>
<tr>
<td>Mathematics 203</td>
<td>Fundamental Concepts of Elementary Mathematics (4)</td>
<td></td>
</tr>
</tbody>
</table>

TOTAL 21-23

For those students following transfer patterns for elementary education programs the following general education electives are recommended to meet content area knowledge for the CSET. They may also be used to meet certain categories of the general education requirements for students not transferring and completing Plan A for the associate’s degree: Communication 110, English 103, Biology 109 and 109L, Physical Science 115, Math 105, History 101, History 120, Political Science 101, Geography 100, History 133, Anthropology 104; and Art 100, Music 100 and 101 or Theatre 100; and English 231, 232, 241, 242, 271 or 272.

Suggested Secondary Teaching Emphasis
Teaching at the secondary level (high school and middle school) requires a single subject credential. Students major in the subject they plan to teach and pass a subject matter competency exam or complete a state approved list of courses in the discipline. Students are advised to work with an SCC counselor to plan this course of study. Education 204 and Education 210, offered at SCC, are recommended prerequisites for secondary credential programs.

Certificate of Proficiency
After School Program Assistant

The certificate of proficiency in after school program assistant is intended to prepare a student for an entry-level position requiring practical skills and knowledge to work with children in an after-school care, tutoring, or mentoring program. Completion of this certificate leads to state certification for a School Age Assistant Permit.

Learning Outcome(s)
Upon successful completion of the requirements for this certificate, students will be able to

- Demonstrate knowledge of the practical skills and requirements to work at an entry-level with children, assisting a teacher, in an after-school care, tutoring, or mentoring program.

Certificate requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Counseling 118</td>
<td>Self Exploration and the Teaching Profession (2)</td>
<td>2-3</td>
</tr>
<tr>
<td>Education 110</td>
<td>The Teaching Experience: Exploration (3)</td>
<td>3</td>
</tr>
<tr>
<td>Education 113</td>
<td>Tutoring Reading in Elementary Schools</td>
<td>1</td>
</tr>
<tr>
<td>Human Development 110</td>
<td>Child Development (DS)</td>
<td>3</td>
</tr>
<tr>
<td>Human Development 121</td>
<td>School Age Child Care Activities (DS)</td>
<td>3</td>
</tr>
<tr>
<td>Physical Education 061</td>
<td>Introduction to Composition</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics N60</td>
<td>Elementary Algebra</td>
<td>0-4</td>
</tr>
</tbody>
</table>

TOTAL 9-17

Certificate of Proficiency
After School Program Associate Teacher

The certificate of proficiency in after school program associate teacher is intended to provide students with advanced skills necessary to work with K-12 students in an after-school setting, provide tutoring/ homework assistance, and assist in academic enrichment programs. In combination with the completion of the SCC After School Program Assistant Certificate, this certificate of completion leads to state certification for the School Age Associate Teacher Permit.

Learning Outcome(s)
Upon successful completion of the requirements for this certificate, students will be able to

- Demonstrate the advanced skills necessary to work with students in an after school program setting that includes knowledge of academic support/enrichment and activity programming.

Certificate requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication 110</td>
<td>Public Speaking</td>
<td>3</td>
</tr>
<tr>
<td>Counseling 118</td>
<td>Self Exploration and the Teaching Profession (2)</td>
<td>2-3</td>
</tr>
<tr>
<td>Education 110</td>
<td>The Teaching Experience: Exploration (3)</td>
<td>3</td>
</tr>
<tr>
<td>Education 113</td>
<td>Tutoring Reading in Elementary Schools</td>
<td>1</td>
</tr>
<tr>
<td>Human Development 107</td>
<td>Child Growth and Development (DS1)</td>
<td>3</td>
</tr>
<tr>
<td>Human Development 110</td>
<td>Child, Family and Community (DS2)</td>
<td>3</td>
</tr>
<tr>
<td>Human Development 121</td>
<td>School Age Child Care Activities (DS5)</td>
<td>3</td>
</tr>
</tbody>
</table>

TOTAL 15-16

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
Certificate of Proficiency
Special Education Paraprofessional

The certificate of proficiency in special education paraprofessional will prepare the student for an entry-level position requiring practical skills and knowledge to work with persons with disabilities in a variety of educational settings. This certificate program also supports the requirements of federal legislation that all paraprofessionals/instructional assistants/aides in Title I schools be "highly qualified". In addition, the course introduces the student to career opportunities in special education or other disability related fields and/or provide major preparation for transfer to four-year institutions to continue a course of study in special education.

Learning Outcome(s)

Upon successful completion of the requirements for this certificate, students will be able to

- Demonstrate analysis and knowledge of the personal and team roles and responsibilities of the Special Education Paraeducator in the public school which includes diagnosis and implementation strategies for students with special needs.

Certificate requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Counseling 118, Self Exploration and the Teaching Profession</td>
<td>2</td>
</tr>
<tr>
<td>Special Education Paraprofessional</td>
<td>3</td>
</tr>
<tr>
<td>Education 211, Classroom Practices for Diverse Learners</td>
<td>3</td>
</tr>
<tr>
<td>Human Development 107, Child Growth and Development (DS1)</td>
<td>3</td>
</tr>
<tr>
<td>Psychology 157, Introduction to Child Psychology</td>
<td>3</td>
</tr>
<tr>
<td>Human Development 205, Exceptionality and Special Needs in Human Development</td>
<td>3</td>
</tr>
<tr>
<td>Human Development 208, Working with Families of Children with Special Needs</td>
<td>3</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>17</strong></td>
</tr>
</tbody>
</table>

Students planning to transfer to CSU Fullerton's Human Services major—Person's with Disabilities Track will receive up to 17 units of credit toward the major if they have satisfactorily completed the requirements for this certificate.

Courses

Education 101
American Schools and Society
Unit(s): 3.0
Class Hours: 48 Lecture total.
Recommended Preparation: English 101/101H.
Introduction to the historical, sociological and psychological goals of American schools as a social/political institution. Topics include equality of educational opportunity; student diversity and multicultural education; economic, societal and political influences; teacher roles and responsibilities; curriculum standards; and the globalization of education. CSU/UC

Education 110
The Teaching Experience: Exploration
Unit(s): 3.0
Class Hours: 48 Lecture total.
An exploration of the teaching profession both from academic understanding and from experience gained through 20 hours of classroom observations, assisting in schools and educational centers and designing, preparing and teaching standards based lessons in grades K-12. Topics will include instructional techniques and skills for the teaching profession, exploration of diversity and student learning and roles and responsibilities of teachers. Career and life plans for the teaching profession will be developed. CSU

Education 113
Tutoring Reading in Elementary Schools
Unit(s): 1.0
Class Hours: 16 Lecture total.
An examination of effective tutoring strategies with a focus on the reading skills of elementary age children. Students are placed in local K-8 classrooms, tutoring centers, and/or after school programs to gain experience tutoring and working with school-age children. CSU

Education 200
Introduction to Elementary Classroom Teaching
Unit(s): 3.0
Class Hours: 48 Lecture total.
Recommended Preparation: English 101/101H and Education 101.
Introduction to educational theory and practice, assessing issues and standards for teaching in California's culturally and linguistically diverse K-12 school settings; explores instructional methods for teaching, historical and philosophical foundations of American education system, contemporary educational issues, California's curriculum standards and teacher performance standards. Students participate in 45 hours of structured fieldwork in an elementary classroom in cooperation with a certificated classroom teacher. CSU/UC (C-ID)

Education 204
Proficiency in Educational Technologies for Secondary Teachers
Unit(s): 3.0
Class Hours: 48 Lecture total.
Development of proficiency in educational technologies to facilitate the teaching process. Training in computer hardware and software terminology; spreadsheets, word processing, publication, and presentation applications; internet search and retrieval; information literacy; electronic communication and awareness of legal and ethical issues. CSU

Education 209
Roles and Responsibilities of the Special Education Paraprofessional
Unit(s): 3.0
Class Hours: 48 Lecture total.
This course is designed to train workers who work as classroom paraprofessional/teaching assistants in the public schools. The course provides an overview of paraprofessional roles and responsibilities including legal, instruction, evaluation and behavioral issues. Supports current legislation for paraprofessionals. CSU

Education 210
The Teaching Experience: Secondary Education
Unit(s): 3.0
Class Hours: 48 Lecture total.
Introduction to the history, philosophy, and sociology of secondary education. This course will cover the California Teaching Performance Expectation and Assessment; needs of special populations, English learners, and struggling readers; content standards; and major curriculum reform documents. Students participate in 40 hours of structured observation and internship in a local secondary classroom. CSU/UC

Education 211
Classroom Practices for Diverse Learners
Unit(s): 3.0
Class Hours: 48 Lecture total.
Prepares individuals to assist teachers in various settings to support diverse learners (individuals who have disabilities, are second language learners, are gifted, etc.). Topics will include lesson planning, adapting academics: reading, mathematics, science, art, job coaching, behavioral support, etc. CSU

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
ELECTRICIAN (ELCT)

Division of Business and Career Technical Education

Dean: Von Lawson

General Electrician

The associate degree and certificate of achievement for the general electrician provide instruction for those seeking a career as an electrician. This meets the state requirements as an electrician trainee program.

Associate in Science
General Electrician (18791)

Learning Outcome(s)

On successful completion of the major requirements for this degree, students will be able to

- Recertify health and safety, first aid and legally mandated electrical training required to maintain journeyworker status.

Major requirements*

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electrician 041, General Electrician 1</td>
<td>3</td>
</tr>
<tr>
<td>Electrician 042, General Electrician 2</td>
<td>3</td>
</tr>
<tr>
<td>Electrician 043, General Electrician 3</td>
<td>3</td>
</tr>
<tr>
<td>Electrician 044, General Electrician 4</td>
<td>3</td>
</tr>
<tr>
<td>Electrician 045, General Electrician 5</td>
<td>3</td>
</tr>
<tr>
<td>Electrician 046, General Electrician 6</td>
<td>3</td>
</tr>
<tr>
<td>Electrician 047, General Electrician 7</td>
<td>3</td>
</tr>
<tr>
<td>Electrician 048, General Electrician 8</td>
<td>3</td>
</tr>
<tr>
<td>Electrician 049, General Electrician 9</td>
<td>3</td>
</tr>
<tr>
<td>Electrician 050, General Electrician 10</td>
<td>3</td>
</tr>
<tr>
<td>Electrician 051, Quality Safety Program and First Aid</td>
<td>1.5</td>
</tr>
</tbody>
</table>

TOTAL 31.5

Certificate of Achievement
General Electrician (18790)

Learning Outcome(s)

Upon successful completion of the requirements for this certificate, students will be able to

- Recertify health and safety, first aid and legally mandated electrical training required to maintain journeyworker status.

Certificate requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electrician 041, General Electrician 1</td>
<td>3</td>
</tr>
<tr>
<td>Electrician 042, General Electrician 2</td>
<td>3</td>
</tr>
<tr>
<td>Electrician 043, General Electrician 3</td>
<td>3</td>
</tr>
<tr>
<td>Electrician 044, General Electrician 4</td>
<td>3</td>
</tr>
<tr>
<td>Electrician 045, General Electrician 5</td>
<td>3</td>
</tr>
<tr>
<td>Electrician 046, General Electrician 6</td>
<td>3</td>
</tr>
<tr>
<td>Electrician 047, General Electrician 7</td>
<td>3</td>
</tr>
<tr>
<td>Electrician 048, General Electrician 8</td>
<td>3</td>
</tr>
<tr>
<td>Electrician 049, General Electrician 9</td>
<td>3</td>
</tr>
<tr>
<td>Electrician 050, General Electrician 10</td>
<td>3</td>
</tr>
<tr>
<td>Electrician 051, Quality Safety Program and First Aid</td>
<td>1.5</td>
</tr>
</tbody>
</table>

TOTAL 31.5

Courses

Electrician 041
General Electrician 1

Unit(s): 3.0
Class Hours: 35 Lecture total, 45 Laboratory total.
First semester of a five-year program for certified electrical trainees. Covers tools and fasteners, knot tying, math and materials, building materials and safety, and residential blueprints. Meets the requirement as a state-certified training course. Open Entry/Open Exit.

Electrician 042
General Electrician 2

Unit(s): 3.0
Class Hours: 35 Lecture total, 45 Laboratory total.
Prerequisite: Electrician 041.
Second semester of a five-year program for certified electrical trainees. Covers DC theory, the National Electrical Code, safe work practices, series circuits, parallel circuits, combination circuits, principles of magnetism and electromagnetism. Meets the requirement as a state-certified training course. Open Entry/Open Exit.

Electrician 043
General Electrician 3

Unit(s): 3.0
Class Hours: 35 Lecture total, 45 Laboratory total.
Prerequisite: Electrician 042.
Third semester of a five-year program for certified electrical trainees. Covers codeology, test instruments and sine waves, three-phase systems, residential and commercial blueprints, mechanical bending. Meets the requirement as a state-certified training course. Open Entry/Open Exit.

Electrician 044
General Electrician 4

Unit(s): 3.0
Class Hours: 35 Lecture total, 45 Laboratory total.
Prerequisite: Electrician 043.
Fourth semester of a five-year program for certified electrical trainees. Covers electrical theory, transformers, and National Electrical Code application. Meets the requirement as a state-certified training course. Open Entry/Open Exit.

Electrician 045
General Electrician 5

Unit(s): 3.0
Class Hours: 35 Lecture total, 45 Laboratory total.
Prerequisite: Electrician 044.
Fifth semester of a five-year program for certified electrical trainees. Covers codeology, test instruments and sine waves, industrial blueprints, and earth testing. Meets the requirement as a state-certified training course. Open Entry/Open Exit.

Electrician 046
General Electrician 6

Unit(s): 3.0
Class Hours: 35 Lecture total, 45 Laboratory total.
Prerequisite: Electrician 045.
Sixth semester of a five-year program for certified electrical trainees. Covers advanced motor control and code as applied to motor protection. Meets the requirement as a state-certified training course. Open Entry/Open Exit.

Electrician 047
General Electrician 7

Unit(s): 3.0
Class Hours: 35 Lecture total, 45 Laboratory total.
Prerequisite: Electrician 046.
Seventh semester of a five-year program for certified electrical trainees. Covers electronics and programmable logic controllers. Meets the requirement as a state-certified training course. Open Entry/Open Exit.

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
Electrician 048
General Electrician 8
Unit(s): 3.0
Class Hours: 35 Lecture total, 45 Laboratory total.
Prerequisite: Electrician 047.
Eighth semester of a five-year program. Covers low voltage systems and lightning protection, fire alarm systems, and instrumentation. Meets the requirement as a state-certified training course. Open Entry/Open Exit.

Electrician 049
General Electrician 9
Unit(s): 3.0
Class Hours: 35 Lecture total, 45 Laboratory total.
Prerequisite: Electrician 048.
Ninth semester of a five-year program for certified electrical trainees. Covers jobsite management. Prepares for competency exams. Meets the requirement as a state-certified training course. Open Entry/Open Exit.

Electrician 050
General Electrician 10
Unit(s): 3.0
Class Hours: 35 Lecture total, 45 Laboratory total.
Prerequisite: Electrician 049.
Final semester of a five-year program. A cover to cover study of the National Electrical Codebook to prepare for the California State Electrical Examination. Meets the requirement as a state-certified training course. Open Entry/Open Exit.

Electrician 051
Quality Safety Program and First Aid
Unit(s): 1.5
Class Hours: 20 Lecture total, 10 Laboratory total.
OSHA workplace requirements, the identification and use of safe work practices, coping with accidents and emergency situations, and one person CPR for inside wireman apprentices. American Red Cross certificate available upon successful completion.
Grade: Pass/No Pass. Open Entry/Open Exit.

Electrician 080
Electrical Safety and First Aid
Unit(s): 1.5
Class Hours: 26 Lecture total.
Meets the needs of electricians already working in the trade. Covers Occupational Safety and Health Administration (OSHA), Quality Safety Program (QSP) and Red Cross first aid and CPR training. Upon successful completion, students will earn American Red Cross First Aid CPR certification. Grade: Pass/No Pass. Open Entry/Open Exit.

Electrician 081
Codeology
Unit(s): 2.0
Class Hours: 32 Lecture total.
Meets the needs of electricians already working in the trade. Covers the National Electrical Code (NEC), definitions and interpretations, using the NEC for calculations, mandatory and fine print rules. Grade: Pass/No Pass. Open Entry/Open Exit.

Electrician 082
NEC Study Level 1
Unit(s): 2.0
Class Hours: 32 Lecture total.
Meets the needs of electricians already working in the trade. Offers a complete study of the National Electrical Code Book from Article 90 through Article 450. Grade: Pass/No Pass. Open Entry/Open Exit.

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
## ENGINEERING (ENGR)

*Division of Mathematics and Sciences*

**Dean:** Martin Stringer  
**Department Chair, Physics and Engineering:** Cynthia Swift  
**Faculty:** Craig Rutan

The engineering program offers a comprehensive set of courses designed to prepare students for transfer into one of many different engineering majors at a four year university. Students will be exposed to the many aspects of engineering including discovery, creation of new technologies, and service to society.

### Courses

**Engineering 210**  
**Engineering Materials**  
Unit(s): 3.0  
Class Hours: 48 Lecture total.  
Prerequisite: Chemistry 219 and Physics 250A  
Recommended Preparation: Chemistry 229.  
Introduction to the properties and performance of engineering materials and the relationship of those properties to the internal structure of materials including metals, polymers, ceramics, composites, and semiconductors. \( \text{CSU/UC} \)

**Engineering 220**  
**Statics**  
Unit(s): 3.0  
Class Hours: 48 Lecture total.  
Prerequisite: Engineering 220.  
Fundamentals of kinematics and kinetics of particles and rigid bodies. Topics include Newton's laws of motion, kinematics of particles, planar and three dimensional motion of rigid bodies, conservation principles, and an introduction to vibrations. \( \text{CSU/UC} \)

**Engineering 225**  
**Dynamics**  
Unit(s): 3.0  
Class Hours: 48 Lecture total.  
Prerequisite: Engineering 220.  
Fundamentals of kinematics and kinetics of particles and rigid bodies. Topics include Newton's laws of motion, kinematics of particles, planar and three dimensional motion of rigid bodies, conservation principles, and an introduction to vibrations. \( \text{CSU/UC} \)

**Engineering 230**  
**Network Analysis**  
Unit(s): 5.0  
Class Hours: 64 Lecture total, 48 Laboratory total.  
Prerequisite: Physics 250B.  
Corequisite: Mathematics 287 or 295.  
Recommended Preparation: Prior completion of Mathematics 287 or Mathematics 295.  
An introductory course on the modeling and analysis of electrical networks. Topics include basic network theorems, steady state analysis, Laplace and Fourier transforms. \( \text{CSU/UC} \)

## ENGLISH (ENGL)

*Division of Arts, Humanities and Social Sciences/Library*

**Dean:** Marilyn Flores  
**Department Chair, English:** Elizabeth Elchlepp  
**Faculty:** Rick Adams, Lynette Beers-McCormick, Lisa Dela Cusack, Elizabeth Elchlepp, Corinna Evett, James Isbell, Kathryn Kosuth-Wood, William Lennertz, Nidzara Pecenkovic, Maureen Roe, Roberta Tragarz

### Associate in Arts

**English for Transfer (31366)**

The Associate in Arts in English for Transfer enables students to develop proficiency in written communication and in the understanding of human nature through the study of language and literature. Completion of the transfer degree in English prepares students to (1) communicate effectively, (2) exercise critical thinking and reasoning, (3) read and write to express creativity, and (4) explore the history of significant literary works. Successful completion of the transfer degree in English guarantees the student acceptance to a California State University to pursue a baccalaureate degree in English or a related field.

#### Learning Outcome(s)

Upon successful completion of the major requirements for this degree, students will be able to:

- Analyze and evaluate texts, written, visual, and oral, for structure, soundness, and creativity.
- Compose texts that focus on specific purposes for specific audiences and that demonstrate effective organization, development, grammatical precision, clarity, originality, and correct use of sources.

#### Major Requirements*

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>English 102/102H, Literature and Composition</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>English 103/103H, Critical Thinking and Writing</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td><strong>Select two (2) courses from the following (List A):</strong></td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>English 231, Survey of English Literature (3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>English 232, Survey of English Literature (3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>English 241, Survey of American Literature 1600-1865 (3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>English 242, Survey of American Literature, 1865-Present (3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>English 271, Survey of World Literature (3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>English 272, Survey of World Literature (3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Select one (1) course from the following (List B):</strong></td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>(may not be a course used to satisfy the requirements of List A)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>English 211, Creative Writing I/Fiction (3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>English 212, Creative Writing II/Fiction (3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>English 214, Creative Writing I/Poetry (3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>English 215, Creative Writing II/Poetry (3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Select one (1) course from the following (List C):</strong></td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>(may not be a course used to satisfy the requirements of List A or B)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>English 220, Survey of the Bible As Literature (3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>English 233A, Shakespeare's Comedies and Romances (3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>English 233B, Shakespeare's Tragedies and History Plays (3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>English 246, Survey of Chicano Literature (3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>English 270, Children's Literature (3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>English 278, Survey of Literature by Women (3)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

TOTAL 20  

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.*
Associate in Arts
English (11928)

The associate degree in English is designed to develop proficiency in written communication and in the understanding of human nature through the study of language and literature. Completion of the degree program prepares students to pursue a major in English leading to a baccalaureate degree.

Learning Outcome(s)
Upon successful completion of the major requirements for this degree, students will be able to
• Compose texts that focus on specific purposes for specific audiences and that demonstrate effective organization, development, grammatical precision, clarity, originality, and correct use of sources.
• Analyze and evaluate texts, written, visual, and oral, for structure, soundness, and creativity.

Major requirements*  
Units
<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>English 101/101H, Freshman Composition</td>
<td>4</td>
</tr>
<tr>
<td>English 102/102H, Literature and Composition</td>
<td>4</td>
</tr>
<tr>
<td>English 103/103H, Critical Thinking and Writing</td>
<td>4</td>
</tr>
<tr>
<td>Select one (1) sequence from the following:</td>
<td>6</td>
</tr>
<tr>
<td>English 231, 232, Survey of English Literature (3, 3)</td>
<td></td>
</tr>
<tr>
<td>English 241, 242, Survey of American Literature (3, 3)</td>
<td></td>
</tr>
<tr>
<td>English 271, 272, Survey of World Literature (3, 3)</td>
<td></td>
</tr>
<tr>
<td>Select four (4) courses from the following:</td>
<td>12</td>
</tr>
<tr>
<td>No more than 3 units in either English 211, 212, 214, or 215 may be used for the required 12 units of electives.</td>
<td></td>
</tr>
<tr>
<td>English 211, Creative Writing I/Fiction (3)</td>
<td></td>
</tr>
<tr>
<td>English 212, Creative Writing II/Fiction (3)</td>
<td></td>
</tr>
<tr>
<td>English 214, Creative Writing II/Poetry (3)</td>
<td></td>
</tr>
<tr>
<td>English 215, Creative Writing II/Poetry (3)</td>
<td></td>
</tr>
<tr>
<td>English 220, Survey of the Bible As Literature (3)</td>
<td></td>
</tr>
<tr>
<td>English 231, Survey of English Literature (3)</td>
<td></td>
</tr>
<tr>
<td>English 232, Survey of English Literature (3)</td>
<td></td>
</tr>
<tr>
<td>English 233A, Shakespeare’s Comedies and Romances (3)</td>
<td></td>
</tr>
<tr>
<td>English 233B, Shakespeare’s Tragedies and History Plays (3)</td>
<td></td>
</tr>
<tr>
<td>English 241, Survey of American Literature 1600-1865 (3)</td>
<td></td>
</tr>
<tr>
<td>English 242, Survey of American Literature, 1865-Present (3)</td>
<td></td>
</tr>
<tr>
<td>English 246, Survey of Chicano Literature (3)</td>
<td></td>
</tr>
<tr>
<td>English 270, Children’s Literature (3)</td>
<td></td>
</tr>
<tr>
<td>English 271, Survey of World Literature (3)</td>
<td></td>
</tr>
<tr>
<td>English 272, Survey of World Literature (3)</td>
<td></td>
</tr>
<tr>
<td>English 278, Survey of Literature by Women (3)</td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>30</strong></td>
</tr>
</tbody>
</table>

Students planning to transfer to 4-year schools should consult with English departments at those institutions regarding specific lower-division requirements and unit limits.

Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>English N60, Basics of Effective Writing</td>
<td>3.0</td>
</tr>
<tr>
<td>Class Hours: 64 Lecture total, 16 Laboratory total.</td>
<td></td>
</tr>
<tr>
<td>Prerequisite: English N50 or qualifying profile from English placement process.</td>
<td></td>
</tr>
<tr>
<td>Sentence structure and paragraph writing including reading-based modeling and integrated study skills. Not applicable to associate degree. 16 additional hours in Writing Center required (one hour per week for 16-week semester sections).</td>
<td></td>
</tr>
<tr>
<td>English N90, c Center I</td>
<td></td>
</tr>
<tr>
<td>Unit(s): 0.2</td>
<td></td>
</tr>
<tr>
<td>Class Hours: 5 Lecture total.</td>
<td></td>
</tr>
<tr>
<td>This course is designed to offer extended composition strategies for English students enrolled in English N50, N60, or 061. Grade: Pass/No Pass. Open Entry/Open Exit.</td>
<td></td>
</tr>
<tr>
<td>English N91, English Writing Center II</td>
<td></td>
</tr>
<tr>
<td>Unit(s): 0.2</td>
<td></td>
</tr>
<tr>
<td>Class Hours: 5 Lecture total.</td>
<td></td>
</tr>
<tr>
<td>This course offers extended composition strategies designed for English students enrolled in English 101, 102, or 103. Grade: Pass/No Pass. Open Entry/Open Exit.</td>
<td></td>
</tr>
<tr>
<td>English N92, Extended Composition Strategies</td>
<td></td>
</tr>
<tr>
<td>Unit(s): 0.2</td>
<td></td>
</tr>
<tr>
<td>Class Hours: 5 Lecture total.</td>
<td></td>
</tr>
<tr>
<td>This course offers extended composition strategies designed for students enrolled in and writing essays for classes other than English. Students will use the Writing Center to get assistance with planning, drafting, documenting, and revising the essays they are assigned in such courses as history, biology, sociology, political science, philosophy, and anthropology. Grade: Pass/No Pass. Open Entry/Open Exit.</td>
<td></td>
</tr>
<tr>
<td>English 061, Introduction to Composition</td>
<td>3.0</td>
</tr>
<tr>
<td>Class Hours: 64 Lecture total, 16 Laboratory total.</td>
<td></td>
</tr>
<tr>
<td>Prerequisite: English N60 or qualifying profile from English placement process.</td>
<td></td>
</tr>
<tr>
<td>Expository paragraph writing emphasizing various methods including argumentation. Practice in refining sentence skills and grammar. 16 additional hours in Writing Center required (one hour per week for 16-week semester sections).</td>
<td></td>
</tr>
<tr>
<td>English 101, Freshman Composition</td>
<td>4.0</td>
</tr>
<tr>
<td>Class Hours: 64 Lecture total.</td>
<td></td>
</tr>
<tr>
<td>Prerequisite: English 061, American College English 116 or qualifying profile from English placement process.</td>
<td></td>
</tr>
<tr>
<td>This course emphasizes expository and argumentative essays and the research paper. Special interest sections are described in the schedule of classes. CSU/UC (C-ID)</td>
<td></td>
</tr>
<tr>
<td>English 101H, Honors Freshman Composition</td>
<td>4.0</td>
</tr>
<tr>
<td>Class Hours: 64 Lecture total.</td>
<td></td>
</tr>
<tr>
<td>Prerequisite: English 061, American College English 116 or qualifying profile from English placement process and a high school or college GPA of 3.0 or above.</td>
<td></td>
</tr>
<tr>
<td>This course provides an enriched exposure to expository and argumentative essays and the research paper, requiring in-depth analysis of issues and substantive treatment of student selected topics. CSU/UC (C-ID)</td>
<td></td>
</tr>
</tbody>
</table>

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
English 102
Literature and Composition
Unit(s): 4.0
Class Hours: 64 Lecture total.
Prerequisite: English 101/101H.
A second semester course in composition and literature that uses literature to develop critical thinking skills with extensive readings selected from the four major genres. CSU/UC (C-ID)

English 102H
Honors Literature and Composition
Unit(s): 4.0
Class Hours: 64 Lecture total.
Prerequisite: English 101/101H and a high school or college GPA of 3.0 or above.
An enriched approach designed for honors students. A second semester course in composition and literature that uses literature to develop critical thinking skills with extensive readings selected from the four major genres. CSU/UC (C-ID)

English 103
Critical Thinking and Writing
Unit(s): 4.0
Class Hours: 64 Lecture total.
Prerequisite: English 101/101H.
This course focuses on developing critical thinking, reading, and writing skills by studying established argumentative methods and models and applying them to contemporary issues. Emphasis will be on logical reasoning and analytical and argumentative skills necessary for critical writing. CSU/UC (C-ID)

English 103H
Honors Critical Thinking and Writing
Unit(s): 4.0
Class Hours: 64 Lecture total.
Prerequisite: English 101/101H and a high school or college GPA of 3.0 or above.
This course will emphasize an enriched and intensive exploration of historical and contemporary issues as well as encourage an application of critical thinking, writing and reading skills to established argumentative methods and models through student-initiated discussion and problem-solving in a seminar setting. CSU/UC (C-ID)

English 211
Creative Writing I/Fiction
Unit(s): 3.0
Class Hours: 48 Lecture total.
Prerequisite: English 101/101H.
This course provides an introduction to the reading and writing of fiction and to the workshop method of critiquing student writing. Focus will be placed on the fundamentals of fiction genres: short story, novel, and drama. CSU/UC

English 212
Creative Writing II/Fiction
Unit(s): 3.0
Class Hours: 48 Lecture total.
Prerequisite: English 211.
This course offers a workshop environment for advanced and intensive practice in the craft of composing and critiquing fiction. Emphasis will be placed on developing advanced skills of analysis with a focus on complex works from three different genres: short story, novel, and drama. CSU/UC

English 213
Creative Writing
Unit(s): 3.0
Class Hours: 48 Lecture total.
Prerequisite: English 101/101H.
This course offers an introduction to writing techniques focusing on the four literary genres: poetry, drama, short story, and novel. Class will be conducted in a workshop format with an emphasis on writing and critiquing. CSU/UC

English 214
Creative Writing I/Poetry
Unit(s): 3.0
Class Hours: 48 Lecture total.
Prerequisite: English 101/101H.
This course provides an introduction to the reading and writing of poetry and to the workshop method of critiquing student writing. Focus will be placed on the fundamentals of poetic techniques, forms, and content. Basic strategies for submitting works for publication will also be addressed. CSU/UC

English 215
Creative Writing II/Poetry
Unit(s): 3.0
Class Hours: 48 Lecture total.
Prerequisite: English 214.
This course offers a workshop environment for advanced and intensive practice in the craft and reading of poetry. Focus will be placed on the more advanced elements of poetic techniques, forms, and content, such as line scansion for rhyme, stress, and meter. A more detailed explanation of the publication process will also be addressed. CSU/UC

English 220
Survey of the Bible As Literature
Unit(s): 3.0
Class Hours: 48 Lecture total.
Prerequisite: English 101/101H.
A study of the literary history, influence, and craftsmanship of the Bible and an exploration of related stories, poems, plays, essays and other diverse materials. CSU/UC

English 231
Survey of English Literature
Unit(s): 3.0
Class Hours: 48 Lecture total.
Prerequisite: English 101/101H.
Introductory study of representative selections of British literature from the Anglo-Saxon period to the neo-classical period. Emphasis on authors best exemplifying their period, such as Chaucer, Shakespeare, Spenser, Jonson, Milton, Donne, Dryden, Johnson, Behn, Pope, and others. CSU/UC (C-ID)

English 232
Survey of English Literature
Unit(s): 3.0
Class Hours: 48 Lecture total.
Prerequisite: English 101/101H.
Introductory study of representative selections from the English Romantic Movement to the present. Emphasis on those authors best exemplifying their period, such as, Austen, Wordsworth, Coleridge, Byron, the Shelleys, Keats, Tennyson, Newman, Carlyle, the Brownings, Dickens, the war poets, Houseman, Yeats, Wilde and Woolf. CSU/UC (C-ID)

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
### English 233A
Shakespeare’s Comedies and Romances

- Unit(s): 3.0
- Class Hours: 48 Lecture total.
- Prerequisite: English 101/101H.

Study of selected Shakespearean comedies and romances. Emphasizes dramatic elements, depiction of human nature, and timeless/timeless conflicts. Augmented by films and, if available, appropriate field trips. Different selections in English 233AB.

CSU/UC

### English 233B
Shakespeare’s Tragedies and History Plays

- Unit(s): 3.0
- Class Hours: 48 Lecture total.
- Prerequisite: English 101/101H.

Study of selected Shakespearean history plays and tragedies. Emphasizes dramatic elements, depiction of human nature, and timeless/timeless conflicts. Augmented by films and, if available, appropriate field trips. Different selections in English 233AB.

CSU/UC

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**Santiago Canyon College**

**ENGLISH PROGRAM AND SEQUENCE OF COURSES**

<table>
<thead>
<tr>
<th>Plan A (AA)</th>
<th>English AA</th>
<th>Plan B (CSU)</th>
<th>Plan C (IGETC)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>E2: Communications &amp; Analytical Thinking English 102/102H, 103/103H</td>
<td>C. Arts, Literature, Philosophy, Foreign Language</td>
<td></td>
</tr>
<tr>
<td></td>
<td>12 units of 200 or above English language or literature classes including those not taken above.</td>
<td>C1: Arts English 233A, 233B</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>D. Social, Political &amp; Economic Institutions &amp; Behavior; Historical Background</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>D1: Ethnic Studies English 278</td>
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<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td>D2: Gender Studies English 278</td>
<td></td>
</tr>
</tbody>
</table>

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.*
English 241
Survey of American Literature 1600-1865
Unit(s): 3.0
Class Hours: 48 Lecture total.
Prerequisite: English 101/101H.
This course provides a survey of America’s greatest works of literature from 1600-1865, emphasizing the relationship between various works and general movements in American culture and literary history. CSU/UC (C-ID)

English 242
Survey of American Literature, 1865-Present
Unit(s): 3.0
Class Hours: 48 Lecture total.
Prerequisite: English 101/101H.
The course provides a survey of America’s greatest works of literature and their contributions to the American culture from 1865 to present, emphasizing the relationship between literary and intellectual history. CSU/UC (C-ID)

Environmental Studies (ENVR)
Division of Mathematics and Sciences
Dean: Martin Stringer
Department Co-Chairs, Life Sciences: Michael Taylor, Mark Smith

Courses
Environmental Studies 200
Environment of Man
Unit(s): 3.0
Class Hours: 48 Lecture total.
A biological and physical science introduction to environmental problems such as energy, resources, pollution, land use, population and food, including economic and political factors. A natural science elective. (Same as Biology 200.) CSU/UC

Environmental Studies 259
Environmental Biology
Unit(s): 4.0
Class Hours: 48 Lecture total, 48 Laboratory total.
Introduction to Environmental Biology includes study of ecosystems, population dynamics, classification, diversity of plant and animal species, effects of pollutants at both the cellular and organismal levels, and principles of ecology. (Same as Biology 259.) CSU/UC

Ethnic Studies (ETHN)
Division of Arts, Humanities and Social Sciences/Library
Dean: Marilyn Flores
Department Chair, Humanities: Marcelo Pimentel

Courses
Ethnic Studies 101
Introduction to Ethnic Studies
Unit(s): 3.0
Class Hours: 48 Lecture total.
Historical and cultural survey of ethnic groups and relations in the U.S. among Euro-Americans, Native Americans, Asian Pacific Americans, African Americans, and Mexican Americans/Latinos from the pre-Columbian period to the present. CSU/UC

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
FRENCH (FREN)

Division of Arts, Humanities and Social Sciences/Library

Dean: Marilyn Flores
Department Chair, Modern Languages: Elizabeth Baez

Courses

French 101
Elementary French I
Unit(s): 5.0
Class Hours: 80 Lecture total, 16 Laboratory total.
   A college-level French course focusing on fundamentals of pronunciation, grammar, basic vocabulary, idioms, and simple conversation and composition, including supplementary cultural readings. French 101 is equivalent to two years of high school French. Sixteen additional hours in the Modern Languages Lab required. CSU/UC

French 102
Elementary French II
Unit(s): 5.0
Class Hours: 80 Lecture total, 16 Laboratory total.
Prerequisite: French 101 or two years of high school French with a grade of C or better. A college-level French course focusing on further training in pronunciation, more extensive vocabulary development, conversation, grammar, reading and composition. French 102 is equivalent to the third year of high school French. Sixteen additional hours in the Modern Language Lab required. CSU/UC

French 194
Conversation and Composition I
Unit(s): 3.0
Class Hours: 48 Lecture total.
Prerequisite: French 101 or two years high school French with grade of C or better. Review and implementation of language structure through discussion, conversation, reading, and composition. Discussions of French culture and current events. CSU

French 196
Conversation and Composition II
Unit(s): 3.0
Class Hours: 48 Lecture total.
Prerequisite: French 102. Further development of conversation and composition skills through cultural and current events and readings and discussions. Vocabulary development and idioms usage will be practiced in a cultural context through discussions and class presentations. CSU/UC

French 201
Intermediate French I
Unit(s): 5.0
Class Hours: 80 Lecture total.
Prerequisite: French 102 or three years of high school French with a grade of C or better. A college-level French class focusing on expansive review of usage and grammar; discussion in French of interpretive reading material; conversation and composition. CSU/UC

French 202
Intermediate French II
Unit(s): 5.0
Class Hours: 80 Lecture total.
Prerequisite: French 201 or four years of high school French with a grade of C or better. A college-level French class focusing on a specialized review of grammar and composition; discussion in French of history and culture based on literary materials. CSU/UC

GEMOLOGY (GEM)

Division of Business and Career Technical Education

Dean: Von Lawson
Facilitator: Lothar Vallot

The associate degree and certificate of achievement in gemology provide technical and practical theory and knowledge in diamonds and colored stones including laboratory grading, identification and evaluation of gems. Employment opportunities upon completion of this program: jewelry appraiser, diamond and colored stones sales, jewelry buyer, jewelry wholesaler and laboratory gemologist.

Associate in Science
Gemology (11874)

Learning Outcome(s)

Upon successful completion of the major requirements for this degree, students will be able to
- Demonstrate the theory and practice of gemology.
- Demonstrate knowledge of the business of gem stones.

Major requirements* Units

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gemology 011, Introductory Colored Stones</td>
<td>4</td>
</tr>
<tr>
<td>Gemology 012, Advanced Colored Stones</td>
<td>4</td>
</tr>
<tr>
<td>Gemology 020, Diamonds</td>
<td>4</td>
</tr>
<tr>
<td>Gemology 030, Antique and Period Jewelry</td>
<td>3</td>
</tr>
<tr>
<td>Gemology 050, Pearls</td>
<td>3</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>18</strong></td>
</tr>
</tbody>
</table>

Certificate of Achievement
Gemology (21644)

Learning Outcome(s)

Upon successful completion of the requirements for this certificate, students will be able to
- Demonstrate the theory and practice of gemology.
- Demonstrate knowledge of the business of gem stones.

Certificate requirements Units

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gemology 011, Introductory Colored Stones</td>
<td>4</td>
</tr>
<tr>
<td>Gemology 012, Advanced Colored Stones</td>
<td>4</td>
</tr>
<tr>
<td>Gemology 020, Diamonds</td>
<td>4</td>
</tr>
<tr>
<td>Gemology 030, Antique and Period Jewelry</td>
<td>3</td>
</tr>
<tr>
<td>Gemology 050, Pearls</td>
<td>3</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>18</strong></td>
</tr>
</tbody>
</table>

Courses

Gemology 011
Introductory Colored Stones
Unit(s): 4.0
Class Hours: 48 Lecture total, 48 Laboratory total.
Introduction to identification, appreciation, and evaluation of colored gemstones. Overview of the world colored-stone industry. Experience using gemological testing equipment and procedures to identify the most commonly seen varieties of natural and synthetic-fashioned gemstones.

Gemology 012
Advanced Colored Stones
Unit(s): 4.0
Class Hours: 48 Lecture total, 48 Laboratory total.
Advanced identification, appreciation and evaluation of colored gemstones. Overview of the world colored-stone industry. Further experience using gemological testing equipment to identify the most commonly seen varieties of both natural and synthetic-fashioned gemstones.

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
Gemology 015
Colored Stones and Diamond Lab
Unit(s): 1.0
Class Hours: 48 Laboratory total.
Recommended Preparation: Previous or concurrent enrollment in another Gemology course.
Laboratory experience in testing and identification of colored gemstones and/or full grading of diamonds for clarity, color, cut and carat weight. Grade: Pass/No Pass.

Gemology 020
Diamonds
Unit(s): 4.0
Class Hours: 48 Lecture total, 48 Laboratory total.
Full range of diamond grading techniques, history, diamond substitutes, physical and optical properties, all types of synthetic, techniques of valuing/pricing, famous diamonds, detecting enhancements.

Gemology 030
Antique and Period Jewelry
Unit(s): 3.0
Class Hours: 48 Lecture total.
The history, techniques, styles and periods of antique and period jewelry. Identification of period pieces from Georgian to Retro, including authentic vs. reproductions. Includes types of metals and materials, stone cutting, setting techniques, and types of gemstones used.

Gemology 050
Pearls
Unit(s): 3.0
Class Hours: 48 Lecture total.
Introduction to the history, appreciation, and evaluation of natural and cultured pearls, including an overview of the world pearl industry. Pearl identification and grading techniques covering the physical and optical properties for judging the luster, surface, shape, color, and size of the various types.

GENERAL EDUCATION CERTIFICATES
CSU/IGETC

Division of Counseling and Student Support Services
Dean: Ruth Babeshoff
Articulation Officer: Leonor Aguilera

California State University (CSU) General Education Breadth Certificate of Achievement (18117)
Complete all CSU General Education Breadth Requirements (Plan B) to a minimum of 39 units as outlined on page 45.

Intersegmental General Education Transfer Curriculum (IGETC) Certificate of Achievement (18118)
Complete all Intersegmental General Education Transfer Curriculum Requirements (Plan C) to a minimum of 34 units as outlined on page 47.

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
GEOGRAPHY (GEOG)

Division of Arts, Humanities and Social Sciences/Library

Dean: Marilyn Flores
Department Co-Chairs, Social Sciences: Cari Cannon, Alexander Taber

Associate in Arts
Geography for Transfer (32364)

The Associate in Arts in Geography for Transfer provides students with an interdisciplinary background for entry into a curriculum at a four-year institution leading to a baccalaureate degree with career opportunities in a wide range of jobs in government, such as Bureau of Census, Central Intelligence Agency (CIA), Drug Enforcement Administration (DEA), United States Geological Survey (USGS), United States Citizenship and Immigration Services (USCIS), United States Immigration and Customs Enforcement (ICE), United States Department of State, and in private industry, such as planning market research, land use analysis, transportation, travel and tourism, and education.

Learning Outcome(s)

Upon successful completion of the major requirements for this degree, students will be able to

- Communication Skills: Develop geographic literacy in both physical and cultural fields. Use specific geographic terminology. Interpret various geographic maps, graphs, and charts.
- Critical Thinking: Evaluate various meteorological and geomorphological data identifying cause and effect. Analyze how humans interpret and interact with their physical environment including global diversity in cultural and physical realms and the challenges this poses to the environment.

Major requirements*

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geography 101, Physical Geography</td>
<td>3</td>
</tr>
<tr>
<td>Geography 101L, Physical Geography Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>Geography 102, Cultural Geography</td>
<td>3</td>
</tr>
<tr>
<td>Select two (2) courses from the following (List A):</td>
<td>6</td>
</tr>
<tr>
<td>Geography 100/100H, World Regional Geography (3)</td>
<td></td>
</tr>
<tr>
<td>Geography 130, Introduction to Weather and Climate (3)</td>
<td></td>
</tr>
<tr>
<td>Geography 140, California Geography (3)</td>
<td></td>
</tr>
<tr>
<td>Geography 150, Map Interpretation and Analysis (3)</td>
<td></td>
</tr>
<tr>
<td>Geography 155, Introduction to Geographic Information Systems (3)</td>
<td>OR</td>
</tr>
<tr>
<td>Survey/Mapping Sciences 150, Introduction to Geographic Information Systems (3)</td>
<td></td>
</tr>
<tr>
<td>Geography 160, Regional Field Studies (3)</td>
<td></td>
</tr>
<tr>
<td>Select two (2) courses from the following (List B):</td>
<td>6</td>
</tr>
<tr>
<td>An additional course from List A (3) (may not be a course used to satisfy the requirements of List A)</td>
<td></td>
</tr>
<tr>
<td>Geology 101, Introduction to Geology (3)</td>
<td></td>
</tr>
<tr>
<td>Anthropology 100/100H, Introduction to Cultural Anthropology (3)</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>19</td>
</tr>
</tbody>
</table>

Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Class Hours: 48 Lecture total.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geography 100</td>
<td>3.0</td>
<td>The study of major world political and natural regions. The location of the regions on earth, the physical and cultural elements that lend the regions with their identities, and ways in which these elements related to the regions’ inhabitants and economies. CSU/UC (C-ID)</td>
</tr>
<tr>
<td>Geography 100H</td>
<td>3.0</td>
<td>Prerequisite: A high school or college GPA of 3.0 or above. Enriched and intensive study, including seminar approach with individual written and oral presentations of major world political and natural regions. The location of the regions on earth, the physical and cultural elements which provide regions with their identity, identities and ways in which these elements relate to the regions’ inhabitants and economies. CSU/UC (C-ID)</td>
</tr>
<tr>
<td>Geography 101</td>
<td>3.0</td>
<td>Introduction to the physical elements of geography: maps, earth/sun relationships, meteorology and climatology, natural vegetation, soils, and geomorphology. CSU/UC (C-ID)</td>
</tr>
<tr>
<td>Geography 101L</td>
<td>1.0</td>
<td>Corequisite: Geography 101. Recommended Preparation: Mathematics N60. Laboratory exercises and experiments designed to explore and understand the primary areas of physical geography. Exercises and applications related to map scales and projections, stereoscopic, topographic and aerial photo interpretation, meteorological tools and models and weather prognostication, geomorphologic models and processes, and landform interpretation. CSU/UC (C-ID)</td>
</tr>
<tr>
<td>Geography 102</td>
<td>3.0</td>
<td>An introductory survey of the geography of culture, and the influences of the physical environment on culture, along with the impact of human activity on the environment, and the role of culture within societies and social groups. The course includes global patterns of population, migration, religion, language, agriculture, politics, customs, resources, and urban and rural settlement. CSU/UC (C-ID)</td>
</tr>
<tr>
<td>Geography 130</td>
<td>3.0</td>
<td>This course examines Earth’s weather and climate patterns from a geographic perspective. Students explore the basic principles of weather and climate as well as causes and effects. Emphasis is placed on understanding various elements and controls of weather and climate as well as interpreting weather maps and charts. Techniques and principles involved in interpreting weather data, weather charts and maps and weather forecasting will also be introduced. CSU/UC (C-ID)</td>
</tr>
</tbody>
</table>

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
**GEOGRAPHY (GEOL)**

Division of Mathematics and Sciences

Dean: Martin Stringer  
Department Chair, Earth Sciences: Debra Brooks  
Faculty: Debra Brooks, Eric Hovanitz

**Associate in Science**  
Geology for Transfer (32044)

The Associate in Science in Geology for Transfer prepares students for transfer to a four-year college or university to complete a baccalaureate degree in a geoscience major. Geoscientists find employment with environmental companies that clean up and monitor pollution problems. Geotechnical companies also employ geoscientists to evaluate risk from earthquakes, landslides, and other geological hazards. Oil and mining companies employ geoscientists to find new resources. The federal, state, county, and city governments also employ geoscientists for many of the same functions, as well as for geoscience research, and to monitor compliance with environmental regulations. Universities, colleges, and museums offer opportunities for teaching and/or research.

Successful completion of the Associate in Science in Geology for Transfer guarantees the student acceptance to a California State University campus to pursue a baccalaureate degree in geology or a related field. While it does not guarantee the student acceptance to the University of California system, it does provide the major preparation needed by geology students transferring to a University of California campus in geology or related fields.

**Learning Outcome(s)**

Upon successful completion of the major requirements for this degree, students will be able to

- Demonstrate an understanding of geological processes that are based upon observation of Earth materials and features.
- Demonstrate an understanding of the basic principles of geology.

**Major requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geology 101, Introduction to Geology</td>
<td>3</td>
</tr>
<tr>
<td>Geology 101L, Introduction to Geology Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>Geology 201, Introduction to Historical Geology</td>
<td>4</td>
</tr>
<tr>
<td>Chemistry 219/219H, General Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>Chemistry 229, General Chemistry and Qualitative Analysis</td>
<td>5</td>
</tr>
<tr>
<td>Mathematics 180/180H, Analytic Geometry and Calculus</td>
<td>4</td>
</tr>
<tr>
<td>Mathematics 185, Analytic Geometry and Calculus</td>
<td>4</td>
</tr>
</tbody>
</table>

**TOTAL** 26

Students are encouraged to take additional articulated major preparation courses prior to transfer such as Physics 250A and 250B, Biology 211 and Geology 260. While these additional courses are not required for this degree, completion of these courses will better prepare students for upper-division Geology courses at a CSU or a UC. It is highly recommended that students meet with an SCC counselor to discuss possible courses for major preparation for either the CSU system or the UC system, because CSU campuses do not all have identical requirements, and CSU requirements are also not identical to UC requirements.

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.*
Associate in Science  
Geology (11934)

The associate degree in geology prepares students for transfer to a four-year college or university to complete a baccalaureate degree in a geoscience major. Geoscientists find employment with environmental companies that clean up and monitor pollution problems. Geotechnical companies also employ geoscientists to evaluate risk from earthquakes, landslides, and other geological hazards. Oil and mining companies employ geoscientists to find new resources. The federal, state, county, and city governments also employ geoscientists for many of the same functions, as well as for geoscience research, and to monitor compliance with environmental regulations. Universities, colleges, and museums offer opportunities for teaching and/or research.

Units used to satisfy the general education requirements may also be used to satisfy the Geology Degree requirements.

Learning Outcome(s)

Upon successful completion of the major requirements for this degree, students will be able to:

- Demonstrate an understanding of geological processes that are based upon observation of Earth materials and features.
- Demonstrate an understanding of the basic principles of geology.

Major requirements*  

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geology 101, Introduction to Geology</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Geology 101L, Introduction to Geology Laboratory</td>
<td>1</td>
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</tr>
<tr>
<td>Geology 201, Introduction to Historical Geology</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Geology 142, Natural Disasters</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Geology 150, Introduction to Oceanography</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Geology 260, Introduction to Mineralogy and Crystallography</td>
<td>4</td>
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</tr>
<tr>
<td>Chemistry 229, General Chemistry and Qualitative Analysis</td>
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<tr>
<td>Chemistry 219/219H, General Chemistry</td>
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</table>

Select a minimum of four (4) units from the following:  

An additional course from above  

(may not be a course used to satisfy the requirements in above list)

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology 211, Cellular and Molecular Biology</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Biology 212, Animal Diversity and Ecology</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Biology 214, Plant Diversity and Evolution</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Earth Science 115, Earth Science for Educators</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Geology 162, Geologic Field Studies of the Mojave Desert</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Geology 164, Geologic Field Studies of the Eastern Sierra Nevada</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Geology 173, Geologic Field Studies of Death Valley</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Geology 174, Geologic Field Studies of Joshua Tree National Park</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Geology 176, Geologic Field Studies of the San Bernardino and San Gabriel Mountains</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Geology 178, Geologic Field Studies of Orange County</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Geology 180, Geologic Field Studies of the San Andreas Fault</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Mathematics 180/180H, Analytic Geometry and Calculus</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Mathematics 185, Analytic Geometry and Calculus</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Mathematics 280, Intermediate Calculus</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Physics 150A, Introductory Physics I</td>
<td>4</td>
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<tr>
<td>Physics 150B, Introductory Physics II</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Physics 210, Principles of Physics</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Physics 211, Principles of Physics II</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Physics 250A, Physics for Scientists and Engineers I</td>
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<td></td>
</tr>
<tr>
<td>Physics 250B, Physics for Scientists and Engineers II</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Physics 250C, Physics for Scientists and Engineers III</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

TOTAL 24-25

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
Geology 174
Geologic Field Studies of Joshua Tree National Park
Unit(s): 1.0
Class Hours: 16 Lecture total.
   The geologic history including mountain building, volcanic activity, faulting, mineral resources and human history of the Joshua Tree region. Mandatory orientation along with a two-day field trip. CSU

Geology 176
Geologic Field Studies of the San Bernardino and San Gabriel Mountains
Unit(s): 1.0
Class Hours: 16 Lecture total.
   A study of the rocks, structure, tectonics, and geologic history of the San Bernardino and San Gabriel Mountains. Mandatory orientation along with two, one-day field trips. CSU

Geology 178
Geologic Field Studies of Orange County
Unit(s): 1.0
Class Hours: 16 Lecture total.
   The geologic history including mountain building, volcanic activity, faulting, coastal processes, stratigraphy and mineral resources of Orange County. Mandatory orientation along with a two-day field trip. CSU

Geology 180
Geologic Field Studies of the San Andreas Fault
Unit(s): 1.0
Class Hours: 16 Lecture total.
   The geologic and tectonic history of the San Andreas Fault in California. Mandatory orientation along with two, one-day field trips. CSU

Geology 201
Introduction to Historical Geology
Unit(s): 4.0
Class Hours: 48 Lecture total, 48 Laboratory total.
   Introductory geology course investigating the former landscapes and inhabitants of the Earth as preserved in the rock record with an emphasis on North America. Two, optional, one-day field trips. CSU/UC (C-ID)

Geology 260
Introduction to Mineralogy and Crystallography
Unit(s): 4.0
Class Hours: 32 Lecture total, 96 Laboratory total.
   Prerequisite: Geology 101, 101L and Chemistry 219
   Recommended Preparation: Mathematics 070.
   Crystallography and the origin, composition, properties, occurrence and identification of the common rock-forming and ore minerals. Required, one-day field trip. CSU/UC

HISTORY (HIST)
Division of Arts, Humanities and Social Sciences/Library
Dean: Marilyn Flores
Department Chair, History: Scott Howell
Faculty: Scott Howell, Narges Rabii-Rankin, Stephen Reed

Associate in Arts
History for Transfer (31720)
The Associate in Arts in History for Transfer provides a basic program to aid a student in thinking critically about one’s self, one’s cultural heritage, social and economic processes, and national and international affairs. Successful completion of the transfer degree in History guarantees the student acceptance to a California State University to pursue a baccalaureate degree in History or a related field to pursue careers in a variety of government agencies, nongovernmental organizations (NGO), nonprofit organizations (NPO), international government organization (IGO), libraries or museums, and research programs.

