

CUYAMACA

C O L L E G E

2012 - 2013

CATALOG



WWW.CUYAMACA.EDU

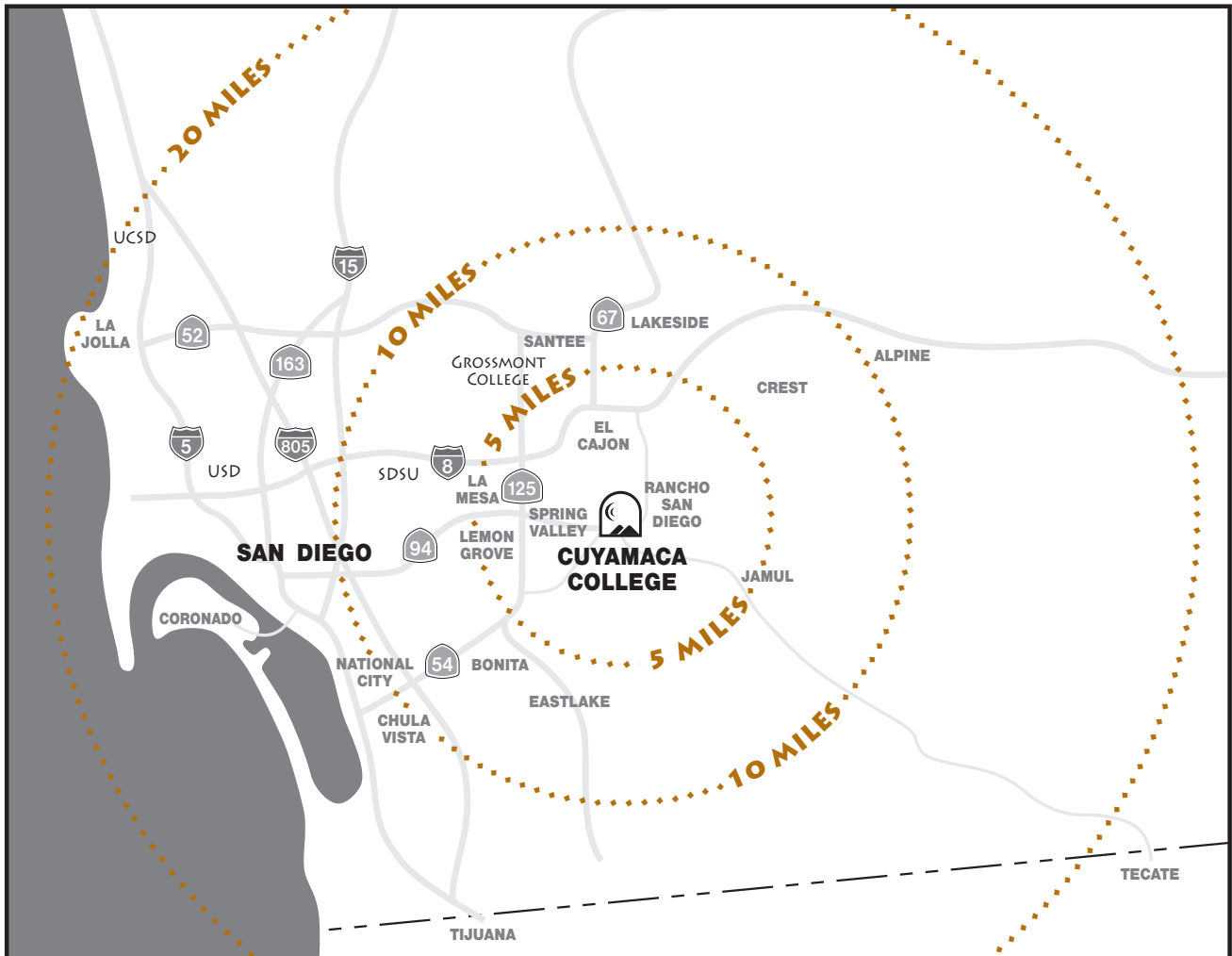
Cuyamaca College

900 Rancho San Diego Parkway, El Cajon, California 92019-4369

www.cuyamaca.edu

619.660.4000

Minutes from the city of San Diego
in the community of Rancho San Diego



Directions: From the West, take 5, 805 or 125 to 94E, continue straight onto Jamacha Road. Turn left on Fury Lane and left onto Rancho San Diego Parkway. For detailed map, see inside back cover.

From the East, take 8 to 125S, connect to 94E, continue straight onto Jamacha Road. Turn left on Fury Lane and left onto Rancho San Diego Parkway.



This catalog is available in alternate formats upon request. Please call the Disabled Students Programs and Services Office at (619) 660-4239.

ACCREDITATION AND AFFILIATIONS

Cuyamaca College is accredited by the Accrediting Commission for Community and Junior Colleges/Western Association of Schools and Colleges (ACCJC/WASC) at 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. Accreditation reports are available and may be reviewed at the Office of the President. The College is approved for the education of veterans under the various United States public laws and the California veteran enactments, and is approved by the Bureau of Immigration and Naturalization for foreign student attendance under education visas.

Appropriate courses of study at Cuyamaca College are fully accepted for transfer by the University of California, the California State University system, and private four-year colleges and universities.

GROSSMONT-CUYAMACA COMMUNITY COLLEGE DISTRICT GOVERNING BOARD: Greg Barr, Bill Garrett, Edwin Hiel, Debbie Justeson, Mary Kay Rosinski **STUDENT MEMBERS:** Mohammed Alyasini, Samantha Elliot **CHANCELLOR:** Cindy L. Miles, Ph.D. **CUYAMACA COLLEGE PRESIDENT:** Mark J. Zacovic, Ph.D. **GROSSMONT COLLEGE PRESIDENT:** Sunita V. Cooke, Ph.D.

PRESIDENT'S MESSAGE

Dear Students,

Welcome to Cuyamaca College! We are delighted that you are exploring your higher education options and as a first step, have acquired a copy of our college catalog. This



document contains pretty much everything you need to know about our course offerings, our degrees and certificates, our services to students, and how to begin your Cuyamaca College journey.

I want to assure you that you have made a good choice by considering Cuyamaca College. We have a renowned faculty that is second to none. Our faculty specializes in teaching and learning and will provide you with an unexcelled learning opportunity. You will not find a more dedicated and hardworking staff and administration than those at Cuyamaca College. All of us are committed to your success. Of course, you must do your part in contributing to your success by being responsible, conscientious, and diligent in your approach to college. Participating in higher education can have a major and profound effect on your life and in success in your chosen career, and we are here to help!

The California Community College system is under siege as the State's budget woes continue into 2012-13. While public support for education is strong and everyone agrees that education is the key to a successful and productive society, the State of California is not able to provide the level of financial support that it has in the past. This is true for community colleges across the state. For the student, this translates into fewer classes available, longer wait times, fewer services, and perhaps a longer time to the completion of your educational goal.

That said, our teams of experts are ready and willing to guide you through the complexities of your educational plan and recommend a course of study that maximizes your investment of time and money. Please do not hesitate to seek our advice in answering your questions. The time you spend in planning your educational path in advance will pay off handsomely in the future.

Our advice for students is: Plan ahead. Be patient. Be persistent. Work hard. Follow your dreams!

Cuyamaca College is a very special place and is a place where dreams are realized. We want to help you in your pursuit of those dreams. I wish you every success and a productive academic year.

Sincerely,

A handwritten signature in black ink that reads "Mark J. Zacovic". The signature is written in a cursive, flowing style.

Mark J. Zacovic, Ph.D.
President

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FALL 2012

July 16–August 18 Registration
 August 13–17 Professional Development–Organizational Meetings
August 20 Regular Day & Evening Classes Begin
 August 20–31 Program Adjustment
 September 3 Holiday (Labor Day)
 September 4 Census Day
 September 21 ... Last Day to Apply for P/NP - Semester-Length Classes
 October 12 Last Day to Apply for Fall 2012 Degree/Certificate
 October 13 End of First 8-Week Session
 October 15 Second 8-Week Session Begins
 November 8 (Thursday) Last Day to Drop Semester-Length Classes
 November 12 (Monday) Holiday (Veterans' Day Observed)
 November 22, 23, 24* Thanksgiving Holiday
 December 10 End of Second 8-Week Session
 December 11, 12, 13, 14, 15 and 17 Final Examinations
 December 17 Close of Fall Semester
 December 19 Instructor Grade Deadline
 December 18–January 18 Winter Recess
 December 24–January 1 College and District Offices Closed

JULY							AUGUST						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7				1	2	3	4
8	9	10	11	12	13	14	5	6	7	8	9	10	11
15	16	17	18	19	20	21	12	13	14	15	16	17	18
22	23	24	25	26	27	28	19	20	21	22	23	24	25
29	30	31					26	27	28	29	30	31	

SEPTEMBER							OCTOBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
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9	10	11	12	13	14	15	14	15	16	17	18	19	20
16	17	18	19	20	21	22	21	22	23	24	25	26	27
23	24	25	26	27	28	29	28	29	30	31			
30													

NOVEMBER							DECEMBER							
S	M	T	W	T	F	S	S	M	T	W	T	F	S	
					1	2	3							1
4	5	6	7	8	9	10	2	3	4	5	6	7	8	
11	12	13	14	15	16	17	9	10	11	12	13	14	15	
18	19	20	21	22	23	24	16	17	18	19	20	21	22	
25	26	27	28	29	30		23	24	25	26	27	28	29	
							30	31						

SPRING 2013

November 19–January 26 Registration
 January 21 Holiday (Martin Luther King Day)
 January 22–25 Professional Development–Organizational Meetings
January 28 Regular Day & Evening Classes Begin
 January 28–February 8 Program Adjustment
 February 11 Census Day
 February 15 & 16* (Friday & Saturday) Holiday (Lincoln Day Observed)
 February 18 Holiday (Washington Day Observed)
 March 1 Last Day to Apply for P/NP - Semester-Length Classes
 March 22 Last Day to Apply for Spring 2013 Degree/Certificate
 March 23 End of First 8-Week Session
 March 25, 26, 27, 28, 29 Spring Recess
 March 29 & 30* (Friday & Saturday) Spring Holiday
 April 1 Second 8-Week Session Begins
 April 26 Last Day to Drop Semester-Length Classes
 May 25 End of Second 8-Week Session
 May 27 Holiday (Memorial Day)
 May 28, 29, 30, 31, June 1 and 3 Final Examinations
 June 3 Close of Spring Semester
 June 4 Instructor Grade Deadline
 June 5 (Wednesday) Grossmont Commencement
 June 6 (Thursday) Cuyamaca Commencement

JANUARY							FEBRUARY							
S	M	T	W	T	F	S	S	M	T	W	T	F	S	
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6	7	8	9	10	11	12	3	4	5	6	7	8	9	
13	14	15	16	17	18	19	10	11	12	13	14	15	16	
20	21	22	23	24	25	26	17	18	19	20	21	22	23	
27	28	29	30	31			24	25	26	27	28			

MARCH							APRIL						
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					1	2	1	2	3	4	5	6	
3	4	5	6	7	8	9	7	8	9	10	11	12	13
10	11	12	13	14	15	16	14	15	16	17	18	19	20
17	18	19	20	21	22	23	21	22	23	24	25	26	27
24	25	26	27	28	29	30	28	29	30				
31													

MAY							JUNE							
S	M	T	W	T	F	S	S	M	T	W	T	F	S	
				1	2	3	4							1
5	6	7	8	9	10	11	2	3	4	5	6	7	8	
12	13	14	15	16	17	18	9	10	11	12	13	14	15	
19	20	21	22	23	24	25	16	17	18	19	20	21	22	
26	27	28	29	30	31		23	24	25	26	27	28	29	
							30							

* College and District Offices closed.

CUYAMACA COLLEGE ADMINISTRATION

Mark J. Zacovic, Ph.D.	President
Arleen Satele, Ed.D.	Vice President, Administrative Services
Robin Steinback, Ph.D.	Vice President, Instruction
Julianna Barnes, Ed.D.	Vice President, Student Services
Susan Topham	Dean, Counseling & Enrollment Services
Connie Elder	Dean, Learning & Technology Resources
.....	Dean of Instruction, Division I (Automotive Technology, Business & Professional Studies, CADD Technology, Computer & Information Science, Graphic Design, Environmental Health & Safety Management, Exercise Science/Health Education, Mathematical Sciences, Science and Engineering)
Danene Brown	Dean of Instruction, Division II (Art, Child Development, Communication Arts, Education, History, Social & Behavioral Science, Humanities & Performing Arts, Ornamental Horticulture, Water/Wastewater Technology, World Languages)
Jennifer Lewis	Interim Dean of Instruction, Continuing Education & Workforce Training
Scott Herrin, Ed.D.	Associate Dean, Athletics
Lauren Weiner-Vaknin, Ed.D.	Associate Dean, Student Affairs
Nanyamka Hill	Interim Assistant Dean, EOPS
Bruce Farnham.....	Director, Campus Facilities, Operations & Maintenance
Ray Reyes	Director, Financial Aid
Michael Gilchrist.....	Manager, Campus Bookstore

GROSSMONT-CUYAMACA COMMUNITY COLLEGE DISTRICT ADMINISTRATION

Cindy L. Miles, Ph.D.	Chancellor
Sue Rearic	Vice Chancellor, Business Services
Victoria Simmons, J.D.	Vice Chancellor, Human Services
Sahar Abushaban	Associate Vice Chancellor, Business Services
Leonor Perez	Interim Sr. Dean, Research, Planning & Institutional Effectiveness
Linda Bertolucci	Sr. Director, Purchasing, Contracts & Ancillary Services
Linda Jensen	Sr. Director, Fiscal Services
Brian Nath	Sr. Director, Information Systems (Contract Services)
Dale Switzer	Sr. Director, Facilities Planning, Development & Maintenance
Tim Corcoran.....	Director, Employee & Labor Relations
Joel Javines.....	Director, Campus Police
Anne Krueger	Director, Communication & Public Information

CODE OF ETHICS

Cuyamaca College, as a public community college, and in the fulfillment of its mission, embraces a code of conduct for students, faculty, classified staff, and administrators. We recognize the value and dignity of each individual within the framework of the campus community.

We strive in all our affairs to:

- ❖ respect the opinions, values, and traditions of others,
- ❖ be responsible for our own behavior,
- ❖ be honest, open and trustworthy,
- ❖ be fair and equitable in our treatment of others, and
- ❖ promote democratic principles, good citizenship and the standards of academic freedom.

College History and Vision

COLLEGE VISION, MISSION, AND VALUES

Vision: Learning for the Future

Mission: The mission of Cuyamaca College is to serve a diverse community of students who seek to benefit from the college's wide range of educational programs and services.

In order to fulfill its commitment to student learning, the college provides:

- Instructional programs that meet student needs for transfer education, career technical education, general education and basic skills courses
- Community education programs and services
- Programs that promote economic, civic and cultural development

To facilitate this mission, Cuyamaca College provides a comprehensive range of support services including: outreach and access initiatives, academic and learning resources, student development programs, and multicultural and co-curricular activities.

In support of its mission, Cuyamaca College structures its planning processes and engages the college community by pursuing the following areas of focus, which form the foundation of the 2010-2016 Strategic Plan:

- Student Access
- Learning and Student Success
- Value and Support of Employees
- Economic and Community Development
- Fiscal and Physical Resources

Values:

- **Equitable Access:** We value equitable access that facilitates participation in academic programs and support services needed to meet students' educational goals.
- **Individual Student Success:** We offer courses and programs leading to degrees, certificates, transfer, employment, personal enhancement, and lifelong learning.
- **Academic Excellence:** We employ a variety of methodologies and technologies responsive to students' needs and conducive to students' varied educational and experiential backgrounds and learning styles.
- **Innovation and Creativity:** We value innovation and creativity in order to encourage our students to question and to expand their thinking.
- **Diversity and Social Harmony:** We value and embrace diversity and create opportunities for our college community to work together to meet the challenges of a complex global society.
- **Environmental Stewardship and Sustainability:** We take pride in our campus and its resources, and we strive to be on the forefront of sustainability and green technology.

- **Strong Community Relations:** We recognize our role in the cultural, educational, technological, and economic/workforce development of the communities we serve.

EDUCATIONAL OBJECTIVES

In order to maximize the opportunity for the development of individuals' personal, social and intellectual qualities, the college provides:

An **instructional** program:

- **Transfer** courses equivalent to the lower division curriculum of universities and colleges for students who plan to continue their education at a baccalaureate institution.
- **Career and technical education** courses to provide technical skills and knowledge for beginning employment, retraining and advancement, respond to local business and industry workforce development and workforce training directions.
- **General education** courses to broaden knowledge, skills, attitudes and values, to develop analytical ability and critical thinking, and to foster interest in lifelong learning in the educational, scientific and cultural fields essential for effective participation in a complex society.
- **Developmental** courses to assist inadequately prepared students to succeed in college course work.

A **student services** program:

- **Academic, vocational and personal support** services to provide students with sufficient opportunity to achieve educational success.
- **Co-curricular activities** to provide opportunities for personal development and social responsibility.