Learning Outcome(s)
Upon successful completion of the major requirements for this degree, students will be able to

• Develop analytical skills by evaluating key historical decisions, testing hypotheses, and choosing among contending viewpoints (Critical Analysis).
• Develop communication skills through writing exercises and discussions of critical historical events (Communication Skills).
• Act as better informed citizens and knowledgeable voters through the study of U.S. political traditions and concepts of citizenship (Citizenship).
• Discuss, analyze, compare and contrast, diverse world cultural, religious, and political traditions (Diversity and Global Citizenship).

Major Requirements*  

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>History 101/101H</td>
<td>World Civilizations to the 16th Century</td>
<td>3</td>
</tr>
<tr>
<td>History 102/102H</td>
<td>World Civilizations Since the 16th Century</td>
<td>3</td>
</tr>
<tr>
<td>History 120/120H</td>
<td>The United States to 1865</td>
<td>3</td>
</tr>
<tr>
<td>History 121/121H</td>
<td>The United States Since 1865</td>
<td>3</td>
</tr>
<tr>
<td>Select one (1) course from Area 1:</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>History 118</td>
<td>Social and Cultural History of the United States</td>
<td>(3)</td>
</tr>
<tr>
<td>History 124</td>
<td>Mexican-American History in the United States</td>
<td>(3)</td>
</tr>
<tr>
<td>History 127</td>
<td>Women in U.S. History</td>
<td>(3)</td>
</tr>
<tr>
<td>History 152</td>
<td>Latin American History</td>
<td>(3)</td>
</tr>
<tr>
<td>History 162</td>
<td>Asian Civilizations</td>
<td>(3)</td>
</tr>
<tr>
<td>Select one (1) course from Area 2:</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Economics 102</td>
<td>Principles/Macro</td>
<td>(3)</td>
</tr>
<tr>
<td>Geography 100/100H</td>
<td>World Regional Geography</td>
<td>(3)</td>
</tr>
<tr>
<td>History 133</td>
<td>History of California</td>
<td>(3)</td>
</tr>
<tr>
<td>Philosophy 118</td>
<td>History of Philosophy</td>
<td>(3)</td>
</tr>
<tr>
<td>Political Science 101/101H</td>
<td>Introduction to American Governments</td>
<td>(3)</td>
</tr>
<tr>
<td>Political Science 200</td>
<td>American Political Thought</td>
<td>(3)</td>
</tr>
<tr>
<td>Political Science 201</td>
<td>Introduction to Comparative Politics</td>
<td>(3)</td>
</tr>
<tr>
<td>Political Science 220</td>
<td>International Politics</td>
<td>(3)</td>
</tr>
<tr>
<td>Political Science 221</td>
<td>Women in American Politics</td>
<td>(3)</td>
</tr>
<tr>
<td>Political Science 230</td>
<td>Political Theory</td>
<td>(3)</td>
</tr>
</tbody>
</table>

TOTAL 18

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
Courses

History 101
World Civilizations to the 16th Century
Unit(s): 3.0
Class Hours: 48 Lecture total.
Examines the development of world civilizations and their interrelationships from the earliest beginnings to the sixteenth century. Emphasis on basic ideas, institutions, personalities, religious traditions, and artistic achievements. CSU/UC

History 101H
Honors World Civilizations to the 16th Century
Unit(s): 3.0
Class Hours: 48 Lecture total.
Prerequisite: A high school or college GPA of 3.0 or above.
An enriched approach designed for honors students that includes individual research as well as small group analysis of historical problems. Emphasis on the development of world civilizations and their interrelationships, basic ideas, institutions, personalities, and artistic achievements from the earliest beginnings to the sixteenth century. CSU/UC

History 102
World Civilizations Since the 16th Century
Unit(s): 3.0
Class Hours: 48 Lecture total.
Broad historical study of world civilizations and their interrelationships from the 16th century to the present. Ideas, institutions, personalities, and artistic achievements which have contributed to present day society. CSU/UC (C-ID)

History 102H
Honors World Civilizations Since the 16th Century
Unit(s): 3.0
Class Hours: 48 Lecture total.
Prerequisite: A high school or college GPA of 3.0 or above.
An enriched approach designed for honors students with emphasis on individual research as well as small group analysis of historical problems. Broad historical study of world civilizations and their interrelationships from the 16th century to the present. Ideas, institutions, personalities, and artistic achievements which have contributed to present day society. CSU/UC (C-ID)

History 118
Social and Cultural History of the United States
Unit(s): 3.0
Class Hours: 48 Lecture total.
Examines social and cultural traditions during major historical periods. Focuses on American attitudes and response to economic and technological changes, aesthetics, politics, music, art, language, architecture, folklore, high and popular culture. CSU/UC

History 120
The United States to 1865
Unit(s): 3.0
Class Hours: 48 Lecture total.
Examines the major political economic, intellectual, and social forces at home and abroad that shaped American life from the colonial period through the Civil War. No credit to students with credit in History 122. CSU/UC

History 120H
Honors: The United States to 1865
Unit(s): 3.0
Class Hours: 48 Lecture total.
Prerequisite: A high school or college GPA of 3.0 or above.
Seminar-style, content-enriched course for honors students that examines major political, economic, intellectual, and social forces at home and abroad shaping American life from the colonial period through the Civil War. No credit to students with credit in History 122. CSU/UC (C-ID)

History 121
The United States Since 1865
Unit(s): 3.0
Class Hours: 48 Lecture total.
A critical analysis of American history. Includes industrial and technological development, the changing nature of society, cultural developments, domestic politics, and America’s expanded world role. No credit to students with credit in History 122. CSU/UC (C-ID)

History 121H
Honors the United States Since 1865
Unit(s): 3.0
Class Hours: 48 Lecture total.
Prerequisite: A high school or college GPA of 3.0 or above.
Seminar-style, content-enriched course for honors students exploring a critical analysis of American history including industrial and technological development, the changing nature of society, cultural patterns, domestic politics, artistic attainments, and America’s expanded world role. No credit to students with credit in History 122. CSU/UC (C-ID)

History 122
American History-Dynamics of Change
Unit(s): 3.0
Class Hours: 48 Lecture total.
Survey of the main cultural, economic, social, and political changes in American history. Fulfills the American institutions requirement for graduation. No credit to students with credit in History 120/120H or 121/121H. CSU/UC

History 124
Mexican-American History in the United States
Unit(s): 3.0
Class Hours: 48 Lecture total.
Survey of Mexican-American history in the U.S. from the Pre-Columbian period to the present. Emphasis on Mexican-American contributions to the political, social, economic, and cultural development of the U.S. Will also examine the relationship of Mexican-Americans to other cultural groups. CSU/UC

History 126
United States since 1945
Unit(s): 3.0
Class Hours: 48 Lecture total.
Recommended Preparation: History 121.
This course covers the history of the United States from the end of World War II to contemporary times, emphasizing developments in politics, society, economics, and culture, including the role of race, sex, gender, and class issues. The politics of government policy and the foreign relations of the United States also receive attention. The history of the American people and the nation will be considered in the larger context of world history. No previous college level knowledge of United States history is assumed. CSU

History 127
Women in U.S. History
Unit(s): 3.0
Class Hours: 48 Lecture total.
Women of European, African, Native, Hispanic, and Asian backgrounds examined in United States (U.S.) History 1607-present. Emphasis on individuation, social status, family, reproduction, child care, slavery, jobs, gender politics, and political activism. Legal impact and theories of patriarchal oppression raised. CSU/UC

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
History 133
History of California
Unit(s): 3.0
Class Hours: 48 Lecture total.
An examination of the major social, political, and economic developments that have shaped California history from the indigenous period to the present. Special attention given to regional issues, ethnic or cultural groups, constitutional matters, cultural change, and California's connection with the Pacific Basin. \textit{CSU/UC}

History 152
Latin American History
Unit(s): 3.0
Class Hours: 48 Lecture total.
A survey of Latin American History from the Indian and European origins to the 21st century with a focus on the historical background of the countries studied. Emphasis placed upon the interplay of Iberian, African and Indian influences upon social and cultural evolution. Also stressed are the Latin American relations with the United States in the 19th and 20th centuries. \textit{CSU/UC}

History 162
Asian Civilizations
Unit(s): 3.0
Class Hours: 48 Lecture total.
Historical survey of Asian Civilizations from the earliest time to the present. An analysis which contrasts and compares Asian cultures with an emphasis on geographic and demographic patterns and the dynamics of primitive, modern and transitional societies. Asian religions, rituals and thought, also included. Emphasis will be given to Islam, Hinduism, Shintoism, Daoism, Confucianism and Buddhism. \textit{CSU/UC}

History 240
Introduction to Peace and Conflict Studies
Unit(s): 3.0
Class Hours: 48 Lecture total.
Recommended Preparation: Political Science 101/101H or 220.
Historical, social and economic development of the world order along with a wide range approach integral to the examination of global studies, peace and conflict resolution. The study of peace and conflict areas to include the war system, war prevention, nonviolence, human rights, social justice, environmental sustainability and the role of the United Nations and other international governing bodies. \textit{CSU/UC}

HUMAN DEVELOPMENT (HUD)
Division of Business and Career Technical Education

Dean: Von Lawson
Department Chair, Human Development: Regina Lamoureille

The early childhood certificates offer students fundamental knowledge about the young child from conception through the early elementary years, providing developmentally appropriate learning opportunities to meet the social, emotional, physical, cognitive, and education needs of the child. The early childhood certificates emphasize infant/toddler, preschool, and school-age courses necessary for employment in state-licensed Title 22, publicly funded Title 5 programs and religious affiliated programs. These certificates are also recommended courses for those who work as licensed family child care providers, nannies, or recreation child care workers (cruise, exercise, or retail child care establishments).

The Infant/Toddler and Preschool certificates prepare students for extended study in infant/toddler development or early learning to obtain an associate or a baccalaureate degree in child development or employment as an infant-toddler or preschool program director, teacher, or other specialist working with young children and families. The school age certificate of proficiency prepares students who are seeking to work with elementary age children in an afterschool, camp, cruise, or family day care setting. All three certificates lead to child development permits and require that students show negative TB test results.

Certificate of Proficiency
Infant/Toddler

The certificate of proficiency in infant/toddler meets the minimum requirements for early learning professionals employed or seeking employment as teachers and/or aides in privately owned and church affiliated (Title 22) or publically funded (Title 5) programs serving infants and toddlers. Completion of this certificate leads to an Infant/Toddler Child Development Permit. This certificate is also recommended for licensed Family Day Care Providers or Nannies.

Learning Outcome(s)

Upon successful completion of the requirements for this certificate, students will be able to
- Demonstrate skill and mastery of child development theories and proficiency in application in a simulated/real infant/toddler setting or scenario.
- Develop a portfolio of developmentally appropriate activities, programming, and assessment strategies for infants and toddlers in the cognitive, psychosocial, and biosocial domains.

Certificate requirements

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human Development 107, Child Growth and Development (DS1)</td>
<td>3</td>
</tr>
<tr>
<td>Human Development 108A, Observation and Assessment for Early Learning and Development (DS1)</td>
<td>3</td>
</tr>
<tr>
<td>Human Development 110, Child, Family and Community (DS2)</td>
<td>3</td>
</tr>
<tr>
<td>Human Development 116A, Infant/Toddler Growth and Development (DS4)</td>
<td>3</td>
</tr>
<tr>
<td>Human Development 116B, Programming for Infants and Toddlers (DS4)</td>
<td>3</td>
</tr>
</tbody>
</table>

**TOTAL 15**

*A NEGATIVE TB TEST IS REQUIRED FOR COMPLETION OF THIS CERTIFICATE.*

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.*
Certificate of Proficiency
Preschool

The certificate of proficiency in preschool program meets the minimum requirements for early learning professionals employed or seeking employment as teachers and/or aides in Title 22 or publicly funded Title 5 programs serving preschoolers 2-5. Completion of this certificate leads to a Child Development Permit. This certificate is also recommended for licensed family day care providers or nannies.

Learning Outcome(s)
Upon successful completion of the requirements for this certificate, students will be able to

• Demonstrate skill and mastery of child development theories and proficiency in application in a simulated/real preschool setting or scenario.
• Develop a portfolio of developmentally appropriate activities, programming, and assessment strategies for preschoolers in the cognitive, psychosocial, and biosocial domains.

Certificate requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human Development 107, Child Growth and Development (DS1)</td>
<td>3</td>
</tr>
<tr>
<td>Human Development 108A, Observation and Assessment for Early Learning and Development</td>
<td>3</td>
</tr>
<tr>
<td>Human Development 110, Child, Family and Community (DS2)</td>
<td>3</td>
</tr>
<tr>
<td>Human Development 111A, Principles and Practices of Teaching Young Children</td>
<td>3</td>
</tr>
<tr>
<td>Human Development 111B, Introduction to Curriculum for Young Children (DS3)</td>
<td>3</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

A NEGATIVE TB TEST IS REQUIRED FOR COMPLETION OF THIS CERTIFICATE.

Certificate of Proficiency
The School Age Child

The certificate of proficiency in the school age child is intended to prepare a student for an entry or reentry level positions requiring practical skills and knowledge to work with school age children (PreK-Grade 3) in Title 22 or Title 5 after-school care programs. Completion of this certificate leads to a School Age Child Development Permit.

Learning Outcome(s)
Upon successful completion of the requirements for this certificate, students will be able to

• Demonstrate skill and mastery in applying school-age child development themes, theories, and concepts in a real/simulated school-age setting or scenario.
• Develop a portfolio of developmentally appropriate school-age activities and programming including discipline, health, social interaction, parent communication, media influences, and assessment strategies for the cognitive, psychosocial, and biosocial domains.

Certificate requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human Development 110, Child, Family and Community (DS2)</td>
<td>3</td>
</tr>
<tr>
<td>Human Development 112, Health, Safety, and Nutrition for Children</td>
<td>3</td>
</tr>
<tr>
<td>Human Development 120, Development of the School Age Child (DS5)</td>
<td>3</td>
</tr>
<tr>
<td>Human Development 121, School Age Child Care Activities (DS5)</td>
<td>3</td>
</tr>
<tr>
<td>Human Development 221, Teaching in a Diverse Society</td>
<td>3</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

A NEGATIVE TB TEST IS REQUIRED FOR COMPLETION OF THIS CERTIFICATE.

Courses

Human Development 107
Child Growth and Development (DS1)
Unit(s): 3.0
Class Hours: 48 Lecture total.
Prerequisite: Human Development 107.
This course examines the major physical, psychosocial, and cognitive/language developmental milestones for children, from conception through adolescence. Using developmental theories and research methodologies, course emphasis will be on typical and atypical development, maturational processes and environmental factors. Students will also observe children, evaluate individual differences and analyze characteristics of development at various stages. No credit for students who have taken Psychology 157. **CSU/UC (C-ID)**

Human Development 108A
Observation and Assessment for Early Learning and Development
Unit(s): 3.0
Class Hours: 48 Lecture total.
Prerequisite: Human Development 107.
This course focuses on the appropriate use of assessment and observation strategies to document development, growth, play and learning to join with families and professionals in promoting children's success. Recording strategies, rating systems, portfolios, and multiple assessment tools are explored. Students must show proof of negative TB test results. **CSU (C-ID)**

Human Development 110
Child, Family and Community (DS2)
Unit(s): 3.0
Class Hours: 48 Lecture total.
Prerequisite: Human Development 108A.
This class examines the developing child in a societal context focusing on the interrelationship of family, school and community and emphasizes historical and socio-cultural factors. Socialization processes and identity development that support and empower families by showing the importance of respectful, reciprocal relationships will be explored. **CSU/UC**

Human Development 111A
Principles and Practices of Teaching Young Children
Unit(s): 3.0
Class Hours: 48 Lecture total.
Prerequisite: Human Development 108A.
This course examines the underlying historical and theoretical principles, and the developmentally appropriate practices of early childhood programs and environments. Emphasis will be on the key role of relationships, constructive adult-child interactions, and teaching strategies in supporting physical, social, creative and intellectual development for all children. The evolution of professional practices promoting advocacy, ethics and professional identity will be explored. Students must show proof of negative TB test results. **CSU**

Human Development 111B
Introduction to Curriculum for Young Children (DS3)
Unit(s): 3.0
Class Hours: 48 Lecture total.
Prerequisite: Human Development 111A.
This course presents an overview of knowledge and skills needed to provide developmentally appropriate curriculum for young children. Students will examine the teacher's role in supporting development, fostering the joy of learning, and creativity through the essential role of play. Content areas include language/literacy, social/emotional/sensory learning, art, music, math, science, health/safety, and motor development. Students must show proof of negative TB test results. **CSU**

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.*
Human Development 112
Health, Safety and Nutrition for Children
Unit(s): 3.0
Class Hours: 48 Lecture total.
Recommended Preparation: Six units of human development classes.

This course examines the regulations, policies, procedures and best practices for early childhood curriculum related to health, safety, food, and nutrition while supporting child development through everyday planning and school programming. The importance of collaboration between families and health and school professionals to ensure physical and mental health of all children, families, and professionals will be explored. Students must show proof of negative TB test results. Field trips to local child development centers may be included. CSU

Human Development 116A
Infant/Toddler Growth and Development (DS4)
Unit(s): 3.0
Class Hours: 48 Lecture total.
Prerequisite: Human Development 107.

Examination of the growth and developmental patterns of infants and toddlers and interactions with culturally diverse family structures. Field trips may be required. This class partially fulfills the requirements for state licensing. With Human Development 116B, this class fulfills Infant/Toddler Specialization for Child Development Center Permit. Students must show proof of negative TB test results. CSU

Human Development 116B
Programming for Infants and Toddlers (DS4)
Unit(s): 3.0
Class Hours: 48 Lecture total.
Prerequisite: Human Development 107.

Recommended Preparation: Human Development 116A.

Focuses on the implementation of quality, developmentally appropriate, infant/toddler programs, including curriculum, environment, planning and interactions among staff, children and parents. Cultural sensitivity to the diversity of staff and families within such programs will be addressed. Field trips may be required. This class partially fulfills the requirements for state licensing. With Human Development 116A, this course fulfills Infant/Toddler Specialization for Child Development Center Permit. Students must show proof of negative TB test results. CSU

Human Development 120
Development of the School Age Child (DS5)
Unit(s): 3.0
Class Hours: 48 Lecture total.

Examines the physical, cognitive/language, and psychosocial development of children five to twelve years old emphasizing the interactions between maturational processes and environmental factors. Using developmental theory and investigative research methodologies, students will observe and evaluate children addressing issues of typical and atypical development and diversity. Fulfills partial requirements for the School Age Child Development Permit. Field trips to local child development centers may be included. Not offered every semester. CSU

Human Development 205
Exceptionality and Special Needs in Human Development
Unit(s): 3.0
Class Hours: 48 Lecture total.

Study of diseases and disorders found in children resulting in exceptionality, including intellectual and learning disabilities; visual, speech, and hearing impairments; behavior disorders, and physical and health impairments. CSU

Human Development 208
Working With Families of Children With Special Needs
Unit(s): 3.0
Class Hours: 48 Lecture total.
Prerequisite: Human Development 205.

This course will provide teachers, intervention assistants, administrators and parents the tools necessary to support families of children with disabilities and other special needs in early childhood and school age programs. Techniques, strategies and resources will be provided to support children in a natural and/or inclusive educational setting and to empower the advocacy of parents. CSU

Human Development 221
Teaching in a Diverse Society
Unit(s): 3.0
Class Hours: 48 Lecture total.

Examination of the development of social identities in diverse societies, and implications of oppression and privilege as they apply to young children, families, programs, classrooms, and teaching. Classroom teaching strategies will be explored emphasizing culturally and linguistically appropriate anti-bias approaches, self-examination, and reflection on issues related to social identity, stereotypes and bias, social and educational access, media and schooling. Field trips may be required. CSU

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
INTERDISCIPLINARY STUDIES (IDS)

Division of Arts, Humanities and Social Sciences/Library

Dean: Marilyn Flores
Department Chair, Humanities: Marcelo Pimentel
Faculty: Georgia Summers

Santiago Canyon College offers multiple interdisciplinary degrees and certificates which span the boundaries of traditional academic majors. Students are provided with opportunities to pursue areas of emphases deriving from the interaction of different disciplines. The sequences of courses lead to degrees and certificates which incorporate concepts from the humanities and arts, the natural sciences and the social sciences. The broad framework of these awards enables students to explore the range of human knowledge.

Each degree and certificate includes a focused study in at least one established interdisciplinary core. Each award specifies the requirements necessary to earn the degree or the certificate.

For the Liberal Arts degrees, the areas of inquiry are referred to as "emphasis requirements". Major requirements for the associate degrees are in addition to the general education requirements. Certificates of Achievement do not require general education.

The interdisciplinary degrees and certificates can be found on:
- Liberal Arts, pages 159-160
- Modern Language, page 168
- Science, pages 183-184
- Social Science, pages 185-186

Courses

Interdisciplinary Studies 155
Human Sexuality
Unit(s): 3.0
Class Hours: 48 Lecture total.
An interdisciplinary review of the biological development and psychological influences across the lifespan, including neuroscience research and sociocultural considerations in the areas of gender, attraction, attachment, love, sexual orientations, anatomy, sexual arousal and response, conception, contraception, reproduction, health, including sexual coercion, sexually transmitted infections. CSU/UC

ITALIAN (ITAL)

Division of Arts, Humanities and Social Sciences/Library

Dean: Marilyn Flores
Department Chair, Modern Languages: Elizabeth Baez

Courses

Italian 101
Elementary Italian I
Unit(s): 5.0
Class Hours: 80 Lecture total, 16 Laboratory total.
- Pronunciation, grammar, speaking, reading, listening, writing, common idioms and cultural insights. Italian 101 is equivalent to 2 years of high school Italian. CSU/UC

Italian 102
Elementary Italian II
Unit(s): 5.0
Class Hours: 80 Lecture total, 16 Laboratory total.
Prerequisite: Italian 101 or two years of high school Italian.
- Mastery of pronunciation and basic grammatical structures. Further training in reading and writing and speaking to promote fluent and idiomatic communication. Italian 102 is equivalent to the third year of high school Italian. CSU/UC

Italian 194
Conversation and Composition
Unit(s): 3.0
Class Hours: 48 Lecture total.
Prerequisite: Italian 102.
- Reinfrces conversational and composition skills. Implementation of language structure through conversation, reading and composition. Discussions of Italian culture. CSU

Italian 195
Advanced Conversational Italian
Unit(s): 3.0
Class Hours: 48 Lecture total.
Prerequisite: Italian 102.
- Advanced conversational techniques. A review of language structure through discussion, conversation, reading, composition, and translation. Discussions of Italian culture. CSU/UC

Italian 201
Intermediate Italian I
Unit(s): 5.0
Class Hours: 80 Lecture total.
Prerequisite: Italian 102 or three years of high school Italian.
- A college level Italian class focusing on expansive review of usage and grammar, discussions of interpretive readings, conversation, and composition. CSU/UC

Italian 202
Intermediate Italian II
Unit(s): 5.0
Class Hours: 80 Lecture total.
Prerequisite: Italian 201 or four years of high school Italian.
- A specialized college level review of structure, usage and composition; discussions in Italian of history and culture based on literary materials. CSU/UC

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.*
KINESIOLOGY (Kin)

Division of Mathematics and Sciences

Dean: Martin Stringer
Department Co-Chairs, Kinesiology: Lisa Camarco, Ian Woodhead
Faculty: Lisa Camarco, Shawn Cummins, Ian Woodhead

Associate in Arts
Kinesiology for Transfer (32434)

The Associate in Arts in Kinesiology for Transfer prepares students to transfer to a four-year institution leading to a baccalaureate degree in Kinesiology. Completion of the degree also provides guaranteed admission with junior status to the CSU system in the Kinesiology major.

Please consult a counselor regarding specific course requirements for your transfer institution.

Upon completion of the Associate in Arts for Transfer in Kinesiology, students will have a general understanding of the human anatomy, human physiology, and mechanics of human movement, and be able to apply fitness-based concepts.

Learning Outcome(s)

Upon successful completion of the major requirements for this degree, students will be able to

- Demonstrate a general understanding of human anatomy, human physiology, and the mechanics of human movement.
- Demonstrate practical application of fitness concepts.

Major requirements*   Units
Kinesiology 100, Introduction to Kinesiology 3
Biology 239, General Human Anatomy 4
Biology 249, Human Physiology 4

Select three (3) units from the following:

- Must select one (1) unit courses from three different areas: Aquatics, Combatives, Dance, Fitness, or Team Sports.

Aquatics
Kinesiology 185A, Basic Swimming (1)
Kinesiology 185B, Intermediate Swimming (1)
Kinesiology 185C, Advanced Swimming (1)

Combatives
Kinesiology 125A, Basic Cardio Kickboxing (1)
Kinesiology 125B, Intermediate Cardio Kickboxing (1)

Dance
Dance 106A, Introduction to Modern Dance (1)
Dance 106B, Introduction to Modern Dance (1)
Dance 108A, Introduction to Ballet (1)
Dance 108B, Introduction to Ballet (1)
Dance 115A, Introduction to Tap Dance (1)
Dance 119A, Introduction to Jazz Dance (1)
Dance 119B, Introduction to Jazz Dance (1)

Fitness
Kinesiology 119, Personal Fitness Evaluation (1)
Kinesiology 120A, Basic Aerobics (1)
Kinesiology 120B, Intermediate Aerobics (1)
Kinesiology 121A, Basic Step Aerobics (1)
Kinesiology 126A, Basic Spin (1)
Kinesiology 126B, Intermediate Spin (1)
Kinesiology 127A, Basic Yoga (1)
Kinesiology 127B, Intermediate Yoga (1)
Kinesiology 140A, Basic Circuit Weight Training (1)
Kinesiology 140B, Intermediate Circuit Weight Training (1)
Kinesiology 140C, Advanced Circuit Weight Training (1)
Kinesiology 146A, Basic Strength Training (1)
Kinesiology 146B, Intermediate Strength Training (1)
Kinesiology 146C, Advanced Strength Training (1)
Kinesiology 147, Strength Training for Women (1)
Kinesiology 200, Conditioning for Athletes-Men (1)
Kinesiology 201, Conditioning for Athletes-Co-Ed (1)
Kinesiology 202, Conditioning for Athletes-Women (1)
Kinesiology 203, Speed and Agility-Men (1)
Kinesiology 204, Speed and Agility-Women (1)

Team Sports
Kinesiology 160A, Basic Basketball (1)
Kinesiology 160B, Intermediate Basketball (1)
Kinesiology 163A, Basic Indoor Soccer (1)
Kinesiology 168A, Basic Volleyball (1)
Kinesiology 168B, Intermediate Volleyball (1)

Select two (2) courses from the following (List A):

Kinesiology 101, First Aid and CPR (3)
Chemistry 210, General, Organic, and Biochemistry (5)
Chemistry 219/219H, General Chemistry (5)
Mathematics 219/219H, Statistics and Probability (4)
OR
Social Science 219/219H, Statistics and Probability (4)

Total 7-10

Physical Education (PST)

Kinesiology 101, First Aid and CPR (3)

Class Hours: 48 Lecture total.

This course involves the theory and detailed demonstration of the first aid care of the injured. The student will learn to assess a victim's condition and incorporate proper treatment. Standard first aid, CPR, and automated external defibrillator (AED) certification(s) will be granted upon successful completion of requirements. CSU/UC (C-ID)

Kinesiology 102

Nutrition and Fitness

Unit(s): 2.0

Class Hours: 32 Lecture total.

An applied nutrition course designed to help improve the nutrition and health of active individuals. The course focuses on the prevention of disease, weight control, and improved physical and mental performance. CSU/UC

Kinesiology 104

Healthful Living

Unit(s): 3.0

Class Hours: 48 Lecture total.

Comprehensive look at factors that impact people's health, longevity and lifetime wellness. Areas covered will be personal fitness, nutrition, drugs, alcohol and tobacco, AIDS and sexually transmitted diseases, and degenerative diseases including cancer, heart disease, strokes and diabetes. CSU/UC

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
Kinesiology 109
Sport in US Society
Unit(s): 3.0
Class Hours: 48 Lecture total.
This course is a comprehensive look at sport in US society and how various ethnic and minority groups have influenced sport at the local, state and national levels. The influences of other cultures outside of the US will be reviewed and analyzed. A review of sport history will be conducted with communication and media influences also examined. CSU

Kinesiology 110
Women's Health Issues
Unit(s): 3.0
Class Hours: 48 Lecture total.
This course is designed to address health concepts as they apply to women. The topics range from personal fitness and nutrition habits to substance abuse; female reproductive structure and function; intimate and abusive relationships; disease transmission, prevention and aging. CSU/UC

Kinesiology 111
Sports Psychology
Unit(s): 3.0
Class Hours: 48 Lecture total.
An academic and practical examination of the psychological aspects of sport. Specific methods will be taught to enhance athletic performance through mental preparation and practice. CSU

Kinesiology 119
Personal Fitness Evaluation
Unit(s): 0.5-1.0
Class Hours: 32-48 Laboratory total.
Personal evaluation of your fitness level. Each student completes appointments that evaluate flexibility, strength, blood pressure, body composition, pulmonary function, resting electrocardiogram, and a graded exercise test. Students are required to record 24 hours of instructor supervised exercise. Designed for healthy individuals with no heart problems. Grade: Pass/No Pass. CSU/UC

Kinesiology 120A
Basic Aerobics
Unit(s): 0.5-1.0
Class Hours: 32-48 Laboratory total.
Aerobic exercises, strength routines and stretching activities set to music designed to improve cardiovascular endurance and enhance muscular strength and flexibility. CSU/UC

Kinesiology 120B
Intermediate Aerobics
Unit(s): 0.5-1.0
Class Hours: 32-48 Laboratory total.
This course provides instruction in various aerobic and stretching movements set to music. Designed to tone the body, improve cardiovascular endurance, and increase one's ability to exercise safely and effectively. CSU/UC

Kinesiology 121A
Basic Step Aerobics
Unit(s): 0.5-1.0
Class Hours: 32-48 Laboratory total.
An aerobic exercise program that improves flexibility, aerobic conditioning, muscular strength and endurance by utilizing a platform for stepping up and down. Includes a variety of stepping routines and upper body strength training exercises in controlled rhythmic patterns set to music. CSU/UC

Kinesiology 123A
Basic Stretch, Flex, and Tone
Unit(s): 0.5-1.0
Class Hours: 32-48 Laboratory total.
A combination of beginning stretching and toning exercises to increase strength, flexibility, and overall body fitness. CSU/UC

Kinesiology 123B
Intermediate Stretch, Flex, and Tone
Unit(s): 0.5-1.0
Class Hours: 32-48 Laboratory total.
Intermediate level course designed to challenge and improve upon the individual's level of flexibility, muscle tone, and strength. CSU/UC

Kinesiology 125A
Basic Cardio Kickboxing
Unit(s): 0.5-1.0
Class Hours: 32-48 Laboratory total.
A series of combative boxing and kickboxing maneuvers designed to improve muscle tone, cardiovascular endurance, and self defense. CSU/UC

Kinesiology 125B
Intermediate Cardio Kickboxing
Unit(s): 0.5-1.0
Class Hours: 32-48 Laboratory total.
This intermediate level Cardio Boxing class will emphasize combative maneuvers that will enhance the cardiovascular fitness level as well as the personal safety of the students at an enhanced level of instruction. CSU/UC

Kinesiology 126A
Basic Spin
Unit(s): 0.5-1.0
Class Hours: 32-48 Laboratory total.
Students will be guided through workout phases on the bike with a basic introduction to warm ups, up-tempo cadences, sprints, climbs and cool downs. CSU/UC

Kinesiology 126B
Intermediate Spin
Unit(s): 0.5-1.0
Class Hours: 32-48 Laboratory total.
Students will be guided through intermediate level spin routines that challenge the cardiovascular and muscular endurance through varying cadence, resistance, and revolutions per minute (RPMs) set to up-tempo music. CSU/UC

Kinesiology 127A
Basic Yoga
Unit(s): 0.5-1.0
Class Hours: 32-48 Laboratory total.
This basic yoga class is an exercise program that emphasizes the practice of postures that strengthen the body, improve flexibility and create a feeling of well-being. CSU/UC

Kinesiology 127B
Intermediate Yoga
Unit(s): 0.5-1.0
Class Hours: 32-48 Laboratory total.
This intermediate level yoga class is an exercise program that emphasizes the practice of postures that strengthen the body, improve flexibility and create a feeling of well-being. CSU/UC

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
Kinesiology 140A
Basic Circuit Weight Training
Unit(s): 0.5-1.0
Class Hours: 24-48 Laboratory total.
This course introduces the basic principles related to the acquisition of muscular strength and endurance. Students will explore training techniques through the use of body weight and light weight equipment. Instruction is provided in the areas of functional fitness and the physiological adaptation process that occurs as a result of circuit training. Grade: Pass/No Pass. CSU/UC

Kinesiology 140B
Intermediate Circuit Weight Training
Unit(s): 0.5-1.0
Class Hours: 24-48 Laboratory total.
This course is designed for students with prior resistance training experience. Principles and training techniques for the development of muscle tone, muscle strength, and muscular endurance will be taught, as well as the use of weightbearing exercises to promote cardiovascular health benefits. Students will utilize weights, variable resistance machines, and other resistance equipment to advance their total body fitness. Grade: Pass/No Pass. CSU/UC

Kinesiology 140C
Advanced Circuit Weight Training
Unit(s): 0.5-1.0
Class Hours: 24-48 Laboratory total.
This course is designed for students possessing advanced knowledge and experience with resistance training exercises. Students will utilize weights, variable resistance machines, and a wide variety of weight-bearing activities equipment to perform high intensity exercise. Muscular development will be achieved through implementation of a resistance training program built upon advanced modes of training and the principles of exercise physiology. Grade: Pass/No Pass. CSU/UC

Kinesiology 146A
Basic Strength Training
Unit(s): 0.5-1.0
Class Hours: 24-48 Laboratory total.
This course introduces students to the basic principles of resistance training through the use of free weight barbells and dumbbells. Emphasis is placed on the development of muscular strength and muscular endurance. Instruction is provided in the areas of free weight safety and practical application of basic strength training concepts. Grade: Pass/No Pass. CSU/UC

Kinesiology 146B
Intermediate Strength Training
Unit(s): 0.5-1.0
Class Hours: 24-48 Laboratory total.
This high intensity strength training course is designed for students who possess significant experience in the use of free weight equipment. Students will apply proper weight lifting techniques and training periodization to develop muscular strength and power through the use of dumbbells and Olympic bar weights. Instruction is provided in advanced strength training theory. Grade: Pass/No Pass. CSU/UC

Kinesiology 146C
Advanced Strength Training
Unit(s): 0.5-1.0
Class Hours: 24-48 Laboratory total.
This course is designed for students with advanced knowledge and extensive experience in free weight strength training. Instruction will focus on training methods applicable to multi-joint powerlifting, Olympic lifting, and sport strength and conditioning. Students will develop individualized workout programs that emphasize the development of muscular strength, power, agility, and explosiveness. Grade: Pass/No Pass. CSU/UC

Kinesiology 147
Strength Training for Women
Unit(s): 0.5-1.0
Class Hours: 24-48 Laboratory total.
This course is designed to teach students the health and fitness benefits of a regular strength training program. Instruction will focus on the development of muscular strength and endurance, muscle toning, and improvement of body composition and joint stability through the use of free weight exercises and equipment. Emphasis is placed on the lifelong benefits of strength training for the female population. Grade: Pass/No Pass. CSU/UC

Kinesiology 160A
Basic Basketball
Unit(s): 0.5-1.0
Class Hours: 32-48 Laboratory total.
To introduce and establish basketball fundamentals with a view to encouraging lifetime fitness. CSU/UC

Kinesiology 160B
Intermediate Basketball
Unit(s): 0.5-1.0
Class Hours: 32-48 Laboratory total.
Intermediate level course to further develop passing, dribbling and various types of shooting. Emphasis will be placed on small group defense, small group offense, rules, special situations and strategies. CSU/UC

Kinesiology 163A
Basic Indoor Soccer
Unit(s): 0.5-1.0
Class Hours: 32-48 Laboratory total.
A basic level soccer course to develop fundamental soccer skills in an indoor facility. CSU/UC

Kinesiology 168A
Basic Volleyball
Unit(s): 0.5-1.0
Class Hours: 32-48 Laboratory total.
This course introduces the fundamental strategies and skills of volleyball, including setting, passing, spiking, blocking and serving, as well as the beginning concepts of team and tournament play. CSU/UC

Kinesiology 168B
Intermediate Volleyball
Unit(s): 0.5-1.0
Class Hours: 32-48 Laboratory total.
An intermediate volleyball class to improve volleyball skills, in the areas of passing, setting, hitting, serving and blocking, as well as basic offensive and defensive systems of play. The course includes discussions of rules and strategy. CSU/UC

Kinesiology 185A
Basic Swimming
Unit(s): 0.5-1.0
Class Hours: 32-48 Laboratory total.
This course introduces basic swimming skills, emphasizing water safety. CSU/UC

Kinesiology 185B
Intermediate Swimming
Unit(s): 0.5-1.0
Class Hours: 32-48 Laboratory total.
This course develops intermediate swim skills, emphasizing the four competitive swim strokes. Speed and endurance swimming will be emphasized in a training environment. CSU/UC

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
Kinesiology 185C
Advanced Swimming
Unit(s): 0.5-1.0
Class Hours: 32-48 Laboratory total.
Advanced swim skills developed with emphasis on the five competitive swim strokes. Advanced speed and endurance training will be emphasized in a training environment. CSU/UC

Kinesiology 189A
Basic Aqua Aerobics
Unit(s): 0.5-1.0
Class Hours: 32-48 Laboratory total.
A class designed to improve muscle tone, flexibility and cardiovascular endurance through exercises using water as a means of resistance. CSU/UC

Kinesiology 200
 Conditioning for Athletes-Men
Unit(s): 0.5-1.0
Class Hours: 32-48 Laboratory total.
An instructor supervised exercise program designed for athletes who participate in men's sports. Emphasis will be on the development of speed, endurance, flexibility, and strength. May be repeated. Students may take a maximum of 350 hours of any team sport, team off season course or conditioning course per academic year. CSU/UC

Kinesiology 201
 Conditioning for Athletes-Co-Ed
Unit(s): 0.5-1.0
Class Hours: 32-48 Laboratory total.
An instructor supervised exercise program designed for athletes who participate in sports. Emphasis will be on the development of speed, endurance, flexibility, and strength. May be repeated. Students may take a maximum of 350 hours of any team sport, team off season course or conditioning course per academic year. CSU/UC

Kinesiology 202
 Conditioning for Athletes-Women
Unit(s): 0.5-1.0
Class Hours: 32-48 Laboratory total.
An instructor supervised exercise program designed for athletes who participate in women's sports. Emphasis will be on the development of speed, endurance, flexibility, and strength. May be repeated. Students may take a maximum of 350 hours of any team sport, team off season course or conditioning course per academic year. CSU/UC

Kinesiology 203
Speed and Agility-Men
Unit(s): 0.5-1.0
Class Hours: 32-48 Laboratory total.
This class is designed for male athletes to increase running speed. This class includes instruction on linear speed, non-linear speed, and jumping ability using state of the art plyometric training and speed specific training tools. May be repeated. Students may take a maximum of 350 hours of any team sport, team off season course or conditioning course per academic year. CSU

Kinesiology 204
Speed and Agility-Women
Unit(s): 0.5-1.0
Class Hours: 32-48 Laboratory total.
This class is designed for female athletes to increase running speed. This class includes instruction on linear speed, non-linear speed, and jumping ability using state of the art plyometric training and speed specific training tools. May be repeated. Students may take a maximum of 350 hours of any team sport, team off season course or conditioning course per academic year. CSU

Kinesiology 240
Basketball Team- Men
Unit(s): 3.0
Class Hours: 160 Laboratory total.
A high-level competitive program in Basketball for male athletes with exceptional athletic talent. Students must meet California Community College Athletic Association (CCCAA) eligibility requirements and pass a health screening prior to competing. May be repeated. Students may take a maximum of 350 hours of any team sport, team off season course or conditioning course per academic year. CSU/UC

Kinesiology 241
Basketball Team- Women
Unit(s): 3.0
Class Hours: 160 Laboratory total.
A high-level competitive program in Basketball for female athletes with exceptional athletic talent. Students must meet California Community College Athletic Association (CCCAA) eligibility requirements and pass a health screening prior to competing. May be repeated. Students may take a maximum of 350 hours of any team sport, team off season course or conditioning course per academic year. CSU/UC

Kinesiology 245
Volleyball Team- Men
Unit(s): 3.0
Class Hours: 160 Laboratory total.
A high-level competitive program in Volleyball for male athletes with exceptional athletic talent. Students must meet California Community College Athletic Association (CCCAA) eligibility requirements and pass a health screening prior to competing. May be repeated. Students may take a maximum of 350 hours of any team sport, team off season course or conditioning course per academic year. CSU/UC

Kinesiology 246
Volleyball Team- Women
Unit(s): 3.0
Class Hours: 160 Laboratory total.
A high-level competitive program in Volleyball for female athletes with exceptional athletic talent. Students must meet California Community College Athletic Association (CCCAA) eligibility requirements and pass a health screening prior to competing. May be repeated. Students may take a maximum of 350 hours of any team sport, team off season course or conditioning course per academic year. CSU/UC

Kinesiology 250
Track and Field Team-Men
Unit(s): 3.0
Class Hours: 160 Laboratory total.
A high-level, competitive program for male students with exceptional track and field talent. Students must meet California Community College Athletic Association (CCCAA) eligibility requirements and pass a health screening prior to participation. May be repeated. Students may take a maximum of 350 hours of any team sport, team off season course or conditioning course per academic year. CSU/UC

Kinesiology 251
Track and Field Team-Women
Unit(s): 3.0
Class Hours: 160 Laboratory total.
A high-level, competitive program for female students with exceptional track and field talent. Students must meet California Community College Athletic Association (CCCAA) eligibility requirements and pass a health screening prior to participation. May be repeated. Students may take a maximum of 350 hours of any team sport, team off season course or conditioning course per academic year. CSU/UC

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
Kinesiology 252
Track and Field Team-Off Season
Unit(s): 0.5-1.0
Class Hours: 32-48 Laboratory total.
A high-level, competitive program for male students with exceptional cross country talent. Students must meet California Community College Athletic Association (CCCAA) eligibility requirements and pass a health screening prior to participation. May be repeated. Students may take a maximum of 350 hours of any team sport, team off season course or conditioning course per academic year. CSU/UC

Kinesiology 255
Cross Country Team-Men
Unit(s): 3.0
Class Hours: 160 Laboratory total.
A high-level, competitive program for male students with exceptional cross country talent. Students must meet California Community College Athletic Association (CCCAA) eligibility requirements and pass a health screening prior to participation. May be repeated. Students may take a maximum of 350 hours of any team sport, team off season course or conditioning course per academic year. CSU/UC

Kinesiology 256
Cross Country Team-Women
Unit(s): 3.0
Class Hours: 160 Laboratory total.
A high-level, competitive program for female students with exceptional cross country talent. Students must meet California Community College Athletic Association (CCCAA) eligibility requirements and pass a health screening prior to participation. May be repeated. Students may take a maximum of 350 hours of any team sport, team off season course or conditioning course per academic year. CSU/UC

Kinesiology 265
Golf Team-Men
Unit(s): 3.0
Class Hours: 160 Laboratory total.
A high-level, competitive program for male students with exceptional golf talent. Students must meet California Community College Athletic Association (CCCAA) eligibility requirements and pass a health screening prior to participation. May be repeated. Students may take a maximum of 350 hours of any team sport, team off season course or conditioning course per academic year. CSU/UC

Kinesiology 267
Golf Team-Off Season
Unit(s): 0.5-1.0
Class Hours: 32-48 Laboratory total.
Application of advanced golf techniques as they relate to practice techniques and competitive play in the sport of golf. The class will focus on playing lessons on regulation golf courses. May be repeated. Students may take a maximum of 350 hours of any team sport, team off season course or conditioning course per academic year. CSU/UC

Kinesiology 270
Soccer Team-Men
Unit(s): 3.0
Class Hours: 160 Laboratory total.
A high-level, competitive program in soccer for male athletes with exceptional athletic talent. Students must meet California Community College Athletic Association (CCCAA) eligibility requirements and pass a health screening prior to participation. May be repeated. Students may take a maximum of 350 hours of any team sport, team off season course or conditioning course per academic year. CSU/UC

Kinesiology 271
Soccer Team-Women
Unit(s): 3.0
Class Hours: 160 Laboratory total.
A high-level, competitive program in soccer for female athletes with exceptional athletic talent. Students must meet California Community College Athletic Association (CCCAA) eligibility requirements and pass a health screening prior to participation. May be repeated. Students may take a maximum of 350 hours of any team sport, team off season course or conditioning course per academic year. CSU/UC

Kinesiology 272
Soccer Team Off Season-Men
Unit(s): 0.5-1.0
Class Hours: 32-48 Laboratory total.
A high-level, competitive practice and skills program in soccer for male students with exceptional athletic talent. May be repeated. Students may take a maximum of 350 hours of any team sport, team off season course or conditioning course per academic year. CSU/UC

Kinesiology 273
Soccer Team Off Season-Women
Unit(s): 0.5-1.0
Class Hours: 32-48 Laboratory total.
A high-level, competitive practice and skills program in soccer for female students with exceptional athletic talent. May be repeated. Students may take a maximum of 350 hours of any team sport, team off season course or conditioning course per academic year. CSU/UC

Kinesiology 274
Theory of Soccer
Unit(s): 2.0
Class Hours: 32 Lecture total.
A general overview of the history of the game, its rules, tactics, techniques, conditioning and overall preparation to understand, play and enjoy soccer. CSU/UC

Kinesiology 281
Softball Team-Women
Unit(s): 3.0
Class Hours: 160 Laboratory total.
A high-level, competitive program in softball for female student athletes with exceptional athletic talent. Students must meet California Community College Athletic Association (CCCAA) eligibility requirements and pass a health screening prior to participation. May be repeated. Students may take a maximum of 350 hours of any team sport, team off season course or conditioning course per academic year. CSU/UC

Kinesiology 283
Softball Team Off Season-Women
Unit(s): 0.5-1.0
Class Hours: 32-48 Laboratory total.
Basic skills and fundamentals of catching, throwing, pitching, hitting and base running will be covered. Offensive and defensive techniques and strategies will be practiced. May be repeated. Students may take a maximum of 350 hours of any team sport, team off season course or conditioning course per academic year. CSU/UC

Kinesiology 284
Theory of Softball
Unit(s): 2.0
Class Hours: 32 Lecture total.
A general overview of rules, regulations, strategies, mental preparation, skill evaluation and the history of the sport of softball. CSU/UC

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
**LIBERAL ARTS**

**Associate in Arts/Science**

**Liberal Arts**

The integrated curriculum of the Liberal Arts degree provides a broad exposure to the arts, humanities, and social sciences, while offering the opportunity for depth of knowledge within an area of emphasis. The program will enable students to develop an appreciation and understanding of the beauty and values that have shaped and enriched our culture and to develop intellectual maturity, a deeper understanding of themselves and the American heritage. The curriculum provides a basic framework for lifelong individual study as well as preparation for university study.

**Emphasis requirements**

- Complete a minimum of 18 units selected from one of the following areas of emphasis: Arts, Humanities and Communication; Mathematics and Sciences; Multi-Cultural Studies; or Social and Behavioral Sciences.

Students are encouraged to select two or more courses within a single discipline in an “area of emphasis” to expand their depth of knowledge within a discipline. All courses in the area of emphasis must be completed with a letter grade of “C” or better. Students are advised to meet with a counselor to select the area of emphasis most appropriate to their educational goal.

In addition to the area of emphasis, students are required to complete a general education pattern (Plan A, B, or C). Students are advised to meet with a counselor to select the general education pattern most appropriate to their educational goals.

Units used to satisfy an area of emphasis may be used to satisfy general education requirements.

**Associate in Arts in Arts, Humanities and Communication (18317)**

These courses emphasize the study of cultural literacy, humanistic activities and the artistic expression of human beings. Students will evaluate and interpret the ways in which people through the ages in different cultures have responded to themselves and the world around them in artistic and cultural creation. Students will also learn to value aesthetic understanding and incorporate these concepts when constructing value judgments. This area of emphasis will prepare students for a variety of majors within the Humanities discipline including Creative Writing, English, Foreign Language, Humanities and Art, and Philosophy. It will also provide lower-division preparation for a wide range of majors with the Communications discipline.

**Learning Outcome(s)**

Upon successful completion of the major requirements for this degree, students will be able to

- Think critically in terms of constructing arguments and presenting evidence to support their views through oral, artistic and written communication.
- Understand and articulate how culture, society, and diversity shape the role of the individual within society and human relations across cultures and disciplines.

**Emphasis requirements**

(18 units minimum)


**Associate in Science in Mathematics and Sciences (18318):**

The science courses in this category examine the physical universe, its life forms and its natural phenomena. These courses will assist the student in developing an appreciation of the scientific method and encourage an understanding of the relationships between science and other human activities. The mathematics courses will encourage the understanding of mathematical concepts through the development of quantitative reasoning skills. Students are required to complete at least one mathematics course within this area of emphasis. This area of emphasis will provide students with lower-division preparation for a variety of majors within the scientific disciplines, including Astronomy, Biology, Chemistry, Geology, and Physics and will provide preparation for Mathematics majors. Additionally, students may undertake preparation for Nursing, Kinesiology, Public Health and other Health Science majors. Many of the courses will also assist students in prerequisite preparation for graduate programs within the Health Sciences.

**Learning Outcome(s)**

Upon successful completion of the major requirements for this degree, students will be able to

- Demonstrate an ability to analyze and evaluate scientific and mathematical topics.
- Clearly communicate scientific and mathematical reasoning and qualitative problem solving skills using appropriate vocabulary, methodologies and diverse technologies.

**Emphasis requirements**

(18 units minimum)

- Anthropology 101; Astronomy 109, 110, 112, 140; Biology 109/109H, 109L, 139, 148, 177, 200, 211, 212, 214, 221, 229, 231, 239, 249, 259; Chemistry 209, 210, 219/219H, 229, 249, 259; Earth Science 110, 115; Engineering 210, 220, 225, 230; Environmental Studies 200, 259; Geography 101; Geology 101, 101L, 142, 150, 201, 260; Mathematics 080, 105, 140, 150, 160, 170, 180/180H, 185, 219/219H, 280, 287, 290, 295; Physical Science 115; Physics 109, 150A, 150AC, 150B, 150BC, 210, 211, 250A, 250B, 250C; Social Science 219/219H

**Associate in Arts in Multi-Cultural Studies (18319):**

These inter-disciplinary courses promote an appreciation of multi-cultural influences in contemporary society. Courses in this category encourage students to acquire the knowledge, skills and attitude needed to function effectively in a pluralistic democratic society and to interact, negotiate and communicate with peoples from diverse groups in order to create a civic and moral community that works for the common good. This emphasis will provide students with lower-division major preparation for disciplines within the area of study devoted to culture and society. These majors would include Chicano Studies, Ethnic Studies, Foreign Language, Global Studies, International Development and Women's Studies.

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*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.*
Learning Outcome(s)

Upon successful completion of the major requirements for this degree, students will be able to
- Appreciate the multi-cultural influences on our contemporary culture and society.
- Communicate effectively with individuals and groups from diverse populations.
- Acquire knowledge, skills, and attitudes to function positively and productively within a diverse society and in upper division coursework.