Learning resources support services:

- **Library collection:** A well-rounded collection of print and electronic materials selected to support instructional programs across the curriculum.
- **Information competency:** Instruction designed to teach students how to locate, evaluate and utilize information resources. Preparing students for lifelong learning is the ultimate goal.
- **Research guidance:** One-on-one instruction to assist students with their course-related and individual research needs.

A **continuing education** program:

- **Noncredit** courses are state-funded and provide students with lifelong learning, college transfer and career preparation opportunities at low or no cost. For many, Noncredit programs provide an educational gateway into the college system.
- **Community services** courses offer a wide variety of affordable not-for-credit classes, workshops, seminars and excursions for personal and professional enrichment. Community service programs are self-supporting and are open to all members of the community willing to pay a minimal fee.

A **contract education** program:

- **Customized training** delivered under contract that meets the workforce education needs of business, government, and industry.

A **workforce development** program:

- **Education and training** that contributes to continuous workforce improvement of regional business and industry.

EDUCATIONAL PHILOSOPHY

The founders of the Grossmont-Cuyamaca Community College District believed that a community college should provide experiences which would greatly broaden the students' educational opportunities and strengthen our society's democratic institutions. The representatives of the community directed the college to provide an education through which students may create rewarding lives, productive for themselves and for society, based on an understanding of the relationship between the past and the challenge of the present and the future.

Cuyamaca College accepts and is committed to these philosophical premises:

- The democratic way of life allows each individual personal freedom and initiative consistent with responsibilities to one another.
- The college recognizes the worth of the individual and the fact that individual needs, interests and capacities vary greatly.
- The maximum development of the personal, social and intellectual qualities of each individual must be encouraged.
- The maximum development and fulfillment of the individual and the development of the general welfare are increasingly interdependent.
- All segments of the college community are encouraged to contribute and participate in the operation of the college.

An educational environment dedicated to these philosophic premises will produce individuals prepared for life and citizenship in a complex, viable society.

GROSSMONT-CUYAMACA COMMUNITY COLLEGE DISTRICT VISION, MISSION, AND VALUE STATEMENT

Vision: Transforming lives through learning.

Mission: Provide outstanding learning opportunities that prepare students to meet community needs and future challenges of a complex, global society.

The Grossmont-Cuyamaca Community College District fulfills its mission by providing:

- Outstanding undergraduate education leading to certificates, associate degrees, and transfer;
- Excellent career and technical education programs that prepare students for workforce entry and advancement;
- Comprehensive student development and support services that help students succeed in meeting their educational goals;
- Engaging educational services that meet learners needs in basic skills, English language proficiency, and lifelong learning; and
- Responsive social and economic development programs and community partnerships.

Value Statement: Cultivate a student-centered culture of excellence, trust, stewardship, and service.

HISTORY OF THE COLLEGE

Cuyamaca College is located in the community of Rancho San Diego at 900 Rancho San Diego Parkway in the City of El Cajon on a 165-acre site which was at one time a part of the Old Monte Vista Ranch. Cuyamaca College is one of two colleges serving the Grossmont-Cuyamaca Community College District.

The name for the college was selected by the Board of Trustees as a reflection of the history and heritage of this area of San Diego County. One historian notes that "The very old Indian name 'Cuyamaca' has persisted through Spanish, Mexican and American times," and has, at various times, been "applied to mountains, lakes, valleys and ranches." Writers have interpreted the Indian meaning of the name in various ways, including "above rain," "beyond rain" and "place where the rain comes from heavens."

The building site was acquired by the Board of Trustees in September 1972, and the college officially opened in Fall 1978. Since then, the college has grown steadily, both in size and sophistication. In 1989, the Learning Resource Center opened and in 1993, the privately funded Heritage of the Americas Museum opened on campus.

In Spring 1995, Rancho San Diego Parkway, the Fury Lane entrance road, was completed providing students easier access to the college. In Fall 1995, the college dedicated a new 20.3 acre physical education facility with a fitness center, gym, tennis and volleyball courts, soccer and ball fields, and an Olympic track. In Spring 1999, the Water Conservation Garden was opened through a Joint Powers Agreement between the College and the Otay and Helix Water Districts.

A new Student Services Center opened in Spring 2001 to provide one-stop student services at the Rancho San Diego Parkway entrance. The Child Development Center and Math Learning Center opened in Fall 2001.

In Spring 2005, the Automotive Technology Complex remodel provided significant improvements to the Automotive Technology Program which included the Ford ASSET Program and General Motors ASEP Program.

In Spring 2007, Cuyamaca College opened a new state-of-the-art Science and Technology Center that provides students with access to the most up-to-date technologies in computer, information, natural and physical sciences. In Fall 2007, the college opened a spectacular Student Center, and a one-of-a-kind Communication Arts Center opened in Spring 2008. Finally, in Spring 2010, the Business and Technology building opened, providing state-of-the-art computer and graphic design labs as well as professional business classrooms. Opening of this new building allowed for relocation of mathematics into the first floor of the Science and Mathematics Building and the opening of the STEM Achievement Center in H-103. These new and welcomed additions are complemented by a host of facility renovations and overall campus improvements which together are greatly expanding the range of instructional programs and student support services that our students have come to enjoy and expect.

Cuyamaca College is growing in response to the ever increasing demands of the surrounding community and to meet the educational needs in the Grossmont-Cuyamaca Community College District. The college is designed to provide a comprehensive curriculum of programs and courses of study and, when completed, will accommodate an enrollment of approximately 15,000 students in 2015.

General Information

AIR FORCE RESERVE OFFICER TRAINING CORPS

The Air Force Reserve Officer Training Corps (AFROTC) is a three-four year program designed to equip students with leadership skills and commission officers for tomorrow's Air Force. Required coursework includes lectures, a leadership laboratory practical component, panel discussions, dialogues, problem solving, and physical training. All coursework is completed on site at or near SDSU, with the exception of a four-week summer Field Training encampment conducted on a military base between the second and third year.

Scholarships are available for qualified cadets, and may be applied towards tuition, lab fees, and other required items. In addition, scholarship students receive a non-taxable book allowance and monthly stipend. Upon successful completion of the AFROTC program and all requirements for a Bachelor's Degree, cadets are commissioned as Second Lieutenants and serve a minimum of four years in the Active Duty Air Force.

Cuyamaca College does not have a Reserve Officer Training Corps (ROTC) program on campus; however, through an agreement with San Diego State University, students may participate in Air Force ROTC through the SDSU College of Extended Studies. Credits earned in these classes may be transferred as electives to meet the degree requirements of Cuyamaca College.

There is no advance application needed to participate in the Freshmen or Sophomore level course; however, an orientation program, held just prior to the start of the semester, is recommended. Interested students should contact the AFROTC Detachment 075 Unit Admissions Officer at (619) 594-5545 or see the website below for more information.

AFROTC Detachment 075 Website: <http://www-rohan.sdsu.edu/dept/afrotc/>

ARMY RESERVE OFFICERS TRAINING CORP

Cuyamaca College has entered into an agreement which permits students to enroll in AROTC at San Diego State University. For further information contact the AROTC at (619) 594-4943.

CONTINUING EDUCATION

Grossmont-Cuyamaca Community College District's Continuing Education Division is at the forefront of workforce development and community-interest training and workshops. This division recognizes that education is a lifelong process and of importance to all age groups and exists to serve the educational needs of the community and businesses. Educational opportunities such as tuition free noncredit classes, fee-based courses, contract education and grant-funded

workforce development programs are all provided through Continuing Education.

Continuing Education is the part of the community college district where students have access to a broad range of educational training and personal development options. It is the place where new programs based on community needs are developed and offered. It is also the place where businesses call to have their customized training needs met. Tuition-free noncredit, fee-based courses, contract education and grant-funded classes carry no units of credit and the progress of students is not graded. Classes are held on the college campuses and at various locations throughout East San Diego County.

Continuing Education also offers classes for children via the College for Kids Program each summer.

The PREVIEW is a free publication listing Continuing Education classes and events for the general public. Published three times a year, the PREVIEW may be obtained by calling (619) 660-4350 or the schedule can be viewed online at www.gcccd.edu/preview. Registration is now online.

HERITAGE OF THE AMERICAS MUSEUM

Cuyamaca College is the home of the Heritage of the Americas Museum, a cultural and educational center featuring the prehistoric and historic art, culture and natural history of the Americas. Fossils as old as 450 million years are exhibited in the Natural History wing. Artifacts representing ancient cultures of the Americas are presented in the Archaeology and Anthropology wings, and the Art wing displays the art of the world from ancient Chinese jade, including a rare burial suit from the Han Dynasty, to modern painting and sculpture.

The museum also serves as an adjunct to the instructional programs of Cuyamaca and Grossmont Colleges in a variety of academic disciplines. There is a research library of more than a thousand books related to the museum's collections. Students and faculty find the museum to be a valuable research facility and a fascinating place to visit. Admission is free to students.

ONLINE COURSES

Cuyamaca College offers a variety of courses entirely online and hybrid (partially online). Some online courses require on-campus orientations and/or exams. Online courses require that students have dependable access to the Internet through their own Internet Service Provider or through one of the college's computer labs.

If you are self-motivated, self-disciplined, have good basic computer skills, and are able to read and follow instructions carefully, online courses may be a good option for you. Online courses are transferable to most four-year colleges and universities.

OPEN-ENTRY/ OPEN-EXIT COURSES

Cuyamaca College offers three primary disciplines in the open-entry/open-exit format: Business Office Technology (BOT), Computer and Information Sciences (CIS) and Exercise Science (Fitness Center). Open-entry/open-exit courses are self-paced, individualized courses that allow you to start at different times throughout the semester and to work at your own pace to complete no later than the end of the semester.

PARKING AND TRAFFIC REGULATIONS

GROSSMONT-CUYAMACA COMMUNITY COLLEGE DISTRICT PARKING REGULATION INFORMATION

The following information is only a summary of the Grossmont-Cuyamaca Community College District Parking Regulations Brochure. The Parking Regulations brochure is published in accordance with the California Vehicle Code and applicable District Policies. For a complete copy, please contact the District Police Parking Unit at (619) 660-4481.

All vehicles must display a valid college-parking permit while parked on campus property. The responsibility for finding a legal parking space, as well as knowing where and when a parking permit is valid, rests with the vehicle operator and/ or owner. The purchase of a permit does not guarantee a space to park. For the safety of the college community, all California Vehicle Codes are enforced. **All persons on college grounds are primarily responsible for their own safety and property.**

STUDENT PARKING PERMITS

Student parking permits may be purchased during registration (see class schedule for details). Permits not purchased during registration are available at the Cashier's Office. To refund or exchange a parking permit, see "Refund Schedule" under Admission Information or the class schedule.

Motorcycle permits are no longer required if the Motorcycle Parking areas are used.

AUTO PARKING PERMIT

This type of permit has multiple uses and MAY BE TRANSFERRED to another vehicle owned and/or operated by the purchaser. Auto parking permits must be displayed so that the color and/or expiration date is clearly visible and displayed properly.

The Auto Parking Permit is only valid when displayed:

1. Completely attached to the rear window either side, inside lower corner.
2. Convertibles, open vehicles, or vehicles with dark tint on the back windows must completely affix the permit to the front windshield, either side, inside lower corner.
3. Hanging from the rear view mirror completely attached to the plastic permit hanger provided by the College.

PERMIT HANGERS

A free plastic permit hanger is available from the Admissions and Records Office, the Cashier's Office, most Student Services Offices, and the District Police Office.

DISABLED PARKING PERMITS

All vehicles utilizing Disabled Parking must have a state issued identification placard, i.e., Department of Motor Vehicles issued placard, DP or DV plates.

Students who have a current California Disabled Placard are not required to purchase a parking permit.

LOST OR STOLEN PERMITS

The college is not responsible for lost or stolen permits. Lost or stolen permits must be replaced by purchasing a new permit at the Cashier's Office.

REPLACEMENT PERMITS

To replace a damaged permit, bring your old permit to the Cashier's Office and you will be issued a new permit for a \$2 replacement charge.

VISITOR PARKING

- **Parking Meters** - Meters are expressly intended for visitors. Parking Permits are not valid at meters. All meters have a two-hour time limit.
- **One-Day Permit** - May be purchased from the Yellow Permit Dispensers. One-day permits are valid in student lots only. Dispensers are located between Student Lot 1 and 4 and Lot 5.

PARKING CITATION PAYMENTS

Fees resulting from citations are payable at the Cashier's Office within the first 21 days. Timely payments may also be mailed to the address listed on the citation.

CITATION REVIEW PROCEDURES

You may obtain a Request for an Administrative Review Form at the District Police Office. The Administrative Review must be completed and returned **within 21** days of the date of your citation.

Remember to remove your keys and lock your vehicle!

POLICIES REGARDING NONDISCRIMINATION

Cuyamaca College does not discriminate on the basis of race, color, national origin, religion, gender, disability or age in any of its policies, procedures or practices. This non-discrimination policy covers admission and access to, and treatment and employment in, Cuyamaca College's programs and activities, including vocational education.

Inquiries regarding the equal opportunity policies, the filing of grievances, policies on academic accommodations, appeals, substitutions and waivers based on disabilities, or to request a copy of Cuyamaca College's grievance procedures may be directed to:

Section 504 and ADA Coordinator
Cuyamaca College
900 Rancho San Diego Parkway
El Cajon, CA 92019-4304
(619) 660-4239
TDD (619) 670-3996

Cuyamaca College recognizes its obligation to provide overall program accessibility for those with disabilities. Contact the Section 504 and ADA Coordinator to obtain information as to the existence and location of programs, services, activities and facilities on campus, and for a geographical accessibility map.

Inquiries regarding Federal laws and regulations concerning non-discrimination in education or the College's compliance with those provisions may also be directed to:

Office for Civil Rights
U.S. Department of Education
221 Main Street, Suite 1020
San Francisco, CA 94105

REVISION OF REGULATIONS

Any regulation adopted by the Grossmont-Cuyamaca Community College District Governing Board has the same force as a printed regulation in the catalog and supersedes any ruling on the same subject which may appear in the catalog or official bulletin of the college.

STUDENT EQUITY PLAN

The Grossmont-Cuyamaca Community College District recognizes that California's economic and social future depends upon the success of all its citizens, particularly those enrolled in institutions of higher education. Therefore, the District has developed a Student Equity Plan.

The intent of the Student Equity Plan is to move our District toward achieving student equity by ensuring that the composition of students who enroll are retained, transfer or achieve their occupational goals mirrors the diversity of the population of the District's service area. The Student Equity Plan is subject to on-going coordination, evaluation and revision. It guarantees that student equity and student success are explicit and integral parts of the District's priorities.

STUDY ABROAD PROGRAMS

Study Abroad programs enable students to immerse themselves in a foreign language environment. During these programs, students are housed with host families, which not only allows the students to become more proficient in a foreign language, but also gives them the opportunity to experience a different culture.

SUMMER SESSION

The College offers a summer session that includes courses and programs also available in the regular academic year. College and legal regulations including residency, fees, veterans and withdrawal procedures apply.

Admission Information

ADDRESS CHANGE

A change of address and email address should be immediately reported to the Admissions and Records Office. You may change your address information online in *WebAdvisor* (www.cuyamaca.edu) or in the Admissions and Records Office.

ADMISSION AND REGISTRATION

The college year is divided into three sessions: fall and spring semesters and a summer session. Courses offered during the various sessions are similar in scope and maintain equivalent standards. The same requirements for admission, enrollment and graduation apply to all students, regardless of the time of day or period of the year they attend classes. The college library, laboratories and other facilities are available throughout each session.

ADMISSION PROCEDURES

Students should observe the following admission procedures:

1. Submit an Application for Admission online at www.cuyamaca.edu
2. Request official transcripts to be sent to Cuyamaca College from all colleges attended in the United States. An official transcript is one that has either been sent directly to Cuyamaca College from the issuing institution or one that is hand carried in a sealed envelope. Transcripts submitted by students who never enroll are kept on file for two years.
Cuyamaca College accepts credit from institutions accredited by one of the six regional accrediting associations and foreign transcripts evaluated by either Academic Credentials Evaluation Institute (ACEI) or International Education Research Foundation (IERF). Please refer to the specific guidelines in this catalog regarding the evaluation of foreign transcripts.
3. Take the English and Math Assessments. The recommendations that result from these assessments will be helpful in selecting appropriate English and Math classes and in planning a successful college program. Students may obtain clearance from the assessment process if they have:
 - taken an English and Math class at a college and received a grade of "Pass" or a minimum grade of "C," or
 - earned an Associate Degree or higher, or
 - completed an Advanced Placement Examination, or
 - completed the assessment process at a local college.

To obtain a clearance, you are required to bring to the Counseling Center one of the following:

- a grade report, or
- a transcript or diploma, or
- a copy of your Advanced Placement Examination results with scores of 3, 4 or 5, or
- assessment scores from any local college.

4. Arrange for a counseling appointment for program advisement.
5. Complete the formal registration process as outlined in the class schedule.

ADMISSION REQUIREMENTS

High school graduates or equivalent, or students who are over 18 years of age and have the ability to benefit from the instruction offered, may attend Cuyamaca College.

While it may be advisable for a student to qualify for a high school diploma through a local adult school, non-graduates over 18 years of age may be admitted directly to Cuyamaca College.

Transfers from accredited colleges and universities are eligible for admission to Cuyamaca College.

High school students who are in the 11th and 12th grades may attend with the approval of the appropriate high school official, the appropriate college official and the student's parents.

ASSESSMENT, ORIENTATION AND NEW STUDENT ADVISING

Assessment, Orientation and New Student Advising are expected of all new students. Assessment includes validated placement tests and other measures, and is intended to assist students in selecting courses appropriate to their abilities and educational goals. Assessment gives students knowledge of present skill levels in the areas of Mathematics, English, and English as a Second Language (ESL). An Orientation and New Student Advising session follows assessment. These sessions, conducted by a counselor, provide important information to students about the programs and services available at the college as well as strategies for student success. The Assessment process takes approximately 3 hours to complete. Orientation and New Student Advising sessions offer an opportunity for the new student to develop an Educational Plan, an important tool to assist students attain goals efficiently. Assessment results are distributed at the Orientation and New Student Advising session, or may be picked up in the Counseling Center. New students must complete the Assessment, Orientation and New Student Advising Program before registering for classes.

New, returning, or transfer students may be exempt from the process of Orientation, Assessment and New Student Advising if they:

- Have an Associate's Degree or higher;
- Are taking personal growth courses only;
- Are enrolled in non-credit, Community Education courses;
- Are taking classes to upgrade their job skills;
- Are concurrently attending another college or university.

In order to meet the placement test requirement, students may instead submit documentation

of previous college course work and/or assessment scores from another college. Scores expire after two years; course work does not expire. Such information should be given to a counselor in the Counseling Center.

The Assessment Office is located in A-200 in the Student Services One Stop Center. The primary mission of the Assessment Office is to assist students through the placement test process. In addition to administering the tests for English, Mathematics and ESL, the Assessment Office also administers the Ability to Benefit (ATB) tests for financial aid purposes. Accommodations are available to students with disabilities. For more information, call (619) 660-4426 or visit the website at www.cuyamaca.edu/assessment.

ENROLLMENT VERIFICATIONS

Each student who has an academic record on file at Cuyamaca College and who is not in arrears to the district with regards to fees, tuition, loans or other charges may request verification of enrollment (commonly used to verify enrollment for insurance purposes, scholarships, student worker eligibility, etc.) from the Admissions and Records Office. Verification of enrollment may be obtained at \$3 per copy (processed within 5 working days). Exception: This charge will not be assessed for student loan deferments. An emergency or rush verification of enrollment will be provided for \$5 per copy (processed within 24 hours). Please note processing time does not include shipping.

FEES

Cuyamaca College is part of the California Community College system and requires enrollment, student center construction and health services fees for all students, payable at the time of registration. Students are dropped from classes for non-payment of fees. The Board of Governors Waiver Program provides methods to assist low income students pay these fees. Eligibility requirements are available in the Financial Aid Office.

Students may purchase daily or semester parking permits. If a student elects to purchase a multi-car parking permit, the permit may be used on any number of vehicles, but entitles the student to the use of a single parking space per permit. See "Parking and Traffic Regulations" for more information.

Students are required to purchase their own textbooks and supplies and may be required to pay for equipment which is lost or broken after it has been issued.

All students are encouraged to support the student activity program through the purchase of a Student Benefit Card.

INSTRUCTIONAL MATERIALS

Students may be required to purchase instructional and other materials required for a credit or non-credit course, provided that such materials are of continuing value to a student outside of the classroom setting, and provided that such materials are not solely or exclusively available from the district.

INTERNATIONAL STUDENT PROGRAM

ADMISSION

- Applications for admission must be received by the following deadlines:
 - Fall semester – June 1
 - Spring semester – November 1

All application materials must be received by the above deadlines.
- TOEFL scores must be submitted in order to be considered for admission. The minimum score is 450 paper based or 45 internet-based. The TOEFL test must be completed by the application deadline.
- New students must enroll in the appropriate level English class.

FULL-TIME STATUS

An international student must maintain a minimum of 12 units with a 2.0 grade point average each fall and spring semester at Cuyamaca College.

FINANCIAL RESOURCES

- Each international student must submit a complete financial statement. The financial statement must indicate the ability of the student to finance the year's education to the satisfaction of the Admissions and Records Office (approximately \$21,000 per year).
- An international student attending Cuyamaca College must pay international student tuition and other fees as required by the Governing Board.
- Financial aid is not available for international students.
- An international student may not work off-campus while attending college unless approval is granted by the Department of Homeland Security and the International Student Specialist in Admissions and Records. In some instances an international student may, after completing at least two semesters, work on campus for 20 hours per week.

HEALTH

Cuyamaca College **strongly** recommends that international students obtain a health and accident insurance policy. The Health and Wellness Center has information on where to acquire such a policy.

HOUSING

Cuyamaca College does not have on-campus housing; however, we do work with a home family agency. Information is available in the Admissions and Records Office. The college assumes no responsibility for providing or supervising such housing facilities.

GRADING STANDARDS

International students are subject to all Cuyamaca College grading, probation and disqualification standards.

ADVANCED DEGREES

International students with an associate degree or its equivalent are considered beyond the scope of community colleges and are discouraged from applying to Cuyamaca College.

NOTIFICATION OF ADMISSION

Students will be notified of their acceptance to Cuyamaca College as soon as their application materials are received and approved. Students need to be available for preregistration orientation and educational counseling approximately two to four weeks prior to the start of each semester.

REFUND SCHEDULE

The refund schedule for international student tuition, nonresident tuition, enrollment, student center construction and health services fees is as follows:

- Full semester courses:
 - 100% refund through first two weeks of instruction
 - 0% refund after second week of instruction
- 8 week courses:
 - 100% refund through first week of instruction
 - 0% refund after first week of instruction
- Other short-term classes:
 - Contact the Admissions and Records Office or go to www.cuyamaca.edu/cc/schedules.asp and click on "Class Deadline Dates" under "Helpful Links"

NONRESIDENT TUITION REFUND

Refunds after the refund deadline will be made for the following reasons only:

- Erroneous determination of nonresident status.* If a student is erroneously determined to be a nonresident and, consequently, a tuition fee is paid, such fee is refundable in full, provided acceptable proof of state residence is presented within the period for which the fee was paid.
- Compulsory military service.*

RESIDENCY INFORMATION

Each person enrolled or applying for admission to any California community college will provide such information and evidence of residence as deemed necessary by the District Governing Board to determine residence classification. Falsification of residency information may result in admission to the college being denied. Guidelines for determining residency are outlined in the California Administrative and Education Codes. The determination of a person's classification will be made in accordance with the provisions of these policies and the residence determination date for the semester or session for which the person proposes to attend. The following is a summary of residency guidelines and is by no means complete. Changes may have been made in the statutes and regulations since the time this catalog was published. For more information, contact the Residency Specialist in the Admissions and Records Office.

I. RESIDENCE CLASSIFICATION

- A "resident" is a person who has been both physically present, and has established intent to make California his/her residence for more than one year immediately preceding the residence determination date (Section

54020 of Title 5 of the California Administrative Code). The "residence determination date" is the day immediately preceding the first day of instruction of the semester or session to which the person seeks admission.

- A "nonresident" is a person who has not been both physically present or established intent to make California his/her residence for more than one year immediately preceding the residence determination date. Persons so classified, unless they qualify under one or more of the exceptions later enumerated, will be required to pay a tuition fee as established by the Grossmont-Cuyamaca Community College District Governing Board.

II. DETERMINATION OF RESIDENCE

- Residence. To determine a person's place of residence, the following rules are observed:
 - Every person has, in law, a residence.
 - Every person who is married or 18 years of age, or older, and not precluded from doing so, may establish residence.
 - There can only be one residence.
 - Residence is the place where one remains when not called elsewhere for labor or other special or temporary purposes, and to which one returns in seasons of repose.
 - A residence cannot be lost until another is gained.
 - Residence can be changed only by the union of act and intent.
 - A man or woman may establish his or her residence. A person's residence shall not be derived from that of his or her spouse.
- Adults. Persons 18 years of age or older may establish residence in accordance with Section A.
- Minors. Persons under 18 years of age may establish residence in accordance with the following:
 - A married minor may establish his/her own residence.
 - If the parents are permanently separated, the residence of the minor is the residence of the parent with whom the minor lives.
 - If both parents are deceased, and there is no court-appointed guardian, the minor may establish his/her own residence.
 - The residence of an unmarried minor who has a parent living cannot be changed by his or her own act, by the appointment of a legal guardian, or by relinquishment of a parent's right of control, unless the minor qualifies for the two-year care and control or the self-support exception.
 - A person who is a minor, and resides with either the father or mother (or both), may be classified as a resident of California if the parent (or parents) with whom the minor lives has established residence in California for more than one year prior to the residence determination date.

III. FACTORS TO BE CONSIDERED IN DETERMINING RESIDENCE

A. Residence is established only by the union of both physical presence and intent. No one factor is decisive, however, the college may look for certain objective manifestations of subjective intent on the part of one asserting that residence status has been established, or has been maintained in spite of an absence from California.

The following factors may be used to demonstrate evidence of maintaining physical presence:

1. Carrying on of a business or employment in California.
2. Maintaining active savings and checking accounts in California banks.
3. Ownership of residential property or continuous occupancy of rented or leased property in California.
4. Active resident membership in service or social clubs.

The following factors may be used to demonstrate intent to reside in California:

1. Filing California personal income taxes as a resident.
2. Registering to vote and voting in California elections.
3. Possession of a California Driver's License or California Identification Card from the Department of Motor Vehicles.
4. Possession of California resident vehicle license plates.
5. Petitioning for a divorce or lawsuit as a resident of California.
6. Carrying on of a business or employment in California.
7. Possession of a California resident hunting or fishing license.
8. Licensing from California for professional practice.
9. California address on federal income tax forms and W-2 forms.
10. Maintaining a California address as the home of record on military records and on the Leave and Earnings Statement (LES) while in the armed forces.

B. Factors that are inconsistent with a claim for California residence include, but are not limited to, the following:

1. Filing California State income taxes as a nonresident or filing income taxes as a resident in another state.
2. Maintaining a driver's license in another state.
3. Maintaining vehicle registration in another state.
4. Maintaining voter registration and voting in another state.
5. Attending an out-of-state institution as a resident of that state.
6. Petitioning for a divorce or lawsuit as a resident in another state.

C. The Cuyamaca College admissions/residency questionnaire shall contain a variety of questions directed at establishing the residency classification of a person.

D. Exceptions.

1. Persons who have attended a California high school for at least three years and have graduated from a California high school, or have attained the equivalent status, are exempt from paying nonresident tuition. This exemption applies to persons who would usually be classified as nonresidents, including undocumented immigrants. Nonimmigrant aliens, including persons on F and B visas, are not eligible for this exemption.
2. A minor who remains in California after resident parents establish residence elsewhere (within one year immediately prior to the residence determination date), may retain resident status until the minor has attained the age of majority and has resided in California long enough to establish residence, so long as, once enrolled, continuous full-time attendance is maintained. Nothing in this section will require attendance during summer intercession or any session beyond the normal academic year.
3. A minor who has been entirely self-supporting and actually present in California for more than one year immediately preceding the residence determination date, with the intention of acquiring a residence therein, shall be entitled to resident classification until he/she has resided in California the minimum time necessary to become a resident. Certain requirements must be met.
4. A student who currently resides in California and is 19 years of age or under at the time of enrollment, who is currently a dependent or ward of the state through California's child welfare system, or was served by California's child welfare system and is no longer being served either due to emancipation or aging out of the system, may be entitled to resident classification until he or she has resided in the state the minimum time necessary to become a resident.
5. A minor shall be entitled to resident classification if, immediately prior to enrolling at a California community college, the minor has lived with and been under the continuous direct care and control of any adult or adults, other than a parent, for a period of not less than two years, provided that the adult or adults having such control have been domiciled in California for more than one year immediately prior to the residence determination date. This exception shall continue until the student has attained the age of majority and has resided in California the minimum time necessary to become a resident so long as continuous full-time attendance is maintained.
6. An unmarried minor alien will be entitled to resident classification if the minor and the minor's parents have not been precluded by the Immigration and Nationality Act from establishing domicile in the United States, provided that the parents have established residence in California for more than one year prior to the residence determination date for the semester or session for which the minor proposes to attend. An exception is made to minors, for establishing residency, if the minor is a U.S. citizen and his/her parents are undocumented aliens.
7. A person who is an adult alien will be entitled to resident classification if he/she is not precluded by the Immigration and Nationality Act from establishing domicile in the United States, provided that he/she has established residence in California for more than one year prior to the residence determination date for the semester or session for which he/she proposes to attend.
8. A person classified as a nonresident shall not obtain resident classification, as a result of maintaining continuous attendance at an institution, without meeting the other requirements of obtaining such classification.
9. An undergraduate student who is a dependent (natural or adopted child, stepchild or spouse) of a member of the armed forces of the United States stationed in California on active duty, is exempt from paying nonresident tuition for the duration of his/her enrollment at a California community college. Graduate dependents are exempt from paying nonresident tuition for one year from the date of his/her arrival in California. If the member of the armed forces, whose undergraduate dependent is in attendance at Cuyamaca College (1) is transferred, on military orders, to a place outside of California, or (2) retires from active duty, the dependent shall not lose his or her exemption status for the one year duration it takes to establish residency. After one year has elapsed, the dependent is subject to reclassification according to the policies stated in this section.
10. An undergraduate student who is a member of the armed forces of the United States stationed in California on active duty, except a member assigned for educational purposes to state-supported institutions of higher education, shall be exempt from paying nonresident tuition for the duration of his/her enrollment at a California community college. Graduate active military students are exempt from paying nonresident tuition for one year from the date of his/her arrival in California. After one year has elapsed, the student is subject to reclassification according to the policies stated in this section.

11. An undergraduate student who was a member of the armed forces stationed in California on active duty for more than one year immediately prior to being discharged, shall be exempt from paying nonresident tuition for up to one year for the time he/she lives in California after being discharged. This one year waiver after the discharge date allows the time necessary to establish residence. After one year has elapsed, the student is subject to reclassification according to the policies stated in this section.
12. A person who is an apprentice, as defined in Section 3077 of the Labor Code, will be entitled to resident classification.
13. A person holding a valid credential authorizing service in the public schools of California and who is employed by a school district in a full-time position requiring certification qualifications for the college year in which the person enrolls, shall be entitled to resident classification if such person meets any of the following requirements:
- Holding of a provisional public school credential and enrollment in courses necessary to obtain another type of credential authorizing service in the public schools.
 - Holding a public school credential issued pursuant to Section 44250 and enrollment in courses necessary to fulfill credential requirements.
 - Enrollment in courses necessary to fulfill the requirements for a fifth year of education prescribed by subdivision (b) of Section 44259.
14. A person who is a full-time employee of a California community college, California State university or college, the University of California, or the California Maritime Academy; or the child or spouse of that person, may be entitled to resident classification until he/she has resided in California the minimum time necessary to become a resident.
15. For purposes of the nonresident tuition fee, a community college district shall disregard the time during which a person living in the district resided outside of California if:
- The change of residence to a place outside of California was due to a job transfer and was made at the request of the person's employer or the employer of the person's spouse or, in the case of a person who resided with and was a dependent of the person's parents, the change of residence was made at the request of an employer of either of the person's parents.
 - Such absence from California was for a period of not more than four years.
 - At the time of application for admission to a college maintained by the district, the person would qualify as a resident if the period of the person's absence from California was disregarded.
- A nonresident tuition fee shall not be charged to a person who meets each of the conditions specified in subdivisions a. to c., inclusive.

IV. REVIEW AND APPEAL OF CLASSIFICATION

Any person, following a final decision on residence classification by the college, may make a written appeal to the Chancellor of the District or designee within 30 calendar days of notification of final decision by the campus regarding classification. The Chancellor, on the basis of the Statement of Legal Residence, pertinent information contained in the file of the Dean of Counseling & Enrollment Services, and information contained in the person's appeal, will make the determination and notify the person by United States mail, postage prepaid.

V. RECLASSIFICATION AND FINANCIAL INDEPENDENCE

Students must complete reclassification forms, which are available in the Admissions and Records Office, for a change in classification from nonresident to resident status. Students will be requested to provide appropriate documentation to prove California residence, for more than one year prior to the residence determination date, for the semester or session which the student is claiming resident status. Education Code Section 68044 requires that the financial independence of a nonresident student seeking reclassification as a resident be included in the factors to be considered in the determination of residence.

VI. NONRESIDENT TUITION

A person classified as a nonresident will be required to pay nonresident tuition, in addition to other fees required by the college. Nonresident tuition must be paid at the time of registration.

VII. INTERNATIONAL STUDENT TUITION

A nonresident person who is a citizen and resident of a foreign country will be required to pay international student tuition, in addition to other fees required by the college. International student tuition must be paid at the time of registration.

TRANSCRIPTS

Each student who has an academic record on file at Cuyamaca College and who is not in arrears to the district with regard to fees, tuition, loans or other charges may request official transcripts from the Admissions and Records Office. The official transcript includes course work from both Cuyamaca and Grossmont College. Two official transcripts of records are provided without charge; additional copies may be obtained at \$3 per copy (processed within 5 working days). An emergency or rush transcript will be provided for \$5 per copy (processed within 24 hours). Please note processing time does not include shipping.