Emphasis requirements (18 units minimum)

Anthropology 100/100H, 104; Art 101, 102; Chicano Studies 101; Communication 120/120H, 225/225H; Counseling 101, 116, 118, 150; Education 101; English 246, 271, 272, 278; Ethnic Studies 101; French 101, 102, 194, 196, 201, 202; History 124, 127, 152, 162; Italian 101, 102, 194, 195, 201, 202; Kinesiology 110; Music 103; Philosophy 112; Political Science 221; Psychology 170; Sign Language 116; Spanish 101/101H, 101A, 101B, 102/102H, 194, 195A, 195B, 201, 202; Women’s Studies 101, 102

Associated in Arts in Social and Behavioral Sciences (18320):

Courses in this category emphasize the connection between human behavior and social, political and economic institutions and promote an understanding of how societies and social subgroups operate. Students will be encouraged to apply critical thinking techniques as they evaluate the way individuals act and have acted in response to their societies. The courses will ensure opportunities for students to develop an understanding of the perspectives and methods of inquiry used in the social and behavioral sciences. This area of emphasis will provide students with lower-division major preparation for many disciplines within the social sciences including Criminal Justice, Economics, Political Science, Psychology, Sociology and History.

Learning Outcome(s)

Upon successful completion of the major requirements for this degree, students will be able to
- Think critically about how individuals are influenced by political, economic, cultural and family institutions in various cultural settings.
- Have experience using social science methods of data collection and analysis in order to draw logical conclusions about individuals and society.
- Discuss, analyze, and compare and contrast U.S. and world political systems in various historical periods.

Emphasis requirements (18 units minimum)

Anthropology 100/100H, 103, 104; Chicano Studies 101; Communication 120/120H, 225/225H; Computer Science 100; Counseling 150; Criminal Justice 101; Economics 101, 102; English 278; Ethnic Studies 101; Geography 100/100H, 102; History 101/101H, 102/102H, 118, 120/120H, 121/121H, 122, 124, 127, 133, 152, 162, 240; Human Development 107, 110, 205, 208, 221; Interdisciplinary Studies 155; Kinesiology 109; Mathematics 219/219H; Political Science 101/101H, 200/200H, 220, 221, 230; Psychology 100/100H, 157, 170, 200, 219, 230, 240, 250; Social Science 219/219H; Sociology 100/100H, 112, 140/140H, 240; Television/Video Communications 105; Women’s Studies 101, 102

LIBRARY & INFORMATION STUDIES (LIBI)

Division of Arts, Humanities and Social Sciences/Library

Dean: Marilyn Flores
Department Chair, Library: Joseph Geissler
Faculty: Leah Freidenrich, Joseph Geissler, Alice Ho, Barbara Sproat, Lana Wong

Courses

Library & Information Studies 100
Library Research Fundamentals
Unit(s): 1.0
Class Hours: 16 Lecture total.
This course is an introduction to college-level research skills for effective use of traditional and electronic library resources. Instruction includes print and non-print information sources such as reference books, scholarly material, online subscription databases and the Internet. Students will visit a library to complete hands-on exercises. CSU/UC

Library & Information Studies 103
Advanced Internet Research
Unit(s): 1.0
Class Hours: 16 Lecture total.
Learn essential library research strategies for effectively locating and evaluating online information on the internet. Core topics are designing and performing successful search strategies, evaluating online information using critical thinking skills, identifying the ethical and legal aspects of using online sources, and citing web sources using a standard documentation style. CSU/UC
MANAGEMENT (MGMT)

Division of Business and Career Technical Education

Dean: Von Lawson
Department Co-Chairs, Business: Steven Deeley, Stewart Myers
Faculty: Steven Deeley

The associate degree and certificates in management are designed to prepare students for various management positions in business, government, and public organizations; to aid existing managers in upgrading their skills; and to assist employees for promotion to management/supervision positions.

Associate in Science
General Management (11861)

Learning Outcome(s)
Upon successful completion of the major requirements for this degree, students will be able to
• Qualify for a management position.

Major requirements* Units
<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting 101 Financial Accounting</td>
<td>4</td>
</tr>
<tr>
<td>Business 100, Fundamentals of Business</td>
<td>3</td>
</tr>
<tr>
<td>Business 120/Management 120, Principles of Management</td>
<td>3</td>
</tr>
<tr>
<td>Business 222, Business Writing</td>
<td>OR 3</td>
</tr>
<tr>
<td>Management 122, Business Communications</td>
<td></td>
</tr>
</tbody>
</table>

Select two (2) courses from the following: 6-7
<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting 102, Managerial Accounting (4)</td>
<td></td>
</tr>
<tr>
<td>Business 105, Legal Environment of Business (3)</td>
<td></td>
</tr>
<tr>
<td>Business 121/Management 121, Human Relations and Organizational Behavior (3)</td>
<td></td>
</tr>
<tr>
<td>Business 150, Introduction to Information Systems and Applications (3)</td>
<td></td>
</tr>
<tr>
<td>Marketing 113, Principles of Marketing (3)</td>
<td></td>
</tr>
</tbody>
</table>

TOTAL 19-20

Certificate of Proficiency
Human Resource Management

Learning Outcome(s)
Upon successful completion of the requirements for this certificate, students will be able to
• Prepare students for employment in the human resources field.

Certificate requirements Units
<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management 120/Busines 120, Principles of Management</td>
<td>3</td>
</tr>
<tr>
<td>Management 121/Business 121, Human Relations and Organizational Behavior</td>
<td>3</td>
</tr>
<tr>
<td>Management 135, Human Resource Management</td>
<td>3</td>
</tr>
<tr>
<td>Business 105, Legal Environment of Business</td>
<td>3</td>
</tr>
</tbody>
</table>

TOTAL 12

Certificate of Proficiency Supervision

Learning Outcome(s)
Upon successful completion of the requirements for this certificate, students will be able to
• Have the background to become a first level supervisor.

Certificate requirements Units
<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management 121/Business 121, Human Relations and Organizational Behavior</td>
<td>3</td>
</tr>
<tr>
<td>Management 122, Business Communications OR Business 222, Business Writing</td>
<td>3</td>
</tr>
<tr>
<td>Management 120/Business 120, Principles of Management OR Management 123, Supervision Management 135, Human Resource Management</td>
<td>3</td>
</tr>
</tbody>
</table>

TOTAL 12

Courses

Management 120
Principles of Management
Unit(s): 3.0
Class Hours: 48 Lecture total.
Principles, methods, and procedures essential to the successful management of human and financial resources. Planning, decision making, staffing, directing, motivating, leading, communicating, controlling, and the application of managerial skills. (Same as Business 120.) CSU

Management 121
Human Relations and Organizational Behavior
Unit(s): 3.0
Class Hours: 48 Lecture total.
The role of the manager and management’s relationship to employees. Includes the application of motivational theories, communications, leadership, and organizational structure. (Same as Business 121.) CSU

Management 122
Business Communications
Unit(s): 3.0
Class Hours: 48 Lecture total.
Recommended Preparation: English 061 or American College English 116.
Overview of oral and written communication skills used in business; emphasizes guidelines for improving writing and speaking skills, common solutions to common communication problems, ethical issues facing business communicators today, instructions on how to identify areas of legal vulnerability, and tested techniques for communicating successfully in today’s high-tech, international business environment. CSU

Management 123
Supervision
Unit(s): 3.0
Class Hours: 48 Lecture total.
A practical, skill building approach to learning and understanding first-line management and supervision. Designed to provide beginning and experienced supervisors with a hands-on situational approach using supervisory skills. CSU

Management 135
Human Resource Management
Unit(s): 3.0
Class Hours: 48 Lecture total.
Introductory course covers the goals, activities, and challenges of human resources. Includes equal employment opportunity and diversity, recruitment and selection, leadership and motivation, training and development, compensation, employee and labor/management relations. CSU

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
MARKETING (MKTG)
Division of Business and Career Technical Education

Dean: Von Lawson
Department Co-Chairs, Business: Steven Deeley, Stewart Myers
Faculty: Lynda Armbruster, Andy Salcido

The associate degree and certificates in marketing are designed to prepare students for various marketing, sales, and retail store management positions; to assist existing marketing managers and sales professionals in upgrading their skills; and to open up new career opportunities within the marketing field. Program content includes selection and buying of merchandise, advertising, sales, product distribution, customer relations, and pricing. The student will then specialize in one of the option areas: general marketing, professional selling, or advertising. The certificate program provides practical skills for the student within specific areas of marketing.

Associate in Science
General Marketing (11866)

Learning Outcome(s)
Upon successful completion of the major requirements for this degree, students will be able to
• Have the skills for an entry-level marketing position.

Major requirements* Units
Accounting 101, Financial Accounting 4
Business 222, Business Writing OR 3
Management 122, Business Communications
Marketing 112, Principles of Advertising 3
Marketing 113, Principles of Marketing 3
Marketing 115, Consumer Behavior 3
Select one (1) course from the following: 3
Business 100, Fundamentals of Business
Business 127, Introduction to E-Commerce
Marketing 114, Professional Selling
Marketing 135, Web Marketing and Promotion

TOTAL 19

Certificate of Proficiency
General Marketing

Learning Outcome(s)
Upon successful completion of the requirements for this certificate, students will be able to
• Have enough knowledge of marketing for an entry-level position.

Certificate requirements Units
Marketing 112, Principles of Advertising 3
Marketing 113, Principles of Marketing 3
Marketing 114, Professional Selling 3
Marketing 115, Consumer Behavior 3

TOTAL 12

Certificate of Proficiency
Advertising

Learning Outcome(s)
Upon successful completion of the requirements for this certificate, students will be able to
• Be employable at a first-level advertising position.

Certificate requirements Units
Marketing 112, Principles of Advertising 3
Marketing 113, Principles of Marketing 3
Marketing 115, Consumer Behavior 3
Marketing 135, Web Marketing and Promotion 3

TOTAL 12

Certificate of Proficiency
Web Marketing

Learning Outcome(s)
Upon successful completion of the requirements for this certificate, students will be able to
• Have the knowledge for an entry-level web marketing position.

Certificate requirements Units
Marketing 112, Principles of Advertising 3
Marketing 113, Principles of Marketing 3
Marketing 115, Consumer Behavior 3
Marketing 135, Web Marketing and Promotion 3
Business 127, Introduction to E-Commerce OR
Computer Information Systems 124, Adobe Photoshop
Computer Information Systems 126, Website Development for Business

TOTAL 12

Courses

Marketing 112
Principles of Advertising
Unit(s): 3.0
Class Hours: 48 Lecture total.
An analysis of the principles of advertising as a marketing tool. The use of persuasive techniques about products, services, or ideas. Understanding the use of various media to increase product use, to build brand preference and loyalty, and to communicate information about a product. CSU

Marketing 113
Principles of Marketing
Unit(s): 3.0
Class Hours: 48 Lecture total.
The process of developing products that will satisfy the many needs of consumers and businesses. Includes market research techniques, pricing, distribution and promotion. CSU

Marketing 114
Professional Selling
Unit(s): 3.0
Class Hours: 48 Lecture total.
Introductory course in sales covering sales presentations, communication styles, prospecting, closing, and evaluation of selling techniques and practices. Utilizes various methods to improve sales effectiveness. Covers objectives in selling from the perspective of the consumer, business and society. CSU

Marketing 115
Consumer Behavior
Unit(s): 3.0
Class Hours: 48 Lecture total.
The investigation and analysis of why consumers select, purchase, use, and dispose of goods and services to satisfy their personal and household needs. CSU

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
Marketing 135  
Web Marketing and Promotion  
Unit(s): 3.0  
Class Hours: 48 Lecture total.  
How to include the Internet in a business marketing plan. Covers advertising and promoting products, services or ideas on the Internet, audience identification, search engine strategies and other basics of increasing business effectiveness with Internet usage.  
CSU

Marketing 172  
Small Business Marketing and Advertising  
Unit(s): 3.0  
Class Hours: 48 Lecture total.  
Techniques for promoting a small business. Includes preparation of advertisements, customer research, media selection, budgeting and scheduling, and the evaluation of promotional effectiveness.  
CSU

MATHEMATICS (MATH)

Division of Mathematics and Sciences

Dean: Martin Stringer  
Department Co-Chairs, Mathematics: Darlene Diaz, Alicia Frost, Laney Wright  
Faculty: Veselka Danova, Darlene Diaz, Jane Francis, Alicia Frost, Anne Hauscarriague, Vanessa Jones, Kathleen Moore, Craig Nance, Scott Sakamoto, Randy Scott, John Smith, Joyce Wagner, Alison Williams, Laney Wright, Joseph Yorba

Associate in Science  
Mathematics for Transfer (31040)

The Associate in Science in Mathematics for Transfer prepares students to transfer to a four-year institution leading to a baccalaureate degree. Employment opportunities are available as mathematicians in government, health, industry and education. Successful completion of the transfer degree in Mathematics guarantees the student acceptance to a California State University to pursue a baccalaureate degree in Mathematics or a related field.

Learning Outcome(s)

Upon successful completion of the major requirements for this degree, students will be able to:

- Integrate into educational and professional conduct a calm, confident, and ethical approach to mathematical reasoning and problem solving while taking personal responsibility for mathematical success.
- Create mathematical models of real world phenomena, apply those models to make predictions about the behavior of the phenomena, apply appropriate problems solving techniques and critically evaluate the veracity of the obtained results.
- Clearly communicate mathematical reasoning and problem solving skills using a variety of formats, diverse technologies, and appropriate mathematical vocabulary and notation.

Major requirements*  

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics 180/180H, Analytic Geometry and Calculus</td>
<td>4</td>
</tr>
<tr>
<td>Mathematics 185, Analytic Geometry and Calculus</td>
<td>4</td>
</tr>
<tr>
<td>Mathematics 280, Intermediate Calculus</td>
<td>4</td>
</tr>
<tr>
<td>Select one (1) course from the following (List A):</td>
<td>4-5</td>
</tr>
<tr>
<td>Mathematics 287, Introduction to Linear Algebra and Differential Equations</td>
<td>(5)</td>
</tr>
<tr>
<td>Mathematics 290, Linear Algebra</td>
<td>(4)</td>
</tr>
<tr>
<td>Mathematics 295, Beginning Differential Equations</td>
<td>(4)</td>
</tr>
<tr>
<td>Select one (1) course from the following (List B):</td>
<td>3-5</td>
</tr>
<tr>
<td>Computer Science 112, Java Programming</td>
<td>(3)</td>
</tr>
<tr>
<td>Computer Science 120, Introduction to Programming</td>
<td>(3)</td>
</tr>
<tr>
<td>Computer Science 213, C# Programming</td>
<td>(3)</td>
</tr>
<tr>
<td>Mathematics 219/219H, Statistics and Probability</td>
<td>(4)</td>
</tr>
<tr>
<td>Social Science 219/219H, Statistics and Probability</td>
<td>(4)</td>
</tr>
<tr>
<td>Physics 250A, Physics for Scientists and Engineers I</td>
<td>(5)</td>
</tr>
</tbody>
</table>

TOTAL 19-22

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
Courses

Mathematics N05  
Basic Mathematics  
Unit(s): 0.5-3.0  
Class Hours: 9-64 Lecture total.  
Reviews whole numbers, fractions, decimals, percents, geometric formulas and signed numbers using lectures, self-paced computer assisted instruction, and manipulative activities. Not applicable to associate degree. Grade: Pass/No Pass. Open Entry/Open Exit.

Mathematics N06  
Essential Mathematics  
Unit(s): 3.0  
Class Hours: 64 Lecture total.  
Reviews whole numbers, fractions, decimals, percents, geometric formulas and signed numbers. Not applicable to associate degree.

Mathematics N06L  
Essential Mathematics Math Lab  
Unit(s): 0.2  
Class Hours: 10 Laboratory total.  
Corequisite: Mathematics N06.  
Students in Mathematics N06L will receive individual and/or group instruction. The course is designed to review, enhance and/or advance the students’ mathematical knowledge based on their individual need in whole numbers, fractions, decimals, percents, geometric formulas and signed numbers. Not applicable to associate degree. Grade: Pass/No Pass. Open Entry/Open Exit.

Mathematics N48  
Pre-Algebra/Algebra Basics  
Unit(s): 4.0  
Class Hours: 64 Lecture total.  
Prerequisite: Mathematics N05, N06 or placement into Mathematics N48 on the Mathematics Level 1 placement exam and a course equivalent to Mathematics N05 or Mathematics N06.  
For students who have little or no previous algebra experience. This course offers an introduction to basic algebra concepts, math vocabulary, algebraic operations. This course is intended to be a bridge from basic arithmetic to elementary algebra. Not applicable to associate degree.

Mathematics N48L  
Pre-Algebra/Algebra Basics Math Lab  
Unit(s): 0.2  
Class Hours: 10 Laboratory total.  
Corequisite: Mathematics N48.  
Students in Mathematics N48L will receive individual and/or group instruction. The course is designed to review, enhance and/or advance the students’ mathematical knowledge based on their individual need in pre-algebra/algebra basics. Grade: Pass/No Pass. Open Entry/Open Exit.

Mathematics N60  
Elementary Algebra  
Unit(s): 4.0  
Class Hours: 64 Lecture total.  
Prerequisite: Mathematics N48 or placement into Mathematics N60 on the Mathematics Level 1 or 2 placement exam and a course equivalent to Mathematics N48.  
A first course in algebra which includes solutions and applications of first and second-degree equations, geometric concepts, graphs, inequalities, exponents, polynomials, and algebraic fractions.

Mathematics N60L  
Elementary Algebra Math Lab  
Unit(s): 0.2  
Class Hours: 10 Laboratory total.  
Corequisite: Mathematics N60.  
Students in Mathematics N60L will receive individual and/or group instruction. The course is designed to review, enhance and/or advance students’ knowledge of mathematics based on their individual need in elementary algebra. Grade: Pass/No Pass. Open Entry/Open Exit.

Mathematics N73L  
Math Review  
Unit(s): 0.2  
Class Hours: 10 Laboratory total.  
Students requiring specific math knowledge in courses outside the math department (such as water science, surveying, physics, accounting, etc.) will receive individual instruction of mathematical topics based on their individual need. Not applicable to associate degree. Grade: Pass/No Pass. Open Entry/Open Exit.

Mathematics 030  
Coping with Math Anxiety  
Unit(s): 1.0  
Class Hours: 16 Lecture total.  
Covers the concept of math anxiety, what causes it, and how to overcome it. Includes review and practice of basic math skills. Grade: Pass/No Pass.

Mathematics 070  
Geometry  
Unit(s): 3.0  
Class Hours: 64 Lecture total.  
Prerequisite: Mathematics N60 or placement into Mathematics 070 on the Mathematics Level 2 placement exam and a course equivalent to Mathematics 060.  
Basic Euclidean geometry including concepts of lines, planes, triangles, congruence, proofs, inequalities, parallel lines, similarity, areas and volumes.

Mathematics 070L  
Geometry Math Lab  
Unit(s): 0.2  
Class Hours: 10 Laboratory total.  
Corequisite: Mathematics 070.  
Students in Mathematics 070L will receive individual and/or group instruction. The course is designed to review, enhance and/or advance the students’ mathematical knowledge based on their individual need in geometry. Grade: Pass/No Pass. Open Entry/Open Exit.

Mathematics 080  
Intermediate Algebra  
Unit(s): 4.0  
Class Hours: 80 Lecture total.  
Prerequisite: Mathematics N60 or placement into Mathematics 080 on the Mathematics level 2 placement exam and a course equivalent to Mathematics 060.  
A second course in algebra that includes systems of equations, inequalities, graphs and functions; radicals, quadratic polynomials, rational expressions; exponential and logarithmic functions, problem solving.

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
Mathematics 080L
Intermediate Algebra Math Lab
Unit(s): 0.2
Class Hours: 10 Laboratory total.
Corequisite: Mathematics 080.
Students in Mathematics 080L will receive individual and/or group instruction. The course is designed to review, enhance and/or advance the students’ mathematical knowledge based on their individual need in intermediate algebra. Grade: Pass/No Pass. Open Entry/Open Exit.

Mathematics 105
Mathematics for Liberal Arts Students
Unit(s): 3.0
Class Hours: 64 Lecture total.
Prerequisite: Mathematics 080 or equivalent skills as measured by the Mathematics Level 3 Exam and a course equivalent to Mathematics 080.
An overview of mathematics for the liberal arts student. Topics will include problem solving, financial management, probability, statistics, and selected other topics such as set theory, geometry, logic, mathematical modeling, and the history of mathematics. CSU/UC

Mathematics 105L
Mathematics for Liberal Arts Students Math Lab
Unit(s): 0.2
Class Hours: 10 Laboratory total.
Corequisite: Mathematics 105.
Students in Mathematics 105L will receive individual and/or group instruction. The course is designed to review, enhance and/or advance the students’ mathematical knowledge based on their individual need in an overview of mathematics for the liberal arts. Grade: Pass/No Pass. Open Entry/Open Exit. CSU

Mathematics 140
College Algebra
Unit(s): 4.0
Class Hours: 64 Lecture total.
Prerequisite: Mathematics 080 or equivalent skills as measured by the Mathematics Level 3 Exam and a course equivalent to Mathematics 080.
Survey of advanced topics in algebra: equations, inequalities and functions involving polynomials, rationals, exponents, and logarithms with applications and graphing; sequences and series. CSU/UC

Mathematics 140L
College Algebra Math Lab
Unit(s): 0.2
Class Hours: 10 Laboratory total.
Corequisite: Mathematics 140.
Students in Mathematics 140L will receive individual and/or group instruction. The course is designed to review, enhance and/or advance the students’ mathematical knowledge based on their individual need in college algebra. Grade: Pass/No Pass. Open Entry/Open Exit. CSU

Mathematics 150
Calculus for Biological, Management and Social Sciences
Unit(s): 4.0
Class Hours: 80 Lecture total.
Prerequisite: Mathematics 140 or placement into Mathematics 150 on the Mathematics Level 3 placement exam and a course equivalent to Mathematics 140.
Single and multi-variable calculus including limits, derivatives, integrals, exponentials and logarithmic functions and partial derivatives. Applications are drawn from Biology, Social Science and Business. CSU/UC (C-ID)

Mathematics 150L
Calculus for Biological, Management and Social Sciences Math Lab
Unit(s): 0.2
Class Hours: 10 Laboratory total.
Corequisite: Mathematics 150.
Students in Mathematics 150L will receive individual and/or group instruction. The course is designed to review, enhance and/or advance the students’ mathematical knowledge based on their individual need in calculus for biological, management and social sciences. Grade: Pass/No Pass. Open Entry/Open Exit. CSU

Mathematics 160
Trigonometry
Unit(s): 4.0
Class Hours: 64 Lecture total.
Prerequisite: Mathematics 070 and 080 or placement in Mathematics 160 with the Math Level 3 exam and courses equivalent to Mathematics 070 and 080.
Angles and their measurement, trigonometric functions and their application s, including vector problems. Use of trigonometric identities. Graphing the basic functions and variations, solving trigonometric equations. Graphing using polar coordinates, and use of complex numbers. CSU

Mathematics 160L
Trigonometry Math Lab
Unit(s): 0.2
Class Hours: 10 Laboratory total.
Corequisite: Mathematics 160.
Students in Mathematics 160L will receive individual and/or group instruction. The course is designed to review, enhance and/or advance the students’ mathematical knowledge based on their individual need in trigonometry. Grade: Pass/No Pass. Open Entry/Open Exit. CSU

Mathematics 170
Pre-Calculus Mathematics
Unit(s): 4.0
Class Hours: 80 Lecture total.
Prerequisite: Mathematics 160 or equivalent skills as measured by the Mathematics Level 4 Exam and a course equivalent to Mathematics 160.
Advanced algebraic topics. Study of rational, trigonometric, exponential and logarithmic functions, polar coordinates, and analytic geometry. Preparation for Mathematics 180. CSU/UC

Mathematics 170L
Pre-Calculus Mathematics Math Lab
Unit(s): 0.2
Class Hours: 10 Laboratory total.
Corequisite: Mathematics 170.
Students in Mathematics 170L will receive individual and/or group instruction. The course is designed to review, enhance and/or advance the students’ mathematical knowledge based on their individual need in pre-calculus mathematics. Grade: Pass/No Pass. Open Entry/Open Exit. CSU

Mathematics 180
Analytic Geometry and Calculus
Unit(s): 4.0
Class Hours: 80 Lecture total.
Prerequisite: Mathematics 170 or equivalent skills as measured by Mathematics Level 4 Exam and a course equivalent to Mathematics 170.
Limits and continuity, derivatives and integrals of algebraic, trigonometric, and other transcendental functions. Applications including extrema tests, related rates and areas. CSU/UC (C-ID)

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
Mathematics 180H
Honors Analytic Geometry and Calculus
Unit(s): 4.0
Class Hours: 80 Lecture total.
Prerequisite: Mathematics 170 or equivalent skills as measured by Mathematics Level 4 Exam and a course equivalent to Mathematics 170 and a high school or college GPA of 3.0 or above.
An in-depth honors level study of limits and continuity, derivatives and integrals of algebraic, trigonometric, and transcendental functions with the emphasis on theory and challenging problems. Applications include extrema tests, related rates and areas. CSU/UC (C-ID)

Mathematics 180L
Analytic Geometry and Calculus Math Lab
Unit(s): 0.2
Class Hours: 10 Laboratory total.
Corequisite: Mathematics 180/180H.
Students in Mathematics 180L will receive individual and/or group instruction. The course is designed to review, enhance and/or advance the students’ mathematical knowledge based on their individual need in analytic geometry and calculus. Grade: Pass/No Pass. Open Entry/Open Exit. CSU

Mathematics 185
Analytic Geometry and Calculus
Unit(s): 4.0
Class Hours: 80 Lecture total.
Prerequisite: Mathematics 180/180H.
Applications of integrals, including volumes, work, arc length, and surface area. Integration techniques, differential equations, conics, parametric equations, polar coordinates, improper integrals, sequences and infinite series. CSU/UC (C-ID)

Mathematics 185L
Analytic Geometry and Calculus Math Lab
Unit(s): 0.2
Class Hours: 10 Laboratory total.
Corequisite: Mathematics 185.
Students in Mathematics 185L will receive individual and/or group instruction. The course is designed to review, enhance and/or advance the students’ mathematical knowledge based on their individual need in analytic geometry and calculus, beyond the level of Mathematics 180. Grade: Pass/No Pass. Open Entry/Open Exit. CSU

Mathematics 199
Mathematics Independent Study
Unit(s): 1.0
Class Hours: 16 Lecture total.
Prerequisite: Mathematics 080
Corequisite: Enrollment in at least one other class at either Santa Ana College or Santiago Canyon College and must show evidence of competence in their academic major and the area in which they propose to do independent study.
Students can increase their knowledge in particular areas of mathematics through individual study and/or in small groups under the direction of a mathematics professor. Science, Technology, Engineering and Mathematics (STEM) majors and future teachers are encouraged to enroll in independent study for mathematics. Divisional approval required. Grade: Pass/No Pass. CSU

Mathematics Course Sequences

Math N06
Essential Math

Math N48
Pre-Algebra/Algebra Basics

Math N60
Elementary Algebra

Math 070
Geometry

Math 080
Intermediate Algebra
This course meets the minimum requirements for an A.A.

Math/Science/Engineering

Math 160*
Trigonometry

Math 170
Pre-Calculus

Calculus Sequence
Math 180 or 180H
Math 185
Math 280

Liberal Arts

Math 105
Liberal Arts Math

Math 140
College Algebra

Math 105
Liberal Arts Math

Math 150
Business Calculus

Math 219 or 219H
Statistics/Probability

Math 203
For Elementary Teachers

Note: Where a student places in the sequence will depend upon previous background and test scores.
Check prerequisites for all courses.
Note: Students planning to transfer to a four-year school should work carefully with a counselor and the catalog of the school of transfer.

* Geometry prerequisite.

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
Mathematics 203
Fundamental Concepts of Elementary Mathematics
Unit(s): 4.0
Class Hours: 64 Lecture total.
Prerequisite: Mathematics 105, 140, 170, 219/219H or Social Science 219/219H.

This course emphasizes problem solving techniques and mathematical structure associated with numeration, set theory, elementary number theory, the real number system, ratio, proportion and patterns. Designed for prospective elementary teachers, this course includes activity-based explorations implementing the common core state curriculum standards. CSU/UC

Mathematics 203L
Fundamental Concepts of Elementary Mathematics Math Lab
Unit(s): 0.2
Class Hours: 10 Laboratory total.
Corequisite: Mathematics 203.
Students in Mathematics 203L will receive individual and/or group instruction. The course is designed to review, enhance and/or advance the students' mathematical knowledge based on their individual need in the fundamental concepts of elementary mathematics. Grade: Pass/No Pass. Open Entry/Open Exit. CSU

Mathematics 219
Statistics and Probability
Unit(s): 4.0
Class Hours: 80 Lecture total.
Prerequisite: Mathematics 080 or placement into Mathematics 219 on the Mathematics Level 3 placement exam and a course equivalent to Mathematics 080.

First course in statistical reasoning. Includes descriptive statistics, graphical displays of data, probability, confidence intervals, hypothesis testing, regression, contingency tables, ANOVA, and non-parametric statistics. Includes use of technology. (Same as Social Science 219.) CSU/UC

Mathematics 219H
Honors Statistics and Probability
Unit(s): 4.0
Class Hours: 80 Lecture total.
Prerequisite: Mathematics 080 or placement into Mathematics 219 on the Mathematics Level 3 placement exam and a course equivalent to Mathematics 080 and a high school or college GPA of 3.0 or above.

This course is an enhanced format for the first course in statistics and probability by using a seminar approach, applying statistical software and presenting individual research. This course includes descriptive statistics, graphical displays of data, probability, confidence intervals, hypothesis testing, regression, contingency tables, ANOVA and non-parametric statistics, with applications designed around the individual interests of students. (Same as Social Science 219H.) CSU/UC

Mathematics 219L
Statistics and Probability Math Lab
Unit(s): 0.2
Class Hours: 10 Laboratory total.
Corequisite: Mathematics 219/219H.
Students in Mathematics 219L will receive individual and/or group instruction. The course is designed to review, enhance and/or advance the students' mathematical knowledge based on their individual need in statistics and probability. Grade: Pass/No Pass. Open Entry/Open Exit. CSU

Mathematics 280
Intermediate Calculus
Unit(s): 4.0
Class Hours: 64 Lecture total.
Prerequisite: Mathematics 185.

Vectors and three-dimensional space, functions of several variables, partial derivatives and multiple integrals. Vector calculus, Green’s Theorem, Stoke’s Theorem, and the Divergence Theorem. CSU/UC (C-ID)

Mathematics 280L
Intermediate Calculus Math Lab
Unit(s): 0.2
Class Hours: 10 Laboratory total.
Corequisite: Mathematics 280.
Students in Mathematics 280L will receive individual and/or group instruction. The course is designed to review, enhance and/or advance the students' mathematical knowledge based on their individual need in intermediate calculus. Grade: Pass/No Pass. Open Entry/Open Exit. CSU

Mathematics 287
Introduction to Linear Algebra and Differential Equations
Unit(s): 5.0
Class Hours: 80 Lecture total.
Prerequisite: Mathematics 280.

Topics include matrices, determinants, vector spaces, linear systems of equations, linear product spaces, first and second order differential equations, systems of differential equations, and the Laplace transform. CSU/UC (C-ID)

Mathematics 287L
Introduction to Linear Algebra and Differential Equations Math Lab
Unit(s): 0.2
Class Hours: 10 Laboratory total.
Corequisite: Mathematics 287.
Students in Mathematics 287L will receive individual and/or group instruction. The course is designed to review, enhance and/or advance the students' mathematical knowledge based on their individual need in the introduction to linear algebra and differential equations. Grade: Pass/No Pass. Open Entry/Open Exit. CSU

Mathematics 290
Linear Algebra
Unit(s): 3.0
Class Hours: 48 Lecture total.
Prerequisite: Mathematics 185

Recommended Preparation: Mathematics 280 or concurrent enrollment.
Systems of linear equations, matrix algebra, matrix theory, determinants, vector spaces, inner products, orthogonality, eigenvalues, eigenvectors, linear transformations, applications, and proofs of elementary properties of linear algebra. CSU (C-ID)

Mathematics 295
Differential Equations
Unit(s): 3.0
Class Hours: 48 Lecture total.
Prerequisite: Mathematics 280.

Introduction to ordinary differential equations including both quantitative and qualitative methods as well as applications from a variety of disciplines. Introduces the theoretical aspects of differential equations, including establishing when solution(s) exist, and techniques for obtaining solutions including series solutions, singular points, Laplace transforms and linear systems. CSU (C-ID)

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
MODERN LANGUAGES

Division of Arts, Humanities and Social Sciences/Library

Dean: Marilyn Flores
Department Chair, Modern Languages: Elizabeth Baez
Faculty: Elizabeth Baez, Lourdes Fajardo

Associate in Arts
Modern Languages (11925)

The associate degree in modern languages is designed to meet the needs of both the student who wishes to transfer to a four-year institution and the student who wishes to achieve basic conversational ability in the language. Completion of the associate in arts degree prepares students to transfer to a four-year institution leading to a baccalaureate degree and then to possible careers requiring proficiency in multiple languages.

The associate degree in modern languages requires the following:
1) Completion of 21 units total
2) Completion of a minimum of 13 units in any one language including the courses numbered 201 and 202.
3) Completion of 5 units in a second language.
4) Completion of 3 units of restricted electives

Learning Outcome(s)

Upon successful completion of the major requirements for this degree, students will be able to
• Demonstrate understanding of the cultural perspectives and mores of target language speakers through the synthesis, analysis and evaluation of the target language to derive meaning of implicit and explicit written material and spoken messages in authentic cultural context.
• Demonstrate understanding of the cultural perspectives and mores of target language speakers through the analysis and application of grammatical structures, appropriate vocabulary, idiomatic expressions to communicate orally and in writing in the target language in culturally appropriate ways.

Emphasis requirements*

<table>
<thead>
<tr>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Courses in one of the languages listed below</td>
</tr>
<tr>
<td>Courses in a second language from the list below</td>
</tr>
<tr>
<td>Restricted Electives</td>
</tr>
</tbody>
</table>

French Courses

- French 101, Elementary French I (5)
- French 102, Elementary French II (5)
- French 194, Conversation and Composition I (3)
- French 196, Conversation and Composition II (3)
- French 201, Intermediate French I (5)
- French 202, Intermediate French II (5)

Italian Courses

- Italian 101, Elementary Italian I (5)
- Italian 102, Elementary Italian II (5)
- Italian 194, Conversation and Composition (3)
- Italian 195, Advanced Conversational Italian (3)
- Italian 201, Intermediate Italian I (5)
- Italian 202, Intermediate Italian II (5)

Spanish Courses

- Spanish 101/101H, Elementary Spanish I (5)
- Spanish 101A, Elementary Spanish IA (2.5)
- Spanish 101B, Elementary Spanish IB (2.5)
- Spanish 102/102H, Elementary Spanish II (5)
- Spanish 194, Beginning Conversational Spanish (3)
- Spanish 195A, Advanced Conversational Spanish (3)
- Spanish 195B, Advanced Conversational Spanish (3)
- Spanish 201, Intermediate Spanish I (5)
- Spanish 202, Intermediate Spanish II (5)
- Spanish 213, College Spanish Composition (3)

Restricted Electives:

- Any course listed above in a third language (3-5)
- Anthropology 100/100H Introduction to Cultural Anthropology (3)
- Art 101, Survey of Western Art History I: Prehistory Through the Middle Ages (3)
- Art 102, Survey of Western Art History II: Renaissance Through the Twentieth Century (3)
- Communication 100/100H, Introduction to Interpersonal Communication (3)
- English 102/102H, Literature and Composition (4)
- English 271, Survey of World Literature (3)
- English 272, Survey of World Literature (3)
- Geography 100/100H, World Regional Geography (3)
- History 101/101H, World Civilizations to the 16th Century (3)
- History 102/102H, World Civilizations Since the 16th Century (3)
- History 124, Mexican-American History in the United States (3)
- Political Science 101/101H, Introduction to American Governments (3)
- Political Science 220, International Politics (3)

TOTAL 21-23

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
MUSIC (MUS)

Division of Arts, Humanities and Social Sciences/Library

Dean: Marilyn Flores
Department Chair, Performing Arts: Binh Vu

Courses

Music 061
Basic Piano Skills
Unit(s): 1.0
Class Hours: 16 Lecture total, 16 Laboratory total.
Group instruction for beginners emphasizing note reading, basic keyboard skills, and sight reading. Practice outside of class required. Practice pianos available on campus. Grade: Pass/No Pass.

Music 101
Music Appreciation
Unit(s): 3.0
Class Hours: 48 Lecture total.
Designed to increase awareness and appreciation of music from the European classical tradition in relation to general culture and history. Develops basic understanding of musical elements and deepens students’ experience of music. Recommended for non music majors. CSU/UC (C-ID)

Music 101H
Honors Music Appreciation
Unit(s): 3.0
Class Hours: 48 Lecture total.
Prerequisite: A high school or college GPA of 3.0 or above.
An enriched approach designed for honors students. The European classical music tradition through study of musical elements, stylistic features, culture and history. Readings, guided listening assignments, required concert attendance and special projects. Recommended for non-music majors. CSU/UC (C-ID)

Music 102
World Music
Unit(s): 3.0
Class Hours: 48 Lecture total.
Music from the Far East, Southeast Asia, Africa, the Middle East, Europe and the Americas. Students are guided to enjoy and to understand music from diverse cultures. Investigation of the interconnections of cultural aesthetics and musical styles. Concert attendance and assigned listening required. CSU/UC

Music 103
Jazz in America
Unit(s): 3.0
Class Hours: 48 Lecture total.
A historical survey of the development and evolution of jazz in America from its earliest roots in African and European music. The study will also include the social and economic conditions which influenced this art form. CSU/UC

Music 104
Rock Music History and Appreciation
Unit(s): 3.0
Class Hours: 48 Lecture total.
Historical survey of rock music from its beginnings in the 50’s to the present. All Rock and Pop styles will be discussed. Personalities and musical styles will be related to the sociology of the time period being studied. CSU/UC

Music 121
Beginning Voice
Unit(s): 1.0
Class Hours: 16 Lecture total, 16 Laboratory total.
Group instruction designed to develop basic principles of solo and choral voice production, diction, breath control and posture. Practice outside of class required. Recommended for non music majors and for music majors not studying privately. Field trips are required. CSU/UC

Music 122
Intermediate Voice
Unit(s): 1.0
Class Hours: 16 Lecture total, 16 Laboratory total.
Prerequisite: Music 121.
Group instruction designed to develop intermediate principles of solo and choral voice production, diction, breath control and posture. Vocal analysis of each student emphasized. Practice outside of class required. Song literature matched to student level II. Designed for both music majors and non music majors. Field trips are required. CSU/UC

Music 123
Advanced Voice
Unit(s): 1.0
Class Hours: 16 Lecture total, 16 Laboratory total.
Prerequisite: Music 122.
Advanced principles of solo and choral vocal production. Vocal exercises and song literature in English and other languages included. Practice outside of class required. Recommended for non music majors and for music majors not studying privately. Field trips are required. CSU/UC

Music 124
Advanced Vocal Production and Repertoire
Unit(s): 1.0
Class Hours: 16 Lecture total, 16 Laboratory total.
Prerequisite: Music 123.
Continuation of group instruction for students who have completed three semesters of voice and can perform at an advanced level. Further develops advanced vocal and choral production in a variety of styles and techniques. Instruction includes advanced English and foreign language song literature. Practice outside of class required. Designed for both music majors and non music majors. Field trips are required. CSU/UC

Music 126
Collegiate Choir
Unit(s): 1.0
Class Hours: 48 Laboratory total.
Recommended Preparation: Students should be able to repeat musical phrases given to him/her from a musical instrument or from vocal singing. Mixed chorus for general interest singers. Rehearses and performs a variety of music, including classical, folk tunes, and songs from Broadway musicals. Each semester requires performance of a variety of new repertoire. Field trips are required. May be repeated. CSU/UC

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
Music 127
Concert Chorale
Unit(s): 1.0
Class Hours: 48 Laboratory total.
Recommended Preparation: Some music reading ability. Students should have one or two semesters of vocal technique class (Music 121, 122 or 123).

Music 128
Masterworks Chorale
Unit(s): 1.0
Class Hours: 48 Laboratory total.
Recommended Preparation: Some music reading ability. Students should have one or two semesters of vocal technique class (Music 121, 122 or 123).

Music 129
Chamber Choir
Unit(s): 1.0
Class Hours: 64 Laboratory total.
Recommended Preparation: Some music reading ability. Students should have one or two semesters of vocal technique class (Music 121, 121 or 123).
Rehearsal and performance of chamber choir repertoire from various historical periods. Emphasizes note reading and various performance styles of 16th through 20th century music. Student must provide nylon string guitar. CSU/UC

Music 161
Class Piano I
Unit(s): 1.0
Class Hours: 16 Lecture total, 16 Laboratory total.
Group instruction for beginners emphasizing note reading, basic keyboard skills, chord patterns, and sight-reading. Practice outside of class required. Practice pianos available on campus. Required for music majors whose principal instrument is not piano. CSU/UC

Music 162
Class Piano II
Unit(s): 1.0
Class Hours: 16 Lecture total, 16 Laboratory total.
Prerequisite: Music 061 or 161.
Group instruction for those possessing basic piano skills but still classified as beginners. Emphasizes note reading, keyboard technique, chord patterns, sight-reading. Daily practice required. Practice pianos available on campus. Required for music majors whose principal instrument is not piano. CSU/UC

Music 163
Class Piano III
Unit(s): 1.0
Class Hours: 16 Lecture total, 16 Laboratory total.
Prerequisite: Music 162.
Instruction for students who have completed two semesters of piano and are ready for the intermediate level. Emphasizes building technique, sight-reading, and performance. Daily practice required. Practice pianos available on campus. CSU/UC

Music 164A
Intermediate Piano Repertoire I
Unit(s): 1.0
Class Hours: 8 Lecture total, 24 Laboratory total.
Prerequisite: Music 163.
Instruction for intermediate level students. Emphasizes advanced technique, sight-reading, interpretation, and performance. Daily practice required. Practice pianos available on campus. CSU/UC

Music 164B
Intermediate Piano Repertoire II
Unit(s): 1.0
Class Hours: 8 Lecture total, 24 Laboratory total.
Prerequisite: Music 164A.
Continuation of instruction for advanced intermediate level students. Emphasizes advanced technique, sight-reading, interpretation, and performance. Daily practice required. Practice pianos available on campus. CSU/UC

Music 165
Advanced Classical Guitar
Unit(s): 1.0
Class Hours: 8 Lecture total, 24 Laboratory total.
Prerequisite: Music 185.
Intermediate instruction in solo, duo and trio repertoire. Emphasizes technical development and performance style of 18th century music. Student must provide nylon string guitar. CSU/UC

Music 166
Advanced Classical Guitar Technique and Repertoire
Unit(s): 1.0
Class Hours: 8 Lecture total, 24 Laboratory total.
Prerequisite: Music 188.
Further develops advanced technique and solo performance through study of Renaissance, Baroque, and Classic ornamentation and various performance styles of 16th through 20th century music. Student must provide nylon string guitar. CSU/UC

Music 167
Advanced Classical Guitar
Unit(s): 1.0
Class Hours: 8 Lecture total, 24 Laboratory total.
Prerequisite: Music 188.
Further develops advanced technique and solo performance through study of Renaissance, Baroque, and Classic ornamentation and various performance styles of 16th through 20th century music. Student must provide nylon string guitar. CSU/UC

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.

Catalog update 8/17/15
NUTRITION & FOOD (NUTR)

Division of Mathematics and Sciences

Dean: Martin Stringer
Department Co-Chairs, Kinesiology: Lisa Camarco, Ian Woodhead

Courses
Nutrition & Food 115
Nutrition
Unit(s): 3.0
Class Hours: 48 Lecture total.
A study of scientific concepts of nutrition relating to the functioning of nutrients in the basic life process. Emphasis is on individual needs, food sources of nutrients, current nutrition issues and diet analysis. CSU/UC

PHILOSOPHY (PHIL)

Division of Arts, Humanities and Social Sciences/Library

Dean: Marilyn Flores
Department Chair, Humanities: Marcelo Pimentel
Faculty: Douglas Deaver, James Granitto, Marcelo Pimentel

Associate in Arts
Philosophy for Transfer (32042)

The Associate in Arts in Philosophy for Transfer prepares students to transfer to a four-year institution leading to a baccalaureate degree. Successful completion of the transfer degree in Philosophy guarantees the student acceptance to a California State University to pursue a baccalaureate degree. The transfer degree prepares students who plan to teach philosophy, or who plan to study theology or law, and establishes a foundation for graduate studies in the areas of liberal arts, critical theory, international relations, cognitive science and specialized historical studies.

Learning Outcome(s)
Upon successful completion of the major requirements for this degree, students will be able to
• Demonstrate knowledge of the discipline of philosophy.
• Demonstrate an ability to analyze and evaluate topics and problems in a way that comports with philosophic method.

Major requirements*  Units

<table>
<thead>
<tr>
<th>Major requirements*</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>Philosophy 106/106H, Introduction to Philosophy OR</td>
<td>3</td>
</tr>
<tr>
<td>Philosophy 108, Ethics</td>
<td></td>
</tr>
<tr>
<td>Philosophy 111, Introductory Logic</td>
<td>4</td>
</tr>
</tbody>
</table>

Select one (1) course from the following (List A): 3-4
- Philosophy 110/110H, Critical Thinking (4)
- Philosophy 112, World Religions (3)
- Philosophy 118, History of Philosophy (3)

Select two (2) courses from the following (List B): 6-7
- An additional course from List A (3-4)
  (may not be a course used to satisfy the requirements in List A)
- Philosophy 115, Philosophy of Religion (3)

Select one (1) course from the following (List C): 3-4
- An additional course from List A or B (3-4)
  (may not be a course used to satisfy the requirements in List A or B)
- Philosophy 120, Introduction to Social and Political Philosophy (3)

TOTAL 19-20

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
Associate in Arts
Philosophy (11930)

The associate degree in philosophy prepares students to transfer to a four-year institution leading to a baccalaureate degree. The baccalaureate degree is intended for those students who plan to teach philosophy, or for pre-professional students in such areas as theology and law, and as a foundation for graduate studies in the areas of library science, diplomacy, theoretical physical science and specialized historical studies.

Learning Outcome(s)
Upon successful completion of the major requirements for this degree, students will be able to
- Demonstrate knowledge of the discipline of philosophy.
- Demonstrate an ability to analyze and evaluate topics and problems in a way that comports with philosophic method.

Major requirements*  
<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Philosophy 106/106H, Introduction to Philosophy</td>
<td>3</td>
</tr>
<tr>
<td>Philosophy 108, Ethics</td>
<td>3</td>
</tr>
<tr>
<td>Philosophy 110/110H, Critical Thinking OR</td>
<td>4</td>
</tr>
<tr>
<td>Philosophy 111, Introductory Logic</td>
<td></td>
</tr>
<tr>
<td>Philosophy 112, World Religions</td>
<td>3</td>
</tr>
<tr>
<td>Philosophy 118, History of Philosophy</td>
<td>3</td>
</tr>
</tbody>
</table>

Select six (6) to seven (7) units from the following:  
6-7

Art 101, Survey of Western Art History I:  
Prehistory Through the Middle Ages (3)
Art 102, Survey of Western Art History II:  
Renaissance Through the Twentieth Century (3)
English 271, Survey of World Literature (3)
English 272, Survey of World Literature (3)
History 101/101H, World Civilizations to the 16th Century (3)
Library and Information Studies 103, Advanced Internet Research (1)
Music 101/101H, Music Appreciation (3)
Psychology 100/100H, Introduction to Psychology (3)

TOTAL 22-23

Courses

Philosophy 106  
Introduction to Philosophy  
Unit(s): 3.0  
Class Hours: 48 Lecture total.  
A survey of historical and contemporary ideas on how to live the good life. **CSU/UC (C-ID)**

Philosophy 106H  
Honors Introduction to Philosophy  
Unit(s): 3.0  
Class Hours: 48 Lecture total.  
Prerequisite: A high school or college GPA of 3.0 or above.  
An enriched approach designed for honors students in a seminar setting. A survey of historical and contemporary ideas on how to live the good life. **CSU/UC (C-ID)**

Philosophy 108  
Ethics  
Unit(s): 3.0  
Class Hours: 48 Lecture total.  
Introduction to key historical and modern theories of philosophical ethics and the application of these theories to ethical issues facing society today. Assists in clarifying our thinking about morality/ethics. Course increases awareness of values in personal and contemporary issues. **CSU/UC (C-ID)**

Philosophy 110  
Critical Thinking  
Unit(s): 4.0  
Class Hours: 64 Lecture total.  
Prerequisite: English 101/101H.  
College level critical thinking and writing. Promotes rational self awareness, independent thinking, and improved academic expression. Examines philosophical methods of reasoning and composition, the uses of informal logic and criticism in personal life, college, work, and democratic society. **CSU/UC**

Philosophy 110H  
Honors Critical Thinking  
Unit(s): 4.0  
Class Hours: 64 Lecture total.  
Prerequisite: English 101/101H and a high school or college GPA of 3.0 or above.  
An enriched approach designed for honors students in a seminar setting. College-level critical thinking and writing. Promotes self-awareness, independent thinking, and improved academic expression. Examines philosophical methods of reasoning and composition, and the uses of informal logic and criticism in personal life, college, work, and democratic society. **CSU/UC**

Philosophy 111  
Introductory Logic  
Unit(s): 4.0  
Class Hours: 64 Lecture total.  
Beginning course in formal and applied logic. Covers cognitive language, formal argument, proof, basic propositional and predicate logic, and philosophy of logic. Emphasizes active student involvement and practical application to college life. **CSU/C (C-ID)**

Philosophy 112  
World Religions  
Unit(s): 3.0  
Class Hours: 48 Lecture total.  
A philosophical overview of the world’s great religions. Includes historical origin and growth of each religion, major doctrines, and influence. Religions dealt with include Primitive, Hinduism, Jainism, Buddhism, Taoism, Confucianism, Judaism, Christianity and Islam. **CSU/UC**

Philosophy 115  
Philosophy of Religion  
Unit(s): 3.0  
Class Hours: 48 Lecture total.  
An introduction to the philosophical analysis of religious beliefs and concepts, including the nature of religion, the nature and existence of some kind of ultimate reality, the problem of evil, the meaning of religious language, the authenticity of religious experiences, the relation between religion and ethics, the relation between religion and science, and religious diversity. **CSU/UC**

Philosophy 118  
History of Philosophy  
Unit(s): 3.0  
Class Hours: 48 Lecture total.  
An introduction to philosophy from a historical perspective: getting acquainted with the thoughts of the world’s great philosophers. Provides a survey of the dominant philosophies of the ancient, medieval, and modern worlds. **CSU/UC**

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.*
Philosophy 120
Introduction to Social and Political Philosophy
Unit(s): 3.0
Class Hours: 48 Lecture total.
A critical examination of rights theory, liberty, justice, individualism, community, state power, political authority, natural law, property, social contract theory, ideology, obedience, alienation, and various forms of social order (e.g. democracy, totalitarianism, theocracy, socialism) from the perspective of social and political philosophy, including multi-cultural and feminist viewpoints and critiques. CSU/UC

PHYSICS (PHYS) & PHYSICAL SCIENCE (PSC)
Division of Mathematics and Sciences
Dean: Martin Stringer
Department Chair, Physics and Engineering: Cynthia Swift
Faculty: Craig Rutan, Cynthia Swift

Associate in Science
Physics for Transfer (31039)
The Associate in Science in Physics for Transfer provides a foundation in physics and mathematics for students planning to transfer into a baccalaureate program in physics or physics education. Successful completion of the transfer degree in Physics guarantees the student acceptance to a California State University to pursue a baccalaureate degree in Physics or a related field.

Learning Outcome(s)
Upon successful completion of the major requirements for this degree, students will be able to
• Perform various scientific experiments and analyze data to check agreement with theoretical predictions.
• Apply appropriate physical laws and mathematical techniques to analyze various physical situations.

Major requirements*

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physics 250A, Physics for Scientists and Engineers I</td>
<td>5</td>
</tr>
<tr>
<td>Physics 250B, Physics for Scientists and Engineers II</td>
<td>5</td>
</tr>
<tr>
<td>Physics 250C, Physics for Scientists and Engineers III</td>
<td>5</td>
</tr>
<tr>
<td>Mathematics 180/180H, Analytic Geometry and Calculus</td>
<td>4</td>
</tr>
<tr>
<td>Mathematics 185, Analytic Geometry and Calculus</td>
<td>4</td>
</tr>
<tr>
<td>Mathematics 280, Intermediate Calculus</td>
<td>4</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>27</strong></td>
</tr>
</tbody>
</table>

It is highly recommended for students to meet with an SCC counselor to discuss other possible courses that are part of major preparation at a local CSU campus. Students are encouraged to take some additional courses, that may be articulated major preparation, prior to transfer such as Mathematics 287, Mathematics 290, Chemistry 219, and Computer Science 120. While these additional courses are not required for this degree, completion of these courses will better prepare students for upper-division Physics courses at a CSU.