TRANSFER CREDIT

EVALUATION OF U.S. TRANSCRIPTS

Courses taken at a regionally accredited college or university and designated as appropriate for general education, Associate Degree, baccalaureate or graduate credit by that institution will be accepted by Cuyamaca College for credit. In support of general education reciprocity, courses used to meet general education requirements at another California community college will be applied towards general education Areas A-D at Cuyamaca College. English and Mathematics competency levels are governed by California Education Code Title 5, section 55063. The extent to which courses taken at other colleges satisfy specific certificate and degree requirements is determined by a review of comparability to courses in the Cuyamaca College curriculum.

Courses completed at institutions without regional accreditation are not generally accepted.

EVALUATION OF FOREIGN TRANSCRIPTS

Transcripts (educational credentials) issued in foreign countries from non-American system institutions and those in languages other than English require special handling. Each foreign transcript must be translated into English and submitted to one of the companies listed below for an official evaluation.

Cuyamaca College accepts the evaluation of foreign transcripts **only** from the following **two** academic evaluations companies:

- Academic Credentials Evaluation Institute, Inc. (ACEI)**
P.O. Box 6908
Beverly Hills, CA 90212 USA
TEL (310) 275-3530
FAX (310) 275-3528
www.acei1.com
- International Education Research Foundation (IERF)**
P.O. Box 366S
Culver City, CA 90231-366S USA
TEL (310) 390-6276
FAX (310) 397-7686

Students will need to contact the evaluation company they select for their particular foreign transcripts evaluation procedure. Once completed, have the evaluation report mailed to the Evaluations Office, Cuyamaca College, 900 Rancho San Diego Parkway, El Cajon, CA 92019.

CUYAMACA COLLEGE'S PROCEDURE FOR THE EVALUATION OF FOREIGN TRANSCRIPTS

- Students must submit to Admissions and Records a detailed evaluation report from one of the companies listed above with **subject breakdowns and grades** from the *official* foreign transcripts. The official report must be **in English** and in a *sealed* envelope.
- The official report will be reviewed by the Cuyamaca College Evaluations Office regarding the possible clearing of general education courses for graduation.
- English** and **speech** courses on any evaluation report will be awarded elective credit only.
- Courses will **only** be used to satisfy major requirements with the approval of the department on a "Modification of Major" form.

5. Courses will **not** be used for General Education Breadth or IGETC certifications.
6. In some instances, additional documentation such as the course syllabus or detailed course description may be needed before an evaluation of foreign course work can be completed.
7. Official transcripts will not be required by Cuyamaca College since the official transcripts are submitted to the evaluation service.

VETERANS SERVICES

Upon filing an application for admission to Cuyamaca College, a veteran should immediately contact the Veterans Certifying Official in Admissions and Records. Military form DD-214 must be presented to the Veterans Office in order to take advantage of veteran's benefits.

Veterans must request official transcripts of all previous college work, including military transcripts of service (AART, SMART, CGIT or CCAF), be sent to the Admissions and Records Office. An official transcript is one that has been sent directly to Cuyamaca College from the issuing institution or one that is hand carried in a sealed envelope. Students not taking advantage of the GI Bill benefits who wish to receive credit should also submit official transcripts.

Credit may be granted for military service schools as recommended in the publication *A Guide to Evaluation of Educational Experiences in the Armed Forces*, published by the American Council on Education (ACE). Military credit will be counted toward graduation as general education for military courses substantially similar to coursework offered by Cuyamaca College, or elective credit, unless specifically accepted by a department for use within a student's major. A maximum of 20 units of military credit (including up to 3 units of Exercise Science) will be allowed. Students should meet with the veterans' counselor to request an Evaluation of Military Credit.

Veterans who have completed at least one year of honorable active service will receive up to 3 units of credit for Exercise Science activity that will meet the graduation requirement at Cuyamaca College.

Students planning to transfer should consult the catalog of the four-year institution for granting of military credit; award varies. Those planning to transfer to a CSU may be able to satisfy Area E, Lifelong Learning, on CSU GE Breadth. To receive this credit for military service, a DD-214 and appropriate military records must be submitted to the Admissions and Records Office.

A veteran may not repeat a course and receive veterans' benefits where a "D" or "F" grade was received unless the course is required for graduation or a grade of "C" is required for the degree.

Veterans should pay special attention to add/drop deadlines and consult the campus Veterans Office when any change in enrollment is made.

If any veteran or dependent receiving VA educational benefits has been on academic or lack of progress probation for two consecutive semesters, Cuyamaca College will not certify the student's enrollment to the VA for payment

of benefits until the cumulative GPA at the GCCCD has improved to a 2.0.

Any veteran who petitions for readmission to the college following disqualification must meet with the veterans' counselor and have the counselor make a recommendation on the petition prior to being considered for readmission.

Veterans should be aware that short-term classes and other flexible schedules may affect benefits. Before registering, check with the veterans' counselor or the Veterans Certifying Official in the Admissions and Records Office about the implications of taking short-term courses.

CALIFORNIA COLLEGE FEE WAIVER (CALVET)

The children and spouses of U.S. veterans with service-connected disabilities or veterans who have died in service or from service-connected disabilities may be eligible for waiver of College fees. The student must complete the BOGW enrollment fee waiver application and submit the VA letter of eligibility to the Financial Aid Office. For more information see the Veterans Certifying Official in Admissions and Records.

SERVICEMEMBERS OPPORTUNITY PROGRAM (SOC)

As a Servicemember Opportunity College, Cuyamaca College provides academic assistance to active-duty personnel which includes program planning and guidance in understanding educational options, acceptance of traditional and nontraditional learning experiences, tutoring, or similar learning opportunities.

Services for Students

ASSOCIATED STUDENT GOVERNMENT OF CUYAMACA COLLEGE (ASGCC)

Cuyamaca College supports the organization of students known as the Associated Student Government of Cuyamaca College (ASGCC). The association promotes the following objectives:

- To serve as an active student voice in the operation of the college, including both shared governance and the management of student activities.
- To provide an opportunity for leadership experience and training for students.
- To enhance, wherever possible, the general excellence of the college, uniting the interests of all persons—students, faculty, administration, staff and the local community.

ASSOCIATED STUDENT GOVERNMENT (ASG) SHARED GOVERNANCE

Since virtually all major decisions made at Cuyamaca College affect students in some way, student input to the various decision-making bodies is relevant, necessary and welcomed. ASGCC has adopted a constitution which established an organized student voice at Cuyamaca College. This voice is facilitated by the ASGCC and is a critical constituency among the college governance structure.

Associated Student Government meetings are held weekly; dates and times are posted on the ASGCC bulletin board. For more information, please call (619) 660-4273. All members of the college community are welcome to attend. Additional information regarding student government is available in the ASGCC Office and the Student Affairs Office.

ASSOCIATED STUDENT GOVERNMENT SERVICES AND ACTIVITIES

With the support of the student body, the ASGCC plans, organizes, promotes, sponsors and finances a comprehensive program of activities and services for all Cuyamaca College students. The activities program is organized to achieve the following objectives:

- To provide opportunities for the development of the social and cultural interests of the entire college community.
- To afford avenues for the enrichment of each individual's life through sharing and enjoying a group spirit of mutual responsibility, leadership and creativity.
- To promote college spirit and community awareness. The variety of departments, clubs and facilities permits a student to experience a broad spectrum of interest, including but not limited to, music, art, drama, sports, ecology, community service and business.

STUDENT AFFAIRS OFFICE

The Associate Dean of Student Affairs acts in an advisory role to the Associated Student Government of Cuyamaca College. Opportunities are provided for students to organize, meet, and work together to extend their academic learning process through campus involvement and participation. By providing this educational culture, the Student

Affairs Office helps foster the intellectual, social, and emotional growth of the campus community.

Facilitating student complaints and grievances in compliance with District policies and helping students learn about college policies and procedures is a major component of this office.

In addition, overseeing ASGCC and Student Trustee elections and the yearly commencement ceremonies are some of the primary responsibilities of this office.

Students interested in obtaining club charters and ASGCC candidate petitions should come to the Student Affairs Office which is located in I-120.

STUDENT BENEFIT "COYOTE" STICKER

A Student Benefit "Coyote" Sticker may be purchased for \$12. This card entitles a student to free admission to all college-sponsored athletic events, 10% off all supplies from the college bookstore (not including textbooks), as well as special college and community discounts.

The Student Benefit "Coyote" Sticker not only benefits students, it also helps the ASGCC to support various activities and programs on campus.

For additional information, please contact the Associated Student Government Office at (619) 660-4273 or the Student Affairs Office at (619) 660-4491.

HONOR SOCIETY/PHI THETA KAPPA

Phi Theta Kappa (PTK) is an honors organization reflecting the hallmarks of scholarship, leadership, service and fellowship. The programs of the Society are designed to give the members opportunities for personal growth in all areas, encouraging the more balanced individual. The organization was created in 1918. Cuyamaca College has an honor society chapter. The requirements for admission as a provisional member are:

- Academic excellence as defined by a GPA of 3.5 or better,
- Must have completed a minimum of twelve semester units at Cuyamaca College that qualify for an Associate Degree program, and
- Each prospective student must pay a non-refundable administration processing fee of \$65 at the time of filing application and profile forms for provisional membership admission.

Students must apply for membership.

COLLEGE STUDENT ORGANIZATIONS/ CLUBS

Cuyamaca College offers a wide spectrum of special interest and program-related clubs for student participation.

Information on how to organize a new club or join an existing one is available in the Student Affairs Office. College clubs include Art, Automotive, Club Aled, Engineering and many others from which to choose.

An Inter-Club Council, consisting of representatives from each college club on campus, exists to coordinate events and activities and share ideas.

In accordance with Sections 76035, 32050 and 32051 of the Education Code of the State of California, the Governing Board of the Grossmont-Cuyamaca Community College District has ruled that secret fraternities,

sororities or clubs may not be formed. Moreover, Section 32051 of the Education Code forbids the practice of hazing by organizations or individuals either on or off the Cuyamaca College campus.

CULTURAL ACTIVITIES

As part of the educational offering, Cuyamaca College presents a year-long series of cultural events. Among the presentations are lectures by persons of note in the political and science disciplines, artists in the fields of music and dance, art festivals, film series, and other events that add variety to the intellectual and cultural life of the college community. These include both day and evening programs which are open to students and the general public.

A selected day each month serves as "College Hour," when college-wide and specialized activities are held as enriching experiences outside of classroom academic life.

BOOKSTORE

Barnes & Noble Bookstores, Inc., the world's largest bookseller, manages the Cuyamaca College Bookstore. The bookstore carries all required textbooks and supplies, as well as Cuyamaca College emblematic giftware and clothing. A portion of the revenues generated by the bookstore is paid to the Grossmont-Cuyamaca Community College District and reallocated for the improvement and expansion of college programs.

CALWORKS S.T.E.P.S.

The CalWORKs (California Work Opportunities and Responsibility to Kids) S.T.E.P.S. (Success Through Education Produces Self-Sufficiency) Program helps students who receive family cash assistance fulfill their Welfare-to-Work program requirements and provides additional support services. Eligible students receive assistance with arranging subsidized child care, obtaining necessary textbooks and supplies, and providing on-campus, paid work study. The CalWORKs counselors work with each student to develop an education plan that leads to self-sufficiency. In addition to providing counseling services, counselors help students access campus and community resources.

If you are a current Welfare-to-Work participant, or believe that you may be eligible for family cash aid, contact the CalWORKs S.T.E.P.S. office in the Student Services One-Stop Center at 619-660-4340. Let us be your liaison with the County CalWORKs Welfare-to-Work staff.

CAREER AND STUDENT EMPLOYMENT CENTER

The Career and Student Employment Center provides career planning and employment assistance to all students, staff and community members. The Center provides assistance in the areas of career assessment, career exploration, goal setting, decision-making, labor market information, and the education and training required. Information regarding various careers is available in the Center's library, through workshops, career fairs and individual appointments with professional

staff. Career assessment tests are available to help students explore their interests, skills, work values and personality type as an aid in making career decisions. A career library is available, as well as computerized occupational information which contains information on local, state and national trends, salaries and skills for various jobs. Internet access is also available.

The Career and Student Employment Center also refers students to on-campus and off-campus job openings and assists students with employment skills such as developing resumes, interviewing and job search skills. Jobs are open to Cuyamaca students and alumni. Jobs are posted on the "Cuyamaca Job Link" on the Internet. For job referral services, students must apply in person at the Center. Jobs are also posted on the Employment Bulletin Board located across from the Administration building. Students register by completing a Student Application Form, presenting their Social Security Card and picture identification. The use of computers is available to perform job search and create resumes. Over 200 employer files containing employment information are also available in the Center.

The Career and Student Employment Center is located in A221 in the Student Services Center (next to Counseling) or you can call (619) 660-4450. Visit us at our website at www.cuyamaca.edu/careerserv/ for more information.

CHILD DEVELOPMENT CENTER

The Child Development Center is a critical component of the academic program and mirrors the teachings of the Child Development Department. Child Development students use the Center as a lab school for observations and work experience. The Center serves children of students, faculty, staff and the community with a professional and quality program. The Center's educational philosophy is built on a partnership of children, families and staff, with respect and value for each participant. The Center is open year-round, following the college schedule for closures. Hours of operation are Monday through Friday, 7:45 am to 5:15 pm. The Center accepts children from 18 months to 5 years old (pre-kindergarten).

COOPERATIVE AGENCIES RESOURCES FOR EDUCATION (CARE)

CARE is a state-funded program designed to recruit and assist single parent students who are EOPS eligible. CARE eligibility requires that the student or their dependent child be a current recipient of CalWORKs/TANF, and the student must have one child under the age of 14.

CARE provides support services and possible grant funds. The CARE counselor works with each student to promote academic success and assist students in attaining their career and vocational goals. For more information contact the CARE program in the EOPS office located in the One-Stop Center, Build A300, or call (619) 660-4293. Visit us at our website at www.cuyamaca.edu/eops/care.asp

COUNSELING

The mission of the Counseling Center is to provide quality educational, career, occupational and personal counseling and create a climate and structure in which each student has a maximum opportunity for self-fulfillment. The Counseling Department is committed to helping students achieve their educational and career goals. Whether the goal is to take one course, earn a certificate or an associate degree, or transfer to a four-year college, counselors are available to assist.

PERSONAL COUNSELING

The Counseling Center is staffed with professional counselors who offer individual counseling for students who want assistance in coping with problems they face in everyday life. Issues relating to self-esteem, anxieties, relationships, and academic performance are common obstacles for college students.

ACADEMIC ADVISING

Planning is an important step in achieving academic success. Each semester, all students are encouraged to meet with a counselor prior to registration for academic advising, course selection and setting up a student educational plan.

CAREER ASSESSMENT AND ADVISING

The Counseling Center, in conjunction with the Career Center, specializes in assisting students in choosing a college, a particular major and/or career goal.

TRANSFER PLANNING

The Counseling Center staff, in conjunction with the University Transfer Center, provides the most current information to assist in the smooth transition to four-year colleges and universities.

Counseling is located in A200 in the Student Services One Stop Center, or you can call (619) 660-4429. Visit us at our website at www.cuyamaca.edu/transfer_center.

ASK A COUNSELOR - ONLINE COUNSELING SERVICE

Cuyamaca College offers online counseling via the "Ask A Counselor" web tool available at www.cuyamaca.edu/counseling. Online counseling services include general information about Cuyamaca College's programs, classes, degree requirements, transfer advising and educational planning. Students using "Ask A Counselor" can expect a response from a counselor within 72 hours, not including weekends.

COUNSELING (COUN) COURSES

Cuyamaca College offers a number of COUN courses to benefit students including COUN 101, Introduction to College, and COUN 120, College and Career Success, taught by counselors. For resources and more information, see www.cuyamaca.edu/pdc. For a complete listing of courses, see the Course Descriptions section of the catalog.

A First Year Success Program (Cuyamaca Link) is also offered by the college in conjunction with some of the local high schools to help new students adjust to the college experience.

DISABLED STUDENTS PROGRAMS AND SERVICES (DSPS)

Disabled Students Programs & Services (DSP&S) provides support services to students with disabilities to enhance their opportunities to experience educational success.

Students who have a disability and require special services and/or equipment in order to access educational opportunities and achieve academic success are asked to contact DSP&S, where qualified staff members are available to assist with such needs. Academic and disability-related counseling is available along with the following services: application and registration assistance, short-term special parking, campus mobility assistance, test proctoring, special equipment, High Tech Lab use, interpreters for the deaf, readers for the blind, note-taking services, learning disability assessment, speech-language assessment and intervention, additional tutoring hours, TTY (619) 660-4386 and referrals to other colleges and outside agencies such as the Department of Rehabilitation, the Access Center and the San Diego Regional Center. Services through DSP&S are authorized based on the documentation of disability available to our office and the functional effects of the student's disability upon his/her educational pursuit.

Cuyamaca College recognizes that a disability may prevent a student from demonstrating required math, reading, and/or writing competencies or from completing course requirements necessary for an AA or AS degree in the same manner as nondisabled students. The college also recognizes the need to accommodate students with documented disabilities to the greatest extent possible without compromising the student's course of study and the integrity of the student's degree. Contact DSP&S for further information at (619) 660-4239.

Questions regarding accessibility, Sections 504 and 508, Americans with Disabilities Act, Title 5 regulations, and VTEA funding should be addressed with DSP&S personnel.

Note: Affiliation with DSP&S is not mandatory in order to receive accommodations. For further information, contact the college ADA-504 Coordinator.

DISTRICT PUBLIC SAFETY DEPARTMENT

The Public Safety Department provides 24 hour-a-day police services to persons and property on college grounds, facilities, parking lots, and at adjacent or offsite locations. However, all persons on college grounds are primarily responsible for their own safety and property.

District police officers are sworn officers in compliance with the California Education Code and the California Penal Code, and have full law enforcement authority throughout the state. They are vested with full law enforcement powers and responsibilities as local police and sheriff's deputies in your home community.

In addition to District police officers, the department employs uniformed student community service officers who provide building security, escorts, and assistance with special events.

The District police have established Memorandums of Understanding (MOUs) with local law enforcement agencies in which the two colleges are located. The mutual agreements allow the District police to have primary operational responsibility for law enforcement and investigative services on college district property, with the assurance that local law enforcement agencies can be called for assistance and mutual aid as appropriate. Copies of these agreements are available to the public at the Public Safety Department headquarters located on the Grossmont College campus, and are also available at the Public Safety office at the Student Services One-Stop Center at Cuyamaca College.

EMERGENCY SPEED DIALING PAY PHONES

At least one phone in each group of pay phones throughout both campuses is equipped with emergency speed dialing. Dialing the pound sign (#) and one (1) will immediately connect the caller to the Public Safety Department. These phones are easily identified by a sign above the phone.

EMERGENCY CALL BOXES

Emergencies and other requests for services can also be reported to the District police by using one of the colored Emergency Call Boxes located throughout both campuses.

Emergency directions in Braille are also on each phone to assist the visually impaired. More information is available through Disabled Students Programs and Services.

CRIME REPORTING PROCEDURES

Public Safety Department personnel are available 24 hours a day. Emergencies, criminal activities, or other incidents may be reported at any time, day or night, by calling:

EMERGENCIES 911
DISTRICT POLICE (619) 644-7654
EL CAJON POLICE (619) 579-3311
S.D. SHERIFF (858) 565-5200

OFF-CAMPUS CRIME INFORMATION

The San Diego County Sheriff's Department and the El Cajon Police Department may provide the district police with crime data for the areas surrounding both college campuses. The district police will notify the college community when security problems arise.

DISTRICT PROPERTY

District property may not be removed from the campus without prior written authorization from the department dean or area supervisor. Unauthorized removal of district property from the campus is a violation of the law and violators may face prosecution by the district.

CRIME PREVENTION

One of the most essential ingredients of any successful crime prevention program is an informed public. It is the goal of the District police to inform students and staff in a timely manner of any criminal activity or security problem that may pose a reasonable threat to their safety. Such information will be distributed to students through brochures, newsletters, posted notices, or student publications. Faculty and staff are informed through inter-department memos, bulletins and newsletters.

Individuals who need to be on campus other than during regular scheduled work hours must secure authorization from the department chairperson or supervisor prior to their arrival. The District police should also be notified of their presence. Many campus rooms and areas are protected by intrusion alarms, so before entering these areas, District police should be contacted. It is the responsibility of those using rooms, offices or other areas to lock access doors, turn off lights and close all windows. Facilities Services staff and Public Safety Department personnel will check many campus areas during off-hours, but the primary responsibility for security lies with the user.

CRIME STATISTICS

The Clery Act requires that institutions disclose statistics for offenses committed in certain geographic locations associated with the institution. A crime should be included in the annual security report only if it occurred in one of the following locations: on campus, in or on a noncampus building or property, or on public property within or immediately adjacent to and accessible from the campus. All crimes, including hate crimes, must be disclosed by geographic location.

On Campus: Any building or property owned or controlled by an institution within the same reasonably contiguous geographic area and used by the institution in direct support of, or in a manner related to, the institution's educational purposes.

On Public Property: All public property, including thoroughfares, streets, sidewalks, and parking facilities, that is within the campus, or immediately adjacent to and accessible from the campus.

Noncampus Building or Property: The District does not own or control any site off campus.

EXTENDED OPPORTUNITY PROGRAMS AND SERVICES (EOPS)

The EOPS Program at Cuyamaca College is designed to recruit, inform and assist students who have been identified as economically and educationally disadvantaged. Eligible students are assisted by qualified counselors who provide the necessary academic and personal support services to enable them to succeed at Cuyamaca College. Services may include, but are not limited to, personal and academic counseling, transfer advising, peer advising and advocacy, financial assistance in the form of book grants, orientations, seminars, and courses for student success.

UNLIMITED POTENTIAL! (UP!) PROGRAM

The UP! Program, sponsored by EOPS and Financial Aid, is designed to assist students who have been in foster care or guardianships. In addition to EOPS and/or CARE services, students are eligible for counseling case management, personalized financial aid assistance, resource referrals, mentoring, life skills workshops, and cohort building events and orientations.

The EOPS office is located in the Student Services One-Stop Center, Bldg A300. You may contact us at (619) 660-4204 or visit our website at www.cuyamaca.edu/eops.

FINANCIAL AID

PURPOSE OF FINANCIAL AID

The purpose of financial aid is to help students who might not otherwise be able to attend school. Although the primary responsibility for meeting college costs rests with the student and/or his or her family, it is recognized that many families have limited resources and are unable to meet the cost of post-secondary education. For this reason, financial aid programs have been established to provide

INCIDENTS	2007	2008	2009	
			CAMPUS	PUBLIC PROPERTY
GC = GROSSMONT CC = CUYAMACA	GC / CC	GC / CC	GC / CC	GC / CC
MURDER AND NONNEGLIGENT MANSLAUGHTER	0 / 0	0 / 0	0 / 0	0 / 0
NEGLIGENT MANSLAUGHTER	0 / 0	0 / 0	0 / 0	0 / 0
FORCIBLE SEX OFFENSES	0 / 0	2 / 0	2 / 0	0 / 0
NONFORCIBLE SEX OFFENSES	0 / 0	0 / 0	0 / 0	0 / 0
ROBBERY	2 / 0	1 / 0	0 / 0	0 / 0
AGGRAVATED ASSAULT	0 / 0	1 / 0	0 / 0	0 / 0
BURGLARY	5 / 1	3 / 4	1 / 1	0 / 0
MOTOR VEHICLE THEFT	6 / 1	9 / 2	0 / 0	6 / 0
ARSON	0 / 0	0 / 0	0 / 0	0 / 0
ALCOHOL POSSESSION	8 / 5	1 / 1	0 / 0	0 / 1
SIMPLE ASSAULT	15 / 1	7 / 1	4 / 1	2 / 2
AUTO BURGLARY	6 / 3	5 / 4	0 / 0	5 / 3
DRUG/NARCOTIC OFFENSES	55 / 25	16 / 3	1 / 1	6 / 5
HATE CRIMES	0 / 0	0 / 0	0 / 0	0 / 0
WEAPONS POSSESSION	9 / 3	3 / 0	1 / 0	1 / 1
ARRESTS				
LIQUOR LAW VIOLATIONS	8 / 5	0 / 1	0 / 0	0 / 0
DRUG LAW VIOLATIONS	55 / 25	15 / 3	0 / 1	4 / 5
ILLEGAL WEAPONS POSSESSION	9 / 3	1 / 0	0 / 0	1 / 1

assistance to students with documented financial need. Financial need exists when the cost of education exceeds the resources available to a student. The cost of education includes fees, books and supplies, room and board, personal expenses and transportation. Student earnings from employment, as well as savings, veterans benefits, social security, TANF/CalWORKs and/or expected contributions from parents' income and assets, are some examples of the resources considered available to a student for the cost of education.

Financial need is determined by the information provided by applicants on the Free Application for Federal Student Aid (FAFSA). Cuyamaca College will attempt to meet the need by offering assistance through the financial aid programs available.

GAINFUL EMPLOYMENT

Federal regulations require higher education institutions to disclose information regarding the success of its students in certificate programs that lead to employment. The information includes graduation rates, estimated education costs, median debt of students who completed programs, and other information designed to help students make better-informed choices about colleges and universities they select. Please visit the GCCCD Gainful Employment web page at www.gcccd.edu/research-planning/career-and-tech-ed.html for detailed information.

FINANCIAL AID PROGRAMS

GRANTS

Board of Governors Waiver: The State of California through the Board of Governors Waiver Program (BOGFW) provides three ways to help students pay mandatory fees (enrollment fee, health services fee and the student center construction fee). Method A waives the enrollment, health services, and student center construction fees; Method B and Method C waive the enrollment fees; Methods A, B & C waive parking fees over \$20. The program also has a special classification BOGFW that will waive the enrollment fees only. If applications have not been processed for the Board of Governors Waiver by the time of registration, fees will be charged and a refund will be made upon approval of the application. To apply for the BOGFW, visit our website at www.cuyamaca.edu/finaid. Students who apply for financial aid by submitting a Free Application for Federal Student Aid (FAFSA) will also be considered for a waiver. For more information, please visit the Financial Aid Office in the Student Services Center, A300.

Bureau of Indian Education's: The BIE's mission "is to provide quality education opportunities from early childhood through life in accordance with a tribe's needs for cultural and economic well-being, in keeping with the wide diversity of Indian tribes and Alaska Native villages as distinct cultural and governmental entities." The Bureau of Indian Education has established links to various scholarships to be used by qualified Native Americans students. The American Indian scholarships can be found on the BIE website www.bie.edu. Individual grants and scholarships are awarded based on the

specific requirements outlined by each nation, tribe, and Alaskan Village. The educational department of each nation, tribe, or Alaskan Village can assist students in applying for grant and scholarship. To receive financial assistance most nations, tribes, and Alaskan Villages require that their students complete the FAFSA as well as any other forms required by individual financial aid departments. In addition, each nation, tribe, and Alaskan Villages will determine blood requirements to be considered for new membership in the individual nations, tribes, or Alaskan Villages.

Cal Grants: There are three types of Cal Grants, administered by the California Student Aid Commission (CSAC). These grants are for California residents only who will be attending a California college or university. To apply for Cal Grant A, B and C, submit a FAFSA and a GPA Verification form postmarked by March 2, prior to the academic year. For more information on Cal Grants visit www.csac.ca.gov. For GPA verification, once a student has completed 16 college-level units, the Cuyamaca College Admissions and Records Office will automatically send the GPA to CSAC.

Cal Grant A: Cal Grant A provides assistance to students from low and middle income families who will be attending tuition-charging institutions after leaving Cuyamaca College. Cal Grant A pays all tuition charges at public California colleges or universities and up to \$9,708 of tuition charges at private California colleges or universities.

Cal Grant B: Cal Grant B provides access costs for low income students up to \$1,551 per year for up to four years and pays all tuition charges at public California colleges or universities and up to \$9,708 of tuition charges at private California colleges or universities for the second through fourth year.

Cal Grant C: Cal Grant C is for vocational students from low and middle income families. The maximum award is \$576 at Cuyamaca College. To qualify, the student must be enrolled in an approved vocational course of study from four months to two years in length. Cal Grant C's are awarded for the length of the vocational course.

Cal Grant Community College Deadline: Community college students who miss the March 2 priority deadline may continue to apply for a limited number of special community college Cal Grants (A or B) until September 2. Students must list a community college first on their FAFSA and submit the FAFSA and a GPA Verification form postmarked by September 2. For GPA verification, once a student has completed 16 college-level units, the Cuyamaca College Admissions and Records Office will automatically send the GPA to CSAC.

Chafee Grant: The California Chafee Grant program is available for current or former foster youth to use for career and technical training or college courses. The maximum grant amount is \$5,000 per year. Students must be enrolled in six or more units each semester to be eligible. For questions regarding eligibility, please contact the Financial Aid Office at 619-660-4291 or the EOPS Office at 619-660-4293 or go to www.chafee.csac.ca.gov.

Child Development Grant: The Child Development Grant program is administered by the California Student Aid Commission (CSAC). The program is designed for students who are attending a California Community

College or four-year institution and pursuing a Child Development permit to teach or supervise in licensed children's centers. You can receive up to \$1,000 each academic year and you must sign a service commitment agreement to provide one full year of service in a licensed children's center for every year you receive the grant.

Federal Work Study (FWS): FWS is a federally-funded program which gives students the opportunity to earn part or all of their financial need by working on campus while in school. Jobs available include teacher's aide, clerk, groundsperson, custodian and lab assistant. The student's wage will be determined by the type and difficulty of the work to which the student is assigned.

Federal Pell Grant: The Federal Pell Grant is available for undergraduate study until students receive their first bachelor's degree to a maximum of six years of full time study. Federal Pell Grants range from \$555 to \$5,550 per academic year depending upon the "Expected Family Contribution" (as determined by the federal government), the cost of attendance and the student's enrollment status. Amounts subject to change based on the Federal Pell Grant Payment Schedule. Undergraduate students who have submitted a valid Student Aid Report (SAR) may qualify for the Federal Pell Grant.

Federal Supplemental Educational Opportunity Grant (FSEOG): FSEOG is a federal grant program for undergraduate students who have "exceptional need" and who have not received a bachelor's degree. First priority will be given to students enrolled full-time with an Expected Family Contribution (EFC) of 900 or below. Generally, the maximum FSEOG award at Cuyamaca College will be \$400 per academic year.

SCHOLARSHIPS

Scholarships are an untapped fund that is available throughout the year. Learn how to effectively search and apply for scholarship. Learn how you are the key to your own success when searching and applying for scholarships. Search for scholarships online, Public Libraries, and Scholarship books. Also, find your scholarships by using the Cuyamaca College Scholarship website. For additional scholarship information, contact the Cuyamaca College Scholarship Specialist and setup an appointment at (619) 660-4537 or go to www.cuyamca.edu/scholarships.

LOANS

William D. Ford Direct Loan: The Direct Loan is a low-interest loan made to the student by the federal government to help the student pay for his or her education. The interest rate is fixed. Grade level one dependent students may borrow up to a maximum of \$3,500 (subsidized and/or unsubsidized) per academic year. Grade level two dependent students may borrow up to a maximum of \$4,500 (subsidized and/or unsubsidized) per academic year. Total borrowing may not exceed \$31,000 for all undergraduate study. To apply for a Direct Loan, a student must first apply for federal financial aid via the FAFSA.

Subsidized Direct Loan: These loans are available to students who demonstrate financial need. Students who are eligible to apply for a subsidized Direct Loan based upon need qualify to have the federal government pay the interest on their loan while they are in school and during deferment periods.

Unsubsidized Direct Loan: These loans are available to students who do not qualify for need-based financial aid. Students are responsible for monthly interest payments (or capitalization of interest) from the date the loan is disbursed.

Emergency Book Loan Fund: The Emergency Book Loan program provides 30-day interest free loans to enable students experiencing a temporary shortage of funds to purchase their books. Students must be enrolled in a minimum of six units and are required to have a co-signer who is at least 21 years of age whose full-time employment can be verified. Depending on the student's enrollment status, loans can range from \$75 to \$150. These monies are made available through donations from the Associated Students of Cuyamaca College, Grossmont-Cuyamaca Community College District Foundation, Grossmont-Cuyamaca Alumni Association, Cuyamaca College Faculty and the Spring Valley Rotary Club.

OTHER SOURCES OF FUNDS

Other assistance programs are available for students through government agencies such as the County Department of Social Services, Social Security Administration and Veterans Administration. When a student applies for assistance through the Financial Aid Office, documentation of the money received from these programs is required.

Please check with the Career and Student Employment Center regarding job announcements. The Center is located in A-221 in the Student Services One-Stop Center.

WITHDRAWALS AND REPAYMENT OF FINANCIAL AID FUNDS

Students receiving federal financial aid who *withdraw from all of their classes during the first 60% of a term* may be required to repay a portion of the federal grants that they have received. This is because a student must "earn" his/her financial aid. Financial aid is "earned" for each day you are enrolled in the semester.

For example, if a semester starts on August 21 and you withdraw from all of your classes on October 23, you will have "earned" 63 days worth of financial aid eligibility. The amount you have to repay will depend on the number of days you were enrolled compared to the number of days in the semester. For example, if there are 121 days in the semester, you would have only earned 52% of the aid you received (63 days/121 days in the term = 52%). If you had received a \$1,500 Pell Grant award for the semester, you would have only earned \$780 of the Pell Grant (\$1,500 x 52% = \$780). Because you have received \$720 more financial aid than you "earned" (\$1,500 - \$780 = \$720), you will be required to repay half of the amount you did not earn. The amount you would be required to pay back in this case would be no more than \$360.

Please note: If you fail all of your classes in a term, you will have only earned 50% of the Pell and/or SEOG that you received and you will be billed for the amount you did not earn. This rule applies even if you were enrolled in classes for the whole term.

If you are required to repay funds to the federal government, you will be billed and have 45 days to repay the funds in full or to set up a repayment schedule. You will be ineligible

for any further financial aid at any college in the United States until you have repaid the funds in full or you have set up a repayment schedule and make repayments according to the repayment schedule.