Physics Courses

Physics 109
Survey of General Physics
Unit(s): 4.0
Class Hours: 48 Lecture total, 48 Laboratory total.
The study of important phenomena in physics. Topics include: mechanics, fluids, thermodynamics, sound, light, electricity, magnetism, and modern physics. Recommended for all students interested in a conceptual approach to physics or students planning to take more advanced courses in physics. CSU/UC

Physics 150A
Introductory Physics I
Unit(s): 4.0
Class Hours: 48 Lecture total, 48 Laboratory total.
Prerequisite: Mathematics 160.
A trigonometry-based physics course. Topics include: mechanics, thermodynamics, fluids, oscillatory motion, and sound. Students that have successfully completed Physics 210 or Physics 279 may not enroll in Physics 150A. CSU/UC (C-ID)

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
Physics 150AC
Introductory Physics I - Calculus
Unit(s): 1.0
Class Hours: 16 Lecture total.
Prerequisite: Mathematics 180/180H.
Corequisite: Physics 150A.
This course expands on the topics covered in Physics 150A by adding the application of calculus to problems in physics. Topics will include motion graphs, motion with non-constant acceleration, variable forces, wave motion, and thermodynamics. **CSU/UC**

Physics 150B
Introductory Physics II
Unit(s): 4.0
Class Hours: 48 Lecture total, 48 Laboratory total.
Prerequisite: Physics 150A.
A trigonometry-based physics course. Topics include: light, electricity, magnetism and modern physics. Students that have successfully completed Physics 211 may not enroll in Physics 150B. **CSU/UC (C-ID)**

Physics 150BC
Introductory Physics II - Calculus
Unit(s): 1.0
Class Hours: 16 Lecture total.
Prerequisite: Physics 150A and 150AC
Corequisite: 150B.
This course expands on the topics covered in Physics 150B by adding the application of calculus to problems in physics. Topics will include electric fields, Gauss’ Law, Ampere’s Law, Faraday’s Law, light, and quantum mechanics. **CSU/UC**

Physics 210
Principles of Physics I
Unit(s): 4.0
Class Hours: 48 Lecture total, 48 Laboratory total.
Prerequisite: Mathematics 150 or 180/180H.
A calculus-based physics course designed for students majoring in the life sciences, pre-medicine, and related disciplines. Topics include classical mechanics, wave motion, and thermodynamics. **CSU/UC (C-ID)**

Physics 211
Principles of Physics II
Unit(s): 4.0
Class Hours: 48 Lecture total, 48 Laboratory total.
Prerequisite: Physics 210.
A calculus-based physics course designed for students majoring in the life sciences, pre-medicine, and related disciplines. Topics include: electricity and magnetism, light, optics, and modern physics. **CSU/UC (C-ID)**

Physics 250A
Physics for Scientists and Engineers I
Unit(s): 5.0
Class Hours: 64 Lecture total, 48 Laboratory total.
Recommended Preparation: Physics 109 or high school physics.
Principles of classical mechanics including particle dynamics, forces, work, energy, momentum, rotational motion, equilibrium, harmonic motion, gravity and fluid dynamics. This course is designed for students majoring in physical sciences and engineering. **CSU/UC (C-ID)**

Physics 250B
Physics for Scientists and Engineers II
Unit(s): 5.0
Class Hours: 64 Lecture total, 48 Laboratory total.
Prerequisite: Physics 250A and Mathematics 185.
Introduces the basic principles of thermodynamics, electricity and magnetism. The main topics are the laws of thermodynamics, kinetic theory of gases, electrostatics, circuits, magnetism, electro-magnetic induction, and Maxwell’s equations. This course is designed for students majoring in physical sciences and engineering. **CSU/UC (C-ID)**

Physics 250C
Physics for Scientists and Engineers III
Unit(s): 5.0
Class Hours: 64 Lecture total, 48 Laboratory total.
Prerequisite: Physics 250B.
Recommended Preparation: Mathematics 280.
Introduces the basic principles of mechanical waves, sound, light, geometrical and wave optics, special relativity and quantum mechanics. This course is designed for students majoring in physical sciences and engineering. **CSU/UC (C-ID)**

Physical Science Courses

Physical Science 115
Concepts in Physical Sciences for Educators
Unit(s): 4.0
Class Hours: 48 Lecture total, 48 Laboratory total.
Recommended Preparation: Mathematics N48.
An investigation of basic principles of physics and chemistry including matter, physical and chemical properties, energy, motion, light, atomic structure, bonding, solutions and chemical reactions. The inter-dependence of chemistry and physics will be emphasized. Designed for non-science majors, concepts are introduced in lab through inquiry and further developed during discussion. **CSU/UC (C-ID)**
POLITICAL SCIENCE (POLT)

Division of Arts, Humanities and Social Sciences/Library

Dean: Marilyn Flores
Department Chair, Political Science: Nooshan Shekarabi,
Faculty: Michael Parrella, Narges Rabii-Rankin,
Nooshan Shekarabi

Associate in Arts
Political Science for Transfer (31730)

The Associate in Arts in Political Science for Transfer prepares students to transfer to a four-year institution leading to a baccalaureate degree. Successful completion of the transfer degree in Political Science guarantees the student acceptance to a California State University to pursue a baccalaureate degree and prepares students for law school, teaching, public relations, journalism, government service on the local, state and national levels, and private employment where government institutions are involved.

Learning Outcome(s)

Upon successful completion of the major requirements for this degree, students will be able to

• Demonstrate critical thinking skills and be able to formulate a thesis in a written and/or oral format.
• Demonstrate a basic knowledge of political institutions and processes of American government.
• Demonstrate how individuals by applying their political science skills can make a difference in their local communities.

Major requirements* Units

Political Science 101/101H, Introduction to American Governments 3

Students must take the following (List A):

Political Science 201, Introduction to Comparative Politics (3)
Political Science 220, International Politics (3)
Political Science 230, Political Theory (3)

Select two (2) courses from the following (List B): 6

Anthropology 100/100H, Introduction to Cultural Anthropology (3)
Economics 101, Principles/Micro (3)
Economics 102, Principles/Macro (3)
History 101/101H, World Civilizations to the 16th Century (3)
Political Science 221, Women in American Politics (3)
Sociology 100/100H, Introduction to Sociology (3)

TOTAL 18

Courses

Political Science 101
Introduction to American Governments
Unit(s): 3.0

Class Hours: 48 Lecture total.
Study of United States national government and California state and local governments. Satisfies graduation requirement for American institutions and state requirements for California state government. CSU/UC

Political Science 101H
Honors Introduction to American Governments
Unit(s): 3.0

Class Hours: 48 Lecture total.
Prerequisite: A high school or college GPA of 3.0 or above.
A student-oriented exploration of the historical and contemporary principles of American government. Study groups and individual computer-based research focus on basic political concepts of American national and state governments. Satisfies graduation requirement for American Institutions and state requirements for California state government. CSU/UC (C-ID)

Political Science 150
Introduction to Model United Nations
Unit(s): 4.0-6.0

Class Hours: 48-48 Lecture total, 48-144 Laboratory total.
Recommended Preparation: Political Science 101/101H or 220.
An introductory course in the study of the United Nations. The focus will be on the role of the United Nations in world politics in relation to the success and failure of theories of collective security, international disputes resolution, human rights, peacekeeping attempts and technological cooperation. Prepares students for individual and team Model United Nations events for intercollegiate United Nations conferences and competitions. Students are required to attend Model United Nations conferences. May be repeated. CSU

Political Science 200
American Political Thought
Unit(s): 3.0

Class Hours: 48 Lecture total.
An inquiry into the major influences that have shaped American political thought. Emphasis is on an historical analysis of political thought contributing to contemporary politics. CSU/UC

Political Science 200H
Honors American Political Thought
Unit(s): 3.0

Class Hours: 48 Lecture total.
Prerequisite: A high school or college GPA of 3.0 or above.
An in depth and intensive exploration of critical issues in American political thought and the influences that have shaped it. Emphasizing student interaction and essay writing in a seminar setting, the course focuses on an historical analysis of political thought contributing to contemporary American politics. CSU/UC

Political Science 201
Introduction to Comparative Politics
Unit(s): 3.0

Class Hours: 48 Lecture total.
A study of the histories, political cultures, and governmental arrangements of various nations and regions around the world. Comparative study is made of the ‘First World’ or industrialized democracies, the ‘Second World’ or former and current communist countries, and the ‘Third World’ developing, and ‘Fourth World’ non-developing countries. CSU/UC

Political Science 220
International Politics
Unit(s): 3.0

Class Hours: 48 Lecture total.
Introduction to basic principles and issues of international politics. Focus is on concepts of security, power, diplomacy, war, terrorism and globalization. Examines problems of rich versus poor nations in context of the new world order. CSU/UC (C-ID)

Political Science 221
Women in American Politics
Unit(s): 3.0

Class Hours: 48 Lecture total.
A historical and philosophical study of the role women play in the politics of the United States as voters, policy makers, and activists. Attention will be devoted to topics of gender in education and the workplace, the politics of abortion, same sex marriage, and surrogate motherhood. The course will consider how race, class, age, and education affect the politicization of women. CSU/UC

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
Political Science 222
Survey of Current Issues in American Politics
Unit(s): 3.0
Class Hours: 48 Lecture total.
Recommended Preparation: Political Science 101/101H.
A survey of current domestic issues as well as international issues involving American politics. Emphasis will be placed on understanding the ideological divisions which underlie and inform much of the debates. Policies will be examined historically for their efficacy and moral salience. Arguments and perspectives on all sides of the current debates will be examined. CSU/UC

Political Science 230
Political Theory
Unit(s): 3.0
Class Hours: 48 Lecture total.
The course will explore the history of political theory from Plato to the present. Such concepts as liberty, equality, power, authority and justice will be examined. CSU/UC (C-ID)

Political Science 250
Advanced Model United Nations
Unit(s): 4.0-6.0
Class Hours: 48-48 Lecture total, 48-144 Laboratory total.
Prerequisite: Political Science 150.
An advanced course in the study of the United Nations. The focus will be on mentorship of novice members, advanced research, team events training, individual events training and research for intercollegiate United Nations conferences and competitions. Non-Governmental Organizations (NGOs), Intergovernmental Organizations (IGOs), International Criminal Court (ICC), International Court of Justice (ICJ) and various other international bodies are covered. Prepares students for international current event debates, parliamentary debate and conflict resolution. Students are required to attend Model United Nations conferences. May be repeated. CSU

PSYCHOLOGY (PSYC)
Division of Arts, Humanities and Social Sciences/Library
Dean: Marilyn Flores
Department Co-Chairs, Social Sciences: Cari Cannon, Alexander Taber
Faculty: Cari Cannon, Christine Umali Kopp
Associate in Arts
Psychology for Transfer (31041)
The Associate in Arts in Psychology for Transfer prepares students to transfer to a four-year institution leading to a baccalaureate degree for specialization in any of more than twenty branches of psychology including: child, clinical, personality, vocational, marriage and family counseling, industrial, mental health, and college teaching. Completion of the two-year program is appropriate for students whose vocational plans include helping people, i.e., teaching, social welfare, probation, criminology, nursing, law, and personnel work. Successful completion of the transfer degree in Psychology guarantees the student acceptance to a California State University to pursue a baccalaureate degree in Psychology or a related field.

Learning Outcome(s)
Upon successful completion of the major requirements for this degree, students will be able to
- Demonstrate familiarity with the major concepts, theoretical perspectives, empirical findings, and historical trends in psychology.
- Respect and use critical thinking, skeptical inquiry, and when possible, the scientific approach to solve problems related to behavior and mental processes.
- Develop insight into their own and others’ behavior and mental processes and apply effective strategies for self-management and self-improvement.

Major requirements*

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychology 100/100H, Introduction to Psychology</td>
<td>3</td>
</tr>
<tr>
<td>Psychology 219, Introduction to Research Methods in Psychology</td>
<td>4</td>
</tr>
<tr>
<td>Select one (1) course from the following (List A): Psychology 200, Introduction to Biological Psychology</td>
<td>3</td>
</tr>
<tr>
<td>Biology 109/109H, Fundamentals of Biology</td>
<td></td>
</tr>
<tr>
<td>Select one (1) course from the following (List B): An additional course from List A (may not be a course used to satisfy the requirements in List A) Psychology 157, Introduction to Child Psychology</td>
<td>3</td>
</tr>
<tr>
<td>OR Human Development 107, Child Growth and Development (DS1)</td>
<td>3</td>
</tr>
<tr>
<td>Psychology 240/Sociology 240, Introduction to Social Psychology</td>
<td></td>
</tr>
<tr>
<td>Students may not earn credit for both Sociology 240 and Psychology 240. Students may not earn credit for both Human Development 107 and Psychology 157.</td>
<td></td>
</tr>
<tr>
<td>Select one (1) course from the following (List C): An additional course from List A or B (3)</td>
<td>3-4</td>
</tr>
<tr>
<td>(may not be a course used to satisfy the requirements in List A or B) Anthropology 100/100H, Introduction to Cultural Anthropology</td>
<td>3</td>
</tr>
<tr>
<td>Anthropology 101, Introduction to Physical Anthropology</td>
<td></td>
</tr>
<tr>
<td>Philosophy 110/110H, Critical Thinking</td>
<td>4</td>
</tr>
<tr>
<td>Philosophy 111, Introductory Logic</td>
<td>4</td>
</tr>
<tr>
<td>Psychology 170, Multicultural Psychology</td>
<td>3</td>
</tr>
</tbody>
</table>

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
**Psychology 230, Psychology and Effective Behavior (3)**

Psychology 250, Introduction to Abnormal Psychology (3)

Sociology 100/100H, Introduction to Sociology (3)

<table>
<thead>
<tr>
<th>Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Psychology 100</strong></td>
</tr>
<tr>
<td>Introduction to Psychology</td>
</tr>
<tr>
<td>Unit(s): 3.0</td>
</tr>
<tr>
<td>Class Hours: 48 Lecture total.</td>
</tr>
<tr>
<td>An introduction to the major theories, methods, concepts, ethical issues, and findings in the major fields in psychology including (but not limited to): research methods, biological bases of behavior, perception, learning, memory, cognition, emotion, motivation, development, personality, social, and abnormal psychology. <strong>CSU/UC (C-ID)</strong></td>
</tr>
</tbody>
</table>

| Psychobiology 100H |
| Honors Introduction to Psychology |
| Unit(s): 3.0 |
| Class Hours: 48 Lecture total. |
| Prerequisite: A high school or college GPA of 3.0 or above. |
| Content-enriched course for honors students emphasizing application and critical analysis of psychological concepts. An introduction to the major theories, methods, concepts, ethical issues, and findings in the major fields in psychology including (but not limited to): research methods, biological bases of behavior, perception, learning, memory, cognition, emotion, motivation, development, personality, social, and abnormal psychology. **CSU/UC (C-ID)** |

| Psychology 157 |
| Introduction to Child Psychology |
| Unit(s): 3.0 |
| Class Hours: 48 Lecture total. |
| Survey of human development from conception through adolescence. Covers major theories of development (cognition, perception, language, personality, etc.) and their application to parenting, teaching, and other interactions with children. (No credit if student has taken Human Development 107.) **CSU/UC** |

| Psychology 170 |
| Multicultural Psychology |
| Unit(s): 3.0 |
| Class Hours: 48 Lecture total. |
| Introduces students to important issues related to cultural diversity in the field of psychology. Major areas of psychology will be explored from a multicultural perspective, including research, mental health, social psychology, and identity development. Exploration of historically underrepresented populations in the U.S. will be emphasized. **CSU/UC** |

| Psychology 200 |
| Introduction to Biological Psychology |
| Unit(s): 3.0 |
| Class Hours: 48 Lecture total. |
| Prerequisite: Psychology 100/100H. |
| Explores relationships between physiological structures of the body and human behavior. Focuses on the organization and function of the brain, spinal cord, peripheral nervous system, glands, sensory and perceptual systems. Relates physiological functioning to motivated behavior, addiction, and psychological disorders. **CSU/UC (C-ID)** |

| Psychology 219 |
| Introduction to Research Methods in Psychology |
| Unit(s): 4.0 |
| Class Hours: 48 Lecture total, 48 Laboratory total. |
| Prerequisite: Psychology 100/100H and Social Science 219/219H or Mathematics 219/219H. |
| Emphasizes methods of study in psychology including: sound and ethical experimental design, analysis of variables contributing to experimental results, data treatment, and communicating findings. **CSU/UC (C-ID)** |

| Psychology 230 |
| Psychology and Effective Behavior |
| Unit(s): 3.0 |
| Class Hours: 48 Lecture total. |
| Application of theory and research in psychology to deal effectively with the adjustment demands of everyday life. Covers topics such as: interpersonal relationships, stress, health, time-management, and working. Includes exercises for increasing self-awareness, self-motivation, and self-management of everyday problems. **CSU/UC** |

| Psychology 240 |
| Introduction to Social Psychology |
| Unit(s): 3.0 |
| Class Hours: 48 Lecture total. |
| An exploration of the interlocking dynamics of psychology and sociology, examining the power of the situation, social interaction and social groups. Emphasized topics will include: aggression, prejudice, attraction, attitudes, group dynamics, self-development and social cognition. (Same as Sociology 240.) **CSU/UC (C-ID)** |

| Psychology 250 |
| Introduction to Abnormal Psychology |
| Unit(s): 3.0 |
| Class Hours: 48 Lecture total. |
| Prerequisite: Psychology 100/100H |
| Recommended Preparation: English 061. |
| This course is an introduction to the scientific study of psychopathology and atypical behaviors. An investigation of abnormal behavior from an integrative approach utilizing the biological, psychological and sociocultural perspectives. A comprehensive survey of theory and research in abnormal psychology with identification, etiology, intervention and prevention being presented. **CSU/UC (C-ID)** |

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.*
PUBLIC WORKS (PBLC)

Division of Business and Career Technical Education

Dean: Von Lawson
Facilitator: Carlos Castellanos

Associate in Science
Construction Inspection (32319)

Public Works Inspectors entering the field or advancing within the field have a designated course of study to improve their employability. Course content is specifically designed to provide the inspectors with coursework relative to the field of inspection and related responsibilities.

Learning Outcome(s)
Upon successful completion of the major requirements for this degree, students will be able to
• Be eligible for employment in high wage, high growth careers as demonstrated by the biennial review process in Construction Inspection.

Major requirements* Units
Public Works 050, Fundamentals of Public Works 3
Public Works 051, Infrastructure Construction and Maintenance 3
Public Works 061, Plan Interpretation and Cost Estimating 3
Public Works 063, Construction Materials and Testing 3
Public Works 070, Construction Inspection 3
Business 222, Business Writing OR 3
Management 122, Business Communications
Computer Information Systems 101, Introduction to Microsoft Office 3

TOTAL 21

Certificate of Achievement
Construction Inspection (11910)

Learning Outcome(s)
Upon successful completion of the requirements for this certificate, students will be able to
• Be eligible for employment in high wage, high growth careers as demonstrated by the biennial review process in Construction Management.

Certificate requirements Units
Public Works 050, Fundamentals of Public Works 3
Public Works 051, Infrastructure Construction and Maintenance 3
Public Works 061, Plan Interpretation and Cost Estimating 3
Public Works 063, Construction Materials and Testing 3
Public Works 070, Construction Inspection 3
Business 222, Business Writing OR 3
Management 122, Business Communications
Computer Information Systems 101, Introduction to Microsoft Office 3

TOTAL 21

Associate in Science
Construction Management (11909)

The associate degree and certificate of achievement in construction management is for current, new or future project managers and team members and those who may seek the PMP (Project Management Professional®) designation as part of their future career plan. The content includes project definition, planning, group dynamics, workplace diversity, team roles and communication techniques, problem solving, evaluation and final reporting on results in both a classroom setting and with opportunities for application.

Learning Outcome(s)
Upon successful completion of the major requirements for this degree, students will be able to
• Be eligible for employment in high wage, high growth careers as demonstrated by the biennial review process in Construction Management.

Major requirements* Units
Public Works 050, Fundamentals of Public Works 3
Public Works 061, Plan Interpretation and Cost Estimation 3
Public Works 074, Contract Administration 3
Public Works 080, Principles of Project Management OR 3
Business 090, Principles of Project Management
Public Works 110, Introduction to Microsoft Project OR 3
Computer Information Systems 110, Introduction to Microsoft Project
Business 222, Business Writing OR 3
Management 122, Business Communications
Computer Information Systems 101, Introduction to Microsoft Office 3

TOTAL 21

Certificate of Achievement
Construction Management (21673)

Learning Outcome(s)
Upon successful completion of the requirements for this certificate, students will be able to
• Be eligible for employment in high wage, high growth careers as demonstrated by the biennial review process in Construction Management.

Certificate requirements Units
Public Works 050, Fundamentals of Public Works 3
Public Works 061, Plan Interpretation and Cost Estimation 3
Public Works 074, Contract Administration 3
Public Works 080, Principles of Project Management OR 3
Business 090, Principles of Project Management
Public Works 110, Introduction to Microsoft Project OR 3
Computer Information Systems 110, Introduction to Microsoft Project
Business 222, Business Writing OR 3
Management 122, Business Communications
Computer Information Systems 101, Introduction to Microsoft Office 3

TOTAL 21

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
Associate in Science
Environmental Management (31847)

The associate in science and certificate of achievement in environmental management are designed for students who have completed either or both of the existing Public Works programs as well as incumbent workers seeking career opportunities. Upon completion of this degree and certificate program students will be eligible for employment as Environmental Compliance Officers, Technicians and Inspectors in city, county and state municipalities.

Learning Outcome(s)
Upon successful completion of the major requirements for this degree, students will be able to
• Be eligible for employment in high wage, high growth careers as demonstrated by the biennial review process in Environmental Management.

Major requirements*  Units
<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Works 050, Fundamentals of Public Works</td>
<td>3</td>
</tr>
<tr>
<td>Public Works 061, Plan Interpretation and Cost Estimating</td>
<td>3</td>
</tr>
<tr>
<td>Public Works 067, Environmental Management</td>
<td>3</td>
</tr>
<tr>
<td>Public Works 068, Fundamentals of Storm Water Management</td>
<td>3</td>
</tr>
<tr>
<td>Public Works 069, Green Infrastructure Construction</td>
<td>3</td>
</tr>
<tr>
<td>Computer Information Systems 101, Introduction to</td>
<td>3</td>
</tr>
<tr>
<td>Microsoft Office</td>
<td></td>
</tr>
<tr>
<td>Management 122, Business Communications</td>
<td>3</td>
</tr>
<tr>
<td>OR</td>
<td></td>
</tr>
<tr>
<td>Business 222, Business Writing</td>
<td>3</td>
</tr>
<tr>
<td>TOTAL</td>
<td>21</td>
</tr>
</tbody>
</table>

Certificate of Achievement
Environmental Management (31848)

Learning Outcome(s)
Upon successful completion of the requirements for this certificate, students will be able to
• Be eligible for employment in high wage, high growth careers as demonstrated by the biennial review process in Environmental Management.

Certificate requirements  Units
<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Works 050, Fundamentals of Public Works</td>
<td>3</td>
</tr>
<tr>
<td>Public Works 061, Plan Interpretation and Cost Estimating</td>
<td>3</td>
</tr>
<tr>
<td>Public Works 067, Environmental Management</td>
<td>3</td>
</tr>
<tr>
<td>Public Works 068, Fundamentals of Storm Water Management</td>
<td>3</td>
</tr>
<tr>
<td>Public Works 069, Green Infrastructure Construction</td>
<td>3</td>
</tr>
<tr>
<td>Computer Information Systems 101, Introduction to</td>
<td>3</td>
</tr>
<tr>
<td>Microsoft Office</td>
<td></td>
</tr>
<tr>
<td>Management 122, Business Communications</td>
<td>3</td>
</tr>
<tr>
<td>OR</td>
<td></td>
</tr>
<tr>
<td>Business 222, Business Writing</td>
<td>3</td>
</tr>
<tr>
<td>TOTAL</td>
<td>21</td>
</tr>
</tbody>
</table>

Certificate of Proficiency
Code Enforcement Officer

The certificate of proficiency in code enforcement provides students with the course work necessary for certification through the California Association of Code Enforcement Officers. It also includes the basic information for a successful career in code enforcement. It is designed for individuals seeking a career as a Code Enforcement Officer as well as sworn or non-sworn inspectors, officers, or investigators employed by a city, state, or county agency seeking specialized training in prevention, detection, investigation and enforcement of violations of statutes or ordinances regulating public health, safety, and welfare, public works, business activities and consumer protection, building standards, land-use, or municipal affairs.

Learning Outcome(s)
Upon successful completion of the requirements for this certificate, students will be able to
• Assess the laws and procedures related to code enforcement for Substandard Housing, Zoning, and Vehicle Abatement.
• Formulate the elements for preparation and documentation for Administrative Hearings and prosecution in court.

Certificate requirements  Units
<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Works 086, Basic Code Enforcement Officer</td>
<td>1</td>
</tr>
<tr>
<td>Public Works 087, Intermediate Code Enforcement Officer</td>
<td>1</td>
</tr>
<tr>
<td>Public Works 088, Advanced Code Enforcement Officer</td>
<td>1</td>
</tr>
<tr>
<td>Public Works 089, Code Enforcement Officer-Supervision</td>
<td>1</td>
</tr>
<tr>
<td>TOTAL</td>
<td>4</td>
</tr>
</tbody>
</table>

Courses

Public Works 050
Fundamentals of Public Works
Unit(s): 3.0
Class Hours: 48 Lecture total. Overview of Public Works, including history and development, department functions, careers opportunities and future trends.

Public Works 051
Infrastructure Construction and Maintenance
Unit(s): 3.0
Class Hours: 48 Lecture total. Covers the infrastructure construction and maintenance processes including: equipment, scheduling, materials, financing, project management, permitting, surveying, and repairs for transportation, flood control, public spaces, utilities and facilities of a city, municipality, county or state.

Public Works 061
Plan Interpretation and Cost Estimating
Unit(s): 3.0
Class Hours: 48 Lecture total. Reading and interpreting plans related to public works projects, including roadway, water, sewer, storm drain and traffic projects. Related concepts include basic mathematical formulas and conversions, construction materials and equipment, surveying, project management, contract documents, costing, quantifying and computer applications.

Public Works 063
Construction Materials and Testing
Unit(s): 3.0
Class Hours: 48 Lecture total. Covers properties, methods of use and testing procedures of construction materials. Common materials of construction include portland cement concrete, masonry, timber, iron, steel, plastic, soil and bituminous materials.

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
Public Works 067
Environmental Management
Unit(s): 3.0
Class Hours: 48 Lecture total.
An overview of the processes and requirements to obtain environmental clearance for Public Works construction projects, including other non-environmental related permits.

Public Works 068
Fundamentals of Storm Water Management
Unit(s): 3.0
Class Hours: 48 Lecture total.
Understanding of regulatory stormwater discharge permits administered by Regional Water Quality Control Board. Course study includes permit compliance requirements for contractors, business owners, residents and government agencies.

Public Works 069
Green Infrastructure Construction
Unit(s): 3.0
Class Hours: 48 Lecture total.
Covers alternative methods for stormwater management. Practices to maintain healthy waters, provide environmental benefits and support sustainable communities while providing flood mitigation, energy use reduction and air quality management.

Public Works 070
Construction Inspection
Unit(s): 3.0
Class Hours: 48 Lecture total.
An overview of inspection techniques and procedures for examining materials and evaluating methods used in Public Works construction projects.

Public Works 074
Contract Administration
Unit(s): 3.0
Class Hours: 48 Lecture total.
Covers the techniques, methods and processes used to manage Public Works construction projects. Includes planning, scheduling, execution, controlling and closure and evaluation of extra work, claims, disputed work and project documentation.

Public Works 080
Principles of Project Management
Unit(s): 3.0
Class Hours: 48 Lecture total.
Utilizing project planning tools and techniques, learn how to define, plan, execute and deliver projects of all types and sizes. Emphasizes practical application using case studies to organize, schedule and manage projects effectively. Industry guest speakers included. (Same as Business 090.)

Public Works 086
Basic Code Enforcement Officer
Unit(s): 1.0
Class Hours: 5 Lecture total, 35 Laboratory total.
This basic code enforcement class is designed to provide standardized academic and professional training for current California code enforcement officers or individuals seeking employment as a code enforcement officer. Course topics include enforcement ethics, inspection best-practices, planning and zoning, basic construction concepts, vehicle abatement, right of entry, inspection warrants, documenting investigations, and legal aspects of criminal, civil, and administrative case preparation.
Grade: Pass/No Pass.

Public Works 087
Intermediate Code Enforcement Officer
Unit(s): 1.0
Class Hours: 5 Lecture total, 35 Laboratory total.
The intermediate code enforcement class is designed to provide standardized academic and professional training for current California code enforcement officers or individuals seeking employment as a code enforcement officer. Course topics include the abatement of sub-standard or hazardous buildings, hazardous materials, residential construction, use of force, self-defense and chemical agents, criminal law, and methods to collaborate with the community.
Grade: Pass/No Pass.

Public Works 088
Advanced Code Enforcement Officer
Unit(s): 1.0
Class Hours: 5 Lecture total, 35 Laboratory total.
The advanced code enforcement class is designed to provide standardized academic and professional training for current California code enforcement officers or individuals seeking employment as a code enforcement officer. Course topics include effective communications, vectors and animal safety, developing staff reports and new ordinances, building, residential, mechanical, plumbing, and fire codes, and gang and drug awareness and officer safety. Optional field trips may be included.
Grade: Pass/No Pass.

Public Works 089
Code Enforcement Officer-Supervision
Unit(s): 1.0
Class Hours: 5 Lecture total, 35 Laboratory total.
The supervisory code enforcement class is designed to provide standardized academic and professional training for current California code enforcement officers or individuals seeking promotion to a senior or supervising code enforcement officer. Course topics include diversity, ethics, and communication for supervisors; performance management best-practices, employment law, assertive leadership, budgets, finance, and grant administration; promoting an agency, critical incident management, strategic planning, and internal investigations.
Grade: Pass/No Pass.

Public Works 110
Introduction to Microsoft Project
Unit(s): 3.0
Class Hours: 48 Lecture total.
How to plan a project, identify and create tasks, estimate workloads and durations, setup project schedules, maintain the schedule, assign resources, connect resources to tasks, setup a project budget, track progress utilize reports and close a project using Microsoft Project. (Same as Computer Information Systems 110.) CSU

Public Works 199
Cooperative Work Experience Education
Unit(s): 1.0-4.0
Class Hours: 60-300 Laboratory total.
Corequisite: Six (6) units in Public Works courses.
This course will provide students majoring in the Public Works the opportunity to apply knowledge and skills gained from college courses in an actual work setting. Students must be enrolled in a minimum of six Public Works units. Job site experience will train the student in additional job skills that will transfer classroom learning to the workplace. Credit may be accrued at the rate of one (1) to four (4) units per semester for a maximum of sixteen (16) units. Additionally, students must work 75 paid hours or 60 non-paid hours per unit earned.
Grade: Pass/No Pass.
Open Entry/Open Exit. CSU

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
READING (READ)

Division of Arts, Humanities and Social Sciences/Library

Dean: Marilyn Flores
Facilitator: Amy Freese
Faculty: Mary McMullin

The Reading program offers a comprehensive set of courses designed to help students develop and enhance reading comprehension and critical thinking skills for greater success in college courses. Reading courses assist students in building academic vocabulary, enhancing reading comprehension across disciplines and developing critical analysis and interpretation of college-level text.

Courses

Reading N96
Foundation for College Reading
Unit(s): 3.0
Class Hours: 48 Lecture total.
   Introduces strategies for developing vocabulary and reading comprehension skills. Word recognition, context clues and dictionary skills are addressed. Comprehension skills such as finding main idea and supporting details, and recognizing patterns and structures are presented. Includes strategies for effective reading practices and overcoming reading anxiety.

Reading 097
Advanced College Reading
Unit(s): 3.0
Class Hours: 48 Lecture total.
Prerequisite: Reading N96 or qualifying profile from placement exam.
   Designed to expand reading comprehension, increase knowledge of academic vocabulary, develop basic critical reading skills, improve reading rate and build confidence and positive attitudes toward reading. Includes strategies for effective reading practices and overcoming reading anxiety.

Reading 102
Academic Reading
Unit(s): 3.0
Class Hours: 48 Lecture total.
Recommended Preparation: English 061 or concurrent enrollment.
   Introduces a repertoire of reading strategies aimed at preparing students for comprehension of complex college-level reading material. Advanced reading strategies provide the foundation for the development of critical reading and the recognition of patterns of academic thought. Reading strategies for specific disciplines, including the Social Sciences, Business, Humanities and the Arts, Mathematics and the Natural Sciences are presented.

REAL ESTATE (RE)

Division of Business and Career Technical Education

Dean: Von Lawson
Facilitator: Robert Lindquist

The associate degree and certificate of achievement in real estate are designed for individuals interested in careers in real estate as salespersons, brokers, and real estate industry professionals including mortgage brokers, property managers, title officers, developers and as government employees.

The program is intended to meet the mandatory and elective course requirements students need to sit for the California real estate sales or brokers license exam.

Associate in Science
Real Estate (11869)

Learning Outcome(s)
Upon successful completion of the major requirements for this degree, students will be able to
   • Sit for the California Real Estate Sales license.

Major requirements* Units
Real Estate 102, Real Estate Principles 3
Real Estate 103, Legal Aspects of Real Estate 3
Real Estate 105, Real Estate Practice 3
Real Estate 106, Real Estate Finance 3
Real Estate 110, Real Estate Economics 3
Real Estate 112, Real Property Management 3
Real Estate 114, Appraisal Principles and Procedures 3.5

Select one (1) course from the following: 1-4
   Accounting 101, Financial Accounting (4)
   Real Estate 116, Residential Real Estate Appraisal (3.5)
   Real Estate 117, Residential Report Writing and Case Studies (1)

TOTAL 22.5-25.5

Individuals interested in obtaining a California real estate salesperson or broker license are directed to contact the State of California Bureau of Real Estate at www.dre.ca.gov to ensure they are meeting both current and their individual requirements for licensing and taking the exam.

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
Certificate of Achievement
Real Estate (21639)

Learning Outcome(s)
Upon successful completion of the requirements for this certificate, students will be able to
• Sit for the California Real Estate Sales license.

Certificate requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Real Estate 102, Real Estate Principles</td>
<td>3</td>
</tr>
<tr>
<td>Real Estate 103, Legal Aspects of Real Estate</td>
<td>3</td>
</tr>
<tr>
<td>Real Estate 105, Real Estate Practice</td>
<td>3</td>
</tr>
<tr>
<td>Real Estate 106, Real Estate Finance</td>
<td>3</td>
</tr>
<tr>
<td>Real Estate 110, Real Estate Economics</td>
<td>3</td>
</tr>
<tr>
<td>Real Estate 112, Real Property Management</td>
<td>3</td>
</tr>
<tr>
<td>Real Estate 114, Appraisal Principles and Procedures</td>
<td>3.5</td>
</tr>
</tbody>
</table>

Select one (1) course from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting 101, Financial Accounting (4)</td>
<td></td>
</tr>
<tr>
<td>Real Estate 116, Residential Real Estate Appraisal (3.5)</td>
<td></td>
</tr>
<tr>
<td>Real Estate 117, Residential Report Writing and Case Studies (1)</td>
<td></td>
</tr>
</tbody>
</table>

TOTAL 22.5-25.5

Individuals interested in obtaining a California real estate salesperson or broker license are directed to contact the State of California Bureau of Real Estate at www.dre.ca.gov to ensure they are meeting both current and their individual requirements for licensing and taking the exam.

Certificate of Proficiency
Real Estate Appraisal

The certificate of proficiency in real estate appraisal is designed for individuals interested in a career in real estate appraisal of both residential and commercial property. The program is intended to prepare students for the California real estate appraiser license exam, certified residential exam and certified general exam. As well as it provides coursework for real estate professionals.

Learning Outcome(s)
Upon successful completion of the requirements for this certificate, students will be able to
• Demonstrate and apply knowledge of methods, concepts and standards according to USPAP (Uniform Standards of Professional Appraisal Practice.)

Certificate requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Real Estate 102, Real Estate Principles</td>
<td>3</td>
</tr>
<tr>
<td>Real Estate 103, Legal Aspects of Real Estate</td>
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</tr>
<tr>
<td>Real Estate 110, Real Estate Economics</td>
<td>3</td>
</tr>
<tr>
<td>Real Estate 114, Appraisal Principles and Procedures</td>
<td>3.5</td>
</tr>
<tr>
<td>Real Estate 116, Residential Real Estate Appraisal</td>
<td>3.5</td>
</tr>
<tr>
<td>Real Estate 117, Residential Report Writing and Case Studies</td>
<td>1</td>
</tr>
</tbody>
</table>

TOTAL 14

Individuals interested in obtaining a Real Estate Appraiser Trainee and Residential license or a Real Estate Appraiser Certified Residential or General license are directed to contact the California State Office of Real Estate Appraisers (OREA) at www.OREA.ca.gov to ensure they are meeting both current and their individual educational and other requirements for licensing and taking the exam.

Certificate of Proficiency
Real Estate Salesperson

The certificate of proficiency in real estate salesperson provides students with the coursework necessary to meet the state BRE (Bureau of Real Estate) educational requirements that qualify an individual to sit for the Salesperson’s license exam. It also includes the basic information for a successful career in real estate sales.

Learning Outcome(s)
Upon successful completion of the requirements for this certificate, students will be able to
• Demonstrate and apply knowledge of principles, procedures and practices of real estate sales according to BRE (Bureau of Real Estate) standards.

Certificate requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Real Estate 102, Real Estate Principles</td>
<td>3</td>
</tr>
<tr>
<td>Real Estate 105, Real Estate Practice</td>
<td>3</td>
</tr>
<tr>
<td>Real Estate 110, Real Estate Economics</td>
<td>3</td>
</tr>
<tr>
<td>Real Estate 114, Appraisal Principles and Procedures</td>
<td>3.5</td>
</tr>
</tbody>
</table>

TOTAL 12.5

Courses

Real Estate 102
Real Estate Principles
Unit(s): 3.0
Class Hours: 48 Lecture total.
• Provides basic information about real estate and prepares students for advanced study in specialized courses. Includes deeds, titles, agency, contracts, mathematics, finance, appraisal, escrow, leases. Required for the California real estate salesperson license. CSU

Real Estate 103
Legal Aspects of Real Estate
Unit(s): 3.0
Class Hours: 48 Lecture total.
• California real estate law including contracts, ownership, estates, easements, landlord-tenant, trust deeds, liens, agency, security devices, and land use. Applies towards: (1) required course for the California real estate salesperson licensing and (2) California real estate broker’s license requirements. CSU

Real Estate 105
Real Estate Practice
Unit(s): 3.0
Class Hours: 48 Lecture total.
• Operation of the real estate business and the role of the agent. Includes listing, prospecting, sales techniques, use of current real estate forms; financing, title insurance, escrow and taxation. This course is required for the educational requirement for the California real estate salesperson license and may be applied toward the California real estate broker license requirements. CSU

Real Estate 106
Real Estate Finance
Unit(s): 3.0
Class Hours: 48 Lecture total.
• Analysis of real estate financing. Covers the mortgage market, lenders, conventional and government-backed loans, processing and closing loans, foreclosures. Applies towards the partial fulfillment for the educational requirements for (1) California real estate salesperson license and (2) California real estate broker license. CSU

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
Real Estate 110
Real Estate Economics
Unit(s): 3.0
Class Hours: 48 Lecture total.
Covers the factors influencing real estate values. Includes business cycles, regional and community growth, influences on real estate development. Applies towards the partial fulfillment for the educational requirements for (1) California real estate salesperson license and (2) California real estate broker license. **CSU**

Real Estate 112
Real Property Management
Unit(s): 3.0
Class Hours: 48 Lecture total.
Principles and practices of managing residential, apartment, commercial and income properties. Covers property management, leases and contracts, collections, rent schedules, tenant selection and supervision, and budgets. Applies towards the partial fulfillment for the educational requirements for (1) California real estate salesperson license and (2) California real estate broker license. **CSU**

Real Estate 114
Appraisal Principles and Procedures
Unit(s): 3.5
Class Hours: 60 Lecture total.
The principles and procedures of appraisal used to estimate market values; location analysis, standards and ethics, and the sales comparison, cost, and income approaches for residential properties. Course applies 60 hours of educational instruction towards the requirements for licensure from the California Office of Real Estate Appraisal (OREA). Course is required for the appraisal licenses for Trainee, Residential, Certified Residential, and Certified General license. Course meets the requirement for the Department of Real Estate (DRE) Brokers License and qualifies as one of the required courses for the Salespersons License. **CSU**

Real Estate 116
Residential Real Estate Appraisal
Unit(s): 3.0
Class Hours: 60 Lecture total.
Studies in residential market analysis and highest and best use; residential appraiser site valuation and cost approach; and residential sales comparison and income approach. Course applies 60 hours of educational instruction towards the requirements for licensure from the California Office of Real Estate Appraisal (OREA). Course is required for the appraisal licenses for Trainee, Residential, Certified Residential, and Certified General license. Course meets the requirement for the Department of Real Estate (DRE) Brokers License and qualifies as one of the required courses for the Salespersons License. **CSU**

Real Estate 117
Residential Report Writing and Case Studies
Unit(s): 1.0
Class Hours: 16 Lecture total.
Residential report writing and case studies in appraisal to include theories, techniques, and procedures of using various residential forms and reports for appraisal. Course applies 16 hours of educational instruction towards the requirements for licensure from the California Office of Real Estate Appraisal (OREA). Course is required for the appraisal licenses for Trainee, Residential, Certified Residential, and Certified General license. **CSU**

**SCIENCE**

Associate in Science
Science (11953)
The associate degree in science is designed to provide students with a foundation in science that will prepare them for transfer to a four-year college or university to complete a baccalaureate science degree in disciplines such as astronomy, biology, biochemistry, chemistry, geology, geophysics, meteorology, oceanography, or physics.

For transfer with upper-division standing, most four-year institutions require a minimum of one year of calculus and one-year of general chemistry in addition to the courses required in the science major. Check with the Transfer Center or a counselor for specific transfer requirements.

Units used to satisfy the general education requirements may also be used to satisfy the Science Degree requirements.

**Learning Outcome(s)**
Upon successful completion of the major requirements for this degree, students will be able to:
- Clearly communicate scientific reasoning and quantitative problem solving skills using appropriate vocabulary, methodologies, and technologies.
- Employ the scientific method of proposing hypotheses based on observations, test the hypotheses, critically analyze experimental data and formulate conclusions based on that analysis.

**Emphasis requirements**

<table>
<thead>
<tr>
<th>Core courses</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics 180/180H, Analytic Geometry and Calculus</td>
<td>4</td>
</tr>
<tr>
<td>Chemistry 219, General Chemistry</td>
<td>5</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>9</strong></td>
</tr>
</tbody>
</table>

**General Science Emphasis:**

| Core Courses                                      | 9     |
| Mathematics 185, Analytic Geometry and Calculus   | 4     |
| Electives                                         | 13    |
| **TOTAL**                                        | **26** |

**Astronomy Emphasis:**

| Core Courses                                      | 9     |
| Astronomy 109, Introduction to the Solar System   |       |
| OR                                               | 3     |
| Astronomy 112, Introduction to Cosmology         |       |
| Astronomy 110, Introduction to Stars and Galaxies | 3     |
| Astronomy 140, Astronomy Laboratory              | 1     |
| Mathematics 185, Analytic Geometry and Calculus  | 4     |
| Electives*                                       | 6     |
| **TOTAL**                                        | **26** |

*Astronomy Emphasis students may substitute Physics 250A for Chemistry 219.

*Completion of Physics 250A/250B/250C and/or Mathematics 280 is highly recommended for Astronomy Emphasis students.*
**Biology Emphasis:**
- Core Courses** 9
- Biology 211, Cellular and Molecular Biology 5
- Biology 212, Animal Diversity and Ecology 5
- OR
- Biology 214, Plant Diversity and Evolution 5
- Electives** 8

**Total** 27

**Chemistry Emphasis:**
- Core Courses 9
- Chemistry 229, General Chemistry and Qualitative Analysis 5
- Mathematics 185, Analytic Geometry and Calculus 4
- Electives*** 8

**Total** 26

**Physics Emphasis:**
- Core Courses***** 9
- Physics 250A, Physics for Scientists and Engineers I 5
- Physics 250B, Physics for Scientists and Engineers II 5
- Mathematics 185, Analytic Geometry and Calculus 4
- Electives***** 4

**Total** 27

**Electives for any emphasis of the Science Degree must be selected from the following courses:**
- Astronomy 109, 110, 112, 140; Biology 109/109H, 109L, 139, 149, 177, 200, 211, 212, 214, 229, 239, 249, 259; Chemistry 209, 210, 229, 249, 259; Earth Science 110, 115; Environmental Studies 200, 259; Geology 101, 101L, 142, 150, 162, 164, 173, 174, 176, 178, 180, 201, 260; Mathematics 185, 280; Physical Science 115; Physics 109, 150A, 150AC, 150B, 150BC, 210, 211, 250A, 250B, 250C.

**SIGN LANGUAGE (SIGN)**

Division of Arts, Humanities and Social Sciences/Library

Dean: Marilyn Flores
Department Chair, Modern Languages: Elizabeth Baez
Faculty: Charlie Malone

**Certificate of Achievement**

**American Sign Language (11905)**

The certificate of achievement in American Sign Language (ASL) is offered as preparation for developing linguistic competency in ASL and readiness for entering a formal interpreter training program. The certificate indicates skill in the use of ASL for personal communication and an introductory awareness of Sign Language interpreting and other professions within the Deaf community.

**Learning Outcomes**

Upon successful completion of the requirements for this certificate, students will be able to:
- Demonstrate an understanding of American Deaf culture.
- Demonstrate the ability to maintain an ongoing dialogue in ASL at an intermediate conversational level.

**Certificate requirements**

**Units**

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>Sign Language 110, American Sign Language I</td>
<td>3</td>
</tr>
<tr>
<td>Sign Language 111, American Sign Language II</td>
<td>3</td>
</tr>
<tr>
<td>Sign Language 112, American Sign Language III</td>
<td>3</td>
</tr>
<tr>
<td>Sign Language 113, Introduction to Interpreting for the Deaf</td>
<td>3</td>
</tr>
<tr>
<td>Sign Language 114, Classifiers, Fingerspelling and Numbering</td>
<td>3</td>
</tr>
<tr>
<td>Sign Language 116, Perspectives on Deafness</td>
<td>3</td>
</tr>
<tr>
<td>Human Development 107, Child Growth and Development (DS1)</td>
<td>3</td>
</tr>
<tr>
<td>Psychology 157, Introduction to Child Psychology</td>
<td>3</td>
</tr>
<tr>
<td>Communication 100/100H, Introduction to Interpersonal Communication (3)</td>
<td>3</td>
</tr>
<tr>
<td>Communication 120/120H, Introduction to Intercultural Communication (3)</td>
<td>3</td>
</tr>
<tr>
<td>Education 209, Roles and Responsibilities of the Special Education Paraprofessional (3)</td>
<td>3</td>
</tr>
<tr>
<td>Human Development 205, Exceptionality and Special Needs in Human Development (3)</td>
<td>3</td>
</tr>
<tr>
<td>Theatre Arts 110, Acting Fundamentals (3)</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total** 24

**Courses**

**Sign Language 110**

**American Sign Language I**

Unit(s): 3.0

Class Hours: 48 Lecture total.

This entry level course is designed to introduce students to American Sign Language (ASL) and fingerspelling as it is used within American Deaf culture. Instruction includes preparation for visual/gestural communication followed by intensive work on comprehension skills, modeling of grammatical structures, and general information about American Deaf culture. Sign Language 110 is equivalent to two years of high school ASL. **CSU/UC**

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*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.*
Sign Language 111  
**American Sign Language II**  
Unit(s): 3.0  
Class Hours: 48 Lecture total.  
Prerequisite: Sign Language 110.  
The second course in the study of American Sign Language (ASL) focuses on vocabulary development, comprehension skills, grammatical structures and practice in the receptive and expressive aspects of ASL, as well as continued exposure to American Deaf culture. It is designed for the student or professional interested in working and interacting with the Deaf community. **CSU/UC**

Sign Language 112  
**American Sign Language III**  
Unit(s): 3.0  
Class Hours: 48 Lecture total.  
Prerequisite: Sign Language 111.  
The third course in the study of American Sign Language (ASL) emphasizes ASL syntax, facial grammar, vocabulary, and finger-spelling enabling students to participate in more complex conversations with Deaf community members. This course enhances students' receptive and expressive skills in ASL. It is designed for the student or professional interested in working and/or interacting with the Deaf community. **CSU/UC**

Sign Language 113  
**Introduction to Interpreting for the Deaf**  
Unit(s): 3.0  
Class Hours: 48 Lecture total.  
Prerequisite: Sign Language 112.  
Introduction to and survey of basic theories, principles and practices of American Sign Language Interpreting and Transliterating for the Deaf. Explores the full spectrum of the roles and ethical responsibilities of professional sign language interpreters in a variety of settings. Provides for practice of expressive and receptive skills. Includes instruction on national testing standards and preparation for certification. **CSU**

Sign Language 114  
**Classifiers, Fingerspelling, and Numbering**  
Unit(s): 3.0  
Class Hours: 48 Lecture total.  
Prerequisite: Sign Language 111.  
This course is designed to provide specialized instruction in the continued development of skills and application of American Sign Language (ASL) classifiers, fingerspelling, and numbering concepts. Expressive and receptive techniques will be emphasized. **CSU**

Sign Language 116  
**Perspectives on Deafness**  
Unit(s): 3.0  
Class Hours: 48 Lecture total.  
This is an introductory course exploring the cultural, educational, linguistic and audiological experiences of people who are deaf, hard of hearing, deafblind and late-deafened in America. Students will be exposed to historical and current perspectives in trends, philosophies, ideologies, and the Deaf community as a subculture of American society. **CSU/UC**

**SOCIAL SCIENCE (SOCS)**

Division of Arts, Humanities and Social Sciences/Library  
Dean: Marilyn Flores  
Department Co-Chairs, Social Sciences: Cari Cannon, Alexander Taber  
Faculty: Emma Breeden, Cari Cannon, Vanessa Engstrom, Scott Howell, Nicholas Magalousis, Michael Parrella, Narges Rabii-Rankin, Stephen Reed, Nooshan Shekarabi, Alexander Taber, Christine Umali Kopp

**Associate in Arts**  
Social Science (11937)

The associate degree in social science is designed to provide the student with a better understanding of man's behavior, past and present, the historical and social environmental forces that operate in the world, and the significant problems of the present day. Completion of the degree prepares students to move into a curriculum at a four-year institution leading to a baccalaureate degree. Some employment opportunities are available in the teaching of social science.

**Learning Outcome(s)**

Upon successful completion of the major requirements for this degree, students will be able to:
- Discuss human behavior within the context of a social environment. Apply concepts of anthropology to the study of diverse world civilizations.
- Understand how macro-economic concepts can be applied to daily decision-making.
- Develop analytic skills through the study of important people, events, and concepts in U.S. and world history.
- Demonstrate knowledge of American political institutions and understand the importance of participatory citizenship and local involvement.

**Emphasis requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>History 101/101H, World Civilizations to the 16th Century OR History 102/102H, World Civilizations Since the 16th Century History 120/120H, United States to 1865 OR History 121/121H, United States Since 1865 Anthropology 100/100H, Introduction to Cultural Anthropology OR Sociology 100/100H, Introduction to Sociology Economics 102, Principles/Macro Political Science 101/101H, Introduction to Governments Psychology 100/100H, Introduction to Psychology</td>
<td></td>
</tr>
<tr>
<td>History 120/120H, United States to 1865 Anthropology 100/100H, Introduction to Cultural Anthropology Sociology 100/100H, Introduction to Sociology Economics 102, Principles/Macro Political Science 101/101H, Introduction to Governments Psychology 100/100H, Introduction to Psychology</td>
<td></td>
</tr>
<tr>
<td>History 121/121H, United States Since 1865 Anthropology 100/100H, Introduction to Cultural Anthropology Sociology 100/100H, Introduction to Sociology Economics 102, Principles/Macro Political Science 101/101H, Introduction to Governments Psychology 100/100H, Introduction to Psychology</td>
<td></td>
</tr>
</tbody>
</table>

**Select two (2) courses from the following:**
- Anthropology 101, Introduction to Physical Anthropology  
  Anthropology 103, Introduction to Archaeology  
- Computer Science 100, The Computer and Society  
- English 231, Survey of English Literature  
- English 232, Survey of English Literature  
- English 241, Survey of American Literature 1600-1865  
- English 242, Survey of American Literature, 1865-Present  
- Geography 100/100H, World Regional Geography  
- History 127, Women in U.S. History  
- History 152, Latin American History  
- History 162, Asian Civilizations  
- Political Science 200/200H, American Political Thought  
- Political Science 201, Introduction to Comparative Politics  
- Political Science 220, International Politics  

**TOTAL 24**

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.*
Courses

Social Science 219
Statistics and Probability
Unit(s): 4.0
Class Hours: 80 Lecture total.
Prerequisite: Mathematics 080 or placement into Mathematics 219 on the Mathematics Level 3 placement exam and a course equivalent to Mathematics 080.