BUDGETS

Cuyamaca College has a diverse student population which means that people have different economic lifestyles and obligations. The budgets used by the Financial Aid Office are expressions of average costs for the student population; they are intended to provide sufficient funds for most students in most circumstances. These budgets are not and cannot be intended to meet each person's full financial responsibilities. For a student who comes to Cuyamaca College relatively free of past obligations, these budgets should provide a sufficient economic base for a student to survive financially and attend school.

Since one purpose of the budget is to fairly distribute the available dollars among all eligible students, it is impossible to take into account all of the situations in which people find themselves or all of the consumer choices they make. People make their own budget decisions about what is most important to them. They may choose to share a low-rent apartment in order to have a car, or they may choose to live alone within biking distance of the campus. The choices are there for each individual.

The following budgets* for the 2012-2013 academic year are based on full-time (12 semester units or more) enrollment at Cuyamaca College:

Housing Status	Living with Parent(s)	Living away from Parent(s)	Living with Relatives/Friends
Fees	\$ 1,336	\$ 1,336	\$ 1,336
Books and Supplies	1,500	1,500	1,500
Food and Housing	4,000	10,500	7,400
Personal Expenses	2,000	2,300	2,300
Transportation	1,200	1,200	1,200
TOTAL	\$10,036	\$16,836	\$13,736

*Amounts subject to change. Contact the Financial Aid Office or go to www.cuyamaca.edu/finaid for current budget amounts.

For disabled students, additional allowances may be made for documented special costs that are educationally related but not covered by other assisting agencies. For the current academic year budget, please check with the Financial Aid Office.

Contact the Financial Aid Office, located in the Student Services One-Stop Center, for further information regarding eligibility, programs available, applications or other information.

HEALTH & WELLNESS CENTER

Room I-134 Telephone: (619) 660-4200
To promote the health and well-being of students, the Health & Wellness Center is maintained by a registered nurse and support staff who evaluate and care for the health needs of Cuyamaca College students. Services are available on a confidential basis and include first aid and urgent care; blood pressure, glucose, vision and hearing screenings; tuberculosis clearance testing; body composition analysis; and illness and injury assessment, care and referral to community resources. The Health & Wellness Center is also a health education resource

providing up-to-date information and direction on subjects including nutrition, illness prevention, substance abuse, birth control, sexually transmitted diseases, and much more.

The mandatory health fee which supports these services also provides for insurance coverage should a student be injured during a supervised, on-campus or school-related activity. Report all accidents and injuries to the Health & Wellness Center. Insurance forms are available.

Students that depend exclusively upon prayer for healing according to the teaching of a bona fide religious sect, denomination or organization may petition for an exemption from the health fee by submitting a written request to the Office of Counseling & Enrollment Services. Requests for exemptions will be reviewed by the Dean of Counseling & Enrollment Services and the Associate Dean for Student Affairs.

HIGH SCHOOL AND COMMUNITY RELATIONS (OUTREACH)

The overall mission of High School and Community Relations is to facilitate access to the institution by providing accurate information and appropriate referrals to a broad and diverse community of individuals who seek to benefit from a wide range of programs and services. High School and Community Relations, also known as Outreach, is a primary point of access to the institution. Outreach provides comprehensive contact information and general descriptions for many aspects of the institution. The Outreach Department meets the introductory informational needs of the campus community: students, faculty members, staff, prospective students and their family members, and general visitors.

Specific services provided by the Outreach staff include distribution of printed information about the college and its programs, visits to schools for career fairs, college nights, peer advising, and interactive presentations. Tours of the college campus are also provided.

Outreach invites all prospective students and interested members of the community to take advantage of the programs and services offered. Please contact the High School and Community Relations (Outreach) office, located in I-121 or call (619) 660-4264.

INTERCOLLEGIATE ATHLETICS

The mission of the Cuyamaca College Athletics Department is to provide all student athletes quality intercollegiate sports that will complement the college's instructional programs, enhance student life on campus, and foster community interest and support.

The Cuyamaca College Coyotes' cross country, soccer, volleyball, basketball and tennis teams compete in the Pacific Coast Conference, which consists of the following colleges: Grossmont, Imperial Valley, MiraCosta, Palomar, San Diego City,

San Diego Mesa, San Diego Miramar, and Southwestern. Men's golf is hosted into the Orange Empire Conference. Track and field is hosted in the Foothills Conference.

Cuyamaca College has won conference championships in women's tennis, men's and women's soccer, men's and women's cross country, and men's and women's track and field. State championships have been awarded to men's and women's cross country and many track and field individual events. Cuyamaca coaches have had numerous coaching excellence awards in soccer, tennis, cross country and track and field.

Student athletes must be continuously and actively enrolled in 12 or more units during the sport season. 24 units must be completed for eligibility between the first and second season of competition. Athletes follow an educational plan and maintain a minimum 2.0 GPA. Authority for eligibility must be verified by the Athletics Director. Academic achievement and high level athletic performance is strongly connected for Cuyamaca sports participation. Advancing student athletes to four-year universities is a primary goal of the Athletics Department.

LEARNING RESOURCES CENTER (LIBRARY SERVICES) - LRC

The LRC offers both print and electronic information resources for students. Librarians assist students in using the online public access catalog, electronic periodical databases and the Internet to locate books, e-books, periodical articles and other print and electronic resources. Materials not available at the Cuyamaca Library are routinely provided through interlibrary loan.

Students are actively encouraged to become trained researchers in the complex and changing world of information literacy. Learning opportunities range from one-on-one reference assistance to formal group orientations designed to meet specific course objectives. A one unit online course (*LIR 110 Research Methods in an Online World*) is available to students who would like a more comprehensive introduction to research methods.

The Open Computer Lab is located on the first floor of the E Building (Business and Technology Building). This lab contains PC and Macintosh computers. Software necessary to support the instructional program is provided. This lab is available to faculty and to currently enrolled Cuyamaca and Grossmont College students for general use.

STUDENT PICTURE I.D. CARD

A Student Picture I.D. Card is required for access to library check-out services, the Fitness Center, Tutoring Center, and may be required for some laboratory classes. After you have completed the registration process (new students must wait 24 hours), please come to the Student Picture I.D. Office for the card. You must present a valid government issued identification card. The office is in the Student Services Center, Building A200, in room 202

next to Counseling. Every Cuyamaca College student is issued one Student Picture I.D. Card while attending Cuyamaca College.

TUTORING

GENERAL TUTORING CENTER

The General Tutoring Center provides assistance at no cost to currently enrolled Cuyamaca College students seeking help with course work. Tutoring is available in a variety of subjects including business, child development, computer science, foreign languages, graphic design, all sciences and social science courses. Study groups are available for certain subjects.

The General Tutoring Center is located in the LRC, with all tutoring by appointment only. Appointments can be made by stopping by the Center. For more information call (619) 660-4306.

STEM ACHIEVEMENT CENTER

The STEM Achievement Center for Science, Engineering and Math students is located in H-103. Free tutoring assistance is available for students enrolled in any Cuyamaca College math or science class. For more information, call (619) 660-4396.

WRITING CENTER

The Writing Center, located in B-167, provides support for students in any course who would like assistance with reading, writing, or ESL skills. Thirty minute tutoring sessions are available by appointment. Drop-in students are also served when scheduling permits. The Writing Center's computer lab with wireless Internet access provides a supportive environment in which students may work on course-related assignments. Reading, writing, and ESL skill-building software is available for self-paced study. For more information, please call (619) 660-4463.

UNIVERSITY TRANSFER CENTER

The University Transfer Center assists students with the process of transferring to four-year colleges and universities by providing the most current information available to ensure a smooth transition. This is achieved by providing quality programs and services that support student success through a Transfer Resource Center. The community college is the crucial link between the K-12 system and four-year academic institutions, and the University Transfer Center is the focus for that smooth transition. It promotes coordination with student services units and instruction within the college, and attempts to strengthen ties with the external agencies that affect student transfer.

Students have access to a current catalog collection of California public universities, articulation agreements, CSU and UC admissions applications, college handbooks, and a video collection of four-year universities and private colleges. In addition, the Center has a computer lab which allows students to access the various university web pages. Some of the top web locations for students are: www.csumentor.edu; www.universityofcalifornia.edu; and www.assist.org. Our website, www.cuyamaca.edu/transfer_center, provides the student with comprehensive transfer information to assist in the transfer process.

The University Transfer Center hosts representatives from four-year universities to assist students in planning for transfer, provides application workshops for transfer to the UC and CSU, and holds a Transfer Achievement Celebration to honor those students who will be going on for a bachelors degree. For additional information, stop by the University Transfer Center in A-200 in the Student Services One Stop Center or call (619) 660-4425.

Academic Policies and Procedures

ACADEMIC HONESTY

Academic honesty is required of all students. Plagiarism—to take and pass off as one's own work the work or ideas of another—is a form of academic dishonesty. Penalties may be assigned for any form of academic dishonesty. Questions or clarification as to how to include the ideas and statements of others or how to avoid other forms of academic dishonesty should be discussed with your instructor to avoid unintentional academic dishonesty.

ACADEMIC HONESTY/ DISHONESTY POLICIES

Your instructors are eager to help you succeed in your studies at Cuyamaca College. But success means more than just receiving a passing grade in a course. Success means that you have mastered the course content so that you may use that knowledge in the future, either to be successful on a job or to continue with your education.

Your success depends on a combination of the skills and knowledge of your instructors and your own hard work. You will reach your future goals only if you gain new knowledge from every course you take. That knowledge becomes yours, and can be used by you only if it is gained through your own personal efforts. Receiving a grade in a course without acquiring the knowledge that goes with it diminishes your chances for future success.

While in college, you are also shaping the principles which will guide you throughout the rest of your life. Ethical behavior and integrity are a vital part of those principles. A reputation for honesty says more about you, and is more highly prized, than simply your academic skills.

For that reason, academic honesty is taken very seriously by the Cuyamaca College faculty. The following guidelines have been prepared so that you will understand what is expected of you in maintaining academic honesty.

- Academic dishonesty is normally dealt with as an academic action by the instructor, reflected in the student's grade in the particular course rather than through college disciplinary procedures.
- No specific departmental, divisional or institutional procedures are established for academic dishonesty other than the normal process for review and appeal of an instructor's grading procedures.
- Other disciplinary procedures (e.g., dismissal, suspension, etc.) will be used only if the student disrupts the class or is otherwise abusive or threatening or violates any other college policy.
- Academic dishonesty is defined as the act of obtaining or attempting to obtain credit for work by the use of any dishonest, deceptive or fraudulent means. Examples of academic dishonesty would include but not be limited to the following:
 - Copying either in part or in whole from another's test or examination;
 - Discussion of answers or ideas relating to the answers on an examination or test when such discussion is prohibited by the instructor;

- Obtaining copies of an exam without the permission of the instructor;
- Using notes, "cheat sheets," or otherwise utilizing information or devices not considered appropriate under the prescribed test conditions;
- Altering a grade or interfering with the grading procedures in any course;
- Allowing someone other than the officially enrolled student to represent the same;
- Plagiarism, which is defined as the act of taking the ideas, words or specific substantive material of another and offering them as one's own without giving credit to the source.

Options may be taken by the faculty member to the extent that the faculty member considers the cheating or plagiarism to manifest the student's lack of academic performance in the course. One or more of the following actions are available to the faculty member who suspects a student has been cheating or plagiarizing:

- Review – no action.
- An oral reprimand with emphasis on counseling toward prevention of further occurrences.
- A requirement that work be repeated.
- A reduction of the grade earned on the specific work in question, including the possibility of a failing grade or no credit for the work.
- A reduction of the course grade as a result of item 4 above including the possibility of a failing grade for the course, if a failing grade for the work produces such a result.
- Referral to the office of the Associate Dean of Student Affairs for further administrative action, such as suspension or expulsion.

COMPUTER SOFTWARE COPYRIGHTS

Computer software is protected by the Federal Copyright Act of 1976. The following guidelines apply to the use of college-acquired software:

- No copies of software may be made except in the following cases:
 - Normally an archive copy of software is allowed for protection against accidental loss or damage. Archive copies of software should be securely stored and not used except to be recopied if the operational copy becomes damaged.
 - Some software, when site licensed by the producer, may permit unlimited copies for use within the college. Such copies must be made only by the person or persons authorized to make copies by the terms of the site license. In this case, duplicates shall be clearly labeled as Cuyamaca College copies of licensed software.
 - Some software, in particular programming languages, allow code to be copied and incorporated within user-written software. Such use is generally permitted as long as the software is for personal use and not sold, rented or leased. If distribution or commercial use is intended for software so produced, clearance must be secured from the copyright owner for the use of the incorporated code, and with the college for use of the equipment during production.
- The intended or unintended piracy, damage, alteration or removal of any college-acquired software may be treated as an act

of theft or malicious destruction. Cuyamaca College may elect not to extend computer services to persons who have been identified as engaging in these acts.

- The user is responsible for complying with whatever terms or conditions are specified in the license agreement or copyright statement which accompanies individual software acquisition.

ACADEMIC RENEWAL

When previously recorded Cuyamaca College work is substandard and not reflective of a student's present level of demonstrated ability, and when a student would be required to take additional units simply to raise the grade point average (GPA) to meet an educational goal, this policy will allow alleviation of substandard work. If a student is otherwise eligible for graduation, academic renewal may not be used to raise the GPA in order to qualify for graduation with honors. Academic renewal cannot be used to set aside semesters containing course work which has been used to meet degree, certificate or certification requirements. Two semesters may be alleviated; only complete semesters may be alleviated, i.e., not individual courses. Summer session, if it is to be alleviated, will be counted as a semester.

When courses are alleviated, grades in courses taken during the semester to be alleviated remain on the student's record but are not used in the computation of the GPA.

CRITERIA

Substandard work completed at Cuyamaca College may be alleviated subject to all of the following criteria:

- The student has requested the action formally and has presented evidence that work completed in the semester(s) under consideration is substandard and not representative of present scholastic ability and level of performance.
- Since the end of the semester to be alleviated, one or more years have elapsed and the student has completed 20 units with at least a 2.5 GPA, or 30 units with at least a 2.0 GPA. Work completed at another accredited institution can be used to satisfy this requirement. Units completed with "P" (Pass) grades will be excluded and not counted toward fulfillment of this requirement.

PROCEDURE

- The Petitions Committee shall review all requests for academic renewal.
- The student must formally request a review of substandard work to be alleviated. All transcripts from previously attended colleges must be on file in the Admissions & Records Office. The committee will determine if all criteria have been met and if one or two semesters shall be alleviated. Determination by the committee shall be final.
- In the event of admission to Cuyamaca College as a transfer student from other colleges where course work has been alleviated, such alleviated course work will be counted toward the maximum of alleviated work allowed. (A student is allowed a total of two semesters, regardless of the number of institutions attended.) If the other institution allowed alleviation of partial

semesters, the work in question shall be counted as one semester of alleviation for the purposes of this policy.

- When such action is taken, the student's permanent academic record shall be annotated so that it is readily evident to all users of the record that no work taken during the alleviated semester(s), even if satisfactory, may apply toward degree requirements. However, all work will remain legible on the record insuring a true and complete academic history.

ACCESS TO EDUCATIONAL PROGRAMS

It is the policy of the Grossmont-Cuyamaca Community College District Governing Board that, unless specifically exempted by statute, every course, course section or class reported for state aid, wherever offered and maintained by the District, shall be fully open to enrollment and participation by any person who has been admitted to Cuyamaca College and who meets such prerequisites as may be established pursuant to Title 5 of the California Code of Regulations, Sections 55200-55202 and 58102-58108.

ADDING COURSES

During the official add period for each class, a student may add courses by following the procedure as outlined in the class schedule. Visit the website www.cuyamaca.edu.

Students may not enroll in more than 18 units a semester (or 8 units in summer session) without the approval of a counselor.

ATTENDANCE REQUIREMENTS

Instructors are obligated at the beginning of the semester to announce their policy regarding excessive absence. When absences exceed twice the number of hours that a class meets in one week for full semester-length classes, the instructor may institute an excessive absence drop. For short-term classes, the number of acceptable absences is proportionately shorter. Failure to attend the first class meeting may result in the student being dropped from the class.

It is the student's responsibility to officially withdraw from any classes not attended and to discuss anticipated absences with the instructor. Make-up work for absences is the responsibility of the student and must be completed to the satisfaction of the instructor.

AUDITING COURSES

Based on GCCCD Governing Board policy, Cuyamaca College permits auditing of courses as follows:

- Audit enrollment will not be permitted until students have completed the allowable number of repeat courses. Courses are determined through agreement between the department and the appropriate

administrator. Priority class enrollments are given to students desiring to take the course for credit. No student will be permitted to enroll for audit purposes until Monday of the second week of instruction.

- A nonrefundable audit fee of \$15 per unit plus any required student or instructional materials fee (e.g., health fee, materials fee) shall be payable at the time of enrollment as an auditor. **Fees are not refundable.**
- Students enrolled in classes to receive credit for 10 or more semester credit units shall not be charged a fee to audit three or fewer units per semester. If the student drops below the 10-unit level, the \$15 per unit audit fee will be assessed.
- Audit enrollment will be based on "seats available" and will not be used to count toward minimum enrollment requirements. If a class closes after an auditor has been admitted, the auditor may be asked to leave to make room for the credit students. Instructor discretion is strongly recommended. Audit enrollments which allow faculty to be eligible for a large class bonus will not be counted.
- No student auditing a course shall be permitted to change his or her enrollment in that course to receive credit for that course.
- Permission to audit a class is done at the discretion of the instructor and with the instructor's signed permission.
- No credit will be received for auditing a course. The college will not maintain any attendance or academic records for MIS reporting.

Courses that may be audited: MUS 127, 257.

CANCELLATION OF COURSES

Cuyamaca College reserves the right to cancel any course for which there is insufficient enrollment.

CATALOG RIGHTS

For purposes of graduation from Cuyamaca College, a student who maintains continuous attendance in the Grossmont-Cuyamaca Community College District may elect to meet the requirements in effect at the time they began their studies in the Grossmont-Cuyamaca Community College District, or any catalog year thereafter. Catalog rights will start at the college where the student began and are maintained by attendance in either college.

CONTINUOUS ATTENDANCE

Students are considered in "continuous attendance" for any semester in which they enroll at Cuyamaca College and/or Grossmont College and for the following semester. This allows a student to "stop out" for one semester and not enroll in classes while still maintaining continuing student status and catalog rights. Summer sessions are not included under this policy.

COURSES TAKEN OUT OF SEQUENCE

In all cases, a student enrolled in a course must have met course prerequisites.

Satisfactory completion of courses (i.e., English, mathematics, foreign languages, etc.) implies competency in the prerequisite courses; therefore, the college does not grant credit toward graduation for courses taken out of sequence.

DROPPING COURSES

A student desiring to drop courses or an entire program must use *WebAdvisor*. The student must initiate this withdrawal prior to the established deadline. Drops during the adjustment period do not appear on the transcript. Drops initiated after the adjustment period will result in a transcript entry of "W," which will be taken into consideration in determining lack-of-progress probation and disqualification. Students must clear all obligations to the college prior to withdrawal.

Withdrawal from a class after the drop deadline shall be authorized in the event of extenuating circumstances. Extenuating circumstances are verified cases of accidents, illnesses, or other circumstances beyond the control of the student. The student must file a petition in the Admissions and Records Office with documentation for review by the Petitions Committee.

Military withdrawals shall be authorized when a student who is a member of an active or reserve United States military service receives orders compelling a withdrawal from courses. Military withdrawals shall not be counted in progress alert and probation or disqualification calculations.

It is the student's responsibility to officially drop courses they are no longer attending. If a course is not officially dropped, the student may receive an "F" for the course.

EMERGENCY ABSENCES OF SHORT DURATION

Emergency absences may be requested through the instructor. Instructors may be requested to provide make-up assignments for all work. Emergency absences will not be granted at the end of the semester when finals would be missed or course requirements not fulfilled.

EXAMINATIONS

FINAL EXAMINATIONS

Students may not be excused from final examinations. Instructors should not give final examinations at other than the regularly scheduled time. Instructors shall notify their Division Dean in writing if an early examination is being given to a student. This notification should include the title of the course, the reason why the early examination is authorized, and the name of the student. In the event that severe illness or other emergency

prevents the student from taking a final examination during the regularly scheduled time, the instructor may allow the student to make up the final examination according to provisions of the incomplete grade policy.

CREDIT BY EXAMINATION

Credit may be granted, subject to approval of the appropriate Department Chair, to any student who satisfactorily passes an examination approved and conducted by the appropriate department. Such credit requires that:

1. The student be registered at Cuyamaca College and be in good standing.
2. The course be listed in the Cuyamaca College catalog and identified below as one for which Credit by Examination may be granted.
3. The unit value may not be greater than that listed for the course in the catalog.
4. Units earned in this manner do not count toward the 12 units required in residency.
5. Students have not enrolled in, or completed, the same course or an advanced course at any college in the area in which Credit by Examination is requested.
6. Petitions for Credit by Examination must be submitted by the end of the second week of classes for a semester or by the end of the first week of classes for a summer session.

CREDIT BY EXAMINATION PROCEDURE

1. Obtain and complete a petition for Credit by Examination from the Admissions and Records Office.
2. Make sure all college transcripts are on file.
3. Obtain approval for taking an examination from the designated instructor. This approval should be obtained before the student registers for classes.
4. Take an examination on the established date.
5. Instructor forwards to the Admissions and Records Office certification that the examination was passed satisfactorily.
6. The student's academic transcript will be annotated for Credit by Examination credit.

Courses for which Credit by Examination may be given: ART 120, 124; ASTR 110; AUTO 120, 121, 122, 130, 140, 152, 160, 170; CADD 115; GD 110; MUS 118, 232, 233.

FAMILY EDUCATIONAL RIGHTS AND PRIVACY ACT

Cuyamaca College accords to students all rights under the Family Educational Rights and Privacy Act. No one outside the institution shall have access to nor will the institution disclose any information from the students' education records without the written consent of students except to persons or organizations providing student financial aid, to accrediting agencies carrying out their accreditation function, to persons in compliance with a judicial order, and to persons in an emergency in order to protect the health or safety of students or other persons. At Cuyamaca College, only those employees acting in the students' educational interests are allowed access to student

education records within the limitations of their need to know.

Cuyamaca student data is also submitted to the National Student Clearinghouse so that research may be conducted which informs studies regarding transfer rates, college performance and other college success indicators. The information shared is maintained with the strictest of confidence; individual names or data are not disclosed. If students wish to restrict their data from being shared with the National Student Clearinghouse, they may complete a form at Admissions and Records which will restrict the release of their student data.

The Act provides students with the right to inspect and review information contained in their education records, to challenge the contents of their education records, to have a hearing if the outcome of the challenge is unsatisfactory, and to submit explanatory statements for inclusion in their files if the decision of the hearing panel is unacceptable. The Dean of Counseling and Enrollment Services has been designated by the institution to coordinate the inspection and review procedures for student education records.

GRADE FORGIVENESS

Grade forgiveness, as defined by Cuyamaca College, is the omission of courses in which "D" or "F" grades are earned when computing GPA for granting of degrees.

Under the Cuyamaca College forgiveness policy, degree candidates must meet all the requirements as stated in the college catalog with the following exception:

Any course in which a "D" or "F" grade is earned may be forgiven without repeating only if that particular course is NOT being used to meet a degree requirement, and when the grade point average prior to forgiveness is below a 2.0, and the grade point average after grade forgiveness is 2.0 or better.

The grade forgiveness policy is automatically applied at the time of graduation.

GRADE NOTIFICATION

Final grades are available approximately two weeks after the end of each term. Students may receive grades in the following ways:

- **VIA THE INTERNET** - Grades are available by logging on to *WebAdvisor* at www.cuyamaca.edu. Select the View/Print Grades option for the requested semester and year.
- **IN PERSON** - Grades for the previous semester are available to students who present a photo I.D. at the Admissions and Records Office.

GRADES—FINAL

In the absence of mistake, fraud, incompetency or bad faith, the determination of the student's grades by the instructor shall be final once they have been filed in the

Admissions and Records Office. Questions regarding final grades should be directed to the Dean of Counseling and Enrollment Services.

GRADING SYSTEM

Grades are earned in each course and recorded on a semester basis on the student's permanent record. A copy of the permanent record is the transcript. Grades should be interpreted as follows:

- A+**
- A** Excellent
- A-**
- B+**
- B** Good
- B-**
- C+**
- C** Satisfactory
- D** Passing, less than satisfactory
- F** Failing
- W** Withdrawal (issued to students who withdraw before the final drop deadline). Students who are enrolled after the final drop date must receive a letter grade (A-F).
- MW** Military Withdrawal awarded to active or reserve military personnel upon receipt of military orders compelling a withdrawal from courses.
- P** Pass formerly CR (Credit), (C or higher) units are not calculated in GPA.
- NP** No Pass formerly NC (No Credit), (less than a C) units are not calculated in GPA. Pass or No Pass may be assigned only if the course is indicated as pass/no pass or if the student has elected this option.
- I** Incomplete - Incomplete academic work for unforeseeable, emergency and justifiable reasons at the end of the term, may result in an "I" symbol being entered in the student's record. An incomplete grade may be given only after the student has contacted the instructor; awarding of an "I" is at the discretion of the instructor.

The "I" may be made up no later than one semester following the end of the term in which it was assigned. The "I" symbol shall not be used in calculating units attempted nor for grade points. A student may petition for extension of the time limit for removal of the incomplete. The petition must include evidence of approval from the instructor.

Both the instructor and the student must complete and sign the Incomplete Grade Contract form. Procedural details are printed on the back of that form.

- IP** In progress - The IP symbol shall be used only in courses which are offered on an "open entry/open exit" basis. It indicates that work is "in progress," but that assignment of a grade must wait its completion. The IP symbol shall remain on the student's permanent record in order to satisfy enrollment documentation. The appropriate grade and unit credit shall be assigned and will appear on the student's permanent

record for the term in which the course is completed. The IP shall not be used in calculating grade point averages.

If a student enrolled in an "open entry/open exit" course is assigned an IP at the end of an attendance period and does not re-enroll in that course during the subsequent attendance period, the instructor will assign a grade to be recorded on the student's permanent record for the course.

RD Report Delayed - The RD symbol may be assigned by the Admissions and Records Office only. It is to be used when there is a delay in reporting the grade of a student due to circumstances beyond the control of the student. It is a temporary notation to be replaced by a permanent symbol as soon as possible. "RD" is not used in calculating GPA.

P, NP, W, MW, I, IP and RD grades are not used in computation of grade point average but the W, NP and I are used for purposes of progress alert and disqualification status.

GRADE POINT AVERAGE

Academic achievement is reported in terms of grade point average (GPA). This is derived from the following weighting system:

- A+** 4.0 grade points per unit earned
- A** 4.0 grade points per unit earned
- A-** 3.7 grade points per unit earned
- B+** 3.3 grade points per unit earned
- B** 3.0 grade points per unit earned
- B-** 2.7 grade points per unit earned
- C+** 2.3 grade points per unit earned
- C** 2.0 grade points per unit earned
- D** 1.0 grade points per unit earned
- F** 0.0 grade points per unit attempted

Grade point average is computed by dividing total units attempted into total grade points earned. Decisions on probation and disqualification, scholarship, eligibility for graduation, and transfer are all influenced or determined by grade point average; hence, students should pay constant attention to their own grade point standing.

GRADUATION CEREMONY

The Cuyamaca College Commencement ceremony is held each May or June, recognizing those students who have received their Associate Degrees and/or Certificates of Achievement the previous summer, fall and current spring semester. Information regarding the commencement ceremony is available in the Student Affairs Office. Students wishing to apply to receive a degree or certificate must file a Petition for Graduation in the Admissions and Records Office. Deadlines are printed in the catalog and class schedule.

GRADUATION WITH HONORS

Students who have earned a 3.5 or better GPA in all degree-applicable college work attempted graduate with honors.

Official transcripts from all colleges attended must be on file in the Admissions and Records Office. However, if no course work on a transcript from another college is used to meet any degree requirement, students may exclude that entire transcript from being used to compute their overall GPA for graduation. Students electing this option need to make this request at the time they file an Evaluation for Graduation Request form in the Admissions and Records Office. An official transcript must be on file prior to request for exclusion. This option only applies to the GPA used to determine graduation with honors from Cuyamaca College. It will not affect transfer GPA and other colleges and universities may not calculate GPA for honors status the same way.

HONORS

Students carrying 12 or more units at Cuyamaca College in which letter grades are earned ("Pass" grades not included), who maintain a 4.0 GPA during any semester, are placed on the President's List. Students who maintain a 3.5 or better GPA during any semester are placed on the Dean's List.

Students carrying less than 12 units at either Cuyamaca College or Grossmont College, but carrying 12 or more units in which letter grades are earned ("Pass" grades not included) at Cuyamaca and Grossmont Colleges, who maintain a 4.0 GPA during any semester, are placed on the District President's List. Students who maintain a 3.5 or better GPA during any semester are placed on the District Dean's List.

Part-time students are eligible for the Dean's List if they (1) complete 12 units at Cuyamaca College in one academic year (July 1 through June 30) with a GPA of 3.5 or better ("Pass" grades not included) and (2) were enrolled in fewer than 12 units per semester.

MATRICULATION APPEALS INFORMATION

PARTICIPATION IN MATRICULATION SERVICES

All students are encouraged to participate in Matriculation services which include assessment, orientation, counseling and advisement; however, if a student does not wish to take part in any or all of these services, the student shall meet with a counselor to discuss Non-Participation in Matriculation Services.

COMPLAINT OF UNLAWFUL DISCRIMINATION

If a student feels that assessment, orientation, counseling, prerequisites or any other Matriculation procedure is being applied in a discriminatory manner, a process has been established to achieve a satisfactory resolution of the problem. This process includes:

- Level 1 Meet with the Chairperson of Counseling (or designee) to discuss the situation and seek solutions to the problem within three working days. A record of the discussion and the solution is filed at this time.

- Level 2 In the event a student complaint is not resolved at Level 1, the Chairperson of Counseling (or designee) will refer the student to the Dean of Counseling and Enrollment Services. The Dean will discuss the complaint with the student and, if necessary, assist the student in preparing a written complaint to the Appeal Panel. An Appeal Panel composed of the Vice President of Student Services, a counselor, the Gender Equity Coordinator, one student and one instructional faculty member will review the complaint and respond appropriately within 10 working days.

NOTICE: If the above procedure is followed and the student is not satisfied, and the complaint is predicated on an alleged unlawful discrimination on the basis of ethnic group identification, religion, age, gender, color, or physical or mental disability, and this complaint is not resolved to his/her satisfaction within 30 days of its filing, the student may file a formal complaint. If the student is interested in pursuing this option, please contact:

Tim Corcoran
 Director of Employee and Labor Relations
 Grossmont-Cuyamaca Community College District
 8800 Grossmont College Drive
 El Cajon, CA 92020

MINIMUM LOAD REQUIREMENTS

Cuyamaca College does not specify a minimum load except when the student desires to meet certain requirements such as:

1. Certification to the Department of Health, Education and Welfare that the student is attending full-time. Requirement: 12 or more units a semester, but a student should average 30 units a year.
2. Veteran Affairs certification for Chapters 30, 31, 32, 33, 35 and 1606.

Fall or Spring Semester

Full-time	12 units
Three-quarter time	9-11 1/2 units
One-half time	6-8 1/2 units
One-quarter time	3-5 1/2 units

Summer Session

Calculated on an individual class basis. Contact the Veterans Specialist in the Admissions and Records Office for detailed information.

3. International students with an "F-1" visa issued by Cuyamaca College. Requirement: 12 or more units a semester.
4. Enrollment verifications for insurance benefits that a student is attending full-time. Requirement: 12 or more units a semester or 6 or more units for summer session.
5. Athletics - Eligibility to participate in Pacific Coast Conference intercollegiate athletics. Requirement: 12 or more units in courses for which NEW units of credit may be earned. Students should see Pacific Coast Conference and Cuyamaca College regulations for additional requirements.
6. Student Government - Eligibility to participate in student government as an office holder or in intercollegiate activities

other than athletics. Requirement: 6 or more units during the semester of participation.

PASS/NO PASS GRADING OPTION

The Pass/No Pass (P/NP) grading option is offered so that students may explore subject areas of interest outside those of their known abilities or assumed competence without competing for grades with students who are majoring in that subject. Cuyamaca College encourages this kind of exploration.

In any course offered at Cuyamaca College, a student may elect to be graded on a "P/NP" basis providing the course is not part of a Degree or Certificate of Achievement. In all cases, a student enrolled in a course must have met course prerequisites.

A maximum of 12 credit units earned at Cuyamaca College with "P" grades may be counted toward satisfaction of General Education and elective curriculum requirements for graduation. Grades received from other accredited institutions, as well as credits authorized for military courses and Advanced Placement examinations, may be applied as "P," when appropriate, toward graduation.

Some courses in the curriculum are offered exclusively on a "P/NP" basis. Credit units earned in these courses are exempt from the 12 unit restrictions. In all other courses that are not part of a Degree or Certificate of Achievement, the election to be graded on a "P/NP" basis is at the option of the student. Students electing to be graded on a "P/NP" basis shall establish that option in writing by the end of the fifth week of the semester. (Short-term classes will be allowed a proportionate amount of time.) Once the "P/NP" deadline has passed, the decision is irrevocable.

A "P" grade shall represent at least a satisfactory ("C" grade) level of performance but shall not be counted as units attempted in computing GPA.

A "NP" grade indicates unsatisfactory completion of course requirements but will not be counted as units attempted in computing GPA. "NP" grades will be taken into consideration in the determination of lack-of-progress probation and disqualification status.

Students intending to transfer to four-year colleges or universities should check the specific policies of those institutions pertaining to transferability of "P" grades.