First course in statistical reasoning. Includes descriptive statistics, graphical displays of data, probability, confidence intervals, hypothesis testing, regression, contingency tables, ANOVA, and non-parametric statistics. Includes use of technology. (Same as Mathematics 219.) CSU/UC

Social Science 219H
Honors Statistics and Probability
Unit(s): 4.0
Class Hours: 80 Lecture total.
Prerequisite: Mathematics 080 or placement into Mathematics 219 on the Mathematics Level 3 placement exam and a course equivalent to Mathematics 080 and a high school or college GPA of 3.0 or above.

This course is an enhanced format for the beginning course in statistics and probability by using a seminar approach, applying statistical software and presenting individual research. This course includes descriptive statistics, graphical displays of data, probability, confidence intervals, hypothesis testing, regression, contingency tables, ANOVA and non-parametric statistics, with applications designed around the individual interests of students. (Same as Mathematics 219H.) CSU/UC

SOCIOLoGY (SOC)

Division of Arts, Humanities and Social Sciences/Library

Dean: Marilyn Flores
Department Co-Chairs, Social Sciences: Cari Cannon, Alexandar Taber
Faculty: Tiffany Gause, Georgia Summer

Associate in Arts
Sociology for Transfer (30600)
The Associate in Arts in Sociology for Transfer is an interdisciplinary social science program providing students an understanding of interpersonal behavior and social structure, a critical appreciation of contemporary social life, and a form of reference for an analysis of human behavior. Successful completion of the transfer degree in Sociology guarantees the student acceptance to a California State University to pursue a baccalaureate degree in Sociology or a related field.

Learning Outcome(s)

Upon successful completion of the major requirements for this degree, students will be able to
• Learn the application of research methods in investigating social problems.
• Understand group interaction, including gender, ethnicity, age differences, and social class.
• Learn the influence of social institutions on individuals and groups.
• Learn to implement perspectives in dealing with social dynamics.

Major requirements*

<table>
<thead>
<tr>
<th>Sociology 100/100H, Introduction to Sociology</th>
<th>3</th>
</tr>
</thead>
</table>

Select two (2) courses from the following (List A):

| Sociology 140/140H, Analysis of Social Trends and Problems (3) | 3 |
| Sociology 219/219H, Statistics and Probability (4) | 4 |

OR

| Mathematics 219/219H, Statistics and Probability (4) | 4 |

Select two (2) courses from the following (List B):

| Sociology 112, Relationships, Marriages, and Family Dynamics (3) | 3 |
| Sociology 240/Psychology 240, Introduction to Social Psychology (3) | 3 |

Select one (1) course from the following (List C):

| Anthropology 100 /100H, Introduction to Cultural Anthropology (3) | 3 |
| English 103/103H, Critical Thinking and Writing (4) | 4 |
| Psychology 100/100H, Introduction to Psychology (3) | 3 |

TOTAL 19-20

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
Associate in Arts Sociology (11947)

The associate degree in sociology is an interdisciplinary social science program providing students an understanding of interpersonal behavior and social structure, a critical appreciation of contemporary social life, a form of reference for an analysis of human behavior. Completion of the associate in arts degree prepares students to move into a curriculum at a four-year institution leading to a baccalaureate degree.

Learning Outcome(s)
Upon successful completion of the major requirements for this degree, students will be able to
• Learn the application of research methods in investigating social problems.
• Learn to implement perspectives in dealing with social dynamics.
• Understand group interaction, including gender, ethnicity, age differences, and social class.
• Learn the influence of social institutions on individuals and groups.

Major requirements* Units
Anthropology 100/100H, Introduction to Cultural Anthropology 3
Psychology 100/100H, Introduction to Psychology 3
Sociology 100/100H, Introduction to Sociology 3
Sociology 140/140H, Analysis of Social Trends and Problems 3
Select two (2) courses from the following: 6-7
Anthropology 101, Introduction to Physical Anthropology (3)
Anthropology 104, Language and Culture (3)
Mathematics 219/219H, Statistics and Probability (4)
OR
Social Science 219/219H, Statistics and Probability (4)
Psychology 157, Introduction to Child Psychology (3)
Psychology 240/Sociology 240, Introduction to Social Psychology (3)
Introduction to Social Psychology (3)
Sociology 112, Relationships, Marriages, and Family Dynamics (3)

TOTAL 18-19

Courses

Sociology 100
Introduction to Sociology
Unit(s): 3.0
Class Hours: 48 Lecture total.
The scientific study of human societies and behavior focusing on the process of social interaction, patterns of social inequality, and the influence of social institutions on individuals as members of social groups. Special emphasis provided to explain factors promoting social stability and social change. CSU/UC (C-ID)

Sociology 100H
Honors Introduction to Sociology
Unit(s): 3.0
Class Hours: 48 Lecture total.
Prerequisite: A high school or college GPA of 3.0 or above.
A seminar-style, content enriched course to provide a critical and extensive exploration of the sociological perspective, methods, and theories of social interaction, stability and change. Focuses on the importance of sociology for understanding individuals in a social context and provides a comprehensive understanding of and scientific way of thinking about society. CSU/UC (C-ID)

Sociology 112
Relationships, Marriages, and Family Dynamics
Unit(s): 3.0
Class Hours: 48 Lecture total.
In-depth examination of the process of developing intimate relationships leading to committed partnerships and marriages with emphasis on effective communication techniques, understanding relationship dynamics, parenting, diverse family systems and overcoming family stressors at each life stage. CSU/UC (C-ID)

Sociology 140
Analysis of Social Trends and Problems
Unit(s): 3.0
Class Hours: 48 Lecture total.
An extensive survey of contemporary social trends and problems through sociological analysis concentrating on their causes, complexities, consequences, and possible solutions. Special emphasis will be placed on the problems in the U.S. with consideration of the global perspective. CSU/UC (C-ID)

Sociology 140H
Honors Analysis of Social Trends and Problems
Unit(s): 3.0
Class Hours: 48 Lecture total.
Prerequisite: A high school or college GPA of 3.0 or above.
A seminar style, in-depth sociological analysis and critique of U.S. social trends and problems with an emphasis on contemporary and historical social policy, with additional consideration of global perspectives. CSU/UC (C-ID)

Sociology 240
Introduction to Social Psychology
Unit(s): 3.0
Class Hours: 48 Lecture total.
An exploration of the interlocking dynamics of psychology and sociology, examining the power of the situation, social interaction and social groups. Emphasized topics will include: aggression, prejudice, attraction, attitudes, group dynamics, self-development and social cognition. (Same as Psychology 240.) CSU/UC (C-ID)

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
SPANISH (SPAN)

Division of Arts, Humanities and Social Sciences/Library

Dean: Marilyn Flores
Department Chair, Modern Languages: Elizabeth Baez

Associate in Arts
Spanish for Transfer (32045)

The Associate in Arts in Spanish for Transfer is designed for students who wish to transfer to a four-year institution and students who wish to achieve proficient oral and written comprehension and communication in Spanish, and a basic understanding and sensitive appreciation of Spanish speakers’ culture. Successful completion of the transfer degree in Spanish guarantees the student acceptance to a California State University. It would also prepare the student to pursue a career in healthcare, law enforcement, public safety, business, international relations, hotel and food services, teaching English in Spanish speaking countries, travel industry and other related fields.

Learning Outcome(s)

Upon successful completion of the major requirements for this degree, students will be able to

- Demonstrate understanding of the cultural perspectives and mores of Spanish speakers through the analysis and proper application of grammatical structures, appropriate vocabulary, idiomatic expressions to communicate orally and in writing in the target language.
- Demonstrate understanding of the Spanish language through the synthesis, analysis and evaluation of the target language to derive meaning of implicit and explicit written material and spoken messages in authentic cultural context.

Major requirements*

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spanish 101/101H</td>
<td>Elementary Spanish I (5)</td>
<td>5.0</td>
</tr>
<tr>
<td>Spanish 101A &amp; 101B</td>
<td>Elementary Spanish IA &amp; IB (2.5+2.5)</td>
<td>5.0</td>
</tr>
<tr>
<td>Spanish 102/102H</td>
<td>Elementary Spanish II</td>
<td>5.0</td>
</tr>
<tr>
<td>Spanish 201</td>
<td>Intermediate Spanish I</td>
<td>5.0</td>
</tr>
<tr>
<td>Spanish 202</td>
<td>Intermediate Spanish II</td>
<td>5.0</td>
</tr>
<tr>
<td>Select one (1) course from the following (List A):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spanish 194</td>
<td>Beginning Conversational Spanish</td>
<td>3.0</td>
</tr>
<tr>
<td>Spanish 195A</td>
<td>Advanced Conversational Spanish</td>
<td>3.0</td>
</tr>
<tr>
<td>Spanish 195B</td>
<td>Advanced Conversational Spanish</td>
<td>3.0</td>
</tr>
</tbody>
</table>

If a student places out of any core course(s) and is not awarded units for that course, the student will need to take additional units to compensate for the course units required. Suggested course substitutions include:

- Chicano Studies 101 (3)
- Any course from List A (3) (may not be a course used to satisfy the requirements in List A)

TOTAL 23

Courses

Spanish N51
Spanish for Public Personnel
Unit(s): 3.0
Class Hours: 48 Lecture total.
Designed for those needing basic Spanish conversation and vocabulary in a specific field of work, such as law enforcement, fire safety, health, and education. Includes clear and concise communication for emergency situations. Not applicable to associate degree.

Spanish 101
Elementary Spanish I
Unit(s): 5.0
Class Hours: 80 Lecture total, 16 Laboratory total.
Practice and integration of pronunciation, grammar, vocabulary, common idioms, listening, speaking, reading and writing techniques for the expression of ideas orally and in writing. Introduction to Hispanic culture. Designated sections focus on skills for Spanish speakers. Spanish 101 is equivalent to two years of high school Spanish. CSU/UC (C-ID)

Spanish 101A
Elementary Spanish IA
Unit(s): 2.5
Class Hours: 40 Lecture total, 8 Laboratory total.
Spanish class focusing on pronunciation, grammar essentials, basic vocabulary including common idioms, listening, speaking, reading and writing techniques to provide avenues for the expression of ideas orally and in writing. Introduction to Hispanic culture is included. Spanish 101A and Spanish 101B together are equivalent in units and content to Spanish 101 and equivalent to two years of high school Spanish.

Spanish 101B
Elementary Spanish IB
Unit(s): 2.5
Class Hours: 40 Lecture total, 8 Laboratory total.
Prerequisite: Spanish 101A.
Spanish class focusing on pronunciation, grammar essentials, basic vocabulary including common idioms, listening, speaking, reading and writing techniques to provide avenues for the expression of ideas orally and in writing. Introduction to Hispanic culture is included. Spanish 101A and Spanish 101B together are equivalent in units and content to Spanish 101 and equivalent to two years of high school Spanish.

Spanish 101H
Honors Elementary Spanish I
Unit(s): 5.0
Class Hours: 80 Lecture total, 16 Laboratory total.
Prerequisite: A high school or college GPA of 3.0 or above.
Enhanced and intensive practice and integration of pronunciation, grammar, vocabulary, common idioms, listening, speaking, reading and writing techniques for the expression of ideas orally and in writing. Enriched introduction of Hispanic culture. Spanish 101H is equivalent to two years of high school Spanish.

Spanish 102
Elementary Spanish II
Unit(s): 5.0
Class Hours: 80 Lecture total, 16 Laboratory total.
Prerequisite: Spanish 101/101H or 101A and 101B or two years of high school Spanish.
A college level Spanish class focusing on further training in language skills providing avenues for the expression of ideas orally and in writing. Additional study of Hispanic culture. Designated sections focus on skills for Spanish speakers. Spanish 102 is equivalent to the third year of high school Spanish.

CSU/UC (C-ID)

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
Spanish 102H
Honors Elementary Spanish II
Unit(s): 5.0
Class Hours: 80 Lecture total, 16 Laboratory total.
Prerequisite: Spanish 101/101H or 101A and 101B or two years of high school Spanish and a high school or college GPA of 3.0 or above.

Further enhanced and intensive training in language skills for the expression of ideas orally and in writing. Additional enriched study of Hispanic culture. NOTE: Some sections are designated for Spanish speakers. Spanish 102H is equivalent to the third year of high school Spanish. **CSU/UC (C-ID)**

### Spanish 115
Practical Communication in Spanish for Teachers
Unit(s): 2.0
Class Hours: 32 Lecture total.
Recommended Preparation: Spanish 101/101H or 101B.

Course emphasizes development of basic reading, oral, and written communication skills in Spanish for realistic situations in a classroom environment, and familiarizes students with the culture of Spanish-speakers. **CSU**

### Spanish 194
Beginning Conversational Spanish
Unit(s): 3.0
Class Hours: 48 Lecture total.
Prerequisite: Spanish 101/101H, 101B or two years of high school Spanish.

Development of conversational and composition skills. Review of language structure through discussions, conversations, readings and compositions dealing with Spanish speakers’ culture and current events. **CSU**

### Spanish 195A
Advanced Conversational Spanish
Unit(s): 3.0
Class Hours: 48 Lecture total.
Prerequisite: Spanish 102/102H.

Further development of conversational skills. Review of language structures as well as reinforcement of new vocabulary and idioms through discussions of reading selections dealing with historical and current events to deepen appreciation of Hispanic cultures. **CSU/UC**

### Spanish 195B
Advanced Conversational Spanish
Unit(s): 3.0
Class Hours: 48 Lecture total.
Prerequisite: Spanish 195A.

Continuation of development of conversational skills. Provides avenues for the expression of ideas introduced in literary and current event readings through discussions and class presentations to deepen appreciation of Hispanic cultures. **CSU/UC**

### Spanish 201
Intermediate Spanish I
Unit(s): 5.0
Class Hours: 80 Lecture total.
Prerequisite: Spanish 102/102H or three years of high school Spanish.

A college-level Spanish class focusing on expansive review of usage and grammar, discussions of interpretive readings, conversation, and composition. **CSU/UC (C-ID)**

### Spanish 202
Intermediate Spanish II
Unit(s): 5.0
Class Hours: 80 Lecture total.
Prerequisite: Spanish 201 or four years of high school Spanish.

A college-level Spanish class focusing on a specialized review of grammar and composition, discussions in Spanish of history and culture based on literary materials. **CSU/UC (C-ID)**

### Spanish 213
College Spanish Composition
Unit(s): 3.0
Class Hours: 48 Lecture total.
Prerequisite: Spanish 201 (may be taken concurrently) or three years of high school Spanish.

Writing of composition through discussions and interpretive readings. **CSU/UC**

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*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.*
SURVEY/MAPPING SCIENCES (SURV)

Division of Business and Career Technical Education

Dean: Von Lawson
Facilitator: Donald Mertens

The associate degree and certificate of achievement in land surveying provide the student a thorough background in land surveying and mapping in addition to an introduction to collection, manipulation, formatting and mapping of geospatial data. The successful graduate of this program will have the technical expertise necessary for an entry level position in the fields of Geographic Information Systems, Land Surveying, and Digital Photogrammetry. The program also assists those students preparing for the State Land Surveyor-In-Training and Land Surveyor’s Exams. The State Board of Registration for Professional Engineers and Land Surveyors will grant one year of experience credit for students completing an Associate Degree in Survey/Mapping Sciences.

Associate in Science

Land Surveying (11906)

Learning Outcome(s)

Upon successful completion of the major requirements for this degree, students will be able to
• Prepare for careers in Geographical Information Systems, Land Surveying, and Digital Photogrammetry.

Major requirements*          Units
Survey/Mapping Sciences 118, Plane Surveying 4
Survey/Mapping Sciences 119, Advanced Plane Surveying 4
Survey/Mapping Sciences 205, Computer Aided Drafting Fundamentals for Land Surveyors 3
Survey/Mapping Sciences 221, Advanced Problems in Surveying I 3
Survey/Mapping Sciences 222, Advanced Problems in Surveying II 3
Survey/Mapping Sciences 229, Legal Aspects of Land Surveying I 3
Survey/Mapping Sciences 230, Legal Aspects of Land Surveying II 3

TOTAL 23

Certificate of Achievement

Land Surveying (21668)

Learning Outcome(s)

Upon successful completion of the requirements for this certificate, students will be able to
• Prepare for careers in Geographical Information Systems, Land Surveying, and Digital Photogrammetry.

Certificate requirements          Units
Survey/Mapping Sciences 118, Plane Surveying 4
Survey/Mapping Sciences 119, Advanced Plane Surveying 4
Survey/Mapping Sciences 205, Computer Aided Drafting Fundamentals for Land Surveyors 3
Survey/Mapping Sciences 221, Advanced Problems in Surveying I 3
Survey/Mapping Sciences 222, Advanced Problems in Surveying II 3
Survey/Mapping Sciences 229, Legal Aspects of Land Surveying I 3
Survey/Mapping Sciences 230, Legal Aspects of Land Surveying II 3

TOTAL 23

Courses

Survey/Mapping Sciences 118
Plane Surveying
Unit(s): 4.0
Class Hours: 48 Lecture total, 48 Laboratory total.
Recommended Preparation: Mathematics 160.
History of and careers in surveying. Introduction to survey measurements, distance, direction and elevations with math review. Fundamentals of traverse computations and adjustment. Recording field measurements by hand and electronically. CSU/UC

Survey/Mapping Sciences 119
Advanced Plane Surveying
Unit(s): 4.0
Class Hours: 48 Lecture total, 48 Laboratory total.
Prerequisite: Survey/Mapping Sciences 118 or possession of a valid certificate as a Land Surveyor-In-Training (LSIT) issued by any state. Recommended Preparation: Mathematics 160.
Emphasis on coordinate geometry calculations. Route surveying with horizontal and vertical curves. Topographic surveying and mapping. Construction surveying. Introduction to geospatial technologies, boundary surveying and surveys of public lands. Field surveying projects. Assists in passing the land surveyor-in-training exam. CSU/UC

Survey/Mapping Sciences 155
Introduction to Geographic Information Systems
Unit(s): 3.0
Class Hours: 48 Lecture total.
Recommended Preparation: Familiarity with PC and Windows operating environment.
This course introduces basic scientific principles of Geographic Information Systems (GIS) as they relate to working with data that have important spatial orientation and organization. Geometric and geographic concepts and theories are used to develop scientific methods for proper communication of the data and the solution of problems that have spatial relationships. Course covers basic concepts in mapping and orientation, the development of map scales and comparison of different coordinate systems and data error analysis. (Same as Geography 155.) CSU/UC (C-ID)

Survey/Mapping Sciences 205
Computer Aided Drafting Fundamentals For Surveyors
Unit(s): 3.0
Class Hours: 48 Lecture total.
Recommended Preparation: Survey/Mapping Sciences 119.
A first course in computer drafting with applications in land surveying specifically intended for students with land surveying training or experience. CSU

Survey/Mapping Sciences 221
Advanced Problems in Surveying I
Unit(s): 3.0
Class Hours: 48 Lecture total.
Recommended Preparation: Survey/Mapping Sciences 119 and Mathematics 160.
Measurement analysis, adjustments, geodesy, state plane coordinates, global position system. Prepares students for land survey exams. CSU

Survey/Mapping Sciences 222
Advanced Problems in Surveying II
Unit(s): 3.0
Class Hours: 48 Lecture total.
Recommended Preparation: Survey/Mapping Sciences 119, 221 and Mathematics 160.
Introduction to photogrammetry emphasizing concepts and calculations. Route surveying includes horizontal and vertical curves, volume calculations and construction staking. Prepares students for land survey exams. CSU

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
**Survey/Mapping Sciences 229**  
**Legal Aspects of Land Surveying I**  
Unit(s): 3.0  
Class Hours: 48 Lecture total.  
Recommended Preparation: Survey/Mapping Sciences 119.  
Basic elements of the U.S. Public Land Survey System, including background, history, and subdivisions of sections and restoration of lost corners. Principles of preparing land descriptions for surveyors and title company personnel. Common pitfalls and how to avoid them. **CSU**

**Survey/Mapping Sciences 230**  
**Legal Aspects of Land Surveying II**  
Unit(s): 3.0  
Class Hours: 48 Lecture total.  
Recommended Preparation: Survey/Mapping Sciences 229.  
Principles and techniques of boundary control. Interpretation of land descriptions, voluntary and involuntary transfer of property, senior rights, simultaneous conveyances, sequential conveyances, and case law pertaining to boundary disputes. **CSU**

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**TELEVISION/VIDEO COMMUNICATIONS (TELV)**

Division of Business and Career Technical Education

**Dean:** Von Lawson  
**Facilitator:** Sandy Sternshein

**Certificate of Proficiency**  
**Digital Media Production**

The certificate of proficiency in digital media production will provide students with the skills and practical experience to create digital content for employers and clients. The program introduces students to video and commercial production, non-linear editing, digital arts as well as elements associated with running a business.

**Learning Outcome(s)**

Upon successful completion of the requirements for this certificate, students will be able to:

- Demonstrate readiness for careers in the fields of commercial and corporate video, and digital marketing.

**Certificate requirements**

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art 195, Introduction to Digital Media Arts</td>
<td>3</td>
</tr>
<tr>
<td>Television/Video Communications 122, Screenwriting for Digital Media</td>
<td>3</td>
</tr>
<tr>
<td>Television/Video Communications 124, Introduction to Digital Media Production</td>
<td>3</td>
</tr>
<tr>
<td>Television/Video Communications 126, Industrial Video Production (IVP)</td>
<td>3</td>
</tr>
<tr>
<td>Television/Video Communications 127, Post Production II/Motion Graphics</td>
<td>3</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

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**Certificate of Proficiency**  
**Digital Media Studies**

The certificate of proficiency in digital media studies is designed to develop students' understanding of television, film and digital media arts. The program includes an overview of the historical, theoretical, economic and technological impact of the industry on society. In addition, students will gain practical experience in scriptwriting, production and post-production. Upon completion of this certificate, students may choose one of three pathways: transfer to higher education, self-employment or a career in the entertainment industry.

**Learning Outcome(s)**

Upon successful completion of the requirements for this certificate, students will be able to:

- Develop scripts, features, video productions and other content that demonstrate creative proficiency in the various media platforms including film, TV, radio, advertising, and the internet.

**Certificate requirements**

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Television/Video Communications 103, History of Film to 1945</td>
<td>3</td>
</tr>
<tr>
<td>Television/Video Communications 104, History of Film from 1945 to Present</td>
<td>3</td>
</tr>
<tr>
<td>Television/Video Communications 105, Mass Media and Society</td>
<td>3</td>
</tr>
<tr>
<td>Television/Video Communications 122, Screenwriting for Digital Media</td>
<td>3</td>
</tr>
<tr>
<td>Television/Video Communications 124, Introduction to Digital Media Production</td>
<td>3</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

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*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.*
### Courses

**TV/Video Communications 100**  
Introduction to Electronic Media: TV, Radio, Film, and the Internet  
Unit(s): 3.0  
Class Hours: 48 Lecture total.  
Survey of historical development, impact, and business practices of TV, Radio, Film, and the Internet. Emphasizes career opportunities and basic studio operations. **CSU**

**TV/Video Communications 101**  
TV and Society: A Visual History  
Unit(s): 3.0  
Class Hours: 48 Lecture total.  
Evolution and impact of TV programming as business and art form in American society. Development of a visual literacy and appreciation of television's various formats—sitcom, Westerns, soaps, dramas, mini series—through videotape viewings and guest speakers. **CSU**

**TV/Video Communications 103**  
History of Film to 1945  
Unit(s): 3.0  
Class Hours: 48 Lecture total.  
A survey course exploring film as an art form and developing appreciation of historical, artistic and technical advances from 1890s to 1945. **CSU/UC**

**TV/Video Communications 104**  
History of Film From 1945 to Present  
Unit(s): 3.0  
Class Hours: 48 Lecture total.  
A lecture/visual aids course exploring film as an art form and developing appreciation of historical, artistic and technical advances. **CSU/UC**

**TV/Video Communications 105**  
Mass Media and Society  
Unit(s): 3.0  
Class Hours: 48 Lecture total.  
Exploration of the history, effects, and role of mass media in U.S. society. Examines major media forms (TV, radio, film, newspapers, magazines, ads, the Internet) in our information-conscious culture. **CSU/UC**

**TV/Video Communications 120**  
Beginning Writing for TV, Film, and Corporate Video  
Unit(s): 3.0  
Class Hours: 48 Lecture total.  
Recommended Preparation: English 101/101H.  
Designed to acquaint students with practical approaches to writing for the television and motion picture and corporate video industries. Emphasis on the development of story, treatments and first drafts of scripts. **CSU**

**TV/Video Communications 122**  
Screenwriting for Digital Media  
Unit(s): 3.0  
Class Hours: 48 Lecture total.  
The primary concern of the course is writing scripts for digital media. Students will learn scriptwriting fundamentals, format, dramatic structure; and how to put those skills to use in the form of non-narrative and narrative scripts for clients and employers. **CSU**

**TV/Video Communications 124**  
Introduction to Digital Media Production  
Unit(s): 3.0  
Class Hours: 32 Lecture total, 48 Laboratory total.  
This course introduces Digital Single Lens Reflex (DSLR) video acquisition, dual channel audio acquisition, lighting and non-linear digital editing equipment. Students will use professional procedures from pre-production through post-production to develop, produce and execute to completion various commercial and industrial video formats applicable to digital production. **CSU**

**TV/Video Communications 126**  
Industrial Video Production (IVP)  
Unit(s): 3.0  
Class Hours: 48 Lecture total.  
Prerequisite: TV/Video Communications 124.  
Provides instruction on working with non-profit and commercial clients to deliver video products which meet the needs, goals and mission of clients. Students will learn about target audience and how to create product for that audience. Students will create one public service announcement (PSA) for a non-profit organization and one promotional video for a non-profit or commercial client. **CSU**

**TV/Video Communications 127**  
Post Production II/Motion Graphics  
Unit(s): 3.0  
Class Hours: 32 Lecture total, 48 Laboratory total.  
Recommended Preparation: TV/Video Communications 124.  
This course builds on the knowledge and skills received in Introduction to Digital Production. Students learn the aesthetics and techniques of incorporating graphics and special effects while practicing advanced digital video editing skills. **CSU**

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.*
THEATRE ARTS (THEA)

Division of Arts, Humanities and Social Sciences/Library

Dean: Marilyn Flores
Department Chair, Performing Arts: Binh Vu

Courses

Theatre Arts 100
Introduction to Theatre
Unit(s): 3.0
Class Hours: 48 Lecture total.
   An introduction to the art and concepts of theatre through a study of modern and historical theories of dramatic structure, playwriting, directing, design, and acting. Attendance at live theatre required. CSU/UC (C-ID)

Theatre Arts 110
Acting Fundamentals
Unit(s): 3.0
Class Hours: 48 Lecture total, 16 Laboratory total.
   A study of acting involving the development of acting techniques, styles and disciplines. Provides the student with theory and practical experience with varied characterizations. Emphasizes individual growth and acquired skills necessary to the acting craft. CSU/UC

Theatre Arts 111
Intermediate Acting
Unit(s): 3.0
Class Hours: 48 Lecture total, 16 Laboratory total.
Prerequisite: Theatre Arts 110.
   Further study in the art of acting for the stage, investigating in-depth character study, role portrayal, special problems, and personal technique. Acting skills developed through use of exercises, monologues, and scenes from contemporary theatre. CSU/UC

Theatre Arts 118
Fundamentals of Scene Study
Unit(s): 2.0
Class Hours: 32 Lecture total, 32 Laboratory total.
Prerequisite: Theatre Arts 110.
   A continued study for the beginning actor in the preparation and presentation of scenes from contemporary drama. Students prepare scenes with partners for performance and critique. Recommended for acting majors. CSU/UC

Theatre Arts 121
Beginning Performance Ensemble
Unit(s): 2.5
Class Hours: 32 Lecture total, 32 Laboratory total.
Prerequisite: Audition.
   A study of the standards and expectations for an actor in auditions, casting, rehearsal and performance in a departamental production. All students will be cast in project plays for public presentation. CSU/UC

Theatre Arts 122
Beginning Production Showcase
Unit(s): 3.0
Class Hours: 32 Lecture total, 48 Laboratory total.
Prerequisite: Audition.
   A study of the performer's process in the development of a character in a live stage performance. Rehearsal and performance hours arranged. Additional hours are required for technical rehearsals, dress rehearsals and performances. CSU/UC

WATER UTILITY SCIENCE (WATR)

Division of Business and Career Technical Education

Dean: Von Lawson
Facilitator: Stephen McLean

The associate degree and certificate of achievement in water utility science cover basic concepts in the operation of water treatment plants, controlling and monitoring water deliveries, water quality control methods, water and wastewater pumping equipment electrical systems repair, in addition to pump repair and maintenance procedures. The program is designed to train new personnel and to enable those already working in the field to upgrade their skills. Typically, the new employee starts as an entry level worker, then advances to other higher levels including lead operator, Operations and Maintenance Supervision, Superintendent and/or Manager.

Associate in Science

Water Distribution (11907)

Learning Outcome(s)

Upon successful completion of the major requirements for this degree, students will be able to
   • Demonstrate knowledge of pipeline selection, hydraulic grades, street placement of appurtenances, water quality issues, and standards.
   • Demonstrate knowledge of distribution systems used in the water utility science industry.

Major requirements*

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water Utility Science 050, Water Mathematics and Hydraulics</td>
<td>3</td>
</tr>
<tr>
<td>Water Utility Science 104, Electrical Wiring and Controls for Operators</td>
<td>3</td>
</tr>
<tr>
<td>Water Utility Science 107, California Water Resources</td>
<td>3</td>
</tr>
<tr>
<td>Water Utility Science 109, Water Distribution Systems</td>
<td>3</td>
</tr>
<tr>
<td>Water Utility Science 131, Water Conservation Practitioner OR</td>
<td>3</td>
</tr>
<tr>
<td>Water Utility Science 204, Water Reclamation and Reuse Water Utility Science 208, Pumps and Pumping</td>
<td>3</td>
</tr>
</tbody>
</table>
| Water Utility Science 210, Advanced Water Distribution | 3     | TOTAL 21

Certificate of Achievement

Water Distribution (19625)

Learning Outcome(s)

Upon successful completion of the requirements for this certificate, students will be able to
   • Demonstrate knowledge of California water utility science industry.
   • Demonstrate knowledge of and ability to apply state standards for water treatment and/or distribution and/or wastewater management.

Certificate requirements

<table>
<thead>
<tr>
<th>Course Description</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Water Utility Science 050, Water Mathematics and Hydraulics</td>
<td>3</td>
</tr>
<tr>
<td>Water Utility Science 104, Electrical Wiring and Controls for Operators</td>
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<td>3</td>
</tr>
</tbody>
</table>
| Water Utility Science 210, Advanced Water Distribution | 3     | TOTAL 21

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.

Catalog update 8/17/15
**Associate in Science**  
**Water Treatment (19623)**

**Learning Outcome(s)**
Upon successful completion of the major requirements for this degree, students will be able to
- Demonstrate knowledge of California water utility science industry including sources, water quality, treatment techniques, distribution challenges, water math, hydraulics and chemistry.
- Demonstrate knowledge of and ability to apply state standards for water supply, treatment, and distribution.

**Major requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>Water Utility Science 050, Water Mathematics and Hydraulics</td>
<td>3</td>
</tr>
<tr>
<td>Water Utility Science 101, Water Treatment Fundamentals</td>
<td>3</td>
</tr>
<tr>
<td>Water Utility Science 102, Advanced Water Treatment</td>
<td>3</td>
</tr>
<tr>
<td>Water Utility Science 103, Water Chemistry and Bacteriology</td>
<td>3</td>
</tr>
<tr>
<td>Water Utility Science 107, California Water Resources</td>
<td>3</td>
</tr>
<tr>
<td>Water Utility Science 109, Water Distribution Systems</td>
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</tr>
<tr>
<td>Water Utility Science 131, Water Conservation Practitioner OR</td>
<td>3</td>
</tr>
<tr>
<td>Water Utility Science 204, Water Reclamation and Reuse</td>
<td>3</td>
</tr>
</tbody>
</table>

**TOTAL** 21

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**Certificate of Achievement**  
**Water Treatment (19624)**

**Learning Outcome(s)**
Upon successful completion of the requirements for this certificate, students will be able to
- Demonstrate knowledge of conventional and point-of-use water treatment technologies commonly used in the California water utility science industry.
- Demonstrate knowledge of and ability to apply water treatment standards used in the industry.

**Certificate requirements**

<table>
<thead>
<tr>
<th>Course</th>
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</thead>
<tbody>
<tr>
<td>Water Utility Science 050, Water Mathematics and Hydraulics</td>
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<tr>
<td>Water Utility Science 101, Water Treatment Fundamentals</td>
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</tr>
<tr>
<td>Water Utility Science 204, Water Reclamation and Reuse</td>
<td>3</td>
</tr>
</tbody>
</table>

**TOTAL** 21

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**Associate in Science**  
**Wastewater/Environmental Sanitation (11908)**

**Learning Outcome(s)**
Upon successful completion of the major requirements for this degree, students will be able to
- Demonstrate knowledge of wastewater treatment and monitoring techniques used in California and in the industry.
- Demonstrate knowledge of key regulatory standards for wastewater management.

**Major requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water Utility Science 050, Water Mathematics and Hydraulics</td>
<td>3</td>
</tr>
<tr>
<td>Water Utility Science 111, Wastewater Treatment Basic Operations</td>
<td>3</td>
</tr>
<tr>
<td>Water Utility Science 112, Wastewater Treatment Advanced Operations</td>
<td>3</td>
</tr>
<tr>
<td>Water Utility Science 116, Collection Systems</td>
<td>3</td>
</tr>
<tr>
<td>Water Utility Science 204, Water Reclamation and Reuse</td>
<td>3</td>
</tr>
<tr>
<td>Water Utility Science 208, Pumps and Pumping</td>
<td>3</td>
</tr>
</tbody>
</table>

**TOTAL** 18

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**Certificate of Achievement**  
**Wastewater/Environmental Sanitation (21669)**

**Learning Outcome(s)**
Upon successful completion of the requirements for this certificate, students will be able to
- Demonstrate knowledge of wastewater treatment techniques as used in California wastewater treatment plants.
- Demonstrate knowledge of and ability to apply wastewater quality standards and management practices to safely operate a wastewater facility.

**Certificate requirements**

<table>
<thead>
<tr>
<th>Course</th>
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</tr>
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<tbody>
<tr>
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<tr>
<td>Water Utility Science 116, Collection Systems</td>
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<tr>
<td>Water Utility Science 204, Water Reclamation and Reuse</td>
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<td>Water Utility Science 208, Pumps and Pumping</td>
<td>3</td>
</tr>
</tbody>
</table>

**TOTAL** 18

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**Courses**

**Water Utility Science 041**  
**Hot Topics: Regulatory Updates**  
Unit(s): 0.2  
Class Hours: 8 Laboratory total.  
Recommended Preparation: Possession of a T2 or D2 license.  
Regulatory updates in the Safe Drinking Water Act, Title 22, Enhanced Coagulation, Disinfectants/Disinfection Bi-Product’s (DBPs) Rule, Clean Water Act, and National Pollution Discharge and Elimination System (NPDES) compliance. Session will aid students in obtaining mandated California Department of Public Health contact-hours. Grade: Pass/No Pass.

**Water Utility Science 042**  
**Hot Topics: Managerial Issues Updates**  
Unit(s): 0.2  
Class Hours: 8 Laboratory total.  
Recommended Preparation: Possession of a T2 or D2 license.  
Managerial styles, safe-working environment, project administration, budgeting, salary comparison, public support, water quality compliance, and other current topics. Qualifies for California Department of Public Health contact-hours. Grade: Pass/No Pass.

**Water Utility Science 043**  
**Hot Topics: Operational Updates**  
Unit(s): 0.2  
Class Hours: 8 Laboratory total.  
Recommended Preparation: Possession of a T2 or D2 license.  
Focuses upon practical operational criteria such as backflow protection techniques, valve replacement procedures, unidirectional flushing, treatment optimization, and other topics. Qualifies for California Department of Public Health contact-hours. Grade: Pass/No Pass.

**Water Utility Science 044**  
**Hot Topics: Maintenance and Security Updates**  
Unit(s): 0.2  
Class Hours: 8 Laboratory total.  
Recommended Preparation: Possession of a T2 or D2 license.  
Corrosion control, coatings, shutdown/repair criteria, shutdown/repair schedules, security issues, and other topics. Qualifies for mandated California Department of Public Health contact-hours. Grade: Pass/No Pass.

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*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.*
Water Utility Science 045
Pump Maintenance Workshop
Unit(s): 1.0
Class Hours: 16 Lecture total.
This course is designed for students to recognize various types of pumps and the associated maintenance procedures required to extend a pump's usefulness. The course will include: pump recognition, basic design, efficiencies, application, and commonly used hands-on maintenance techniques. Grade: Pass/No Pass.

Water Utility Science 050
Water Mathematics and Hydraulics
Unit(s): 3.0
Class Hours: 48 Lecture total.
Recommended Preparation: Mathematics N06 or equivalent skills as measured by the Mathematics Level 1 Exam.
Practical application of mathematics to determine areas, volumes, pressure, rate of flow, velocity, basic hydraulics, horsepower, formula conversions, and chemical dosage used in utility operation.

Water Utility Science 056
Treatment Test Preparation
Unit(s): 0.2
Class Hours: 8 Laboratory total.
Review information provided in various water treatment classes in the program and prepare students to take and successfully pass the California Department of Health Services Operator T1 and T2 examinations. Grade: Pass/No Pass.

Water Utility Science 057
Water Distribution Test Preparation
Unit(s): 0.2
Class Hours: 8 Laboratory total.
Review information provided in various water distribution classes in the program and prepare students to take and successfully pass the California Department of Health Services Operator D1 and D2 examinations. Grade: Pass/No Pass.

Water Utility Science 058
NPDES - Regulations and Standards
Unit(s): 0.2
Class Hours: 8 Laboratory total.
This course discusses and provides examples for pollution discharges into waterways. Course stresses water discharge monitoring and reporting requirements within the National Pollution Discharge Elimination System (NPDES) law and discusses emerging permitting programs within the regulatory environment. Grade: Pass/No Pass.

Water Utility Science 066
Backflow Devices in Water/Wastewater
Unit(s): 0.2
Class Hours: 8 Laboratory total.
A course that reviews the regulatory authority, types of devices on the market, and designs of backflow devices used in Orange and Los Angeles counties. Grade: Pass/No Pass.

Water Utility Science 086
Backflow Devices Repair
Unit(s): 2.0
Class Hours: 32 Lecture total.

Water Utility Science 101
Water Treatment Fundamentals
Unit(s): 3.0
Class Hours: 48 Lecture total.
Prerequisite: Water Utility Science 050 or concurrent enrollment.
A specialized course including conventional treatment processes, facility maintenance, water sources, monitoring, sampling and water quality standards. Primary course for California Department of Health Services Operator Treatment T2 and T3 examinations. CSU

Water Utility Science 102
Advanced Water Treatment
Unit(s): 3.0
Class Hours: 48 Lecture total.
Recommended Preparation: Water Utility Science 050 and 101.
Public health aspects of water supply, water quality control, chemical treatment, sedimentation, filtration, ion exchange, disinfection. Operation and maintenance of water treatment unit processes. Preparation for Water Treatment Examinations. CSU

Water Utility Science 103
Water Chemistry and Bacteriology
Unit(s): 3.0
Class Hours: 48 Lecture total.
Recommended Preparation: Water Utility Science 050.
Water chemistry and water bacteriology as applied to control of water treatment processes, water conditioning, and protection of water quality. Laboratory demonstrations in techniques of physical, chemical, and bacteriological examination of water. CSU

Water Utility Science 104
Electrical Wiring and Controls for Operators
Unit(s): 3.0
Class Hours: 48 Lecture total.
Theoretical and practical skills needed to perform preventive maintenance and minor repair of simple electrical wiring and control systems used in and around water and wastewater pumping systems. CSU

Water Utility Science 107
California Water Resources
Unit(s): 3.0
Class Hours: 48 Lecture total.
Introduction to water law and rights, California water history, political lore, and water supply agencies serving Orange County. Includes hydrologic cycle, sea water intrusion, protection of wells and reservoirs, flood control, pollution/contamination of ground water supplies, and the conservation of water. Also focuses upon California water supply show stoppers and affects. CSU

Water Utility Science 108
Cross Connection Control Specialist
Unit(s): 3.0
Class Hours: 48 Lecture total.
Introduction and methodology of establishing a cross connection control program. Includes local, state and federal regulations. Prepares students for American Water Works Association Cross Connection Control Specialist examination. CSU

Water Utility Science 109
Water Distribution Systems
Unit(s): 3.0
Class Hours: 48 Lecture total.
Prerequisite: Water Utility Science 050.
Water distribution systems operation. Fundamentals of water production, quality, and system operation. Includes piping, services, pumps, reservoirs, mathematics, and basic hydraulics. Preparation for Grades D1, D2 and D3 Water Distribution Operator certification. CSU

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
Water Utility Science 111
Wastewater Treatment Basic Operations
Unit(s): 3.0
Class Hours: 48 Lecture total.
Recommended Preparation: Water Utility Science 050.
Wastewater treatment, including preliminary, primary and secondary treatment processes. Successful completion provides student with 48 CWEA contact hours and 8 SWRCB educational points. Prepares student for SWRCB Wastewater Treatment Plant Operator exam-Grades 1 and 2. CSU

Water Utility Science 112
Wastewater Treatment Advanced Operations
Unit(s): 3.0
Class Hours: 48 Lecture total.
Recommended Preparation: Water Utility Science 111.
Secondary and advanced treatment, disinfection and chlorination, reclamation of wastewater, and laboratory procedures. Preparation for SWRCB Wastewater Treatment Plant Operator exam Grades 3. Successful completion provides 48 CWEA contact hours and 8 SWRCB educational points. CSU

Water Utility Science 116
Collection Systems
Unit(s): 3.0
Class Hours: 48 Lecture total.
Sewer construction, inspection and testing, cleaning methods, safety, elementary hydraulics, pipeline repair, equipment maintenance, communications, and record keeping. Successful completion provides student with 48 CWEA contact hours and 4 SWRCB educational points. Preparation for CWEA Wastewater Collection System exam all Grades. CSU

Water Utility Science 131
Water Conservation Practitioner
Unit(s): 3.0
Class Hours: 48 Lecture total.
Theoretical and practical training in applied water use efficiency. Includes residential, commercial, and landscape customers, water uses, budgets, demand management, water audits, best management practices, rate structures, program design and management. Preparation for American Water Works Association (AWWA) Grade 1 and 2 Water Conservation Practitioner certification. CSU

Water Utility Science 135
Chlorine Workshop
Unit(s): 1.0
Class Hours: 16 Lecture total.
Chlorine properties, containment, and safe handling procedures for operating personnel. Theoretical and practical methods for handling and feeding into public water supplies as required by various private and governmental agencies will be stressed. Grade: Pass/No Pass. CSU

Water Utility Science 199
Cooperative Work Experience Education
Unit(s): 1.0-4.0
Class Hours: 60-300 Laboratory total.
Prerequisite: Successful completion of 6 units in Water Utility Science. This course is designed for students majoring in the Water Utility Science. Students must be enrolled in a minimum of six Water Utility Science units. Job site experience will train the student in additional job skills that will enhance academic learning from the classroom to the workplace. May be either paid or unpaid. May be repeated. Grade: Pass/No Pass. Open Entry/Open Exit. CSU

Water Utility Science 204
Water Reclamation and Reuse
Unit(s): 3.0
Class Hours: 48 Lecture total.
Fundamentals of reclaimed water, includes case studies and history of reclaimed water development. Planning, design and construction of reclaimed distribution systems. Problems regarding marketing, legislation and regulations for reclaimed water. Includes microbiology and health/safety issues. CSU

Water Utility Science 208
Pumps and Pumping
Unit(s): 3.0
Class Hours: 48 Lecture total.
A progressive course containing basic pump theory, operation, and repair. Assists operators and technicians in the design, selection, installation and maintenance of centrifugal and other positive displacement pumps. Focus will be placed upon pump and system efficiencies. CSU

Water Utility Science 210
Advanced Water Distribution
Unit(s): 3.0
Class Hours: 48 Lecture total.
A managerial level course to address the costs and benefits in pipe type selection, reservoir management, use of maps, record keeping, and applied hydraulics as applied to distribution systems. Preparation for Distribution Grades D2, D3 and D4 Water Distribution Operator certification by the California Department of Public Health. CSU

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
WOMEN’S STUDIES (WMNS)

Division of Arts, Humanities and Social Sciences/Library

Dean: Marilyn Flores
Department Chair, Humanities: Marcelo Pimentel
Faculty: Georgia Summer

Associate in Arts
Women’s Studies (11938)

The associate degree in women’s studies is a liberal arts major which is designed to meet the following needs: 1) to help women develop a perspective pertaining to their own self-interest and relate those views to social and cultural factors such as economic necessity, political participation, historical patterns, and ethics; 2) to develop their self-awareness in relation to others; 3) to develop skills of communication and analysis; 4) to prepare for transfer to four-year colleges and schools of professional training; 5) to enrich women’s knowledge of their culture and the rapid developments that are taking place within it.

Learning Outcome(s)
Upon successful completion of the major requirements for this degree, students will be able to
- Understand and explain the historical and cultural factors in the development and persistence of sex/gender inequality.
- Explain major concepts, ideas, and issues relevant to the study of women and project their significance into the real world.
- Connect the thinking and research of multiple disciplines on various issues and problems relevant to women.

Major requirements*  

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Women’s Studies 101, Introduction to Women’s Studies</td>
<td>3</td>
</tr>
<tr>
<td>Women’s Studies 102, Women in America: Work, Family, Self</td>
<td>3</td>
</tr>
<tr>
<td>English 278, Survey of Literature by Women</td>
<td>3</td>
</tr>
<tr>
<td>History 127, Women in U.S. History</td>
<td>3</td>
</tr>
<tr>
<td>Interdisciplinary Studies 155, Human Sexuality</td>
<td>3</td>
</tr>
<tr>
<td>Kinesiology 110, Women’s Health Issues</td>
<td>3</td>
</tr>
</tbody>
</table>

Select six (6) to seven (7) units from the following: 6-7

- Communication 225/225H, Gender Communication (3)
- Counseling 116, Career/Life Planning and Personal Exploration (3)
- Library and Information Studies 103, Advanced Internet Research (1)
- Philosophy 108, Ethics (3)
- Sociology 112, Relationships, Marriages, and Family Dynamics (3)

TOTAL 24-25

Courses

Women’s Studies 101
Introduction to Women’s Studies
Unit(s): 3.0
Class Hours: 48 Lecture total.
A multicultural survey of social trends, issues, opportunities, and topics of special interest to women. Discussion includes sex, sex role stereotyping, family problems, work, law, gender equity, physical and mental health, feminism, rape, and women in arts, sciences, history and business. CSU/UC

Women’s Studies 102
Women in America: Work, Family, Self
Unit(s): 3.0
Class Hours: 48 Lecture total.
Examination of women’s roles in America. Emphasis on employment, family structures, and personal development. Topics include: historical patterns, socialization, opportunities, sexism, identity, growth, law, unionization, sexual harassment, media influence, family pressures, child care, guilt, stress. CSU/UC

*Major requirements for the associate degrees are in addition to the General Education requirements found on page 37.
### CONTINUING EDUCATION DIVISION
#### INSTRUCTIONAL CALENDAR 2015–2016

#### FALL SEMESTER 2015
- **August 24-28**: Faculty projects
- **August 31**: INSTRUCTION BEGINS
- **September 7**: Labor Day — holiday
- **November 11**: Veterans’ Day — holiday
- **November 24-29**: Thanksgiving recess
- **December 20**: INSTRUCTION ENDS
- **December 21-January 13, 2016**: Winter recess

#### SPRING SEMESTER 2016
- **January 6 – 8**: Faculty projects
- **January 11**: INSTRUCTION BEGINS
- **January 18**: Martin Luther King, Jr. — holiday
- **February 12-13**: Lincoln’s Birthday — holiday
- **February 15**: President’s Day — holiday
- **April 1**: Cesar Chavez Day — holiday
- **April 2**: Non-Instructional Day — no class
- **April 4-9**: OEC Spring recess
- **May 30**: Memorial Day — holiday
- **June 2**: OEC Commencement
- **June 4**: INSTRUCTION ENDS

#### SUMMER SESSION 2016
- **June 6**: INSTRUCTION BEGINS**
- **July 4**: Independence Day — holiday
- **August 6**: INSTRUCTION ENDS**

### COLLEGE CREDIT CLASSES
#### INSTRUCTIONAL CALENDAR 2015-2016

#### FALL SEMESTER 2015
- **August 17-19**: Faculty projects
- **August 20-21**: Common college flex day
- **August 24**: INSTRUCTION BEGINS
- **September 6**: Last date to drop with enrollment fee refund (semester-length courses)
- **September 7**: Labor Day — holiday
- **September 25**: Last date to file Pass/No Pass option (semester-length courses)
- **October 9**: Deadline to submit Petitions for Graduation and Certificates
- **November 11**: Veterans’ Day — holiday
- **November 15**: Last date to drop semester–length courses with a “W” grade
- **November 26-28**: Thanksgiving — holiday
- **December 13**: INSTRUCTION ENDS
- **December 14 – January 3, 2016**: Winter break

#### INTERSESSION 2016
- **January 4**: INSTRUCTION BEGINS
- **January 18**: Martin Luther King, Jr. — holiday
- **January 31**: INSTRUCTION ENDS

#### SPRING SEMESTER 2016
- **February 1-3**: Faculty projects
- **February 4-5**: Common college flex days
- **February 8**: INSTRUCTION BEGINS
- **February 12**: Lincoln’s Birthday — holiday
- **February 15**: President’s Day — holiday
- **February 21**: Last date to drop with enrollment fee refund (semester-length courses)
- **March 11**: Deadline to submit Petitions for Graduation and Certificates
- **March 11**: Last date to file Pass/No Pass option (semester-length courses)
- **April 1**: Cesar Chavez Day — holiday
- **April 4-9**: Spring recess
- **May 8**: Last date to drop semester–length classes with “W” grade
- **May 30**: Memorial Day — holiday
- **June 2**: INSTRUCTION BEGINS
- **June 5**: INSTRUCTION ENDS

#### SUMMER SESSION 2016
- **June 6**: INSTRUCTION BEGINS**
- **July 4**: Independence Day — holiday
- **August 14**: INSTRUCTION ENDS

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* OEC Spring recess dates may be adjusted to correspond to unified school district instructional calendar.
** beginning/ending date could be adjusted
CONTINUING EDUCATION

Mission Statement
The mission of the continuing education division is to offer a variety of free, noncredit classes, programs, and services that enable students to maximize their potential by acquiring the necessary skills to reach their personal, educational, and vocational goals so that they can benefit from, and contribute to, a changing American society as productive, active members of their communities.

Santiago Canyon College
Orange Education Center
1465 North Batavia Street
Orange, CA 92867
714-628-5900

The Santiago Canyon College Orange Education Center is the major adult education service provider in the Orange area. In addition, there are other sites in which instruction is offered. These facilities provide a broad-based program which meets the educational needs of the community. Open entry/open exit classes allow students to register anytime during the school year and provide maximum flexibility in program scheduling.

For the current class schedule, please visit the website at www.sccollege.edu/oec or call the Orange Education Center at 714-628-5900.

Classroom Instruction
Traditional and individualized, self-paced classroom instruction is offered in academic, vocational, and basic skills areas. The open entry/open exit format allows flexibility in planning.

Convenient Community Locations
Day and evening community locations make classes conveniently available to all adults in the district.

Weekend Classes
To meet the needs of working adults, continuing education classes are also offered Fridays and Saturdays.

INSTRUCTIONAL PROGRAMS

Adult Basic Education (ABE)
Assists students in strengthening their skills in reading, writing, spelling, mathematics, English usage and grammar. ABE provides students with a strong educational foundation that can be used as a basis for employment preparation, entrance into high school subjects, GED preparation, and college and vocational programs.

In addition, Native Language Basic Skills for Adults assists students in acquiring basic skills in their native language in order to facilitate the transition to beginning English as a Second Language courses. This program focuses on reading, math, and writing skills, as well as classroom and community coping skills.

Adult High School Diploma Program
Accommodates adults with varied responsibilities, backgrounds, and needs who desire to earn a high school diploma. Individualized instruction is provided so that students may take classes that fit their personal schedules, thus enabling them to work and complete high school credits at their own pace.

Citizenship
Introduces students to U.S. citizenship and the naturalization process, U.S. history, and government. Prepares students for the U.S. Citizenship and Immigration Services USCIS interview and exam.

English as a Second Language (ESL)
Provides English language instruction for speakers of languages other than English. Offers instruction in beginning levels through intermediate levels. Core classes integrate acquisition of skills in speaking, listening, reading, and writing. Speciality classes focus on further improvement of specific skills, such as conversation, pronunciation, writing, civics or employment skills. Provides certificate programs for successful completion of courses in each level, beginning through intermediate.

Substantial Disabilities
Provides information related to topics of everyday interest and importance to adults with developmental disabilities. Examines issues of relevance and provides a forum for discussion.

GED/California High School Equivalency Certificate Preparation
Individualized classes in GED/California High School Equivalency Certificate preparation, including practice testing, are also offered.

Health and Safety Program
Provides courses specifically designed to offer lifelong education to promote the health, safety and well-being of individuals, families and communities.

Parent Education Program
Provides courses which emphasize intellectual, physical, and emotional aspects of parenting.

Career Technical Training Programs
Provides employment preparation focusing on specific career technical areas and on general workforce development skills. Provides certificate programs in occupational areas with high employment potential.

Older Adults Program
Offers courses designed to meet specific needs of older students in a variety of areas, including music, cooking, manipulative skills, and discussion seminars. Many classes are offered in facilities specifically serving older adults.
ADMISSIONS AND STUDENT SERVICES

Who May Attend
Persons 18 years of age or older, or high school graduates, are eligible to enroll in continuing education classes. Students currently enrolled in secondary schools who wish to attend continuing education classes may be admitted by special request of the secondary school and approval from continuing education administration.

Where to Register
Santiago Canyon College
Orange Education Center
1465 North Batavia Street
Orange, CA 92867
Phone: 714-628-5900

Santiago Canyon College
OEC Provisional Education Facility
1937 West Chapman Avenue, 2nd Floor
Orange, CA 92868

Santiago Canyon College
8045 East Chapman Avenue
Room S-105 & Room U-84
Orange, CA 92869

Schedule of Classes
A schedule of classes is prepared each semester which includes general information, courses offered, hours, locations and rooms. Schedules are available before registration each semester in each of the major continuing education sites and Rancho Santiago Community College District campuses. Registration is ongoing, provided there is space available in classes.

Open Enrollment
The policy of the Rancho Santiago Community College District and Santiago Canyon College is that, unless specifically exempted by statute or regulation, every course, course section, or class, reported for state aid, wherever offered and maintained by the college, shall be fully open to enrollment and participation by any person who has been admitted to the college, provided there is available space in classes.

Class Discontinuance Policy
Any class which does not have a total of at least 20 students enrolled by the beginning of instruction may be discontinued. Any class which does not maintain satisfactory attendance may be discontinued at anytime during the term.

Student Identification Card
Each student may obtain a student identification card upon request for a nominal fee. For more information, please call SCC Cashiers Office 714-628-4727.

Textbooks and Supplies
ESL textbooks are available for purchase at the OEC Provisional Education Facility. A complete list of ESL textbooks, including cost, required for each class is posted. Supplementary books and supplies are also available. For bookstore hours, please call 714-628-5924.

Students in the classes held at Santiago Canyon College can purchase supplies at the college bookstore in SCC A-101, phone 714-628-4736.

Testing
A wide variety of academic, aptitude, vocational, interest and other assessments are provided to assist the adult in educational and career planning.

Diagnostic assessment tests are administered to advise placement for courses in English as a Second Language, Adult Basic Education, and High School Subjects.

Counseling and Guidance
Each continuing education student is provided with the unique opportunity to benefit from individualized counseling and guidance designed to help students improve the quality of their lives.

Counselors are available to provide academic, career, and personal counseling in a confidential office setting.

Students may seek counseling for many reasons, including planning of educational objectives, obtaining information about employment and job skills, resolving personal and family problems, examining aptitudes, interests, and achievement, finding new careers and vocational directions, and learning to adjust in a new country. Students enrolling in courses leading toward a high school diploma must see a counselor upon registering. Counselors are available by appointment or on a walk-in basis. For more information or to arrange an appointment, please call 714-628-5929.

Scholarships
Several scholarships are made available to continuing education ESL students and high school graduates. Selection of scholarship recipients will be based upon recommendation of teachers and counselors, financial need, academic excellence, attendance, and minimum enrollment standards. For more information, call the Counseling office at 714-628-5929.

Photography
Santiago Canyon College, a non-profit California Community College, reserves the right to use photography and video images of students and visitors, age 18 and older, taken on our property and at college-sponsored events for marketing and promotional purposes. Objection to the use of an individual's photography may be made in writing to Public Affairs and Publications, RSCCD District Office, 2323 N. Broadway, Suite 408, Santa Ana, CA 92706.

Disability Students Policy
The College will make reasonable accommodations for individuals with disabilities. To request services, contact the office of Disabled Students Programs and Services at 714-628-4860.

Career Services
Career information, materials, interest inventories and counseling are provided for interested students. Appointments may be made by calling 714-628-5942.

Associated Student Government
The Associated Student Government was established to provide students with government and leadership experience. Opportunities are available to become involved as student representatives. Students will learn first hand about group dynamics and decision making, event programming, and running effective meetings. Additionally, there are student clubs to join. For more information, please call 714-628-5947.

Child Development
A child development program center is available at Santiago Canyon College. There is no fee for eligible families. Arrangements may be made by calling 714-628-6952.

Transcripts
Students may obtain an official transcript of records by filing in person or mailing a request to the Admissions and Records Office, OEC Provisional Education Facility, 1937 West Chapman Avenue, 2nd Floor, Orange, CA 92868. The first two in-person transcripts will be issued without charge, thereafter, a $3 charge will be assessed for each additional transcript. All official transcripts are copies of the student’s permanent record in the Office of Admissions and Records. Only records prepared and issued directly from that office will be considered official or certified for accuracy.
POLICIES GOVERNING STUDENTS

A. Attendance

Students are expected to attend all class meetings. Students who are enrolled but absent on the first class session may be dropped. A student may also be dropped for excessive absences.

B. Standards of Student Conduct

Guidelines for Student Conduct are set forth in the California Education Code, California Administrative Code, Title V, policies of the Board of Trustees, and all civil and criminal codes. Students enrolling in district educational programs assume an obligation to obey state law and district rules and regulations governing the conduct of students. For the complete guidelines for Student Conduct, see pages 22-24.

C. Standards of Conduct for Computer Classrooms and Computer Labs

In accordance with Board Policy (BP 3720) and Administrative Regulation (AR 3720) and in an effort to extend the life of the hardware, comply with the copyright laws, and adhere to appropriate computer network conduct and usage, standards of conduct are required of all students using computer classrooms, computer labs, and the wireless network. For the complete guidelines for Standards of Conduct for Computer Classrooms and Computer Labs, see page 24 and Computer Network Use, see page 17.

D. Academic Honesty

Students at Santiago Canyon College are expected to be honest and forthright in their academic endeavors. To falsify the results of one's research, to steal the words or ideas of another, or to cheat on an examination corrupts the essential process by which knowledge is advanced. Academic dishonesty is seen as an intentional act of fraud, in which a student seeks to claim credit for the work or efforts of another without authorization or uses unauthorized materials or fabricated information in any academic exercise. We as an institution, also consider academic dishonesty to include forgery of academic documents, intentionally impeding or damaging the academic work of others, assisting other students in acts of dishonesty or coercing students into acts of dishonesty. For procedures see page 14.

E. Disciplinary Action

Violations to any tenets within the standards of student conduct are subject to the following disciplinary actions: warning, reprimand, probation, restitution, removal, suspension or expulsion. Disciplinary actions may be imposed singly or in combination.

F. Grading Standards

<table>
<thead>
<tr>
<th>Grade</th>
<th>Description</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Superior</td>
<td>4 per unit</td>
</tr>
<tr>
<td>B</td>
<td>Above Average</td>
<td>3 per unit</td>
</tr>
<tr>
<td>C</td>
<td>Average</td>
<td>2 per unit</td>
</tr>
<tr>
<td>D</td>
<td>Below Average</td>
<td>1 per unit</td>
</tr>
<tr>
<td>F</td>
<td>Fail</td>
<td>0 (but counted in GPA)</td>
</tr>
<tr>
<td>P</td>
<td>Pass</td>
<td>0</td>
</tr>
<tr>
<td>W</td>
<td>Withdrawal</td>
<td>0</td>
</tr>
<tr>
<td>COM</td>
<td>Completed</td>
<td>0</td>
</tr>
<tr>
<td>SP</td>
<td>Satisfactory Progress</td>
<td>0</td>
</tr>
<tr>
<td>NP</td>
<td>No Pass</td>
<td>0</td>
</tr>
</tbody>
</table>

G. Credit by Examination

Credit by examination may be earned only for courses that are specifically designated as courses that are eligible for credit by examination. A student cannot take credit by examination to improve a substandard grade.

High School Diploma Courses

Information for receiving credit by examination may be obtained from a continuing education counselor.

Career Technical Business Skills Courses

Examinations are offered on specific dates. Students who demonstrate course competency are awarded a passing grade.

H. Procedures for Student Complaints Regarding Grades

1. Education Code 76224 states:

   “When grades are given for any course of instruction taught in a community college district, the grade given to each student shall be the grade determined by the instructor for the course; and the determination of the student's grade by the instructor, in the absence of mistake, fraud, bad faith, or incompetence, shall be final.”

2. Procedure
   a. Student shall meet with instructor to discuss grade.
   b. If the issue is not resolved, and the student believes that the grade is based on mistake, fraud, bad faith or incompetence (EC 76224), an appeal in writing may be made to the Area Dean of Instruction and Student Services.
   c. The student may be requested to set up an appointment with the Dean of Instruction and Student Services to discuss the written complaint.
   d. The Dean of Instruction and Student Services will review the allegations and may consult with the instructor.
   e. The Dean of Instruction and Student Services will review the issue and will notify the student and instructor in writing of the decision.
   f. The decision of the Dean of Instruction and Student Services is final.

I. Complaint Procedures for Students

Students may file a complaint when they believe they have been deprived of a right granted to students by the Board of Trustees in any of the policies or regulations of the Rancho Santiago Community College District.

The purpose of these complaint procedures is to resolve differences as fairly and expeditiously as possible while preserving the rights of students and staff members.

1. Definitions
   a. Days: number of days refers to the days when the District offices are open.
   b. Committee: Continuing Education Student Complaint Committee.

2. Procedure
   a. Students shall first confer with the staff member who took action or made the ruling to
which they object no later than ten days following the event which prompted the complaint. The Area Dean of Instruction and Student Services or designee will assist the student in arranging an appointment with the staff member.

b. If the difference is not satisfactorily resolved, the student shall confer with the staff member's supervisor.

The Area Dean of Instruction and Student Services or designee will assist the student and staff member's supervisor.

c. If the complaint is unresolved, the student may file a written statement setting forth the nature of the complaint on the prescribed form with the Area Dean of Instruction and Student Services no later than ten days after conferring with the staff member's supervisor.

d. The complaint form shall be completed in full and shall include a full description of the complaint, times, dates and pertinent facts, and the remedy sought by the student.

A Student Complaint-Staff Response form will be sent to both the staff member and supervisor for completion.

e. The Area Dean of Instruction and Student Services shall forward the completed forms to the Continuing Education Student Complaint Committee chairperson for review and recommendation.

The committee shall have the power to make an appropriate investigation of the complaint and shall state the findings and make a recommendation.

f. If the complaint is sustained by the committee, it will recommend appropriate action for relief of the complaint and communicate this in writing to the staff member to whom the complaint was directed. If the staff member accepts the recommended action and if the student who filed the complaint is satisfied with the action, the complaint shall be considered resolved and closed.

g. If the findings of the committee do not sustain the complaint, the committee shall communicate this finding in writing to the student who filed the complaint. If the student accepts this finding, the complaint shall be considered resolved and closed.

h. If no resolution of the complaint is obtained under (f.) or (g.) above, the Area Dean of Instruction and Student Services shall forward the complaint together with findings of the committee to the Chancellor for review and decision.

i. If this decision does not resolve the complaint in the opinion of the student, the Chancellor shall present the case to the Board of Trustees with the findings and recommendations. If the Board finds that the complaint is invalid, the Chancellor's recommendation shall stand in final resolution. If the Board finds that the complaint is valid, it shall instruct the Chancellor as to how the complaint shall be resolved, and the Chancellor shall implement the Board's decision.

j. Student Records

Under the guidelines of the Family Educational Rights and Privacy Act of 1974, student records are confidential, and privacy is to be scrupulously maintained.

Right to Review and Challenge Records: Under the provisions of the U.S. Department of Health, Education and Welfare, students have the right to inspect and review any of the following files:

- admissions/records
- data processing
- financial aids
- placement
- veterans

After review and exploration, students may challenge any information relating to them if they believe information to be inaccurate, misleading, or otherwise in violation of their rights of privacy or other rights. Forms for challenge are available in the Area Dean of Instruction and Student Services office. District staff or other professionals who have a legitimate educational interest such as counseling and carrying out the normal operations of the educational program have access to student records.

Any student has the right to file complaint with the U.S. Department of Health, Education and Welfare concerning alleged failure of the institution to comply with provisions above or Section 438 of the General Provision.

K. High School Petition Students

Secondary school students who wish to take course work in Rancho Santiago Community College District Continuing Education and have it transferred to another school must present a completed Petition for Registration in order to be considered for admission. Failure to comply fully with all conditions listed on the form may result in the immediate revocation of the petition and dismissal from Continuing Education classes.

1. Grading and Transfer of Credits: Students must satisfactorily complete all course requirements including exams, projects, papers and attendances before credit or grades can be issued. Students are responsible for planning schedules and progress in order to earn credits in time to meet graduation deadlines in other school districts.

2. Conduct: A student's conduct must be productive, responsible and courteous at all times. Unacceptable behavior may result in the immediate revocation of this petition and dismissal from class. Unacceptable behavior includes, but is not limited to, excessive talking, noncompliance with rules, failure to follow instructor directions, falsification of records, cheating or assisting others to cheat, destruction or theft of school property, disruption of classes, violence, or being under the influence of drugs or alcohol.

L. Special Rules, Regulations and Student Obligations

Because of special program characteristics, the following programs must adhere to special rules, regulations and student obligation beyond the Standard Guidelines for Student Conduct adopted by the Rancho Santiago Community College District. Students enrolled in any of the following programs are obligated to perform within those special program characteristics.

- veterans
- district staff
- other professionals who have a legitimate educational interest such as counseling and carrying out the normal operations of the educational program have access to student records.
guidelines in order to maintain class attendance: any community-based organization or governmental agency with which the Rancho Santiago Community College District cooperates in a program offering.

M. Family Education Rights and Privacy

As required under the provisions of the Family Education Rights and Privacy Act of 1974, the Rancho Santiago Community College District will make public without student consent only certain directory information. This information consists of the following: a student’s name; city of residence; a major field; participation in officially recognized activities and sports; weight, height, and age if a member of an athletic team; dates of attendance; degree and awards received; and the most recent previous educational institution or agency attended by the student.

A student may request the Admissions and Records Office to withhold this information. Such request must be in writing and submitted each semester.

N. Use of Public School Facilities for Adult Classes

1. Alcoholic Beverages and Controlled Substances: Both by policies instituted by local Boards of Education (Garden Grove Unified School District, Orange Unified School District, Rancho Santiago Community College District and Santa Ana Unified School District) and California State Law specifically prohibit possession of alcoholic beverages and controlled substances on school premises at any time, by any person, regardless of age. Regulations also prohibit use of alcoholic beverages at school events, whether on or off the campus, or the appearance at school events while under the influence of alcoholic beverages and/or controlled substances. The penalty for violation of these regulations is immediate suspension from school, followed by expulsion, if imposed by the Board of Trustees. Additional penalties may be imposed by law enforcement agencies.

2. Smoking: Provisions of the Uniform Fire Code, Article 29, Section 29.06, Smoking Activity on School Property, state:

“It shall be unlawful for any person or persons to engage in any smoking activity or to possess any flaming or glowing object or cause to be lighted any substance in any classroom or on school property at any time except in areas authorized by the local Board of Education.”

The only areas authorized for smoking are outside the school buildings in a designated smoking area. There is to be No Smoking by anyone in any of the classrooms at any time. Proper containers are provided in the smoking areas for disposal of cigarettes.

3. Food and Beverages: Food and beverages are not to be brought into the classrooms at any time. Proper containers are provided for disposal of trash in designated areas.
ADULT HIGH SCHOOL DIPLOMA PROGRAM

General Information
Rancho Santiago Community College District offers a comprehensive adult high school diploma program for adults who wish to continue their formal education. The Adult High School Diploma Program at Santiago Canyon College is approved by the California Community Colleges Chancellor's office. Santiago Canyon College is accredited by the Accrediting Commission for the Western Association of Schools and Colleges.

Diplomas are issued by the Rancho Santiago Community College District to students who complete the required course of study and demonstrate proficiency in basic skills. Graduation ceremonies are traditionally held each spring at Santiago Canyon College. Students may complete the diploma program at any time during the year and receive verification of completion of requirements at that time. Courses designed to meet high school graduation requirements are offered in both the traditional classroom setting or in open entry/open exit self-paced individualized learning programs. Elective credits may be earned in continuing education classes offered in a wide variety of locations throughout the community as listed in the schedule of classes published each semester.

Counseling and Guidance
Counselors are available for students needing academic, personal, or financial assistance, and career/vocational guidance.

Counselors design programs of study on an individual basis so that students desiring a high school diploma may achieve their individual educational goals. For students transferring from other high school or adult programs, counselors evaluate transcripts to determine which courses meet the general education requirements and/or elective requirements. Counselors advise students of lifelong learning opportunities and assist students with postsecondary vocational and educational planning for degree or certificate programs at Rancho Santiago Community College District.

Registration
The Adult High School Diploma Program is available at the Santiago Canyon College. Students may obtain a schedule of classes and enroll at any time during the fall, spring, and summer semesters. For information, call 714-628-5929.

To qualify for a high school diploma, the candidate must meet the following requirements:

Course of Study
Effective July 1, 2009
High School Graduation Requirements
The high school diploma requires a total of 160 credits taken from the following:

<table>
<thead>
<tr>
<th>Subject Area</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>40.0</td>
</tr>
<tr>
<td>(a maximum of 10 credits of reading; must include at least one composition course)</td>
<td></td>
</tr>
<tr>
<td>Mathematics</td>
<td>20.0</td>
</tr>
<tr>
<td>(must include both a biological and a physical science course)</td>
<td></td>
</tr>
<tr>
<td>Natural Sciences</td>
<td>20.0</td>
</tr>
<tr>
<td>Social and Behavioral Sciences</td>
<td>30.0</td>
</tr>
<tr>
<td>(must include U.S. History, American Government, Economics, World History, Geography, and Culture)</td>
<td></td>
</tr>
<tr>
<td>Humanities</td>
<td>10.0</td>
</tr>
<tr>
<td>Electives</td>
<td>40.0</td>
</tr>
<tr>
<td>TOTAL</td>
<td>160.0</td>
</tr>
</tbody>
</table>

Limitations on Enrollment
A student who has received a passing grade (A, B, C, D) for a high school course may not re-enroll in the same course. A student who has graduated from the Adult High School Diploma Program may not enroll Adult Basic Education (ABE) or high school courses without written permission from an administrator.

Residency
Residency Requirement: At least 20 of the 160 required high school credits must be completed in residence at Santiago Canyon College. Only 5 of the 20 residency credits may be challenged.

Petition for Graduation
A petition for graduation must be completed and submitted soon after the date students complete the diploma requirements.

Proficiency Requirements
Proficiency must be demonstrated in basic skills areas of reading, mathematics, and composition, according to the categories listed below:

A. Reading. All Santiago Canyon College adult high school graduates will be required to demonstrate a minimum eighth grade reading ability as measured by a SCC Continuing Education approved reading proficiency examination.

B. Mathematics. Students will be required to demonstrate math proficiency by passing an SCC Continuing Education approved mathematics examination with a minimum score of 70%, or by passing the Math Fundamentals 2 course.

C. English Composition. Students will be required to demonstrate English composition proficiency by passing an SCC Continuing Education approved composition examination with a minimum score of 70% or by passing the Composition 2 course.

Prior to June 30, 2009
High School Graduation Requirements
Any student who was enrolled in the Adult High School Diploma Program prior to June 30, 2009, may receive a high school diploma based on completion of the curriculum required prior to June 30, 2009, provided the student remains continuously enrolled without a break of more than one primary term subsequent to the Spring 2009 term. At least 15 of the 160 required high school credits must be completed in residence at the Rancho Santiago Community College District.

Grade Reports
1. Grade Reports: In-class progress is reported to the student in a number of ways. Tests are often given to show individual student progress.

2. Cumulative Records: The district will maintain cumulative records on each current high school diploma student. These records may contain pertinent information necessary to aid students in educational planning. Placement tests follow-up, interest inventories, and other data contained in the cumulative record will be available for review by the student upon request.

Policies Governing Sources of Credit
A. Previous Secondary Schools
All credits earned in the 9th, 10th, 11th, and 12th grades recorded on an official transcript will be accepted except physical education credits and credits which are a duplication of course work for which credit was previously granted.

B. Trade or Business Schools
Courses taken in trade or business schools will be evaluated for possible high school credit equivalency. Courses in this category must be approved by
the Office of Private Postsecondary Education.

It is the responsibility of the student to provide to the district transcripts, certificates, and/or other records requested for the evaluation and possible awarding of credit.

C. Armed Forces Schools and/or Programs
Credit may be granted for completion of training programs (armed services) and other valid educational experiences provided they have been certified by the United States Armed Forces Institute or by a statement on the service record, and provided they parallel 1) courses usually taught in secondary schools, and 2) vocational training courses with counterparts in civilian life.


This section is to be interpreted as including:
1. Officer and enlisted service school courses;
2. Off-duty classes offered by the armed forces and cooperating local institutions;
3. Correspondence courses offered by the United States Armed Forces Institute, the Marine Corps Institute, the Coast Guard Institute, and cooperating colleges and universities;
4. United States Armed Forces Institute courses and subject examinations. (Authorization for this procedure is contained in Title V, Section 99, part C, of the California Administrative Code.)

D. College Credit Courses
College units to be used for high school credits may be evaluated in a ratio of 3 college units to 10 high school semester periods of credit. The college should be notified in writing when college credits are utilized to meet high school requirements.

College credit equivalency recommended by the American Council on Education guides will be evaluated for high school credit on the same basis as other college credit courses.

E. Correspondence Courses
Courses taken by correspondence will be evaluated for possible high school credit equivalency. Courses in this category must be approved by the Office of Private Postsecondary Education.

It is the responsibility of the student to provide to the district transcripts, certificates, and/or other records requested for the evaluation and possible awarding of credit.

F. Adult School Credit Courses
Courses taken at adult schools will be evaluated for possible high school credit equivalency. Courses in this category must be approved by the California State Department of Education.

No credit will be allowed for physical education courses nor for courses from other adult schools if such courses are designated in the Rancho Santiago Community College District as “no high school credit.”

It is the responsibility of the student to provide to the district transcripts, certificates, and/or other records requested for the evaluation and possible awarding of credit.

G. Work Experience Credit
Students may obtain credit for certain types of full-time work experience or for work experience that can be related to high school subject matter.

In order to obtain credit for work experience, students must provide written verification from those employers with whom they have worked for at least one year. The Continuing Education administrators or counselors will evaluate the amount of work experience credit and the area of application. Evaluation will not be made for more credits than is necessary to meet graduation requirements and which the letters of verification justify. Combined work experience credit and consumer skills task credit may not exceed 40 credits.

Verification of work experience should be obtained by the student, requesting from each employer on official letterhead stationery the following information:
1. Dates of employment.
2. Job description.
3. Nature of duties performed, indicating progress to more complex operations justifying a division into beginning and advanced skills.
5. Reason for termination of employment, if applicable.
6. The letter of self-employed students must be accompanied by a copy of the student’s business license or W-2 form.
7. Upon receipt of verification of all work experience which the student wishes to be considered for credit, evaluation will be made on the following basis:
   a. Up to 10 credits will be given for the first year of successful work experience.
   b. Up to 10 additional credits to a maximum of 40 will be granted for each additional full year of employment if the student has made successful progress each year on the job.
   c. After the initial 10 credits for the first year, student may earn 5 credits for a period of six months employment, provided there is evidence of successful progress.

H. Testing
The district may award a maximum of 80 high school credits on the basis of district approved testing.

1. Mathematics Achievement Test (ITED)
Credit may be earned in mathematics by obtaining a satisfactory score on the math section of the Iowa Tests of Education Development Form X5. No other subtests are accepted for credit purposes. Ten semester credits will be awarded for a raw score of 14, provided these credits
Continuing Education

SCC Catalog 2015-2016

are not previously earned math credits. (These 5 credits may be used to satisfy Math Fundamentals 2 requirements.) Fifteen semester credits will be awarded for a raw score of 20, provided these credits are not a duplication of previously earned math credits. (These 10 credits may be used to satisfy Math Fundamentals 2 requirements, and 5 elective credits.)

2. Subject Matter Credit by Examination
Credit by examination may be earned only for courses that are specifically designated by the division curriculum committee as courses that are eligible for credit by examination. Information for receiving this credit may be obtained from a counselor in continuing education. Only 5 of the 20 residency credits may be challenged.

J. High School Diploma Elective Credits

1. Learning Skills Credit
A maximum of 40 credits in Learning Skills will be allowed toward high school graduation credit in the elective area, including work experience.

2. ESL Credit
Five elective high school diploma credits may be awarded to students who pass Intermediate 1, 2, and 3 and who have passing scores on the ESL post tests in these classes. The passing scores are 75% for Intermediate 1 and 2 and 70% for Intermediate 3.

3. Adult Basic Education
A maximum of 20 high school elective credits may be granted when students pass all or parts of the required ABE exit tests.

I. Regional Occupational Program Courses
Credit will be determined upon receipt of an official secondary or community college transcript which indicates credit and grades as appropriate.

Guidelines for issuance of ROP credit when not on a unified school district transcript:

1. RSCCD will accept an official Grade Reporting Sheet from Central County Regional Occupational Program in lieu of a unified school district transcript provided it has a grade and a number of total hours.

2. The amount of credit issued is to be based on 16 clock hours per credit unit.

3. The maximum of 20 units toward electives will be accepted in this manner.

4. Students coming from outside the CCROP will have to validate their credits only through an official school district transcript.
CAREER DEVELOPMENT &
COLLEGE PREPARATION CERTIFICATES

NONCREDIT COURSE DESCRIPTIONS

Continuing education courses are listed by subject on the following pages. Course numbers are listed at the beginning of each course title.

Open entry/open exit courses are noted in the course descriptions. Students may enroll at any time in these courses and begin class immediately, provided there is space available. Students progress at their own rate and may exit from the class at any time upon satisfactory completion of the required work.

All credits listed are high school credits. Ten high school credits represent a minimum of 144 hours of study. In open entry/open exit courses, students earn credits by meeting individual competency-based objectives.

Some courses offer a certificate of course completion upon completion of all course requirements. A certificate of course completion does not appear on the official transcript.

Completion of Career Development and College Preparation (CDCP) program coursework appears on the student transcript. In addition, the student may request an official program certificate be issued for successful completion of all CDCP program coursework.

The class schedule should be consulted for current offerings.
# CAREER DEVELOPMENT & COLLEGE PREPARATION CERTIFICATES

<table>
<thead>
<tr>
<th>PROGRAM</th>
<th>PROGRAM</th>
</tr>
</thead>
<tbody>
<tr>
<td>English as a Second Language</td>
<td>Vocational: Business</td>
</tr>
<tr>
<td>ESL Advanced</td>
<td>Customer Service Representative</td>
</tr>
<tr>
<td>ESL Literacy</td>
<td>General Office Clerk</td>
</tr>
<tr>
<td>ESL Beginning</td>
<td>Executive Secretary / Administrative Assistant</td>
</tr>
<tr>
<td>ESL Beginning Multilevel</td>
<td>First-Line Supervisor / Manager, Office and</td>
</tr>
<tr>
<td>Enhanced Beginning ESL Skills</td>
<td>Administrative Support Workers</td>
</tr>
<tr>
<td>ESL Intermediate</td>
<td>Web Associate</td>
</tr>
<tr>
<td>ESL Intermediate Communication</td>
<td>Medical Billing</td>
</tr>
<tr>
<td>ESL Intermediate Multilevel</td>
<td>Receptionist/Information Clerk</td>
</tr>
<tr>
<td>ESL Intermediate Writing</td>
<td></td>
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<tr>
<td>Enhanced Intermediate ESL Skills</td>
<td></td>
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<tr>
<td>Vocational ESL</td>
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<tr>
<td>ESL Civics</td>
<td></td>
</tr>
<tr>
<td>Secondary Education/GED Preparation</td>
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<tr>
<td>Secondary Subjects</td>
<td></td>
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<td>Secondary Education</td>
<td></td>
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<tr>
<td>Vocational: Clothing</td>
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<tr>
<td>Vocational: Clothing</td>
<td></td>
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<tr>
<td>Vocational: Construction</td>
<td></td>
</tr>
<tr>
<td>Vocational: Construction</td>
<td></td>
</tr>
<tr>
<td>Vocational: Food</td>
<td></td>
</tr>
<tr>
<td>Vocational: Food</td>
<td></td>
</tr>
</tbody>
</table>
ADULT BASIC EDUCATION (ABE)
Division of Instruction and Student Services

Dean: Lori Fasbinder
Coordinator: Ethel Jordan

Certificate of Competency
Adult Basic Education (33421)

This combination of courses is designed to prepare students for basic reading, writing, spelling, and math skills used in the Adult High School Diploma Program, General Education Development (GED) Preparation, and college courses.

Learning Outcome(s)
Upon successful completion of the requirements for this certificate, students will be able to
• Demonstrate proficient skills in basic reading, writing, spelling, and mathematics used in high school courses, GED Preparation, and college courses.

Certificate requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adult Basic Education 024, Adult Basic Education Writing</td>
<td>72</td>
</tr>
<tr>
<td>Adult Basic Education 025, Adult Basic Education Mathematics</td>
<td>72</td>
</tr>
</tbody>
</table>

Select one (1) course from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adult Basic Education 023, Adult Basic Education Reading (72)</td>
<td>72</td>
</tr>
<tr>
<td>Adult Basic Education 026, Adult Basic Education Spelling (72)</td>
<td>72</td>
</tr>
</tbody>
</table>

TOTAL 216

Certificate of Competency
Adult Basic Education/Adult Secondary Education Mathematics (33422)

The certificate of completion in ABE/ASE mathematics is designed to prepare students for higher level math skills in the Adult High School Diploma Program, General Education Development (GED) Preparation, and college courses.

Learning Outcome(s)
Upon successful completion of the requirements for this certificate, students will be able to
• Demonstrate proficiency in pre algebraic concepts.

Certificate requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adult Basic Education 025, Adult Basic Education Mathematics</td>
<td>72</td>
</tr>
<tr>
<td>High School Subjects Math 159, Math Fundamentals 2</td>
<td>72</td>
</tr>
</tbody>
</table>

TOTAL 144

Certificate of Competency
Adult Basic Education/Adult Secondary Education Reading (33420)

The certificate of completion in ABE/ASE reading is designed to prepare students for higher level reading skills used in high school courses, General Education Development (GED) Preparation, and college courses.

Learning Outcome(s)
Upon successful completion of the requirements for this certificate, students will be able to
• Demonstrate level gains in reading.

Certificate requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>High School Subjects Reading 093, Building Reading Skills 1</td>
<td>72</td>
</tr>
<tr>
<td>High School Subjects Reading 094, Building Reading Skills 2</td>
<td>72</td>
</tr>
</tbody>
</table>

TOTAL 144

Certificate of Competency
Adult Basic Education/Adult Secondary Education Writing (33555)

The certificate of completion in ABE/ASE writing is designed to prepare students for higher level writing skills in the Adult High School Diploma Program, General Education Development (GED) Preparation, and college courses.

Learning Outcome(s)
Upon successful completion of the requirements for this certificate, students will be able to
• Emphasize mastery of sentence and paragraph skills, including organization in terms of unity, support, and coherence.

Certificate requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>High School Subjects English 066, English Fundamentals 2</td>
<td>72</td>
</tr>
<tr>
<td>High School Subjects English 083, Composition 1</td>
<td>72</td>
</tr>
</tbody>
</table>

TOTAL 144

Courses

Adult Basic Education 009
Adult Basic Education
Credit(s): 5.0-20.0
Class Hours: 72-288 Lecture total.
Recommended Preparation: English as a Second Language 460 or higher and/or placement by counselor assessment.
Instructs students in basic skills, including reading, writing, spelling, and mathematics. Prepares students to take High School Subjects courses, job training, or college credit classes. Grade: Pass/No Pass. Open Entry/Open Exit.

Adult Basic Education 010
Money Matters: Financial Literacy
Credit(s): 2.5
Class Hours: 36 Lecture total.
Prepares the student for the adult world of financial management and for the development of sound decision making skills in personal and family money matters. Grade: Pass/No Pass. Open Entry/Open Exit.

Adult Basic Education 011
Native Language Basic Skills for Adults
Credit(s): 0
Class Hours: 216 Lecture total.
Assists students in acquiring basic skills in their native language in order to facilitate the transition to beginning ESL courses. Focuses on reading, math, and writing, as well as academic and life skills. Grade: Pass/No Pass. Open Entry/Open Exit.
Adult Basic Education 023
Adult Basic Education Reading
Credit(s): 5.0
Class Hours: 72 Lecture total.
Instructs students in basic reading and functional literacy skills. Prepares students for Adult High School Diploma courses, job training, or the General Education Development course. Grade: Pass/No Pass. Open Entry/Open Exit.

Adult Basic Education 024
Adult Basic Education Writing
Credit(s): 5.0
Class Hours: 72 Lecture total.
Instructs students in basic writing and functional literacy skills. Prepares students for Adult High School Diploma courses, job training, or the General Education Development course. Grade: Pass/No Pass. Open Entry/Open Exit.

Adult Basic Education 025
Adult Basic Education Mathematics
Credit(s): 5.0
Class Hours: 72 Lecture total.
Introduces students to basic math skills including whole numbers, fractions, and decimals, and prepares students for Adult High School Diploma courses, job training, or the General Education Development course. Grade: Pass/No Pass. Open Entry/Open Exit.

Adult Basic Education 026
Adult Basic Education Spelling
Credit(s): 5.0
Class Hours: 72 Lecture total.
Provides students with a multisensory approach to improving English spelling skills. Emphasizes phonetic structures using workbooks and audio lessons. Grade: Pass/No Pass. Open Entry/Open Exit.

CITIZENSHIP (CTZN)
Division of Instruction and Student Services
Dean: Lori Fasbinder
Coordinator: Ethel Jordan

Courses
Citizenship 020
Citizenship
Credit(s): 0
Class Hours: 72 Lecture total.
Recommended Preparation: English as a Second Language 430 or higher.
Provides basic knowledge of local, state, and federal government in preparation for the United States citizenship examination including language usage within the context of history and government. Grade: Pass/No Pass. Open Entry/Open Exit.

COUNSELING (CNG)
Division of Instruction and Student Services
Dean: Lori Fasbinder
Coordinator: Ethel Jordan
Faculty: Ruby Frias, Rosa Salazar de la Torre

Courses
Counseling 303
Education and Career Assessment
Credit(s): 0
Class Hours: 3 Lecture total.
Assists students with appropriate educational placement and/or an overview of student services, career and academic guidance information that is available in Continuing Education as a result of individual and group testing. Grade: Pass/No Pass. Open Entry/Open Exit.
ENGLISH AS A SECOND LANGUAGE (ESL)

Division of Instruction and Student Services

Interim Dean: Mary Walker
Coordinator: Eden Quimzon

Certificate of Competency
ESL Advanced (33137)

The curriculum for the certificate of completion in ESL Advanced improves limited-English speaking students’ communication skills in English with an emphasis on grammar and writing in preparation for enhanced job opportunities and transition to academic studies.

Learning Outcome(s)
Upon successful completion of the requirements for this certificate, students will be able to

• Demonstrate advanced written communication skills.

Certificate requirements
<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>English as a Second Language 480, Intermediate ESL 3</td>
<td>216</td>
</tr>
<tr>
<td>English as a Second Language 601, Advanced Grammar and Writing</td>
<td>96</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>312</strong></td>
</tr>
</tbody>
</table>

Certificate of Completion
ESL Literacy (24230)

The curriculum for the certificate of completion in ESL Literacy develops the ability of non-English speaking students in basic literacy skills, including letter and number recognition/production, simple personal information, and basic oral communication in preparation for enhanced job opportunities.

Learning Outcome(s)
Upon successful completion of the requirements for this certificate, students will be able to

• Demonstrate basic oral communication and literacy skills.

Certificate requirements
<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adult Basic Education 011, Native Language Basic Skills for Adults</td>
<td>216</td>
</tr>
<tr>
<td>English as a Second Language 399, ESL Literacy</td>
<td>216</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>432</strong></td>
</tr>
</tbody>
</table>

Certificate of Completion
ESL Beginning (30644)

The certificate of completion in ESL Beginning is designed to give fundamental reading, writing, listening, and speaking skills to limited-English speaking students, preparing them for enhanced job opportunities and academic studies.

Learning Outcome(s)
Upon successful completion of the requirements for this certificate, students will be able to

• Demonstrate fundamental reading, writing, listening, and speaking skills.

Certificate requirements
<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>English as a Second Language 410, Beginning ESL 1</td>
<td>216</td>
</tr>
<tr>
<td>English as a Second Language 420, Beginning ESL 2</td>
<td>216</td>
</tr>
<tr>
<td>English as a Second Language 430, Beginning ESL 3</td>
<td>216</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>648</strong></td>
</tr>
</tbody>
</table>

Certificate of Completion
ESL Beginning Multilevel (24233)

The curriculum for the certificate of completion in ESL Beginning Multilevel develops the ability of limited-English speaking students to perform a variety of simple listening, speaking, reading and writing tasks in preparation for enhanced job opportunities.

Learning Outcome(s)
Upon successful completion of the requirements for this certificate, students will be able to

• Demonstrate fundamental reading, writing, listening, and speaking skills.

Certificate requirements
<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>English as a Second Language 399, ESL Literacy</td>
<td>216</td>
</tr>
<tr>
<td>English as a Second Language 440, Beginning 1-3 Multilevel</td>
<td>216</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>432</strong></td>
</tr>
</tbody>
</table>

Certificate of Completion
Enhanced Beginning ESL Skills (30690)

The curriculum for the certificate of completion in Enhanced Beginning ESL Skills improves the reading, writing, listening, speaking, and employability skills of Beginning ESL students for better communication and personal growth.

Learning Outcome(s)
Upon successful completion of the requirements for this certificate, students will be able to

• Demonstrate fundamental reading, writing, listening, and speaking skills with a focus on pronunciation.

Certificate requirements
<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>English as a Second Language 250, Seminar for Beginning ESL Students</td>
<td>72</td>
</tr>
<tr>
<td>English as a Second Language 530, American English Pronunciation</td>
<td>216</td>
</tr>
<tr>
<td>English as a Second Language 606, Interactive Language Training</td>
<td>72</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>360</strong></td>
</tr>
</tbody>
</table>
Certificate of Completion
ESL Intermediate (30646)
The certificate of completion in ESL Intermediate is designed to give essential reading, writing, listening, and speaking skills to limited-English speaking students, in preparation for enhanced job opportunities and transition to academic studies.

Learning Outcome(s)
Upon successful completion of the requirements for this certificate, students will be able to
• Demonstrate essential reading, writing, listening, and speaking skills.

Certificate requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>English as a Second Language 460, Intermediate ESL 1</td>
<td>216</td>
</tr>
<tr>
<td>English as a Second Language 470, Intermediate ESL 2</td>
<td>216</td>
</tr>
<tr>
<td>English as a Second Language 480, Intermediate ESL 3</td>
<td>216</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>648</strong></td>
</tr>
</tbody>
</table>

Certificate of Completion
ESL Intermediate Communication (24195)
The curriculum for the certificate of completion in ESL Intermediate Communication develops the ability of limited-English speaking students in non-verbal communication skills and the use of formal and colloquial language in preparation for enhanced job opportunities and transition to academic studies.

Learning Outcome(s)
Upon successful completion of the requirements for this certificate, students will be able to
• Demonstrate essential oral communication skills.

Certificate requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>English as a Second Language 570, Conversation 1</td>
<td>72</td>
</tr>
<tr>
<td>English as a Second Language 580, Conversation 2</td>
<td>72</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>144</strong></td>
</tr>
</tbody>
</table>

Certificate of Completion
ESL Intermediate Multilevel (24234)
The curriculum for the certificate of completion in ESL Intermediate Multilevel develops the ability of limited-English speaking students in a variety of advanced written, interpersonal, and academic communication tasks in preparation for enhanced job opportunities and transition to academic studies.

Learning Outcome(s)
Upon successful completion of the requirements for this certificate, students will be able to
• Demonstrate essential reading, writing, listening, and speaking skills.

Certificate requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>English as a Second Language 430, Beginning ESL 3</td>
<td>216</td>
</tr>
<tr>
<td>English as a Second Language 500, Intermediate 1-3 Multilevel</td>
<td>216</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>432</strong></td>
</tr>
</tbody>
</table>

Certificate of Completion
ESL Intermediate Writing (24196)
The curriculum for the certificate of completion in ESL Intermediate Writing develops the ability of limited-English speaking students in composition and other essential written communication skills in preparation for enhanced job opportunities and transition to academic studies.

Learning Outcome(s)
Upon successful completion of the requirements for this certificate, students will be able to
• Demonstrate essential written communication skills.

Certificate requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>English as a Second Language 010, ESL Writing</td>
<td>72</td>
</tr>
<tr>
<td>English as a Second Language 430, Beginning ESL 3</td>
<td>216</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>288</strong></td>
</tr>
</tbody>
</table>

Certificate of Completion
Enhanced Intermediate ESL Skills (30647)
The curriculum for the certificate of completion in Enhanced Intermediate ESL Skills improves the reading, writing, listening, speaking, and employability skills of Intermediate English as a Second Language students for better communication and personal growth.

Learning Outcome(s)
Upon successful completion of the requirements for this certificate, students will be able to
• Demonstrate essential reading, writing, listening, and speaking skills with a focus on writing.

Certificate requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>English as a Second Language 010, ESL Writing</td>
<td>72</td>
</tr>
<tr>
<td>English as a Second Language 260, Seminar for Intermediate ESL Students</td>
<td>72</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>144</strong></td>
</tr>
</tbody>
</table>

Certificate of Completion
Vocational ESL (24198)
The curriculum for the certificate of completion in Vocational ESL develops the English language and workplace skills of limited-English speaking students.

Learning Outcome(s)
Upon successful completion of the requirements for this certificate, students will be able to
• Demonstrate essential workplace communication skills.

Certificate requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>English as a Second Language 510, English for Work 1</td>
<td>216</td>
</tr>
<tr>
<td>English as a Second Language 520, English for Work 2</td>
<td>216</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>432</strong></td>
</tr>
</tbody>
</table>
Certificate of Completion
ESL Civics (24191)

The curriculum for the certificate of completion in ESL Civics enhances the English language skills of limited-English speaking students while preparing them for the United States Citizenship Exam and civic participation.

Learning Outcome(s)
Upon successful completion of the requirements for this certificate, students will be able to
- Demonstrate knowledge of citizenship and civic-related issues.

Certificate requirements

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>English as a Second Language 120, ESL Civics</td>
<td>144</td>
</tr>
<tr>
<td>English as a Second Language 430, Beginning ESL 3</td>
<td>216</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>360</strong></td>
</tr>
</tbody>
</table>

Courses

**English as a Second Language 010**
ESL Writing
Credit(s): 0
Class Hours: 72 Lecture total.
Introduces non-native English speakers to an overview of the writing process including activities to improve student composition skills. Grade: Pass/No Pass. Open Entry/Open Exit.

**English as a Second Language 120**
ESL Civics
Credit(s): 0
Class Hours: 144 Lecture total.
Recommended Preparation: English as a Second Language 430 or higher.
Provides development in listening, speaking, reading, and writing English within the context of history and government in preparation for the United States citizenship examination. Grade: Pass/No Pass. Open Entry/Open Exit.

**English as a Second Language 250**
Seminar for Beginning ESL Students
Credit(s): 0
Class Hours: 72 Lecture total.
Provides instruction in English language skills (reading, writing, listening, speaking) on topics of concern to English as a Second Language students. Students will use teamwork and communication skills to enhance learning. Grade: Pass/No Pass. Open Entry/Open Exit.

**English as a Second Language 260**
Seminar for Intermediate ESL Students
Credit(s): 0
Class Hours: 72 Lecture total.
Provides instruction in intermediate English language skills (reading, writing, listening, speaking) on topics of concern to English as a Second Language students. Students will use teamwork and communication skills to enhance learning. Grade: Pass/No Pass. Open Entry/Open Exit.

**English as a Second Language 399**
ESL Literacy
Credit(s): 0
Class Hours: 216 Lecture total.
Develops the ability of second language learners to recognize and read letters and numbers, copy-produce the alphabet, numerals, and simple personal information. This is the first course in the Continuing Education ESL continuum. Grade: Pass/No Pass. Open Entry/Open Exit.

**English as a Second Language 410**
Beginning ESL 1
Credit(s): 0
Class Hours: 216 Lecture total.
Emphasizes listening comprehension and beginning oral production of simple conversations, reading phrases and simple sentences, and performing communicative written tasks. This is the second course in the Continuing Education ESL continuum. Grade: Pass/No Pass. Open Entry/Open Exit.

**English as a Second Language 420**
Beginning ESL 2
Credit(s): 0
Class Hours: 216 Lecture total.
Emphasizes comprehending simple conversations, communicating survival needs, reading phrases and simple sentences, and producing short written passages. This is the third course in the Continuing Education ESL continuum. Grade: Pass/No Pass. Open Entry/Open Exit.

**English as a Second Language 430**
Beginning ESL 3
Credit(s): 0
Class Hours: 216 Lecture total.
Provides instruction for students in various levels of beginning English proficiency. Emphasizes speaking, listening, reading and writing English in familiar contexts. Recommended for students in Beginning ESL levels 1 - 3. Grade: Pass/No Pass. Open Entry/Open Exit.

**English as a Second Language 440**
Beginning 1-3 Multilevel
Credit(s): 0
Class Hours: 216 Lecture total.
Emphasizes creative oral language activities, initial critical thinking skills in reading comprehension, and written tasks which begin to focus on academic skills. This is the fifth course in the Continuing Education ESL continuum. Grade: Pass/No Pass. Open Entry/Open Exit.

**English as a Second Language 460**
Intermediate ESL 1
Credit(s): 0
Class Hours: 216 Lecture total.
Emphasizes understanding higher level language activities, reading passages with increased understanding, and increasing focus on creative and academic writing tasks. This is the sixth course in the Continuing Education ESL continuum. Grade: Pass/No Pass. Open Entry/Open Exit.
English as a Second Language 480
Intermediate ESL 3
Credit(s): 0
Class Hours: 216 Lecture total.
Emphasizes higher level language activities, conversations which convey complex thought patterns, authentic material which expands the use of critical thinking skills, and expanding realistic and creative/academic writing. This is the seventh course in the Continuing Education ESL continuum. Grade: Pass/No Pass. Open Entry/Open Exit.

English as a Second Language 500
Intermediate 1-3 Multilevel
Credit(s): 0
Class Hours: 216 Lecture total.
Provides instruction for students in various levels of intermediate English proficiency. Emphasizes creative oral language activities, introductory critical thinking skills, and academic writing tasks. Recommended for students in Intermediate ESL levels 1 - 3. Grade: Pass/No Pass. Open Entry/Open Exit.

English as a Second Language 510
English for Work 1
Credit(s): 0
Class Hours: 216 Lecture total.
Recommended Preparation: English as a Second Language 420 or 430.
Prepares limited English-speaking students for employment. Focuses on vocabulary skills and vocational readings with emphasis on oral communication through basic language skills instruction. Grade: Pass/No Pass. Open Entry/Open Exit.

English as a Second Language 520
English for Work 2
Credit(s): 0
Class Hours: 216 Lecture total.
Recommended Preparation: English as a Second Language 460 or higher.
Prepares limited English-speaking students for employment. Focuses on vocabulary skills and vocational readings with emphasis on oral communication through intermediate language skills instruction. Grade: Pass/No Pass. Open Entry/Open Exit.

English as a Second Language 530
American English Pronunciation
Credit(s): 0
Class Hours: 216 Lecture total.
Recommended Preparation: English as a Second Language 430 or higher.
Develops English language fluency and productive and receptive skills as they relate to sound discrimination, sound inventory, stress, intonation, linking, prominence, and rhythm. The course aims to help students understand English and be understood while functioning within employment, survival, and academic contexts. Grade: Pass/No Pass. Open Entry/Open Exit.

English as a Second Language 570
Conversation 1
Credit(s): 0
Class Hours: 72 Lecture total.
Recommended Preparation: English as a Second Language 430 or 460.
Introduces conversational strategies in listening, language use and non-verbal communication. Presents oral skills necessary in initiating, maintaining and closing conversations. Emphasis on oral skills that assist in social encounters and expand listening and speaking skills. Grade: Pass/No Pass. Open Entry/Open Exit.
HEALTH & SAFETY (SAFE)

Courses

Health & Safety 200
Health and Safety Awareness and Application
Credit(s): 0
Class Hours: 30 Lecture total.
Provides information and a discussion forum related to current and relevant health and safety topics, issues, and/or concerns. Students will use teamwork, research techniques, decision making, and communication skills to enhance learning. Grade: Pass/No Pass. Open Entry/Open Exit.

Health & Safety 850
Emergency Planning & Safety
Credit(s): 0
Class Hours: 30 Lecture total.
Adheres to emergency planning and safety guidelines of appropriate federal, state and county authorities, specifically as it applies to the state of California. This course includes basic guidelines for dealing with emergency situations and handling safety issues arising from natural or man-made causes such as earthquakes, brush fires, home/building fires, freeway travel safety, floods and landslides. Grade: Pass/No Pass. Open Entry/Open Exit.

Health & Safety 877
Health Issues & Concepts
Credit(s): 0
Class Hours: 72 Lecture total.
Provides a basic foundation in the following health topics: mental, family, and social health; the stages of the life cycle; medicine and drugs; diseases and disorders. Grade: Pass/No Pass. Open Entry/Open Exit.

Health & Safety 898
Substance Abuse
Credit(s): 0
Class Hours: 18 Lecture total.
Provides instruction and discussion on the following components: addictive substances, physiology of addiction, stages of addiction, coping strategies, family systems, cognitive/behavioral principles, family relationships, and relapse prevention. Grade: Pass/No Pass. Open Entry/Open Exit.

SECONDARY SUBJECTS GED (HSGED)

Certificate of Completion
Secondary Education/GED Preparation (24467)
Courses in ABE lead to the GED Test Preparation class which prepares students for the reading, writing, and math skills necessary for the achievement of the official GED Certificate.

Learning Outcome(s)
Upon successful completion of the requirements for this certificate, students will be able to
- Demonstrate foundational knowledge and comprehension of the natural sciences, social and behavioral sciences, and humanities.
- Demonstrate proficiency in the core math concepts from arithmetic through geometry.
- Demonstrate effective written communication skills.

Certificate requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secondary Subjects GED 031, GED Test Preparation</td>
<td>360</td>
</tr>
<tr>
<td>Adult Basic Education 009, Adult Basic Education</td>
<td>288</td>
</tr>
<tr>
<td>Adult Basic Education 010, Money Matters: Financial Literacy</td>
<td>36</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>684</strong></td>
</tr>
</tbody>
</table>

Courses

Secondary Subjects GED 031
GED Test Preparation
Credit(s): 0
Class Hours: 360 Lecture total.
Provides pre and post testing and individualized prescriptive instruction in preparation for the GED test. Covers test-taking strategies and the fundamentals of social studies, mathematics, science, writing, and reading. Grade: Pass/No Pass. Open Entry/Open Exit.
Division of Instruction and Student Services

Dean: Lori Fasbinder
Department Chair: Jolene Shields
Coordinator: Ethel Jordan
Faculty: Ethel Jordan, Jolene Shields

Certificate of Competency
Secondary Education (24389)

The sequence of courses in the High School Subjects and Adult Basic Education programs is designed to offer students instruction ranging from the basic skill level to the high school level with the purpose of preparing them to earn a high school diploma and for other higher educational or job opportunities. Each high school course is worth five (5) credits unless otherwise noted.

Learning Outcome(s)
Upon successful completion of the requirements for this certificate, students will be able to:

- Demonstrate foundational knowledge and comprehension of the natural sciences, social and behavioral sciences, and humanities.
- Demonstrate proficiency in the core concepts from the student's selected mathematics courses.
- Demonstrate effective written communication skills.

Certificate requirements:

ENGLISH:
Number of Credits required: 40

Required courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>High School Subjects English 083, Composition 1</td>
<td>5</td>
</tr>
<tr>
<td>High School Subjects English 084, Composition 2</td>
<td>5</td>
</tr>
<tr>
<td>High School Subjects English 085, Composition 3</td>
<td>5</td>
</tr>
</tbody>
</table>

Electives:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>High School Subjects English 020, Literature Brought to Life</td>
<td>5</td>
</tr>
<tr>
<td>High School Subjects English 030, AP English 1A</td>
<td>5</td>
</tr>
<tr>
<td>High School Subjects English 050, English Through Literature 11B</td>
<td>5</td>
</tr>
<tr>
<td>High School Subjects English 051, English Through Literature 12B</td>
<td>5</td>
</tr>
<tr>
<td>High School Subjects English 052, English Language Arts 1</td>
<td>5</td>
</tr>
<tr>
<td>High School Subjects English 053, English Language Arts 2</td>
<td>5</td>
</tr>
<tr>
<td>High School Subjects English 063, English Through Literature 11A</td>
<td>5</td>
</tr>
<tr>
<td>High School Subjects English 064, English Through Literature 12A</td>
<td>5</td>
</tr>
<tr>
<td>High School Subjects English 066, English Fundamentals 2</td>
<td>5</td>
</tr>
<tr>
<td>High School Subjects English 067, English Fundamentals 3</td>
<td>5</td>
</tr>
<tr>
<td>High School Subjects English 068, English Fundamentals 4</td>
<td>5</td>
</tr>
<tr>
<td>High School Subjects English 070, Short Story</td>
<td>5</td>
</tr>
<tr>
<td>High School Subjects English 072, Poetry</td>
<td>5</td>
</tr>
<tr>
<td>High School Subjects English 076, The Novel</td>
<td>5</td>
</tr>
<tr>
<td>High School Subjects English 098, Building Vocabulary 3</td>
<td>5</td>
</tr>
<tr>
<td>High School Subjects English 201, Survey of English Level 1</td>
<td>5</td>
</tr>
<tr>
<td>High School Subjects English 202, Survey of English Level 2</td>
<td>5</td>
</tr>
<tr>
<td>High School Subjects English 203, Survey of English Level 3</td>
<td>5</td>
</tr>
<tr>
<td>High School Subjects English 204, Survey of English Level 4</td>
<td>5</td>
</tr>
<tr>
<td>High School Subjects Reading 089, Reading Proficiency Development</td>
<td>5</td>
</tr>
<tr>
<td>High School Subjects Reading 090, Reading Improvement</td>
<td>5</td>
</tr>
<tr>
<td>High School Subjects Reading 093, Building Reading Skills 1</td>
<td>5</td>
</tr>
<tr>
<td>High School Subjects Reading 094, Building Reading Skills 2</td>
<td>5</td>
</tr>
</tbody>
</table>

*A maximum of 10 credits from High School Subjects Reading 089, 090, 093, and 094 can be used for English credit.

NATURAL SCIENCES:
Number of Credits required: 20

Required courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>High School Subjects Science 168, Life Science 1</td>
<td>5</td>
</tr>
<tr>
<td>High School Subjects Science 169, Life Science 2</td>
<td>5</td>
</tr>
<tr>
<td>High School Subjects Science 193, Basic Science 2</td>
<td>5</td>
</tr>
</tbody>
</table>

Must include one (1) of the following physical science courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>High School Subjects Science 100, Chemistry 1B</td>
<td>5</td>
</tr>
<tr>
<td>High School Subjects Science 184, Chemistry 1A</td>
<td>5</td>
</tr>
<tr>
<td>High School Subjects Science 188, Earth Science 1</td>
<td>5</td>
</tr>
<tr>
<td>High School Subjects Science 190, Physical Science 1</td>
<td>5</td>
</tr>
<tr>
<td>High School Subjects Science 191, Physical Science 2</td>
<td>5</td>
</tr>
<tr>
<td>High School Subjects Science 192, Basic Science 1</td>
<td>5</td>
</tr>
</tbody>
</table>

Electives:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>High School Subjects Science 182, Physiology 1A</td>
<td>5</td>
</tr>
<tr>
<td>High School Subjects Science 183, Physiology 1B</td>
<td>5</td>
</tr>
<tr>
<td>High School Subjects Science 196, Health Science</td>
<td>5</td>
</tr>
</tbody>
</table>

SOCIAL AND BEHAVIORAL SCIENCES:
Number of Credits required: 30

Required courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>High School Subjects Social Science 215, Introduction to Economics</td>
<td>5</td>
</tr>
<tr>
<td>High School Subjects Social Science 222, Government 1: United States Federal Government and Politics</td>
<td>5</td>
</tr>
</tbody>
</table>

Must include both of the following American Government courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>High School Subjects Social Science 218, US History 1: Colonization to Industrialization</td>
<td>5</td>
</tr>
<tr>
<td>High School Subjects Social Science 219, US History 2: The Shaping of Modern America</td>
<td>5</td>
</tr>
</tbody>
</table>

Must include both of the following World History courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>High School Subjects Social Science 229, World History, Geography, and Culture 1</td>
<td>5</td>
</tr>
<tr>
<td>High School Subjects Social Science 230, World History, Geography, and Culture 2</td>
<td>5</td>
</tr>
</tbody>
</table>

Electives:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>High School Subjects Social Science 216, World Cultures 1A</td>
<td>5</td>
</tr>
<tr>
<td>High School Subjects Social Science 217, World Cultures 1B</td>
<td>5</td>
</tr>
<tr>
<td>High School Subjects Social Science 223, Government 2: California State/Local Government</td>
<td>5</td>
</tr>
<tr>
<td>High School Subjects Social Science 224, World Geography 1A</td>
<td>5</td>
</tr>
<tr>
<td>High School Subjects Social Science 225, World Geography 1B</td>
<td>5</td>
</tr>
</tbody>
</table>

HUMANITIES:
Number of Credits required: 10

Electives:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>High School Subjects Arts 020, Literature Brought to Life</td>
<td>5</td>
</tr>
<tr>
<td>High School Subjects Arts 070, Short Stories</td>
<td>5</td>
</tr>
<tr>
<td>High School Subjects Arts 828, Understanding America Through Art</td>
<td>5</td>
</tr>
<tr>
<td>High School Subjects Arts 837, The Film as Art</td>
<td>5</td>
</tr>
<tr>
<td>High School Subjects Arts 845, Drawing and Painting 1</td>
<td>5</td>
</tr>
<tr>
<td>High School Subjects Arts 846, Drawing and Painting 2</td>
<td>5</td>
</tr>
</tbody>
</table>
High School Subjects: English 070

**Short Stories**
Credit(s): 5.0
Class Hours: 72 Lecture total.
Introduces the student to the short story as a literary form so that the student will learn how the individual elements work together to present a theme or effect. The student will study the development of the short story and will read selected short stories from various periods. Open Entry/Open Exit. (Same as High School Subjects: English 070.)

High School Subjects: Arts 082

**Understanding America Through Art**
Credit(s): 5.0
Class Hours: 72 Lecture total.
Provides an overview of American civilization through arts and crafts from the colonial period through the 20th century, interpreting arts and crafts in their historical context. Open Entry/Open Exit.

High School Subjects: Arts 837

**The Film As Art**
Credit(s): 5.0
Class Hours: 72 Lecture total.
Traces the history of film from the recording of a single event through the silent film era to current classic films, and identifies the ways films reflect the values of American culture. Culminates in the use of classic and contemporary elements as a basis for modern film. Open Entry/Open Exit.

High School Subjects: Arts 845

**Drawing and Painting 1**
Credit(s): 5.0
Class Hours: 72 Lecture total.
Provides a beginning level studio course which introduces students to the world of visual art. Students will learn to draw and use a variety of materials and techniques to explore the elements of art and principles of design. Primary emphasis will be on drawing and creating works of art. Open Entry/Open Exit.

High School Subjects: Arts 846

**Drawing and Painting 2**
Credit(s): 5.0
Class Hours: 72 Lecture total.
Introduces students to visual arts with an emphasis on learning to paint and create original artwork. Students will employ a wide variety of materials and techniques as they explore the elements of arts and principles of design. Open Entry/Open Exit.

High School Subjects: English (HSENG)

High School Subjects: English 020

**Literature Brought to Life**
Credit(s): 5.0
Class Hours: 72 Lecture total.
Provides students with reading, writing, listening, and speaking activities through the study of literature. Literary samples include novels, poetry, short stories, biographies, and essays. Open Entry/Open Exit.

High School Subjects: English 030

**AP English 1A**
Credit(s): 5.0
Class Hours: 72 Lecture total.
Prepares students to take the Advanced Placement Examination. Colleges and universities give advanced placement and/or college credit based on the results of the AP examination. Areas of study include critical analysis of literature and writing assignments requiring focused practice in exposition, argument, personal narrative, and fictional or poetic forms. Open Entry/Open Exit.

**HIGH SCHOOL SUBJECTS: ARTS (HSART)**

**High School Subjects: Arts 020**

**Literature Brought to Life**
Credit(s): 5.0
Class Hours: 72 Lecture total.
Provides students with reading, writing, listening, and speaking activities through the study of literature. Literary samples include novels, poetry, short stories, biographies, and essays. Open Entry/Open Exit. (Same as High School Subjects: English 020.)

**High School Subjects: Arts 070**

**Short Stories**
Credit(s): 5.0
Class Hours: 72 Lecture total.
Introduces the student to the short story as a literary form so that the student will learn how the individual elements work together to present a theme or effect. The student will study the development of the short story and will read selected short stories from various periods. Open Entry/Open Exit. (Same as High School Subjects: English 070.)

**High School Subjects: Arts 828**

**Understanding America Through Art**
Credit(s): 5.0
Class Hours: 72 Lecture total.
Provides an overview of American civilization through arts and crafts from the colonial period through the 20th century, interpreting arts and crafts in their historical context. Open Entry/Open Exit.

**High School Subjects: Arts 837**

**The Film As Art**
Credit(s): 5.0
Class Hours: 72 Lecture total.
Traces the history of film from the recording of a single event through the silent film era to current classic films, and identifies the ways films reflect the values of American culture. Culminates in the use of classic and contemporary elements as a basis for modern film. Open Entry/Open Exit.

**High School Subjects: Arts 845**

**Drawing and Painting 1**
Credit(s): 5.0
Class Hours: 72 Lecture total.
Provides a beginning level studio course which introduces students to the world of visual art. Students will learn to draw and use a variety of materials and techniques to explore the elements of art and principles of design. Primary emphasis will be on drawing and creating works of art. Open Entry/Open Exit.

**High School Subjects: Arts 846**

**Drawing and Painting 2**
Credit(s): 5.0
Class Hours: 72 Lecture total.
Introduces students to visual arts with an emphasis on learning to paint and create original artwork. Students will employ a wide variety of materials and techniques as they explore the elements of arts and principles of design. Open Entry/Open Exit.

**High School Subjects: English (HSENG)**

**High School Subjects: English 020**

**Literature Brought to Life**
Credit(s): 5.0
Class Hours: 72 Lecture total.
Provides students with reading, writing, listening, and speaking activities through the study of literature. Literary samples include novels, poetry, short stories, biographies, and essays. Open Entry/Open Exit.

**High School Subjects: English 030**

**AP English 1A**
Credit(s): 5.0
Class Hours: 72 Lecture total.
Prepares students to take the Advanced Placement Examination. Colleges and universities give advanced placement and/or college credit based on the results of the AP examination. Areas of study include critical analysis of literature and writing assignments requiring focused practice in exposition, argument, personal narrative, and fictional or poetic forms. Open Entry/Open Exit.

**HIGH SCHOOL SUBJECTS: ARTS (HSART)**

**High School Subjects: Arts 020**

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Credit(s): 5.0
Class Hours: 72 Lecture total.
Provides students with reading, writing, listening, and speaking activities through the study of literature. Literary samples include novels, poetry, short stories, biographies, and essays. Open Entry/Open Exit. (Same as High School Subjects: English 020.)

**High School Subjects: Arts 070**

**Short Stories**
Credit(s): 5.0
Class Hours: 72 Lecture total.
Introduces the student to the short story as a literary form so that the student will learn how the individual elements work together to present a theme or effect. The student will study the development of the short story and will read selected short stories from various periods. Open Entry/Open Exit. (Same as High School Subjects: English 070.)

**High School Subjects: Arts 828**

**Understanding America Through Art**
Credit(s): 5.0
Class Hours: 72 Lecture total.
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**High School Subjects: Arts 837**

**The Film As Art**
Credit(s): 5.0
Class Hours: 72 Lecture total.
Traces the history of film from the recording of a single event through the silent film era to current classic films, and identifies the ways films reflect the values of American culture. Culminates in the use of classic and contemporary elements as a basis for modern film. Open Entry/Open Exit.

**High School Subjects: Arts 845**

**Drawing and Painting 1**
Credit(s): 5.0
Class Hours: 72 Lecture total.
Provides a beginning level studio course which introduces students to the world of visual art. Students will learn to draw and use a variety of materials and techniques to explore the elements of art and principles of design. Primary emphasis will be on drawing and creating works of art. Open Entry/Open Exit.

**High School Subjects: Arts 846**

**Drawing and Painting 2**
Credit(s): 5.0
Class Hours: 72 Lecture total.
Introduces students to visual arts with an emphasis on learning to paint and create original artwork. Students will employ a wide variety of materials and techniques as they explore the elements of arts and principles of design. Open Entry/Open Exit.

**HIGH SCHOOL SUBJECTS: ENGLISH (HSENG)**

**High School Subjects: English 020**

**Literature Brought to Life**
Credit(s): 5.0
Class Hours: 72 Lecture total.
Provides students with reading, writing, listening, and speaking activities through the study of literature. Literary samples include novels, poetry, short stories, biographies, and essays. Open Entry/Open Exit.

**High School Subjects: English 030**

**AP English 1A**
Credit(s): 5.0
Class Hours: 72 Lecture total.
Prepares students to take the Advanced Placement Examination. Colleges and universities give advanced placement and/or college credit based on the results of the AP examination. Areas of study include critical analysis of literature and writing assignments requiring focused practice in exposition, argument, personal narrative, and fictional or poetic forms. Open Entry/Open Exit.
High School Subjects: English 050
English Through Literature 11B
Credit(s): 5.0
Class Hours: 72 Lecture total.
Provides students with the opportunity to study the literature of the United States from 1850-present. Language arts skills of reading, analysis, interpretation and writing are emphasized. Multi-media approaches are utilized. Open Entry/Open Exit.

High School Subjects: English 051
English Through Literature 11B
Credit(s): 5.0
Class Hours: 72 Lecture total.
Recommended Preparation: High School Subjects: English 064.
Provides students with the opportunity to study some of the central works/authors in British and world literature. Language arts skills of reading, analysis, interpretation and writing are emphasized. Multi-media approaches are utilized. Open Entry/Open Exit.

High School Subjects: English 052
English Language Arts 1
Credit(s): 5.0
Class Hours: 72 Lecture total.
Introduces students to the development of language arts skills through an integrated course which includes instruction and practice in grammar and mechanics, academic and business writing, and reading with active responses to works of literature. Open Entry/Open Exit.

High School Subjects: English 053
English Language Arts 2
Credit(s): 5.0
Class Hours: 72 Lecture total.
Expands the development of language arts skills through reading and actively responding to various works of literature. Presents concepts of English grammar, mechanics, and punctuation through a primary text and technology-enhanced instruction. Open Entry/Open Exit.

High School Subjects: English 063
English Through Literature 11A
Credit(s): 5.0
Class Hours: 72 Lecture total.
Recommended Preparation: 10th grade English or equivalent.
Integrates language arts skills and reading analysis, interpretation, and writing through a literature-based curriculum. Survey course which allows the student an opportunity to study some of the central works in American literature. Open Entry/Open Exit.

High School Subjects: English 064
English Through Literature 12A
Credit(s): 5.0
Class Hours: 72 Lecture total.
Recommended Preparation: 11th grade English or equivalent.
Integrates language arts skills and reading analysis, interpretation, and writing through world literature. This course allows the student to study some central works in world literature. Open Entry/Open Exit.

High School Subjects: English 066
English Fundamentals 2
Credit(s): 5.0
Class Hours: 72 Lecture total.
Reinforces and expands the basic concepts of sentence structure, vocabulary, grammar, parts of speech, and writing skills. Open Entry/Open Exit.

High School Subjects: English 067
English Fundamentals 3
Credit(s): 5.0
Class Hours: 72 Lecture total.
Provides an intermediate English course that expands on vocabulary, parts of speech, and grammar to accelerate writing skills. Open Entry/Open Exit.

High School Subjects: English 068
English Fundamentals 4
Credit(s): 5.0
Class Hours: 72 Lecture total.
Recommended Preparation: High School Subjects: English 064.
Provides an advanced course in English vocabulary, grammar, parts of speech, writing skills, and general proficiency in the English language, both written and spoken. Open Entry/Open Exit.

High School Subjects: English 070
The Short Story
Credit(s): 5.0
Class Hours: 72 Lecture total.
Introduces the student to the short story as a literary form, so that the student will learn how the individual elements work together to present a theme of effect. The student will study the development of the short story and will read selected short stories from various periods. Open Entry/Open Exit.

High School Subjects: English 072
Poetry
Credit(s): 5.0
Class Hours: 72 Lecture total.
Introduces poetry as a literary form. Examines the fundamentals of poetry through the reading of poetry of literary quality. Open Entry/Open Exit.

High School Subjects: English 076
The Novel
Credit(s): 5.0
Class Hours: 72 Lecture total.
Introduces the student to the novel as a literary form and how the individual elements work together to present a theme. The student will select two novels from an annotated reading list for independent study, completing dialectical journal entries. Open Entry/Open Exit.

High School Subjects: English 083
Composition 1
Credit(s): 5.0
Class Hours: 72 Lecture total.
Provides instruction and practice in the communication of ideas in written form. Emphasis on mastery of sentence and paragraph skills, including organization in terms of unity, support, and coherence in an effective, well-supported, one-page composition. Open Entry/Open Exit.

High School Subjects: English 084
Composition 2
Credit(s): 5.0
Class Hours: 72 Lecture total.
Recommended Preparation: High School Subjects: English 083 or equivalent.
Prepares the student to write well-conceived and well-executed two-page essays. Meets the composition proficiency requirement. Open Entry/Open Exit.
High School Subjects: English 085
Composition 3
Credit(s): 5.0
Class Hours: 72 Lecture total.
Recommended Preparation: High School Subjects: English 084 or equivalent.
Prepares college bound students with an advanced writing assignment that requires in-depth research culminating in the production of a minimum 15-page research term paper, including an outline and bibliography. Open Entry/Open Exit.

High School Subjects: English 098
Building Vocabulary 3
Credit(s): 5.0
Class Hours: 72 Lecture total.
An advanced vocabulary course that provides practice in using context clues to develop vocabulary, and includes practice in synonyms, antonyms, matching words with meaning, adding words to readings, analogies, and sentence writing. Builds reading comprehension skills and creates a strong vocabulary foundation that enables students to be better readers, writers, thinkers, and test-takers. Open Entry/Open Exit.

High School Subjects: English 201
Survey of English Level 1
Credit(s): 5.0
Class Hours: 72 Lecture total.
Introduces students to the development of language arts skills through reading and active response to works of literature. Multi-media approaches are utilized. Open Entry/Open Exit.

High School Subjects: English 202
Survey of English Level 2
Credit(s): 5.0
Class Hours: 72 Lecture total.
Expands the development of language arts skills through reading and active response to works of literature. Multi-media approaches are utilized. Open Entry/Open Exit.

High School Subjects: English 203
Survey of English Level 3
Credit(s): 5.0
Class Hours: 72 Lecture total.
Explores the literature of the United States from the earliest English settlers to the present. Examines genres and characteristics of various literary movements. Open Entry/Open Exit.

High School Subjects: English 204
Survey of English Level 4
Credit(s): 5.0
Class Hours: 72 Lecture total.
Integrates the language arts skills of reading, analysis, interpretation, and writing through literature. Examines central works in world and British literature. Open Entry/Open Exit.

HIGH SCHOOL SUBJECTS: MATHEMATICS (HSMTH)

High School Subjects: Mathematics 101
AP Calculus Preparation 1A
Credit(s): 5.0
Class Hours: 72 Lecture total.
Prepares students to take the Mathematics Advanced Placement Examination-BC level. Colleges and universities may give advanced placement and/or college credit based on the results of the AP examination. Areas of study include: functions, limits, continuity, and derivative series. The graphing calculator is used extensively in the course and on the AP examinations. Open Entry/Open Exit.

High School Subjects: Mathematics 102
AP Calculus Preparation 1B
Credit(s): 5.0
Class Hours: 72 Lecture total.
Prepares students to take the Mathematics Advanced Placement Examination-BC level. Colleges and universities may give advanced placement and/or college credit based on the results of the AP examination. Areas of study include integrals and polynomical approximations. The graphing calculator is used extensively in the course and on the AP examinations. Open Entry/Open Exit.

High School Subjects: Mathematics 154
Pre-Algebra A
Credit(s): 5.0
Class Hours: 72 Lecture total.
Recommended Preparation: High School Subjects: Mathematics 159 or equivalent.
Covers language, symbolism, and fundamental operations skills required to prepare students for success in Algebra 1. Number and operation sense, estimation skills, and the ability to judge reasonableness of results will be strengthened in the context of practical applications and problem solving. Open Entry/Open Exit.

High School Subjects: Mathematics 155
Pre-Algebra B
Credit(s): 5.0
Class Hours: 72 Lecture total.
Recommended Preparation: High School Subjects: Mathematics 154 or equivalent.
Covers language, symbolism, and fundamental operations skills required to prepare students for success in Algebra 1 and Geometry. Data analysis, spatial thinking, and the ability to judge reasonableness of results will be strengthened in the context of practical applications and problem solving. Open Entry/Open Exit.

High School Subjects: Mathematics 156
Essential Mathematics 1
Credit(s): 5.0
Class Hours: 72 Lecture total.
Recommended Preparation: High School Subjects: Mathematics 159 and Adult Basic Education 009 (Math Unit).
Provides the student with practice in math skills that are applicable to everyday situations. Percents, graphs, proportions, and units of measurement are included. Open Entry/Open Exit.

High School Subjects: Mathematics 157
Essential Mathematics 2
Credit(s): 5.0
Class Hours: 72 Lecture total.
Recommended Preparation: High School Subjects: Mathematics 156 or equivalent.
Provides the student with practice in basic computational skills of mathematics, algebra, and geometry. Practical applications are included. Open Entry/Open Exit.

High School Subjects: Mathematics 159
Math Fundamentals 2
Credit(s): 5.0
Class Hours: 72 Lecture total.
Recommended Preparation: Adult Basic Education 009; ABE math or by diagnostic placement test.
Provides instruction in the areas of decimals, percents, measurements, formulas, equations, ratios, and proportions. Provides learning activities which allow for remediation of difficulties and mastery of necessary skills. Open Entry/Open Exit.
High School Subjects: Mathematics 161
Pre-Calculus with Trigonometry 1A
Credit(s): 5.0
Class Hours: 72 Lecture total.
Recommended Preparation: High School Subjects: Mathematics 163 or equivalent.
This course covers topics in basic geometry, reasoning and include: exponents, square roots, the laws of the sign, binomials, and simultaneous equations. Open Entry/Open Exit.

High School Subjects: Mathematics 164
Algebra 1A
Credit(s): 5.0
Class Hours: 72 Lecture total.
Recommended Preparation: High School Subjects: Mathematics 162 or equivalent.
Provides instruction in coordinate systems; graphing of linear equations; simultaneous equations with fractions; ratios; proportions; factoring; formulas; inequalities and square roots. Open Entry/Open Exit.

High School Subjects: Mathematics 165
Algebra 2A
Credit(s): 5.0
Class Hours: 72 Lecture total.
Recommended Preparation: High School Subjects: Mathematics 164 or equivalent.
Provides instruction in sets, numbers, formulas, monomials, exponents, square roots, the laws of the sign, binomials, and simultaneous equations. Open Entry/Open Exit.

High School Subjects: Mathematics 166
Algebra 2B
Credit(s): 5.0
Class Hours: 72 Lecture total.
Recommended Preparation: High School Subjects: Mathematics 165 or equivalent.
Provides instruction in order to study of calculus. The graphing calculator is used extensively throughout the course. Open Entry/Open Exit.

High School Subjects: Mathematics 167
Geometry A
Credit(s): 5.0
Class Hours: 72 Lecture total.
Recommended Preparation: Completion of ten credits in algebra.
This course covers topics in basic geometry, reasoning and proofs, perpendicular and parallel lines, congruent triangles, properties of triangles, and quadrilaterals. Open Entry/Open Exit.

High School Subjects: Mathematics 168
Geometry B
Credit(s): 5.0
Class Hours: 72 Lecture total.
This course covers topics in transformations, similarity, right triangles, trigonometry, circles, areas of polygons and circles, surface area and volume. Open Entry/Open Exit.

High School Subjects: Mathematics 180
Pre-Calculus With Trigonometry 1B
Credit(s): 5.0
Class Hours: 72 Lecture total.
Recommended Preparation: High School Subjects: Mathematics 161 or equivalent.
Extends the study of trigonometry, analytical geometry, functional analysis, and algebraic techniques needed in preparation for the study of calculus. The graphing calculator is used extensively throughout the course. Open Entry/Open Exit.

High School Subjects: Other 050
Basics of Leadership Part 1
Credit(s): 0
Class Hours: 72 Lecture total.
Supervised one-to-one and small group tutoring in academic subject, for students enrolled at Rancho Santiago Community College District in courses for which tutoring is requested. Exam review sessions offered in some areas. Open Entry/Open Exit.

High School Subjects: Other 202
Basics of Leadership Part 2
Credit(s): 5.0
Class Hours: 72 Lecture total.
Introduces applied leadership and self-development skills. Information will be presented in academic format, and students will be required to demonstrate mastery through participation in student-centered, hands-on activities. This course consists of ten stand-alone lessons, moderated by counseling faculty. Open Entry/Open Exit.

High School Subjects: Other 505
Spanish 2A
Credit(s): 5.0
Class Hours: 72 Lecture total.
Designed to further develop the student's control of the language through listening, speaking, reading, and writing activities with emphasis being placed upon listening and speaking. Develops the student's knowledge of cultural topics. Open Entry/Open Exit.

High School Subjects: Other 510
Spanish 2B
Credit(s): 5.0
Class Hours: 72 Lecture total.
Designed to further develop the student's control of the language through listening, speaking, reading, and writing activities with emphasis being placed upon listening and speaking. Develops the student's knowledge of cultural topics. Open Entry/Open Exit.
**HIGH SCHOOL SUBJECTS: SCIENCE (HSSCI)**

**High School Subjects: Science 100**
Chemistry 1B  
Credit(s): 5.0  
Class Hours: 72 Lecture total.  
Recommended Preparation: High School Subjects: Science 184 or equivalent.  
Extends the study of properties that can be used to identify matter and the techniques to measure those properties. Core topics include thermochemistry, gases, liquids and solids, solutions, chemical equilibrium, acids and bases, and organic chemistry. Open Entry/Open Exit.

**High School Subjects: Science 168**
Life Science 1  
Credit(s): 5.0  
Class Hours: 72 Lecture total.  
Surveys the principles and concepts of life science, including the study of organisms and their environment. Cells, plants, protists, heredity, and diversity of life will be examined. Open Entry/Open Exit.

**High School Subjects: Science 169**
Life Science 2  
Credit(s): 5.0  
Class Hours: 72 Lecture total.  
Surveys the principles and concepts of life science, including the study of animals, ecology, and the human body. Open Entry/Open Exit.

**High School Subjects: Science 182**
Physiology 1A  
Credit(s): 5.0  
Class Hours: 72 Lecture total.  
Develops an understanding of the structure and functions of the systems of the body and their relationships. Fundamental topics include structural and functional organization of the human body, cell physiology, integration of skeletal, muscular and nervous systems. Study of other organisms is included to complement an understanding of the human body. Open Entry/Open Exit.

**High School Subjects: Science 183**
Physiology 1B  
Credit(s): 5.0  
Class Hours: 72 Lecture total.  
Recommended Preparation: High School Subjects: Science 182 or equivalent.  
Develops an understanding of the structure and function of the systems of the body and their relationships. Fundamental topics include structural and functional organization of the human circulatory, respiratory, digestive, excretory, endocrine, and reproductive systems. Open Entry/Open Exit.

**High School Subjects: Science 184**
Chemistry 1A  
Credit(s): 5.0  
Class Hours: 72 Lecture total.  
Provides instruction in the principles and concepts of general science, including scientific method, energy and motion, the nature of matter, and the characteristics and properties of various kinds of substances. Open Entry/Open Exit.

**High School Subjects: Science 188**
Earth Science 1  
Credit(s): 5.0  
Class Hours: 72 Lecture total.  
Provides instruction in the principles and concepts of earth science. The Earth's matter and features will be examined. Open Entry/Open Exit.

**High School Subjects: Science 190**
Physical Science 1  
Credit(s): 5.0  
Class Hours: 72 Lecture total.  
Surveys the principles and concepts of physical science, including energy and motion, the nature of matter, and the examination of electricity and energy resources. Open Entry/Open Exit.

**High School Subjects: Science 191**
Physical Science 2  
Credit(s): 5.0  
Class Hours: 72 Lecture total.  
Surveys the principles and concepts of physical science, including interactions of matter; analysis of waves, light, and sound; and the examination of electricity and energy resources. Open Entry/Open Exit.

**High School Subjects: Science 192**
Basic Science 1  
Credit(s): 5.0  
Class Hours: 72 Lecture total.  
Surveys basic principles and concepts of general science including Earth, space, and physical science. Examines minerals, rocks, the atmosphere, weather, climate, and the earth in space. Discusses properties and classes of matter, Newton's Laws of Motion, energy and energy resources. Open Entry/Open Exit.

**HIGH SCHOOL SUBJECTS: READING (HSRDG)**

**Reading Proficiency Development**  
Credit(s): 5.0  
Class Hours: 72 Lecture total.  
Enables students to become proficient in practical, content, and reference skills as well as improve general comprehension and vocabulary skills. This course provides preparation for the reading proficiency examination. Open Entry/Open Exit.

**High School Subjects: Reading 090**
Reading Improvement  
Credit(s): 5.0  
Class Hours: 72 Lecture total.  
This course concentrates on two main approaches to improve reading skills: speed reading, which increases the number of words that can be read in a minute, and use of reading strategies to extract information from a text in the most effective way possible. Students will advance and adjust their individual reading rates appropriate to purpose. Open Entry/Open Exit.

**High School Subjects: Reading 093**
Building Reading Skills 1  
Credit(s): 5.0  
Class Hours: 72 Lecture total.  
Provides an opportunity for skill development in word recognition, comprehension, study and content reading skills which are necessary for success in the High School Subjects program. Computer-aided instruction is included. Open Entry/Open Exit.

**High School Subjects: Reading 094**
Building Reading Skills 2  
Credit(s): 5.0  
Class Hours: 72 Lecture total.  
Provides an opportunity for skill development in word recognition, general and inferential comprehension, critical thinking and content reading skills which are necessary for success in the High School Subjects program. Computer-aided instruction is included. Open Entry/Open Exit.

**HIGH SCHOOL SUBJECTS: SCIENCE (HSSCI)**

**High School Subjects: Science 168**
Life Science 1  
Credit(s): 5.0  
Class Hours: 72 Lecture total.  
Surveys the principles and concepts of life science, including the study of organisms and their environment. Cells, plants, protists, heredity, and diversity of life will be examined. Open Entry/Open Exit.

**High School Subjects: Science 169**
Life Science 2  
Credit(s): 5.0  
Class Hours: 72 Lecture total.  
Surveys the principles and concepts of life science, including the study of animals, ecology, and the human body. Open Entry/Open Exit.
High School Subjects: Science 193
Basic Science 2
Credit(s): 5.0
Class Hours: 72 Lecture total.
Surveys principles and concepts of life and ecological science. Examines life structure and classification, cellular processes, heredity, evolution, body systems, plants, ecology, and conserving resources. Open Entry/Open Exit.

High School Subjects: Science 196
Health Science
Credit(s): 5.0
Class Hours: 72 Lecture total.
Provides a basic foundation in personal health, nutrition, body functions, first aid and community health. Open Entry/Open Exit.

HIGH SCHOOL SUBJECTS: SOCIAL SCIENCES (HSSOC)

High School Subjects: Social Sciences 215
Introduction to Economics
Credit(s): 5.0
Class Hours: 72 Lecture total.
Introduces the basic concepts of economics. Explores the basic questions of every economic system. Examines money, the role of consumers, workers, businesses, and governments. Open Entry/Open Exit.

High School Subjects: Social Sciences 216
World Cultures 1A
Credit(s): 5.0
Class Hours: 72 Lecture total.
A general survey of world history and culture from the fourteenth century Italian Renaissance to the nineteenth century and the Industrial Age. Open Entry/Open Exit.

High School Subjects: Social Sciences 217
World Cultures 1B
Credit(s): 5.0
Class Hours: 72 Lecture total.
A general survey of world history and culture from World War I to the present including modern industrialization and globalization. Open Entry/Open Exit.

High School Subjects: Social Sciences 218
U.S. History 1: Colonization to Industrialization
Credit(s): 5.0
Class Hours: 72 Lecture total.
Surveys events, movements, and personalities in United States history from the colonial period through reconstruction, westward expansion, and industrialization. Includes immigration, plight of Native and African Americans, reform movements, and geographical influences in the history of the United States. Open Entry/Open Exit.

High School Subjects: Social Sciences 219
U.S. History 2: The Shaping of Modern America
Credit(s): 5.0
Class Hours: 72 Lecture total.
Recommended Preparation: High School Subjects: Social Sciences 218. Examines United States history from the beginning of industrialization to present. Emphasizes the emergence of America on the international, economic, geographical, social, and political scene. Open Entry/Open Exit.

High School Subjects: Social Sciences 222
Government 1: United States Federal Government and Politics
Credit(s): 5.0
Class Hours: 72 Lecture total.
Examines the development of the federal government from colonial times and the structure of contemporary government. Explores the economic, social, and political influence on American citizens and their civic duties and responsibilities. Open Entry/Open Exit.

High School Subjects: Social Sciences 223
Government 2: California State/Local Government
Credit(s): 5.0
Class Hours: 72 Lecture total.
Examines the diversity of California's geography, economy, and population, as well as California's history and constitutional development. Explores voters' roles in state and local politics. Open Entry/Open Exit.

High School Subjects: Social Sciences 224
World Geography 1A
Credit(s): 5.0
Class Hours: 72 Lecture total.
Provides a basic foundation for understanding physical geography and the cultural and economic variables in relation to the earth and its history. Introduces North America, Latin America, Europe, and Russia. Includes geography skills such as map reading, interpretation of graphs and diagrams, and map identification. Open Entry/Open Exit.

High School Subjects: Social Sciences 225
World Geography 1B
Credit(s): 5.0
Class Hours: 72 Lecture total.
Provides an overview of certain areas of the world in terms of their physical, cultural, historical, and economic geography. Introduces North Africa, the Middle East, Africa south of the Sahara, the Asian Region, and the Pacific Region. Includes geography skills such as map reading, interpreting graphs, and analyzing data from a chart. Open Entry/Open Exit.

High School Subjects: Social Sciences 229
World History, Geography, and Culture 1
Credit(s): 5.0
Class Hours: 72 Lecture total.
Primes multiple perspectives on specific historical events in the context of a broad world view. Begins with the fourteenth century Italian Renaissance and continues on to the fourteenth century and the Industrial Age. Open Entry/Open Exit.

High School Subjects: Social Sciences 230
World History, Geography, and Culture 2
Credit(s): 5.0
Class Hours: 72 Lecture total.
Relates the human story by reviewing perspectives on specific historical events in the context of a broad world view. The historical time frame begins with World War I and continues through to the present including modern industrialization and globalization. Open Entry/Open Exit.
OLDER ADULTS (OAP)

Courses

Older Adults 457
Music Arts for Older Adults
Credit(s): 0
Class Hours: 72 Lecture total.
Provides a positive framework for developing and enhancing music appreciation, vocal and instrumental skills. Emphasis will be on activities designed to encourage creative expression.
Grade: Pass/No Pass. Open Entry/Open Exit.

Older Adults 518
Creative Cooking for Older Adults
Credit(s): 0
Class Hours: 72 Lecture total.
Enhances awareness of current cooking techniques, basic nutrition, and consumer awareness. A variety of cooking appliances and methods are utilized. Grade: Pass/No Pass. Open Entry/Open Exit.

Older Adults 802
Seminar for Older Adults
Credit(s): 0
Class Hours: 72 Lecture total.
Provides information and a discussion forum related to the examination of concerns common to older adults. Discovers specific needs and interests and examines current news events as interpreted through historical background and current political/regional developments and changes. Grade: Pass/No Pass. Open Entry/Open Exit.

Older Adults 823
Manipulative Skills for Older Adults
Credit(s): 0
Class Hours: 72 Lecture total.
Concentrates on improvement of motor skills and decision making through utilization of a variety of art media and techniques. Provides opportunities for analysis and decision making skills while exercising basic manipulative skills. Grade: Pass/No Pass. Open Entry/Open Exit.

Older Adults 894
Physical Fitness for Older Adults
Credit(s): 0
Class Hours: 72 Lecture total.
Teaches movement exercises designed to improve or maintain flexibility, strength, endurance and cardiovascular and respiratory functions. Emphasizes motor movements, hand-eye coordination, body space awareness, balance training, reaction time, joint protection, and relaxation techniques. Grade: Pass/No Pass. Open Entry/Open Exit.

PARENT EDUCATION (PRNT)

Courses

Parent Education 527
Pre-Kindergarten
Credit(s): 0
Class Hours: 132 Lecture total.
Provides the opportunity for parents and others to learn the importance of providing appropriate early childhood experiences and preparing children for a successful kindergarten experience. Topics include school readiness, how to transform children's everyday world into an exciting learning environment, and how to stay positively involved in children's education. Grade: Pass/No Pass. Open Entry/Open Exit.

Parent Education 532
Effective Parenting
Credit(s): 0
Class Hours: 132 Lecture total.
Provides parents with an overview of child development milestones. Includes varied strategies for problem solving, effective communication, positive discipline and child-centered activities. Raises awareness of substance abuse, gangs, suicide, and peer pressure. Encourages parents to take an active role to ensure the academic success, health and safety, and social well-being of their children. Grade: Pass/No Pass. Open Entry/Open Exit.

Parent Education 544
Preparation for Childbirth
Credit(s): 0
Class Hours: 36 Lecture total.
Provides prospective parents with information regarding the intellectual, physical, and emotional components of the birth process. Emphasizes exercise techniques for relaxation, labor, birth, and post-natal care. Grade: Pass/No Pass. Open Entry/Open Exit.
SUBSTANTIAL DISABILITIES (SSD)

Courses

Substantial Disabilities 200
Issues and Concepts for Adults With Developmental Disabilities
Credit(s): 0
Class Hours: 180 Lecture total.
Provides information related to topics of everyday interest and importance to adults with developmental disabilities. Examines issues of relevance and provides a forum for discussion and exploration of various topics, such as current events, cultural awareness and health. Grade: Pass/No Pass. Open Entry/Open Exit.

Substantial Disabilities 787
Employment Preparation for Adults with Developmental Disabilities
Credit(s): 0
Class Hours: 180 Lecture total.
Assists adults with developmental disabilities attain a higher functional level for the purpose of employment. Teaches skills necessary to establish and maintain productive interpersonal relationships, social interaction, and etiquette related to home, community, and vocational settings. Grade: Pass/No Pass. Open Entry/Open Exit.

Substantial Disabilities 788
Independent Living Skills for Adults with Developmental Disabilities
Credit(s): 0
Class Hours: 180 Lecture total.
Assists adults with developmental disabilities attain a higher functional level for independent living in these areas: health and nutrition, personal appearance, communication, manners, money management, safety and consumer awareness, transportation, social interaction, and practical reading, writing and math skills related to home and community settings. Grade: Pass/No Pass. Open Entry/Open Exit.

Substantial Disabilities 793
Physical Activities for Adults with Developmental Disabilities
Credit(s): 0
Class Hours: 180 Lecture total.
Assists adults with developmental disabilities acquire the skills necessary to maximize physical capabilities through physical activities tailored to their abilities. Students will be guided through independent and group activities to develop fitness awareness. Grade: Pass/No Pass. Open Entry/Open Exit.

VOCATIONAL

Division of Instruction and Student Services
Dean: Lori Fasbinder

VOCATIONAL: BUSINESS (VBUS)

Certificate of Completion
Customer Service Representative (24427)

The certificate of completion in Customer Service Representative is designed to give students the necessary knowledge and skills to deal directly with customers as the company representative in special problems that may arise. Students will be prepared to work as commercial or residential service representatives in positions in major department stores, collection agencies, credit bureaus, airlines, travel agencies, medical insurance agencies, public utilities and telephone answering services.

Learning Outcome(s)

Upon successful completion of the requirements for this certificate, students will be able to:

- Work efficiently with Windows-based applications using common, cross-application keyboard shortcuts; e.g., save, open, print, copy, paste, etc.
- Demonstrate competence in a variety of Windows-based applications.

Certificate requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vocational Business 012, Workforce Readiness</td>
<td>60</td>
</tr>
<tr>
<td>Vocational Business 119, Introduction to Keyboarding and Basic Windows</td>
<td>60</td>
</tr>
<tr>
<td>Vocational Business 258, Navigating the Internet</td>
<td>60</td>
</tr>
<tr>
<td>Vocational Business 260, Introduction to Word Processing using MS Word</td>
<td>60</td>
</tr>
</tbody>
</table>

TOTAL 240

Certification of Completion
General Office Clerk (24095)

The certificate of completion in General Office Clerk is designed to give students the skills for entry-level positions in the business world. Clerk typist, credit clerk, file clerk, general clerk, receptionist, or data entry clerk positions require limited knowledge of office management systems and procedures. Clerical duties include skills in answering telephones, bookkeeping, typing or word processing, office machine operation, and filing.

Learning Outcome(s)

Upon successful completion of the requirements for this certificate, students will be able to:

- Demonstrate proficiency in computer equipment office skills used including data entry, word processing, spreadsheets, and machine operation.
- Work efficiently with windows-based applications using common, cross-application keyboard shortcuts; e.g., save, open, print, copy, paste, etc.

Certificate requirements

<table>
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<tr>
<td>Vocational Business 012, Workforce Readiness</td>
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<tr>
<td>Vocational Business 118, Introduction to Windows</td>
<td>60</td>
</tr>
<tr>
<td>Vocational Business 119, Introduction to Keyboarding and Basic Windows</td>
<td>60</td>
</tr>
<tr>
<td>Vocational Business 258, Navigating the Internet</td>
<td>60</td>
</tr>
<tr>
<td>Vocational Business 260, Introduction to Word Processing using MS Word</td>
<td>60</td>
</tr>
<tr>
<td>Vocational Business 262, Introduction to Spreadsheets using MS Excel</td>
<td>60</td>
</tr>
</tbody>
</table>

TOTAL 360
Certificate of Completion
Executive Secretary / Administrative Assistant (24426)

The certificate of completion in Executive Secretary/Administrative Assistant is designed to give students the necessary knowledge and skills from diversified technology, and background to hold high-level administrative support positions of responsibility in the workplace. Students will be prepared to conduct research, prepare reports, and perform clerical functions such as preparing correspondence, receiving visitors, arranging conference calls, and scheduling meetings.

Learning Outcome(s)
Upon successful completion of the requirements for this certificate, students will be able to
- Work efficiently with Windows-based applications using common, cross-application keyboard shortcuts; e.g., save, open, print, copy, paste, etc.
- Demonstrate competence in a variety of Windows-based applications.

Certificate requirements
| Vocational Business 012, Workforce Readiness | 60 |
| Vocational Business 013, Introduction to Personal Management using MS Outlook | 60 |
| Vocational Business 096, Introduction to Use of Digital Cameras using Adobe InDesign | 60 |
| Vocational Business 102, Introduction to Desktop Publishing using Adobe InDesign | 60 |
| Vocational Business 117, Introduction to Document Processing using Adobe Acrobat | 30 |
| Vocational Business 119, Introduction to Keyboarding and Basic Windows | 60 |
| Vocational Business 258, Navigating the Internet | 60 |
| Vocational Business 260, Introduction to Word Processing using MS Word | 60 |
| Vocational Business 261, Introduction to Databases using MS Access | 60 |
| Vocational Business 262, Introduction to Spreadsheets using MS Excel | 60 |
| Vocational Business 304, Introduction to Electronic Presentations using MS PowerPoint | 60 |
| **TOTAL** | **630** |

Certificate of Completion
First-Line Supervisor/Manager, Office and Administrative Support Workers (24187)

The certificate of completion in First-Line Supervisor/Manager, Office and Administrative Support Workers is designed for both entry-level and experienced office workers looking for a promotion. Graduates will have expert office skills and in-depth software knowledge. The program provides training in office information systems and communications, work process and organizational performance improvement, business decision-making, project management, and capital and human resource management.

Learning Outcome(s)
Upon successful completion of the requirements for this certificate, students will be able to
- Work efficiently with Windows-based applications using common, cross-application keyboard shortcuts; e.g., save, open, print, copy, paste, etc.
- Demonstrate competence in a variety of Windows-based applications.

Certificate requirements
| Vocational Business 014, Introduction to Mobile and Social Media Tools | 60 |
| Vocational Business 097, Introduction to Personal Commerce on the Internet | 60 |
| Vocational Business 103, Introduction to MS Project | 60 |
| Vocational Business 118, Introduction to Windows | 60 |
| Vocational Business 258, Navigating the Internet | 60 |
| Vocational Business 260, Introduction to Word Processing using MS Word | 60 |
| Vocational Business 262, Introduction to Spreadsheets using MS Excel | 60 |
| Vocational Business 304, Introduction to Electronic Presentations using MS PowerPoint | 60 |
| **TOTAL** | **480** |

Certificate of Completion
Web Associate (24420)

The certificate of completion in Web Associate is designed to give students the necessary knowledge and skills to support providers and consumers of web services. The web associate utilizes the understanding of distributed web services to support advertising, marketing and sales staff in today's global economy. Understanding and utilizing developed web applications is critical to finding new business for web design, Internet marketing, hosting, programming, and technology projects.

Learning Outcome(s)
Upon successful completion of the requirements for this certificate, students will be able to
- Demonstrate proficiency in creating, editing, and managing websites and images using industry standard web applications.
- Work efficiently with window-based applications that operate in multiple platforms.

Certificate requirements
| Vocational Business 010, Introduction to Web Design using Adobe Dreamweaver | 60 |
| Vocational Business 097, Introduction to Personal Commerce on the Internet | 60 |
| Vocational Business 242, Introduction to Vector Graphics using Adobe Illustrator | 60 |
| Vocational Business 302, Introduction to Web Page Development using HTML | 60 |
| Vocational Business 303, Introduction to Electronic Imaging using Adobe Photoshop | 60 |
| **TOTAL** | **300** |
Certificate of Completion
Medical Billing (24052)

The certificate of completion in Medical Billing is designed to give students the necessary knowledge and skills to hold a medical billing position. Students will have practical experience using computers and patient billing software, be familiar with the rules and guidelines of health care plans in order to submit proper documentation for appropriate reimbursement of services rendered, and they will have the necessary customer service skills to succeed in this field.

Learning Outcome(s)
Upon successful completion of the requirements for this certificate, students will be able to
• Apply the concepts and skills of medical billing using industry-standard software; e.g., using Allscripts software.
• Demonstrate effective workforce skills, including oral and written communication, and resume and interview preparation.

Certificate requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vocational Business 012, Workforce Readiness</td>
<td>60</td>
</tr>
<tr>
<td>Vocational Business 080, Introduction to Medical Billing</td>
<td>120</td>
</tr>
<tr>
<td>Vocational Business 119, Introduction to Keyboarding and Basic Windows</td>
<td>60</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>240</strong></td>
</tr>
</tbody>
</table>

Certificate of Completion
Multi-Media Artists and Animators (33161)

The certificate of completion in Multi-Media Artists and Animators is designed to develop the technical and creative knowledge and skills necessary for employment in the entertainment industry.

Learning Outcome(s)
Upon successful completion of the requirements for this certificate, students will be able to
• Demonstrate proficiency in Digital Cameras, Video, 2D and 3D Animation applications.
• Work efficiently with window-based applications that operate in multiple platforms.

Certificate requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vocational Business 096, Introduction to Use of Digital Cameras</td>
<td>60</td>
</tr>
<tr>
<td>Vocational Business 101, Introduction to 3D Modeling using Blender</td>
<td>60</td>
</tr>
<tr>
<td>Vocational Business 105, Introduction to 3D Animation using Blender</td>
<td>60</td>
</tr>
<tr>
<td>Vocational Business 109, Introduction to Desktop Video Editing using Adobe Premiere</td>
<td>60</td>
</tr>
<tr>
<td>Vocational Business 120, Introduction to Animations using Adobe Flash</td>
<td>60</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>300</strong></td>
</tr>
</tbody>
</table>

Certificate of Completion
Receptionist/Information Clerk (30985)

The certificate of completion in Receptionist/Information Clerk is designed to give students the skills for entry-level receptionist or information clerk positions. Clerical duties include greeting the public, answering phones, making appointments, and word processing.

Learning Outcome(s)
Upon successful completion of the requirements for this certificate, students will be able to
• Complete job applications and prepare for the interviewing process.
• Demonstrate competence in a variety of Windows-based applications.

Certificate requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>High School Subjects 338, Workforce Preparation</td>
<td>15</td>
</tr>
<tr>
<td>Vocational Business 121, Introduction to Computer Software Applications</td>
<td>60</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>75</strong></td>
</tr>
</tbody>
</table>

Courses

Vocational: Business 010
Introduction to Web Design using Adobe Dreamweaver
Credit(s): 0
Class Hours: 60 Lecture total.
Provides introductory instruction on Adobe Dreamweaver, one of the industry's leading web authoring tools. Students will learn how to create, publish, manage, and maintain a website. Grade: Pass/No Pass. Open Entry/Open Exit.

Vocational: Business 012
Workforce Readiness
Credit(s): 0
Class Hours: 60 Lecture total.
Provides instruction in office skills for employment preparation. Students will learn communication, decision-making, interpersonal, lifelong learning, and job seeking skills. Grade: Pass/No Pass. Open Entry/Open Exit.

Vocational: Business 013
Introduction to Personal Management using Microsoft Outlook
Credit(s): 0
Class Hours: 60 Lecture total.
Provides introductory instruction on Microsoft Outlook, one of the industry's leading personal data management applications. Students will learn how to better manage their electronic communications, schedules, tasks, and contact information using Outlook’s E-mail, Calendar, Task, and Contact components. Grade: Pass/No Pass. Open Entry/Open Exit.

Vocational: Business 014
Introduction to Mobile and Social Media Tools
Credit(s): 0
Class Hours: 60 Lecture total.
Provides introductory instruction on how to incorporate social networks and mobile technology in a business environment utilizing applications and tools such as LinkedIn, Facebook, Twitter, wikis, and blogs. Grade: Pass/No Pass. Open Entry/Open Exit.

Vocational: Business 080
Introduction to Medical Billing
Credit(s): 0
Class Hours: 120 Lecture total.
Introduces students to concepts and skills needed for a successful career in medical office billing. Students will learn current procedural terminology, the general flow of information in a medical office, and the role of computers. Grade: Pass/No Pass. Open Entry/Open Exit.
Vocational: Business 096
Introduction to Use of Digital Cameras
Credit(s): 0
Class Hours: 60 Lecture total.
Provides introductory instruction on using digital still and digital video cameras. Introduces students to camera selection, basic features, compositional guidelines, how to transfer files from the camera to the computer, basic image editing, use of photos/videos in common applications, and output options. Grade: Pass/No Pass. Open Entry/Open Exit.

Vocational: Business 097
Introduction to Personal Commerce on the Internet
Credit(s): 0
Class Hours: 60 Lecture total.
Provides introductory instruction to personal commerce on the Internet. Topics include privacy and security issues, searching techniques, auction bidding, secure payment methods, selling techniques, and protecting consumer rights. Grade: Pass/No Pass. Open Entry/Open Exit.

Vocational: Business 101
Introduction to 3D Modeling using Blender
Credit(s): 0
Class Hours: 60 Lecture total.
Recommended Preparation: Vocational: Business 119 or equivalent.
Provides introductory instruction on 3D modeling and animation using Blender software. Introduces students to Blender's interface, 3D space, animation and modeling features, surfaces and textures, and uses. Grade: Pass/No Pass. Open Entry/Open Exit.

Vocational: Business 102
Introduction to Desktop Publishing using Adobe InDesign
Credit(s): 0
Class Hours: 60 Lecture total.
Recommended Preparation: Vocational: Business 119 or equivalent.
Provides introductory instruction for using Adobe InDesign. Introduces students to InDesign's work area, document setup, placement of text and graphics within frames, styles, color and transparency features, and how to export and print professional quality InDesign files. Grade: Pass/No Pass. Open Entry/Open Exit.

Vocational: Business 103
Introduction to MS Project
Credit(s): 0
Class Hours: 60 Lecture total.
Recommended Preparation: Vocational: Business 119 or equivalent.
Provides introductory instruction on the use of Microsoft Office Project software. Students will learn how to set up a project, manage project files, create a task list, schedule tasks, view a schedule, define and assign resources and costs, track a project, analyze progress, and revise a schedule. Grade: Pass/No Pass. Open Entry/Open Exit.

Vocational: Business 105
Introduction to 3D Animation using Blender
Credit(s): 0
Class Hours: 60 Lecture total.
Recommended Preparation: Vocational: Business 119.
Provides introductory instruction for creating short 3D animations using Blender software for viewing on the Internet or in other multimedia formats. Students learn to create animations using Blender's tools and timeline, e.g. trajectory, lighting, bones, and movements. Students will gain an understanding of the basics needed to succeed as an animator. Grade: Pass/No Pass. Open Entry/Open Exit.

Vocational: Business 109
Introduction to Desktop Video Editing using Adobe Premiere
Credit(s): 0
Class Hours: 60 Lecture total.
Recommended Preparation: Vocational: Business 119 or equivalent.
Provides introductory instruction on desktop digital video production and editing using industry standard software. Includes capturing, importing, assembling, and editing video, audio and still images. Grade: Pass/No Pass. Open Entry/Open Exit.

Vocational: Business 117
Introduction to Document Processing using Adobe Acrobat
Credit(s): 0
Class Hours: 30 Lecture total.
Provides introductory instruction for creating short Adobe Flash movies for viewing on the Internet or for viewing in other multimedia formats. Students learn to create animations using Flash's drawing tools, layers, and timeline. Students also are given an opportunity to explore Flash libraries, preview movies, save, and publish Flash documents. Grade: Pass/No Pass. Open Entry/Open Exit.

Vocational: Business 118
Introduction to Windows
Credit(s): 0
Class Hours: 60 Lecture total.
Provides introductory instruction for learning MS Windows. Introduces students to Windows: navigation, views, commands, file management, desktop customization, Help and other Windows programs; for example, address book and electronic communications. Grade: Pass/No Pass. Open Entry/Open Exit.

Vocational: Business 119
Introduction to Keyboarding and Basic Windows
Credit(s): 0
Class Hours: 60 Lecture total.
Provides introductory instruction for keyboarding by touch and learning MS Windows. Introduces students to Windows: navigation, views, commands, file management, desktop customization, and simple Accessory programs, such as WordPad, Character Map, Calculator, and Paint. Scanning and working with simple graphics is also explored. This course or Introduction to Windows is highly recommended prior to taking other courses taught within the Windows environment. Grade: Pass/No Pass. Open Entry/Open Exit.

Vocational: Business 120
Introduction to Animations using Adobe Flash
Credit(s): 0
Class Hours: 60 Lecture total.
Provides introductory instruction for creating short Adobe Flash movies for viewing on the Internet or for viewing in other multimedia formats. Students learn to create animations using Flash's drawing tools, layers, and timeline. Students also are given an opportunity to explore Flash libraries, preview movies, save, and publish Flash documents. Grade: Pass/No Pass. Open Entry/Open Exit.

Vocational: Business 121
Introduction to Computer Software Applications
Credit(s): 0
Class Hours: 60 Lecture total.
Provides individual skill-building assistance on industry-standard computer applications, e.g. Web, MS Office, Adobe Creative Suite/Cloud, and Multi-Media applications. Grade: Pass/No Pass. Open Entry/Open Exit.
Vocational: Business 242  
**Introduction to Vector Graphics using Adobe Illustrator**  
Credit(s): 0  
Class Hours: 60 Lecture total.  
Recommended Preparation: Vocational: Business 119 or equivalent. Provides introductory instruction in computer graphics and design. Includes basic design concepts, use of illustration tools, and modification of artwork and text layout. Grade: Pass/No Pass. Open Entry/Open Exit.

Vocational: Business 258  
**Navigating the Internet**  
Credit(s): 0  
Class Hours: 60 Lecture total. Introduces students to the Internet. Topics include types of Internet connections, e-mail, research, and data retrieval techniques. Grade: Pass/No Pass. Open Entry/Open Exit.

Vocational: Business 260  
**Introduction to Word Processing using MS Word**  
Credit(s): 0  
Class Hours: 60 Lecture total.  
Recommended Preparation: Vocational: Business 119 or equivalent. Provides introductory instruction to word processing techniques using the personal computer. Includes creating, formatting, editing, saving, and printing of simple documents using MS Word software. Grade: Pass/No Pass. Open Entry/Open Exit.

Vocational: Business 261  
**Introduction to Databases using MS Access**  
Credit(s): 0  
Class Hours: 60 Lecture total.  
Recommended Preparation: Vocational: Business 119 or equivalent. Provides instruction in basic concepts addressing typical database problems with MS Access software. Grade: Pass/No Pass. Open Entry/Open Exit.

Vocational: Business 262  
**Introduction to Spreadsheets using MS Excel**  
Credit(s): 0  
Class Hours: 60 Lecture total.  
Recommended Preparation: Vocational: Business 119 or equivalent. Provides instruction in basic spreadsheet concepts using typical spreadsheet problems with Microsoft Excel software. Grade: Pass/No Pass. Open Entry/Open Exit.

Vocational: Business 302  
**Introduction to Web Page Development using HTML**  
Credit(s): 0  
Class Hours: 60 Lecture total.  
Recommended Preparation: Vocational: Business 119 or equivalent. Provides introductory instruction to web page development. Topics include web page design elements: HTML; graphic images, movie and sound formats; and testing pages on cross platforms. Grade: Pass/No Pass. Open Entry/Open Exit.

Vocational: Business 303  
**Introduction to Electronic Imaging using Adobe Photoshop**  
Credit(s): 0  
Class Hours: 60 Lecture total.  
Recommended Preparation: Vocational: Business 119 or equivalent. Provides introductory instruction to electronic imaging using Adobe Photoshop software. Topics include beginning Photoshop features, scanner basics, image and file formats, color, importing/exporting of files, and printing. Grade: Pass/No Pass. Open Entry/Open Exit.

Vocational: Business 304  
**Introduction to Electronic Presentations using MS PowerPoint**  
Credit(s): 0  
Class Hours: 60 Lecture total.  
Recommended Preparation: Vocational: Business 119 or equivalent. Provides introductory instruction for development of professional quality, computer-generated presentations using presentation software used in industry. Includes concepts of combining text, graphics, animations and/or sound to create slides for electronic output. Grade: Pass/No Pass. Open Entry/Open Exit.
VOCATIONAL: CLOTHING (VCLTH)

Certificate of Completion
Commercial Textile Worker (24146)

The certificate of completion in Commercial Textile Worker prepares students for entry-level employment in the commercial textile industry. Students will learn different types of fabrics, seam finishes, garment styles, and garment construction and repair.

Learning Outcome(s)
Upon successful completion of the requirements for this certificate, students will be able to
• Apply the concept and skills of sewing to successfully construct a garment.

Certificate requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vocational Clothing 477, Fundamentals of Commercial Sewing</td>
<td>180</td>
</tr>
<tr>
<td>Vocational Clothing 483, Introduction to Commercial Sewing</td>
<td>160</td>
</tr>
<tr>
<td>TOTAL</td>
<td>340</td>
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</table>

Courses
Vocational: Clothing 477
Fundamentals of Commercial Sewing
Credit(s): 0
Class Hours: 180 Lecture total.
Recommended Preparation: Vocational: Clothing 483 or instructor's approval by assessment.
Provides instruction in commercial sewing including the selection of textiles, thread, and needle size appropriate to each item to be sewn or manufactured. Provides in-depth study of design, pattern making, construction, and quality control aspects of manufacturing. Grade: Pass/No Pass. Open Entry/Open Exit.

Vocational: Clothing 483
Introduction to Commercial Sewing
Credit(s): 0
Class Hours: 160 Lecture total.
Introduces basic commercial sewing skills, including safe operation of equipment, sewing terminology, use of patterns, fabric cutting, garment construction, and repair. Grade: Pass/No Pass. Open Entry/Open Exit.

VOCATIONAL: CONSTRUCTION (VCNST)

Certificate of Completion
Carpenter (24097)

The certificate of completion in Carpenter prepares students for entry-level employment in companies that manufacture kitchen and bathroom cabinets, music/media furniture, book shelves, and other furniture items using a variety of finishes.

Learning Outcome(s)
Upon successful completion of the requirements for this certificate, students will be able to
• Apply the concepts and skills of safe cabinetry in the design and construction of a project.

Certificate requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
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<tbody>
<tr>
<td>Vocational Construction 859, Introduction to Cabinetry/Furniture Refinishing, Pre-Apprentice</td>
<td>180</td>
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<tr>
<td>Vocational Construction 953, Fundamentals of Cabinetry/Furniture Refinishing, Pre-Apprentice</td>
<td>180</td>
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<tr>
<td>TOTAL</td>
<td>360</td>
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</table>

Courses
Vocational: Construction 608
Introduction to Welding, Pre-Apprentice
Credit(s): 0
Class Hours: 180 Lecture total.
Introduces welding safety, proper use of hand and power tools, and the basics of arc welding. Grade: Pass/No Pass. Open Entry/Open Exit.

Vocational: Construction 611
Fundamentals of Welding, Pre-Apprentice
Credit(s): 0
Class Hours: 180 Lecture total.
Recommended Preparation: Vocational: Construction 608 or by instructor's approval by assessment.
Provides basic instruction and training in Arc welding, Tungsten Inert Gas welding (TIG), and Metal Inert Gas welding (MIG). Grade: Pass/No Pass. Open Entry/Open Exit.

Vocational: Construction 859
Introduction to Cabinetry/Furniture Refinishing Pre-Apprentice
Credit(s): 0
Class Hours: 180 Lecture total.
Provides introductory instruction in workshop safety and basic use of tools and power equipment, cabinet design, construction principles, and the use of finishes on common types of woods and cabinets. Grade: Pass/No Pass. Open Entry/Open Exit.

Vocational: Construction 953
Fundamentals of Cabinetry/Furniture Refinishing, Pre-Apprentice
Credit(s): 0
Class Hours: 180 Lecture total.
Recommended Preparation: Vocational: Construction 859 or instructor's approval by assessment.
Provides instruction in basic cabinetry/furniture construction, refinishing and repair with an emphasis on the use of hand and power tools. Grade: Pass/No Pass. Open Entry/Open Exit.
VOCATIONAL: FOOD (VFOOD)

Certificate of Completion
Commercial and Institutional Food Preparation (24093)

The certificate of completion in Commercial and Institutional Food Preparation prepares students for employment in commercial and institutional food kitchens, especially in the restaurant industry, by providing knowledge and skills in hygiene, sanitation, storage, nutrition, and food service administration.

Learning Outcome(s)
Upon successful completion of the requirements for this certificate, students will be able to
• Apply the issues and concepts of safe food preparation.

Certificate requirements

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Hours</th>
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<tr>
<td>Vocational Food 010, Institutional Food Preparation</td>
<td>240</td>
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<tr>
<td>High School Subjects 338, Workforce Preparation</td>
<td>15</td>
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<tr>
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<td><strong>255</strong></td>
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</tbody>
</table>

Courses

Vocational: Food 010
Institutional Food Preparation
Credit(s): 0
Class Hours: 240 Lecture total.
Prepares students for employment in commercial and institutional food kitchens. Topics include an introduction to basic food service administration, personal hygiene and food safety/sanitation, storage, terminology, equipment, food service math and science, nutrition, procedures, and employment preparation. Prepares the students for Servsafe Food Protection Manager Certification. Grade: Pass/No Pass. Open Entry/Open Exit.

VOCATIONAL: SHELTER DOG TRAINING (VDOG)

Courses

Vocational: Shelter Dog Training 020
Concepts in Dog Training
Unit(s): 0
Class Hours: 12 Lecture total.
Provides an introduction to basic concepts of dog training, including proper techniques to socialize shelter dogs for placement in private homes. Emphasizes techniques for training animals to perform specific tasks or improve obedience. Grade: Pass/No Pass. Open Entry/Open Exit.

Vocational: Shelter Dog Training 030
Practical Dog Training
Unit(s): 0
Class Hours: 36 Lecture total.
Applies the concepts of dog training to the actual training of a shelter dog preparing it for adoption in a family home. Grade: Pass/No Pass. Open Entry/Open Exit.

VOCATIONAL: WAREHOUSING (VWHS)

Courses

Vocational Warehousing 010
Warehouse Worker
Unit(s): 0
Class Hours: 40 Lecture total.
Provides instruction, demonstration and discussion of topics that are critical for the entry level warehouse worker. Grade: Pass/No Pass. Open Entry/Open Exit.
COLLEGE FACULTY & ADMINISTRATORS
Adams, Rick (2001)
Professor of English
B.A., University of California, Berkeley
M.A., Fuller Theological Seminary
M.S., California State University Los Angeles

Aguilera, Leonor (2007)
Associate Professor of Counseling
B.A., Social Welfare, University of California, Berkeley
M.S., Academic Counseling, National University

Armbuster, Lynda (1990)
Professor of Marketing and Business
B.B.A., M.B.A., National University, Irvine

Babayan, Diana (1981)
Professor of American College English
B.A., Linguistics, California State University, Fullerton
M.A., Linguistics, California State University, Long Beach

Babeshoff, Ruth (1980)
Dean of Counseling & Student Support Services
B.A., Sociology, California State University, Fullerton
M.A., Sociology, Pepperdine University

Baez, Elizabeth (1999)
Professor of Spanish
B.A., M.A., Ph.D, University of California, Irvine

Bailey, Denise (2011)
Assistant Professor of Chemistry
B.A., Chemistry, University of California, San Diego
Ph.D., Organic Chemistry, University of California, Irvine

Baldizon-Rios, Nena (1994)
Professor of Counseling
B.S., Human Services, California State University, Fullerton
M.A., Counseling, Chapman University
Ed.D., Educational Leadership, Argosy University

Barembaum, Morrie (2000)
Professor of Astronomy
B.S., Physics, University of California, Irvine
M.S., Astronomy, San Diego State University

Professor of English
B.A., English, San Diego State University
M.A., English, Chapman University
M.F.A., Creative Writing, Chapman University

Breeden, Emma J. (2015)
Assistant Professor of Psychology
B.A., Psychology, California State University, Long Beach
M.S.W., California State University, Long Beach

Brooks, Debra Ann (1993)
Professor of Geology
A.A., Physics, San Bernardino Valley College
B.S., Geophysics, University of California, Riverside
M.S., Geophysics, Texas A & M University

Associate Professor of Kinesiology
B.A., Physical Education, Point Loma Nazarene University
M.S., Exercise Science, California University of Pennsylvania

Campitelli-Smith, Melissa (2011)
Clinical Psychologist
B.A., California State University, Long Beach
M.A., California School of Professional Psychology, Los Angeles
Psy.D., California School of Professional Psychology, Los Angeles

Professor of Psychology
B.A., Psychology, University of California, Los Angeles
Ph.D., M.S., Psychology, Washington State University.

Carroll, Judy (2006)
Associate Professor of Counseling
B.A., Political Science, University of California, Irvine
M.S., Educational Counseling, National University.

Carr-Rollitt, Lucy (1997)
Professor of Disabled Students Programs & Services
A.A., Rancho Santiago College
B.V.E., M.S., California State University, Long Beach

Chaidez, Maria (2015)
Assistant Professor of Counseling
A.A., Liberal Studies, Fullerton College
B.S., Human Services, California State University, Fullerton
M.S., Counseling, University of La Verne

Coto, Jennifer (2001)
Professor of Counseling
A.A Orange Coast College
B.A., California State University, Long Beach
M.A., California State University, Dominguez Hills
Ed.D., Argosy University

Crabill, Phillip (2013)
Assistant Professor of Counseling
A.A., Liberal Arts, Santiago Canyon College
B.A., Psychology, California State University, Fullerton
M.S., Counseling, California State University, Fullerton
Ed.D., Counseling Psychology, Argosy University

Cummins, Shawn (2001)
Professor of Kinesiology
B.S., Kinesiology, California State University, Fullerton
M.Ed., Physical Education, Azusa Pacific University

Danova, Veselka (2015)
Assistant Professor of Mathematics
B.S., Mathematics: Pure Option, California State Polytechnic University, Pomona
M.S., Mathematics: Pure Option, California State Polytechnic University, Pomona

Deaver, Douglas (2005)
Professor of Philosophy
B.A., M.A., California State University, Long Beach
Ph.D., University of Southern California

DeCarbo, Michael (2000)
Professor of Communication
B.A., Speech Communication, California State University, Los Angeles.
M.A., Communication Studies, California State University, Los Angeles

Deeley, Steven (2006)
Associate Professor of Business
B.A., Political Science, University of California, Santa Barbara
M.B.A., University of Southern California
Professor of English
B.A., Loyola Marymount University
M.A., Boston College
Ph.D., University of California, Riverside

Diaz, Darlene (2007)
Associate Professor of Mathematics
B.S., University of California, Irvine
M.S., California State University, Northridge

Elchlepp, Elizabeth (1991)
Professor of English
B.A., M.A., California State University, Fullerton

El-Said, Nahla (2005)
Professor of Chemistry
M.S., Organic Chemistry, California State University, Fullerton
Ph.D., Organic Chemistry, University of California, Riverside

Engstrom, Vanessa (2015)
Assistant Professor of Geography
B.S., Regional Development, University of Arizona
M.A., Geography, University of Arizona

Enriquez, Rosemarie (1974)
Professor of Counseling
B.A., Spanish, California State University, Long Beach
M.S., Counseling, California State University, Long Beach

Escobar, Dora (2015)
Assistant Professor of Counseling
A.A., Liberal Arts, Orange Coast College
B.A., Business Administration, California State University, Fullerton
M.S., Counseling, California State University, Fullerton

Evett, Corinna (2005)
Professor of English
B.A., M.A., English Literature, California State University, Fullerton

Fajardo, Lourdes (2005)
Professor of Spanish
B.A., California State University, Stanislaus
M.A., California State University, Sacramento

Fasbinder, Lori (2002)
Dean of Instruction and Student Services, Continuing Education
B.A., M.A., Linguistics, California State University, Fullerton
Ed.D., Educational Leadership, Argosy University

Flores, Marilyn (2013)
Dean of Arts, Humanities, Social Sciences and Library
B.A., Liberal Studies, University of California, Riverside
M.A., Education - Curriculum & Instruction, University of California, Los Angeles
Ph.D., Institutional Leadership & Policy Studies, University of California, Riverside

Foley, Denise (2006)
Associate Professor of Biology
B.S., Loyola Marymount University
Ph.D., University of California, Los Angeles

Francis, Jane E. (1987)
Professor of Mathematics
B.S., M.A., Bowling Green State University

Freidenreich, S. Leah (1991)
Professor of Library and Information Science
B.A., M.S., University of Southern California
M.A., Pacifica Graduate Institute

Frias, Rudy (2002)
Professor of Counseling
A.A., Saddleback College
B.S., California State Polytechnic University, Pomona
M.A., Ed.D., Pepperdine University

Frost, Alicia (2005)
Professor of Mathematics
B.S., M.S., California State University, Long Beach

Gause, Tiffany (2013)
Assistant Professor of Sociology
M.A., Sociology, California State University, Fullerton
B.A., Sociology, California State University, Fullerton

Geissler, Joseph (2001)
Professor of Library and Information Science
B.A., Communications, California State University, Fullerton
M.L.I.S., San Jose State University

Graham, Song (2015)
Assistant Professor of Counseling
B.A., Psychology, University of California, Irvine
M.S., Counseling, California State University, Long Beach

Granitto, James V. (2006)
Associate Professor of Philosophy
B.A., Philosophy, University of California, Irvine
M.A., Philosophy, California State University, Long Beach

Hauscarriague, Anne (2001)
Professor of Mathematics
B.S., Biology/Mathematics, St. Mary’s College of California
M.A.T., Secondary Mathematics, Kent State University
Ph.D., Math Education, Claremont Graduate University

Hedenberg, Lacy (2015)
Assistant Professor of Counseling
B.S., Human Services, California State University, Fullerton
M.S., Counseling, California State University, Fullerton

Vice President of Student Services
B.A., Sociology, California State University, Fullerton
M.S., Counseling, California State University, Long Beach
Ph.D., College Student Personnel Administration, University of Maryland, College Park

Ho, Alice (2001)
Professor of Library and Information Science
M.S., University of North Texas

Hoffman, Elizabeth (2000)
Student Health & Wellness Services Coordinator and Registered Nurse
B.S.N., Public Health Nursing, California State University, Long Beach
M.N., Nursing Administration, University of California, Los Angeles

Houska, Robert (2001)
Professor of Biology
B.A., M.A., California State University, Long Beach

Hovanitz, Eric (2001)
Professor of Geology
M.S., B.S., Geology, California State University, Los Angeles
Ph.D., Geological Sciences, University of Southern California
Professor of History
B.A., University of California, Irvine
M.A., Ph.D., University of California, Riverside

Irwin, Kari (2015)
Associate Dean of Business and Career Technical Education
A.A., Liberal Arts, Santiago Canyon College
B.S., Business Administration, California State Polytechnic University, Pomona
M.A., Management, University of Redlands

Isbell, James (2004)
Professor of English
B.A., M.A., Chapman University

James, Scott (2014)
Assistant Professor/Coordinator of Distance Education
M.A., Educational Technology, Pepperdine University
B.S., Technical Management, Embry-Riddle Aeronautical University

Jones, Vanessa (2013)
Assistant Professor of Mathematics
M.S., Mathematics, California State Polytechnic University, Pomona
B.S., Pure Mathematics, California State Polytechnic University, Pomona

Johnson, Kimberly (2015)
Assistant Professor of Biology
B.S., Marine Biology, California State University, Long Beach
M.S., Biology, California State University, Long Beach

Coordinator, High School Subjects/Adult Basic Education/Parent Education/Health & Safety/Substantial Disabilities/Older Adults Programs
B.S., Iowa State University
M.S., Northern Illinois University

Associate Dean of Student Development
B.A., History, University of California, Los Angeles
M.A., Educational Management, University of LaVerne
M.A., Clinical Psychology, Chicago School of Professional Psychology

Professor of Computer Science and Psychology
A.A., Liberal Arts, Santa Ana College
B.A., M.A., Psychology, California State University, Long Beach
Ph.D., Psychology, California School of Professional Psychology

Kirchen, DeAnna (2015)
Assistant Professor of Accounting
B.A., Business Administration, California State University, Long Beach
M.B.A., California State University, Long Beach

Professor of English
B.A., English, University of California, Los Angeles
M.A., English, California State University, Fullerton

Kubicka-Miller, Jared (2006)
Associate Professor of Communication
B.A., M.A., California State University, Long Beach

Professor of Communication
B.S., Northern Arizona University
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Lamourelle, Regina (2000)
Professor of Human Development
B.A., University of California, Santa Barbara
M.S., Ed.D., Nova Southeastern University, Florida

Lawson, Von (2015)
Dean of Business and Career Technical Education
B.A., Gerontology and Sociology, Langston University
M.A., Political Science, University of Central Oklahoma

Lennertz, William (1991)
Professor of English
B.A., California State University, Long Beach
M.F.A., George Mason University

Lui, Anson M.W. (2011)
Assistant Professor of Biology
B.S., M.S., California Polytechnic State University, San Luis Obispo

Magaloussis, Nicholas M. (2005)
Professor of Anthropology and Archaeology
B.A., Anthropology, California State University, Fullerton
M.A., Anthropology/Archeology, California State University, Fullerton

Malone, Charlie (2014)
Assistant Professor of American Sign Language
B.A., Economics, California State University, Northridge
M.A., Special Education, California State University, Northridge
Professional Clear Level II Education Specialist Credential, California State University, Northridge

Martin, Linda (2015)
Assistant Professor of Library and Information Science
A.A., Cypress College
B.S., California State University, Dominguez Hills
M.L.S., University of California, Los Angeles

Martino, Danielle L. (2006)
Associate Professor of Astronomy
B.S., California State University, Fullerton
M.S., San Diego State University

McLean, Stephen (2014)
Assistant Professor of Water Utility Science
M.S., Engineering, Loyola Marymount University, Los Angeles
B.S., Biochemistry, California Polytechnic State University, San Luis Obispo

McMullin, Mary (1998)
Professor of Reading
B.A., German, Humboldt State University,
B.A., History, Humboldt State University
M.A., Linguistics, California State University, Long Beach

Mettler, Mary (2007)
Associate Professor of Disabled Students Programs and Services
B.S., Communication Disorders, Boston University
M.S., Speech-Language Pathology, Boston University
Psy.D., M.A., Clinical Psychology, Pepperdine University

Miller, Robert (2011)
Assistant Professor of Art
B.F.A., Art, Columbia College, Chicago
M.F.A., Art, California State University, Fullerton

Moore, Kathleen (1996)
Professor of Mathematics
B.A., University of Dallas
M.A., California State University, Fullerton
Mora, Aracely (2002)  
Vice President of Academic Affairs  
B.A., Physical Education, California State University, Long Beach  
M.A., Physical Education/Instructional Design, California State University, Long Beach  
Ed.D., Institutional Management, Pepperdine University  

Myers, Stewart (1984)  
Professor of Computer Information Systems and Computer Science  
B.S., M.S., California State University, Fullerton  

Nance, Craig (2000)  
Professor of Mathematics  
A.A., Fullerton College  
M.A., B.A., Mathematics, California State University, Fullerton  

Nguyen, Tuyen (2015)  
Assistant Dean, Admissions/Records  
A.A., Liberal Arts, Santiago Canyon College  
B.A., Management, California State Polytechnic University, Pomona  
M.A., Management, University of Redlands  

Parrella, Michael (1991)  
Professor of Political Science  
B.A., M.A., History, University of California, Riverside  
M.A., Public Administration, University of California, Riverside  
Ph.D., Political Science, University of California, Riverside  

Pecenkovic, Nidzara (2015)  
Assistant Professor of English  
M.A., English, Chapman University  
M.F.A., Creative Writing, Chapman University  

Perry, Janis (1985)  
Professor of Counseling and Teacher Education  
B.S., Elementary Education, University of Southern California  
M.S., Education, University of Southern California  

Pimentel, Marcelo (2000)  
Professor of Philosophy  
B.A., California State University, Fullerton  
M.A., U.N.R.  

Powell, Kay (1994)  
Professor of English as a Second Language  
B.A., English, Brigham Young University  
M.A., Teaching English to Speakers of Other Languages, U.S. International University  

Powers, Charleen (1996)  
Professor of Biology  
B.A., M.A., California State University, Fullerton  

Quimzon, Eden (2006)  
Associate Professor of English as a Second Language  
B.A., Liberal Arts, California State University, Long Beach  
M.A., Reading and Literacy, Walden University  

Rabii-Rankin, Narges (2004)  
Professor of History and Political Science  
B.A., California State University, Fullerton  
M.A., History, California State University, Fullerton  
M.A., Political Science, California State University, Long Beach  

Reed, Stephen (2007)  
Professor of History  
B.A., History and Spanish, University of California, Riverside  
M.A., B.A., History, University of California, Riverside  
M.A., History, University of Notre Dame  

Resnick, Barry (1980)  
Professor of Counseling  
B.S., University of Southern California  
M.A., California State University, Long Beach  
M.A., National University  
Ed.D., Brigham Young University  

Rizvi, Syed (2005)  
Associate Dean of Student Support Services  
M.S., Counseling, National University, La Jolla  

Roe, Maureen (2000)  
Professor of English  
B.A., English and Philosophy, Chapman University  
M.A., English Literature, Chapman University  
M.Ed., Curriculum and Instruction, American Intercontinental University  

Rutan, Craig (2005)  
Professor of Physics and Engineering  
M.S., Physics, University of California, Irvine  
M.S., B.S., Electrical Engineering, University of California, Irvine  

Sakamoto, Scott (2001)  
Professor of Mathematics  
B.S., University of California, Santa Barbara  
M.A., M.S., Ph.D., University of Arizona  
M.A., English, California State University, Fullerton  

Salazar de la Torre, Rosa (1996)  
Professor of Counseling  
B.S., California State Polytechnic University, San Luis Obispo  
M.A., California State University, Dominguez Hills  

Salcido, Andy (1998)  
Professor of Business, Computer Information Systems & Marketing  
B.S., Business Administration, Chapman University  
B.S., Computer Information Systems, Chapman University  
M.B.A., Business Administration, Chapman University.  

Satele, Arleen (2014)  
Vice President of Administrative Services  
B.A., Business Administration, California State University of San Bernardino  
M.A., Public Administration, California State University of San Bernardino  
Ed.D, Leadership and Change, Fielding Graduate University  

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<table>
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<tr>
<th>Name</th>
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<td>Associate Professor of Biology</td>
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<td>Summers, Georgia (1985)</td>
<td>Professor of Interdisciplinary Studies, Sociology and Women's Studies</td>
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<td>Vice President of Continuing Education</td>
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<td>M.A. &amp; B.A., Mathematics, California State University, Fullerton</td>
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</tbody>
</table>
-Operating Engineers-Heavy Duty Repairer ................................ 96
-Operating Engineers-Heavy Equipment/
  Landscape Operator Engineer ........................................... 97
-Operating Engineers-Plant Equipment/
  Rock, Sand and Gravel.................................................. 97
-Operating Engineers-Special Inspector ............................... 98
-Philosophy ........................................................................ 172
-Physics ............................................................................. 184
-Power Lineman .................................................................. 103
-Real Estate ........................................................................ 181
-Requirements for Associate Degrees ............................... 37–39
-Science .............................................................................. 183–184
-Social and Behavioral Sciences .................................. 160
-Social Science .................................................................... 185
-Sociology ........................................................................... 187
-Surveying-Chainman ..................................................... 104
-Wastewater/Environmental Sanitation ............................ 194
-Water Distribution .......................................................... 193
-Water Treatment .............................................................. 194
-Women’s Studies .............................................................. 197

Associate Degrees for Transfer .................................... 25, 35–37, 43–44, 55
-Anthropology ............................................................... 60
-Business Administration ............................................... 117
-Communication Studies .............................................. 121
-Economics ...................................................................... 132
-Elementary Teacher Education .................................... 133
-English ............................................................................ 138
-Geography ....................................................................... 145
-Geology ........................................................................... 146
-History ............................................................................. 148
-Kinesiology ....................................................................... 154
-Mathematics ................................................................. 163
-Philosophy ....................................................................... 171
-Physics ............................................................................. 173
-Political Science .............................................................. 175
-Psychology ....................................................................... 176
-Sociology .......................................................................... 186
-Spanish ............................................................................. 188
-Studio Arts.......................................................... 107

Cafeteria (see Campus Centers). ....................................... 31
Calculus/Pre-Calculus .................................................. 165–167
Calendar ......................................................................... 2, 200
California Geography ................................................... 146
California State Programs (Financial Aid) ................. 32–33
California State University System, Transfer to ........ 40–48, 144
CalWORKS Program .................................................. 25
CAMP (College Assistance Migrant Program) ............. 25
Campus Centers ............................................................ 31
Campus Job Placement Office ..................................... 34
Career Advanced Placement ...................................... 15
Career Development Certificates ......................... 209–210
-English as a Second Language ................................ 213–216
-Noncredit Courses ..................................................... 209–220
Career Services .............................................................. 25, 202
-On-Campus Job Placement Office ............................. 34
Career Technical Education (CTE) Transitions ........ 16
Career Technical Training Programs .......................... 201
Carpentry Apprenticeships .......................................... 62–99
-Acoustical Tile .............................................................. 62
-Concrete ................................................................. 62
-Courses ....................................................................... 68–82
-Drywall Finisher .......................................................... 63

Human Genetics .............................................................. 115
Human Physiology ............................................................ 114, 116
Microbiology ................................................................. 114–116
Plant Diversity ............................................................... 116
-Quality and Regulatory Compliance ....................... 115
Biotechnology ................................................................. 113–115
-Biomanufacturing Technician .................................. 113
-Lab Assistant ............................................................... 115
-Laboratory Technician: Food Safety ....................... 113
-Technician, General .................................................. 115
Board of Trustees ........................................................... 6
Bookstore ........................................................................ 25
Business ........................................................................... 117–119
-Accounting ................................................................. 57–58
-Cooperative Work Experience Education ................ 119
-E-Commerce ............................................................... 119
-Economics ................................................................. 132
-Entrepreneurship ......................................................... 118–119
-Human Relations and Organizational Behavior .......... 119
-Information Systems and Applications .................. 119
-Legal Environment of ............................................... 119
-Project Management .................................................. 118, 180
-Small Business Marketing and Advertising ............ 163
-Vocational Programs .................................................. 226–230
-Website Development for ....................................... 125
Business Administration ............................................... 117
Business Communications ........................................... 161
Business Management ...................................................... 118
-Entrepreneurship ......................................................... 118
-Human Relations and Organizational Behavior .......... 161
-Principles of Management ........................................ 119
-Small Business Management .................................. 119
Business Writing ............................................................... 119
D

Dance ......................................................... 130–131
Dance History ............................................ 130
Deafness and Sign Language .................... 184–185
Debate ....................................................... 122
Degree Requirements, Associate ............. 37–39
Design
- Graphic Design .................................... 108–110
- Mobile Application Development and Design 109–111
- Web Design ............................................ 109–110
Digital Media Arts .................................... 108–110
Digital Media Studies .............................. 191–192
Disabled Students Programs and Services (DSPS) 26, 202
Disciplinary Action ................................. 24, 203
Dismissal, Academic .............................. 14–15
Distance Education ................................. 26
Drawing .................................................... 109–111
Dropping Classes .................................... 15
Drug Free Environment and Drug Prevention Program 18

E

Earth Science ............................................. 131
Ecology ..................................................... 116
E-Commerce ............................................. 119
Economics ................................................. 132
- Real Estate Economics ......................... 183
Educational Options
(See also Associate Degrees; Certificates of Achievements;
Certificates of Proficiency; Continuing Education) 35–54
Education and Teaching ......................... 133–135
- After School Program Assistant .......... 134
- After School Program Associate Teacher 134
- American Schools and Society .......... 135
Counseling ................................................. 129–130
- Diverse Learners ................................. 135
- Earth Science for Educators ............... 131
- Educational Technology .................... 135
- Elementary Education ....................... 133–134
- Human Development ......................... 150–152
- Pathways to Teaching Program .......... 21, 28
- Physical Sciences for Educators ......... 174
- Reading ............................................... 135
- Secondary Teaching Education ......... 134–135
- Spanish Language for Teachers ....... 189
- Special Education Paraprofessional ..... 135
Electrical Safety ....................................... 137
Electrician ................................................. 136–137
Electricity Apprenticeship ..................... 83–87
- Courses ............................................... 85–87
- Industrial ............................................. 83
- Intelligent Transportation Systems Electrician 84
- Sound Installer ................................. 84
- Sound Technician ............................ 85
Elementary Teaching Education .......... 133–135
Engineering ............................................. 138
- Operating Engineers Apprenticeships 96–102
- Physics for ......................................... 174
English ...................................................... 138–142
- American College English .............. 58–59
English as a Second Language (Continuing Education) .................. 201, 213–216
Enrollment Priority ..................................................................... 17
Entrepreneurship ................................................................. 118–119
Environmental Biology ....................................................... 117–118
Environmental Management ........................................... 178–180
Environmental Studies ....................................................... 142
Esthetician ........................................................................ 128–129
Ethics and Logic .................................................................. 172
Ethnic Studies ..................................................................... 42
Expenses, See Fees and Expenses ................................. 10–11
Experimental Courses .................................................. 18
Extended Opportunity Programs and Services (EOPS) .......... 26
Extenuating Circumstances .......................................... 24
External Exams .................................................................. 43–44

F
Facilities .............................................................................. 5
Faculty ............................................................................. 234–238
Family Education Rights and Privacy Act ......................... 18, 205
Fees and Expenses ................................................................ 10–11
Drop for Non-Payment Policy ................................... 10–11, 15
Non-Resident Tuition ....................................................... 11
Refund of Tuition (Non-Resident) ................................. 11
Refunds ........................................................................... 11, 20
Textbooks and Supplies .................................................. 12, 202
Film History ..................................................................... 192
Finance
Personal Finance ................................................................. 119
Real Estate Finance ............................................................. 182
Financial Accounting ...................................................... 58
Financial Aid and Scholarships ...................................... 32–34, 202
Financial Aid Services .................................................... 26
Food and Nutrition ............................................................ 171
Food Safety ....................................................................... 113, 115
Food, Vocational ................................................................. 232
Foreign Languages
French ............................................................................. 143, 168
Italian ............................................................................... 153, 168
Language Lab ..................................................................... 27
Modern Languages ............................................................ 168
Spanish ......................................................................... 168, 188–189
Free Expression ................................................................. 18
French ............................................................................. 143
Full-Time Student, Defined ........................................... 9–10

G
Gainful Employment .............................................................. 34, 36
GED Preparation ............................................................... 201
High School Subjects ......................................................... 218–224
Gemology ........................................................................ 143–144
Gender Communication .................................................. 123

General Education Certificates ........................................... 144
General Education Requirements ....................................... 37–47
Associate Degree ............................................................... 37–39
California State Universities ........................................... 45, 47
University of California .................................................. 47, 48
Genetics ........................................................................... 115
Geography ...................................................................... 145–146
Geology ........................................................................ 146–148
Geometry ......................................................................... 164–166

Grading Information
Grade Grievances .............................................................. 18–19, 203
Grade Notification ............................................................. 19
Grade Point Average ........................................................ 18, 203
Incomplete Work .............................................................. 20
Pass/No Pass .................................................................... 20–21
Replacement Penalty Grades (Academic Renewal) .......... 14
Withdrawal ..................................................................... 24
Graduation ........................................................................ 37, 206
Academic Honors at Graduation .................................... 14
Associate Degree Requirements ...................................... 37–39
Petition for Graduation .................................................. 37, 206
Grants and Loans .............................................................. 32–34
Graphic Design ................................................................. 108–110
Grievance and Complaint Procedures ......................... 18–19, 203–204
Group Dynamics ............................................................... 122
Guitar ............................................................................ 170

H
Harassment (Title IX) ............................................................. 19–20
Health and Safety ............................................................... 201, 217
Health and Wellness Services .......................................... 28
High School and Community Outreach ......................... 26, 204
High School Diploma Program, Adult ................................. 201, 206–208
High School Subjects .......................................................... 218–224
Historical Geology ............................................................... 148
History ............................................................................. 148–150
Art History ....................................................................... 109
Dance History ................................................................. 130
Filmmaking ...................................................................... 192
Philosophy ...................................................................... 172
Honors and Awards ............................................................ 33
Academic Honors ............................................................... 14
Financial Awards ............................................................... 33
Honors Courses
American Governments ..................................................... 175
American Political Thought ............................................. 175
Art Concepts ................................................................. 109
Biology ............................................................................... 114
Chemistry ......................................................................... 120
Communication ............................................................. 122–123
Critical Thinking ............................................................. 172
Critical Thinking and Writing ....................................... 140
Cultural Anthropology ...................................................... 61
English Composition ....................................................... 139
Gender Communication .................................................. 123
Geography ...................................................................... 166
Intercultural Communication ........................................... 123
Literature and Composition ........................................... 140
Music Appreciation .......................................................... 169
- Philosophy ................................................................. 172
- Psychology ............................................................... 177
- Sociology ...................................................................... 187
- Spanish ......................................................................... 188–189
- Statistics and Probability .............................................. 167, 186
- World Regional Geography ......................................... 145

Honors Program and Courses ........................................... 26–27
- Completing ................................................................... 27
- Disqualification From ...................................................... 27
- President’s Scholar ......................................................... 27
- Requirements .................................................................. 26–27

Housing Facilities ............................................................... 10
HTML .............................................................................. 125

Human Development ......................................................... 150–152
- Infant/Toddler ................................................................. 150
- Preschool ....................................................................... 151
- School Age Child ........................................................... 151

Human Relations and Organizational Behavior ................. 119
Human Resource Management ......................................... 161

Human Sexuality ................................................................. 153

ID Cards, Students ............................................................ 9, 202

Illustration ........................................................................ 109–110
Incomplete Work ................................................................. 20

Independent Study .............................................................. 20

Information Systems and Applications .......................... 119

Institutional Student Learning Outcomes .......................... 4

Insulator Apprenticeship ..................................................... 88–89

Intercollegiate Athletics ....................................................... 31
Intercultural Communication .......................................... 122
Interdisciplinary Studies .................................................... 153

International Baccalaureate (IB) Examination Program .... 54
International Politics ............................................................. 175
International Students .......................................................... 10
International Transcripts ..................................................... 13

Internet Research ............................................................... 160
Internships (STEM) ............................................................. 115

Intersegmental General Education Transfer Curriculum (IGETC) ..................................................... 47, 144

iOs/iPhone Mobile App Development ................................ 125
Italian ............................................................................. 153, 168

Java Programming ............................................................. 127
JavaScript .......................................................................... 127

Jazz, American ................................................................. 169
Jazz Dance ......................................................................... 131

K

Kinesiology ....................................................................... 154–158

L

Land Surveying ................................................................. 190–191
Language and Culture ....................................................... 61
Language Lab ................................................................. 27
Languages, See English; Foreign Languages; Sign Language
Latin American History ..................................................... 149–150

Law and Legal Aspects
- Business ....................................................................... 119
- Criminal Justice ............................................................ 130
- Real Estate ..................................................................... 182
- Survey/Mapping Sciences .............................................. 191

Learning Center (see Tutoring Center) .......................... 29

Liberal Arts ......................................................................... 159–160

Libraries
- Campus Library .............................................................. 28
- Multicultural and Leadership Resource Library .......... 31

Library & Information Studies ...................................... 160

Literature .......................................................................... 140–142

Locations, College ............................................................. 5

Lost of Enrollment Priority .............................................. 17

Lost and Found ................................................................. 20

M

Maintenance Mechanic Apprenticeship ............................. 90–92
Management ..................................................................... 161
- Business Management .................................................. 118–119
- General Management ..................................................... 161
- Human Resource Management ...................................... 161
- Project Management ......................................................... 118, 125, 180
- Supervision ..................................................................... 161

Managerial Accounting .................................................... 58

Manicuring ................................................................. 128–129

Mapping/Survey Sciences ............................................... 104–106, 190–191

Maps
- District ................................................................. 5
- OEC Provisional Education Facility .................................. 240
- Santiago Canyon College ............................................. 239

Marketing ................................................................. 162–163
- Advertising .................................................................. 162
- General Marketing .......................................................... 162
- Small Business Marketing and Advertising ................ 162
- Web Marketing ............................................................... 162–163

Mathematics ................................................................. 163–167
- Algebra/Pre-Algebra ....................................................... 164–165, 167
- Calculus/Pre-Calculus ..................................................... 165–167
- Differential Equations ..................................................... 167
- for Electricians .............................................................. 137
- for Liberal Arts .............................................................. 165
- Geometry ................................................................. 164–166
- Independent Study .......................................................... 166
- Math Anxiety ................................................................. 164
- Statistics and Probability ................................................. 167, 186
- STEM Internship ............................................................ 115
- Trigonometry ................................................................. 165
- Upward Bound Math and Science ................................ 29

Math Study Hall (MaSH) ..................................................... 28

Media Communications Studies ..................................... 191–192

Microbiology ................................................................. 114–116

Microsoft Access ............................................................. 125
Microsoft Excel ................................................................. 124
Microsoft Office ............................................................... 124
Microsoft Project ............................................................... 125, 180
Microsoft Word ................................................................. 124

Military Credits ................................................................. 29

Military Recruiters, Solomon Amendment for ................. 12

Lost and Found ................................................................. 20
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<td>96</td>
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<td>–Courses</td>
<td>98–102</td>
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<td>–Continuing Education</td>
<td>201</td>
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<td>–District Mission</td>
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<td>109–111</td>
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<td>175–176</td>
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<td>130</td>
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<td>168</td>
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<td>95</td>
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<tr>
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<td>115–116</td>
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</tr>
<tr>
<td>Multicultural Psychology</td>
<td>177</td>
</tr>
<tr>
<td>Multi-Cultural Studies</td>
<td>159–160</td>
</tr>
<tr>
<td>Music Appreciation</td>
<td>169</td>
</tr>
<tr>
<td>Music Studies</td>
<td>169–170</td>
</tr>
<tr>
<td>N</td>
<td></td>
</tr>
<tr>
<td>Nondiscrimination Policy</td>
<td>8</td>
</tr>
<tr>
<td>Nutrition &amp; Food</td>
<td>171</td>
</tr>
<tr>
<td>O</td>
<td></td>
</tr>
<tr>
<td>Oceangraphy</td>
<td>147</td>
</tr>
<tr>
<td>Older Adults</td>
<td>201, 225</td>
</tr>
<tr>
<td>Online Student Services</td>
<td>28</td>
</tr>
<tr>
<td>Open Enrollment (formerly Open Courses)</td>
<td>20, 202</td>
</tr>
<tr>
<td>Operating Engineers Apprenticeship</td>
<td>96–102</td>
</tr>
<tr>
<td>–Construction Safety Inspector</td>
<td>96</td>
</tr>
<tr>
<td>–Courses</td>
<td>98–102</td>
</tr>
<tr>
<td>–Heavy Duty Repairer</td>
<td>96</td>
</tr>
<tr>
<td>–Heavy Equipment/Landscape Operator Engineer</td>
<td>97</td>
</tr>
<tr>
<td>–Plant Equipment/Rock, Sand and Gravel</td>
<td>97</td>
</tr>
<tr>
<td>–Special Inspector</td>
<td>98</td>
</tr>
<tr>
<td>Organic Chemistry</td>
<td>120</td>
</tr>
<tr>
<td>Organizational Behavior</td>
<td>119</td>
</tr>
<tr>
<td>P</td>
<td></td>
</tr>
<tr>
<td>Painting</td>
<td>110–111</td>
</tr>
<tr>
<td>Parent Education</td>
<td>201, 225</td>
</tr>
<tr>
<td>Parking</td>
<td>20</td>
</tr>
<tr>
<td>Part-Time Student, Defined</td>
<td>9–10</td>
</tr>
<tr>
<td>Pass/No Pass</td>
<td>20–21</td>
</tr>
<tr>
<td>Pathways to Teaching Program</td>
<td>28</td>
</tr>
<tr>
<td>Personal Finance</td>
<td>119</td>
</tr>
<tr>
<td>Philosophy</td>
<td>171–173</td>
</tr>
<tr>
<td>Photography, College Use Policy</td>
<td>21, 202</td>
</tr>
<tr>
<td>Photography Digital</td>
<td>110–111</td>
</tr>
<tr>
<td>Physical Anthropology</td>
<td>61</td>
</tr>
<tr>
<td>Physical Geography</td>
<td>145</td>
</tr>
<tr>
<td>Physics</td>
<td>173–174, 184</td>
</tr>
<tr>
<td>Physiology, Human</td>
<td>114, 116</td>
</tr>
<tr>
<td>Piano</td>
<td>169–170</td>
</tr>
<tr>
<td>Policies and Procedures</td>
<td>14–24</td>
</tr>
<tr>
<td>Politica de no Discriminacion</td>
<td>8</td>
</tr>
<tr>
<td>Political Science</td>
<td>175–176</td>
</tr>
<tr>
<td>Power Lineman Apprenticeship</td>
<td>103–104</td>
</tr>
<tr>
<td>Prerequisites</td>
<td>21–22</td>
</tr>
<tr>
<td>President’s Message</td>
<td>4</td>
</tr>
<tr>
<td>President’s Scholar</td>
<td>14, 27</td>
</tr>
<tr>
<td>Probation, Academic</td>
<td>14–15</td>
</tr>
<tr>
<td>Programming Languages</td>
<td></td>
</tr>
<tr>
<td>–HTML</td>
<td>125</td>
</tr>
<tr>
<td>–Java</td>
<td>127</td>
</tr>
<tr>
<td>–JavaScript</td>
<td>125</td>
</tr>
<tr>
<td>–Visual BASIC</td>
<td>127</td>
</tr>
<tr>
<td>Programming, Robotics</td>
<td>126–127</td>
</tr>
<tr>
<td>Project Management</td>
<td>118, 125, 180</td>
</tr>
<tr>
<td>Psychology</td>
<td>176–177</td>
</tr>
<tr>
<td>Public Affairs</td>
<td>28</td>
</tr>
<tr>
<td>Public Opinion Policies</td>
<td>22</td>
</tr>
<tr>
<td>Public Speaking</td>
<td>122</td>
</tr>
<tr>
<td>Public Works</td>
<td>178–180</td>
</tr>
<tr>
<td>–Code Enforcement Officer</td>
<td>179</td>
</tr>
<tr>
<td>–Construction Inspection</td>
<td>178–180</td>
</tr>
<tr>
<td>–Construction Management</td>
<td>178–180</td>
</tr>
<tr>
<td>–Environmental Management</td>
<td>179–180</td>
</tr>
<tr>
<td>–Environmental Sustainability</td>
<td>180</td>
</tr>
<tr>
<td>Q</td>
<td></td>
</tr>
<tr>
<td>QuickBooks</td>
<td>57</td>
</tr>
<tr>
<td>R</td>
<td></td>
</tr>
<tr>
<td>Rancho Santiago Community College District Information</td>
<td>4–7</td>
</tr>
<tr>
<td>Reader’s Theatre</td>
<td>123</td>
</tr>
<tr>
<td>Reading</td>
<td>181</td>
</tr>
<tr>
<td>Real Estate</td>
<td>181–183</td>
</tr>
<tr>
<td>Real Estate Appraisal</td>
<td>182–183</td>
</tr>
<tr>
<td>Real Estate Finance</td>
<td>182</td>
</tr>
<tr>
<td>Real Estate Salesperson</td>
<td>182</td>
</tr>
<tr>
<td>Reciprocity Policy and Procedures</td>
<td>43–44</td>
</tr>
<tr>
<td>Recommended Preparation</td>
<td>21</td>
</tr>
<tr>
<td>Records</td>
<td></td>
</tr>
<tr>
<td>–for Admissions and Registration</td>
<td>12–13</td>
</tr>
<tr>
<td>–Privacy of</td>
<td>11, 18</td>
</tr>
<tr>
<td>–Right to Review and Challenge</td>
<td>11–12</td>
</tr>
<tr>
<td>–Transcripts</td>
<td>12–13, 202</td>
</tr>
<tr>
<td>Refunds</td>
<td>11, 20</td>
</tr>
<tr>
<td>Registered Sex Offender Information</td>
<td>11</td>
</tr>
<tr>
<td>Religion</td>
<td>172</td>
</tr>
<tr>
<td>Repeatability and Repetition</td>
<td>16–17</td>
</tr>
<tr>
<td>Research Methods and Skills</td>
<td></td>
</tr>
<tr>
<td>–in Psychology</td>
<td>177</td>
</tr>
<tr>
<td>–Internet Research</td>
<td>160</td>
</tr>
<tr>
<td>Residency</td>
<td>10, 206</td>
</tr>
<tr>
<td>Review and Challenge Records, Right to</td>
<td>11–12</td>
</tr>
<tr>
<td>Revised Course Titles</td>
<td>56</td>
</tr>
<tr>
<td>Right-To-Know Act</td>
<td>11, 34</td>
</tr>
<tr>
<td>Robotics Programming</td>
<td>126–127</td>
</tr>
<tr>
<td>Rock Music</td>
<td>169</td>
</tr>
<tr>
<td>S</td>
<td></td>
</tr>
<tr>
<td>Santiago Canyon College Foundation</td>
<td>33–34</td>
</tr>
<tr>
<td>Schedule of Classes</td>
<td>12, 202</td>
</tr>
<tr>
<td>–Right to Cancel</td>
<td>55</td>
</tr>
<tr>
<td>Scheduling Options and Definitions</td>
<td>28</td>
</tr>
<tr>
<td>Scholarships</td>
<td>33, 202</td>
</tr>
</tbody>
</table>
### U

- United States Citizenship .................................................. 201, 212
- United States History ....................................................... 148–150
- Unit of Credit ................................................................. 24
- University of California Transfer Course Agreement ........ 48
- University of California, Transfer to .................................. 41–48, 144
- Upward Bound Math and Science .................................... 29

### V

- Veterans’ Services ........................................................... 29–30
- Visual BASIC ....................................................................... 127
- Vocabulary Skills ............................................................. 181
- Vocational Programs ....................................................... 226–231
  - Business ......................................................................... 226–230
  - Clothing .......................................................................... 231
  - Construction ..................................................................... 231
  - Food ................................................................................ 232
  - Shelter Dog Training ...................................................... 232
  - Warehousing .................................................................... 232
- Voice and Diction .............................................................. 123
- Voice and Singing ............................................................. 169–170

### W

- Warehousing, Vocational .................................................. 232
- Water Utility Science ....................................................... 193–196
  - Wastewater/Environmental Sanitation ......................... 194
  - Water Distribution ......................................................... 193
  - Water Treatment ........................................................... 194
- Weather and Climate ....................................................... 145
- Web Design ......................................................................... 109–110
- Web Marketing ............................................................... 162–163
- Web Multimedia Applications ........................................ 110
- Website Development ...................................................... 125
- William D. Ford Federal Direct Loan Programs ............... 32
- Windows 8 Store Applications .......................................... 125
- Withdrawals, Class ......................................................... 24
- Women
  - Gender Communication ................................................ 123
  - In American Politics ...................................................... 175
  - In History ......................................................................... 149
  - Literature by ................................................................. 142
- Women’s Studies .............................................................. 197
- Work Experience
  - (see Cooperative Work Experience Education) .......... 25, 207
- World History ................................................................. 148–150
- World Literature ............................................................. 142
- World Music ................................................................. 169
- World Regional Geography ........................................... 145
- World Religions ............................................................. 172
- Writing
  - Business Writing .......................................................... 119
  - Creative Writing .......................................................... 140
  - English Written Communication .................................. 139
  - Poetry Writing ............................................................. 140
  - Real Estate Residential Report Writing ....................... 183
  - Screenwriting ............................................................. 192
  - Spanish Language ........................................................ 189
  - Television Writing ......................................................... 192
- Writing Center ................................................................. 30
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