POLICIES RELATING TO STUDENTS

POLICY	WHERE TO FIND IT
Academic Accommodations	<i>Disabled Students Programs & Services</i>
Academic Appeals	<i>Disabled Students Programs & Services</i>
Americans with Disabilities Act (ADA)	<i>Vice President, Student Services</i>
Bulletin Boards	<i>Student Affairs</i>

Campaign and Election *ASGCC Office Student Affairs*

Compliance with Students with Disabilities Regulations Section 504 of the 1973 Rehabilitation Act *Disabled Students Programs & Services*

District Drug and Alcohol *District Public Safety Health Services*

Family Educational Rights and Privacy Act *Admissions and Records College Catalog*

Matriculation Plan and Appeal Process *Dean of Counseling and Enrollment Services*

Petition to Challenge Course Prerequisites, Corequisites and Limitations on Enrollment *Counseling Center College Catalog*

Sexual Harassment *College Catalog Director, Employee and Labor Relations Vice President, Student Services Reference Copies: Student Affairs*

Smoke/Tobacco Free Facility *Vice President, Administrative Services*

Student Code of Conduct *Student Affairs Vice President, Student Services College Catalog*

Student Grievance and Due Process Procedures *Student Affairs College Catalog Vice President, Student Services*

Title IX Prohibiting Sex Discrimination in Education *Vice President, Student Services*

PREREQUISITES, COREQUISITES, RECOMMENDED PREPARATIONS, AND LIMITATIONS ON ENROLLMENT

A *prerequisite* is 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 *corequisite* is a condition of enrollment consisting of a course that a student is required to simultaneously take in order to enroll in another course.

An *advisory or recommended preparation* is a condition of enrollment that a student is advised, but not required, to meet before or in conjunction with enrollment in a course or educational program.

Limitations on enrollment are conditions for enrollment in Honors courses or courses which include public performance or intercollegiate competition.

All courses shall be open for enrollment to any student who has been admitted to the college, except that students may be required to meet necessary and valid prerequisites. In addition, the District may also limit enrollment in a course based on health and safety considerations, facility limitations, or legal requirements imposed by statute or regulations.

GROUNDS FOR CHALLENGE ARE:

1. Student can demonstrate that the prerequisite has not been established following the District's policy or in accordance with Title 5.
2. Student can demonstrate that the course is discriminatory or applied in a discriminatory manner.
3. Student can demonstrate knowledge or skill needed to succeed in the course without the prerequisite.
4. Student can demonstrate that attainment of his/her educational goal will be unduly delayed because the prerequisite has not been made reasonably available (impacted programs).
5. Student can demonstrate that no threat is posed to self or others in a course which has a prerequisite established to protect health and safety.

Students should plan their schedules early and see a counselor for assistance.

CHALLENGE PROCEDURE

Students who believe that they have sufficient grounds may challenge a prerequisite, corequisite, or limitation on enrollment. A student may obtain a Petition to Challenge Prerequisites, Corequisites, and Limitations on Enrollment as well as a copy of the challenge procedure in the Counseling Center no later than 10 working days prior to the published add deadline for the course being challenged. Students who challenge a prerequisite or corequisite after the start of the semester should speak with a counselor. Contact the Counseling Center for additional information.

PROBATION AND DISQUALIFICATION

Cuyamaca College believes that students who can profit from higher education should be allowed admission free of probationary status. Grades earned at other schools prior to admission to Cuyamaca College shall not be considered in determining probationary status.

PROBATION

1. *Academic Probation:* Any student who has attempted a minimum of 12 semester units at Grossmont-Cuyamaca Community College District (GCCCD) and whose cumulative college grade point average falls below a 2.0 in courses receiving letter grades shall be placed on academic probation.
2. *Lack-of-Progress Probation:* Any student who has enrolled in a total of at least 12 semester units (beginning with the Fall 1981 semester) at GCCCD shall be placed on lack-of-progress probation when the student's cumulative units indicate 50 percent or more units of "W," "I," "NC" or "NP."
3. *Removal from Probation:*
 - a. Any student placed on academic probation shall be removed from probation when the cumulative GPA at GCCCD has improved to 2.0.
 - b. Any student placed on lack-of-progress probation shall be removed from probation when the cumulative units of "W," "I," "NC" or "NP" recorded at GCCCD are less than 50 percent of the total units attempted.

DISQUALIFICATION

Any student disqualified from a college within the Grossmont-Cuyamaca Community College District may not attend any college within the District during the next consecutive semester. The student may, however, attend the summer session.

1. *Academic Disqualification:* Any student on academic probation whose semester GPA falls below 2.0 shall be academically disqualified. Any student on academic probation whose semester GPA equals or exceeds 2.0, but whose cumulative GPA for all units attempted remains below 2.0, shall be continued on probation.
2. *Lack-of-Progress Disqualification:* Any student who is on lack-of-progress probation and whose semester work indicates 50 percent or more units of "W," "I," "NC" or "NP" will be disqualified. Any student on lack-of-progress probation whose semester work indicates fewer than 50 percent units of "W," "I," "NC" or "NP," but whose cumulative records show 50 percent or more units of "W," "I," "NC" or "NP," will be continued on lack-of-progress probation.

REINSTATEMENT

Any student believing to be unjustifiably disqualified may file a petition with documentation to the Admissions and Records Office requesting that such disqualification be reconsidered. Students are encouraged to see a counselor for assistance with petitions. To facilitate the official adding of courses prior to the published add deadline, a petition for reinstatement should be submitted no later than ten working days prior to the published add deadline.

Any veteran who petitions for readmission to the college following disqualification must meet with a counselor and have the counselor make a recommendation on the petition prior to being considered for readmission.

REMEDIAL COURSE LIMIT

Students may not receive credit for more than 30 units of remedial course work. This limit shall not apply to the following students:

- Students enrolled in one or more courses of English as a Second Language.
- Students identified by a college in the District as having a learning disability.

Students may be granted a waiver to the limitation upon petition to a college in the District. Waivers will be granted only when the student shows significant and measurable progress toward the development of skills necessary for college-level courses. Such waivers will be given only for a specified period of time or for a specified number of units.

REPETITION OF COURSES

A student is not obligated to repeat a course which he/she has failed unless it is a course required for graduation, transfer or is a prerequisite to another required course.

SUBSTANDARD WORK

1. A student may repeat any course in which a substandard final grade ("D," "F," "NC" or "NP") was earned. If the course is offered at both colleges in the District, the student may repeat the course at either college. A course may be repeated twice under this policy.
2. Upon completion of a repeated course, the original grade will be annotated and removed from the cumulative totals on the academic transcript in such a manner that all work remains legible, insuring a true and complete academic history. Only the last grade will be included in determining GPA and academic standing, and only those units will be counted toward graduation. No assurance can be provided that repeated course(s) will be treated in this manner by other institutions.

COURSE REPETITION RESTRICTIONS

Students will only be allowed to enroll in a course three times if they received a substandard grade (D, F, NP or NC) or withdrew from the class with a "W." Students with extenuating circumstances may seek approval to enroll in a course for the fourth time through the petition process. These changes do not contain a grandfather clause so any student that has already taken a course the maximum number of times will no longer be able to take the same class within the Grossmont-Cuyamaca Community College District.

SPECIAL CIRCUMSTANCES:

SPECIAL NEEDS

Subject to the provisions above, additional repetitions of special specific classes are permitted to provide accommodations to a student's educational limitations pursuant to state and federal nondiscrimination laws when such repetitions are essential to completing a student's preparation for enrollment into other regular or special classes.

PASSED COURSE

A student may not repeat a course in which a grade of "P" or "C" or higher was earned except by petition under extenuating circumstances and must be needed to meet an educational or occupational objective. A minimum of two years since the completion of the course must have elapsed before a petition can be filed. If such circumstances do exist, the grade earned in the repeated course shall not be counted in calculating the student's GPA.

MANDATED TRAINING

Courses that are required for mandated training are petitionable within the two-year time period.

SEXUAL HARASSMENT

The Grossmont-Cuyamaca Community College District is committed to providing an academic and work environment that respects the dignity of individuals and groups. As per Board Policy 3430, the District shall be free of sexual harassment and all forms of sexual intimidation and exploitation. The District shall also be free of unlawful harassment pertaining to: ethnic group identification, national origin, religion, age, sex (gender), race, color, medical condition, ancestry, sexual

orientation, marital status, physical or mental disability, or because he or she is perceived to have one or more of those characteristics. Harassment based on any of the protected status is prohibited and will not be tolerated. It is illegal to retaliate against any individual who filed a sexual harassment complaint or for participating in a sexual harassment investigation. The District's policy in its entirety may be found in the Student Affairs office or the District Employee and Labor Relations office.

STUDENT CODE OF CONDUCT

GROUND S FOR DISCIPLINARY ACTION

Student conduct must conform to District and College rules and regulations. If a Student Code of Conduct violation occurs while a student is enrolled in any program of instruction within the District, to include distance programs, he or she may be disciplined for one or more of the following causes that must be District related. These categories of behavior are not intended to be an exhaustive list, but are examples of causes and are good and sufficient causes for discipline, including but not limited to the removal, suspension or expulsion of a student. Other misconduct not listed may also result in discipline if good cause exists (Education Code Section 76034).

- Academic dishonesty such as cheating or plagiarism, or knowingly furnishing false information to the District and/or the College by any method including but not limited to any electronic mail, text messaging, media, or online course.
- Forgery, alteration or misuse of District or College documents, records, or identification.
- Obstruction or disruption of instructional, counseling, administrative, public service or other authorized District or College functions or activities.
- Assault, battery, abuse, harassment or any threat of force or violence or hazing directed toward any person on District-owned or controlled property, or at District or College-sponsored or supervised functions, or conduct which threatens or endangers the health or safety of any such person, or stalking of any District or College student or staff member by any method including but not limited to any electronic mail, or other media.
- Theft of or willful damage to District property or theft or willful damage to property of a member of the District or College community, such as visitors, students or employees on District property or at an authorized District or College activity.
- Unauthorized entry onto or use of District or College facilities including but not limited to administrative offices and instructional classrooms.
- Violation of District or College rules or regulations including District or College policies concerning student organizations, use of District or College facilities, or the time, place, and manner of student expression (Education Code 76120).
- Use, possession, or distribution of alcoholic beverages, narcotics, or controlled substances, including related paraphernalia

on campus, except as expressly permitted by law, or presence on District property or at a District or College authorized event while under the influence thereof.

- Willful failure to comply with directions of District or College officials, including faculty and staff acting in the performance of their duties.
- Disorderly, lewd, indecent, or obscene conduct, expression, or language on District-owned or controlled property, to include but not limited to computers or servers, or at District or College-sponsored or supervised functions.
- Use of slander, libel or in any way across any medium including electronic mail, text messaging, web sites, or blogs to cause defamation.
- Possession or use of explosives, dangerous chemicals, deadly weapons including but not limited to knives, firearms, martial and physical arts training or implements (not expressly required for an academic or non-credit course of instruction), or any item used to threaten bodily harm to any person on District property or at a District or College function without prior authorization of the Chancellor or designee.
- Misrepresentation of oneself or of an organization to be an agent of the District or College.
- Conduct that is in violation of Federal, State, or local laws or ordinances while on District premises or at District or College-sponsored or supervised activities.
- Abuse of computer facilities, not limited to but including servers, the Internet and telephones or use of computers for other than authorized assigned work including, but not limited to: unauthorized entry into a file to read, use, copy, or change its contents; unauthorized transfer of a file; unauthorized use of another individual's identification or password; use of District or College computing facilities to interfere with the work of another member of the District or College community; use of computers for unauthorized activities; unauthorized use of computers to display material of a sexual nature or other material that creates a hostile environment for persons in the immediate vicinity; and by any method including but not limited to any electronic mail, media (BP/AP 3720).
- Attempting any of the causes for disciplinary action identified above.

TYPES OF DISCIPLINARY ACTIONS

Disciplinary actions that may be imposed for violations of the Student Code of Conduct include the following:

- **Warning:** Written or oral notice to the student that continuation or repetition of misconduct may be cause for further disciplinary action.
- **Reprimand:** Written censure for violation of specific regulations.
- **Disciplinary Probation:** Specific period of conditional participation in campus and academic affairs that may involve exclusion from designated privileges or extracurricular activities. If a student violates any condition of probation, or is charged a second time with a violation of the Standards of Student Conduct during the probationary period, it shall be grounds for revocation of the student's probationary status and for

further disciplinary action to be taken in accordance with these procedures.

- **Faculty-Initiated Suspensions:** A faculty member may remove for good cause any student from his or her class for up to two (2) class sessions. The student shall not return to the class during the period of the removal without concurrence of the instructor and, if required, the consent of the Vice President of Student Services (VPSS) or designee. Nothing herein will prevent the College President, the VPSS, or designee from recommending further discipline in accordance with these procedures based on the facts that led to the removal. As used in this rule, "good cause" includes those offenses listed in the Student Code of Conduct. The faculty member shall immediately report the suspension to the respective division administrator and to the VPSS or designee. If the student is a minor, the College President, the President's designee or the VPSS shall schedule a conference with the student and the student's parent or guardian regarding the suspension. The faculty member is not obliged to provide makeup opportunities for class work missed during the two (2) class periods of suspension.
- **Suspension or Termination of Financial Aid:** In the event a student is suspended for willfully and knowingly disrupting the orderly operation of the campus, this action will result in ineligibility for state financial aid, as defined in Education Code Section 69813, for the period of suspension (Education Code Section 69810).
- **Immediate Interim Suspension:** The College President, the President's designee or the VPSS may order immediate suspension of a student when he or she concludes that immediate interim suspension is required to protect lives or property and to ensure the maintenance of order provided that a reasonable opportunity be afforded the suspended person for a hearing within ten (10) days of the time that the VPSS or designee, or the College President became aware of the infraction unless mutually agreed upon by the student and the designated College administrator that more time is required.
- In cases where an immediate interim suspension has been ordered, the time limits contained in these procedures shall not apply, and all hearing rights, including the right to a formal hearing where a long-term suspension or expulsion is recommended, will be afforded to the student according to the provisions above.
- In the event that a student does not request a hearing within the ten (10) days or contact the VPSS or designee, or the College President to establish a mutually agreed upon time for a hearing, the college where the infraction occurred will proceed with a due process hearing twenty (20) days after the point that the aforementioned administrators became aware of the infraction with or without the accused student being present. Students placed on Immediate Interim Suspension shall have holds placed on all records and transcripts pending the outcome of the due process hearing (Education Code Section 66017).
- **Withdrawal of Consent to Remain on Campus:** The College President, the President's designee or the VPSS, may notify any person as to whom there is a

reasonable belief that the person has willfully disrupted the orderly operation of the campus that consent to remain on campus has been withdrawn. If the person is on campus at the time, he or she must promptly leave or be escorted off campus by District Public Safety. If consent is withdrawn by the College President, the President's designee or the VPSS, a written report must be promptly made to the College President. The person from whom consent has been withdrawn may submit a written request for a hearing on the withdrawal within the period of the withdrawal. The request shall be granted no later than seven (7) days from the date of receipt of the request. The hearing will be conducted in accordance with provisions of this procedure relating to interim suspensions. In no case shall consent be withdrawn for longer than fourteen (14) days from the date upon which consent was initially withdrawn. Any person as to whom consent to remain on campus has been withdrawn who knowingly reenters the campus during the period in which consent has been withdrawn, except to come for a meeting or hearing, is subject to arrest (California Penal Code 626.4).

- **Short-Term Suspension:** Temporary exclusion from student status or other privileges or activities for a specified period of time not to exceed ten (10) days (Education Code Section 76031).
- **Long-term Suspension:** Temporary exclusion from student status or other privileges or activities for the remainder of the current semester.
- **Expulsion Subject to Reconsideration:** Permanent termination of student status, subject to reconsideration by the Board of Trustees after a specified length of time. Reconsideration may be requested in accordance with the procedure for reconsideration.
- **Permanent Expulsion:** Permanent termination of student status. There shall be no right of reconsideration of a permanent expulsion at any time. On its own motion, the Board of Trustees may reconsider such actions at any time.
- **Restitution:** Appropriate restitution shall be sought from any student found guilty of theft, vandalism or willful destruction of District or College property.

STUDENT GRIEVANCE AND DUE PROCESS PROCEDURES

The educational philosophy of the Grossmont-Cuyamaca Community College District set forth by Governing Board Policy 1300 states that "The Colleges recognize the worth of the individual and the fact that individual needs, interests, and capacities vary greatly." With acceptance of this principle comes the recognition that divergent viewpoints may result and that a process by which these viewpoints can be aired and resolved must be established.

The purpose of these procedures is to provide a prompt and equitable means for resolving student grievances. In the pursuit of academic goals, the student should be free of unfair or improper action by any member of the campus

community. The grievance procedure may be initiated by a student who reasonably believes he or she has been subject to unjust action or denied rights that have adversely affected his or her status, rights, or privileges as a student. It is the responsibility of the student to submit proof of alleged unfair or improper action.

Grievances pertaining to grades are subject to the California Education Code Section 76224(a) which 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 faculty member 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."

This Student Grievance and Due Process Procedure does not apply to the challenge process for prerequisites, corequisites, recommended preparations (advisories), and limitations on enrollment; an appeal of residence decision determination; or the determination of eligibility, disqualification or reinstatement of financial aid. These processes should be directed to the administrator in charge of the specific area of concern. Alleged violations of sexual harassment policies, actions dealing with student discipline, alleged discrimination on the basis of ethnic group identification, religion, age, gender, color, sexual orientation, physical or mental disability should be directed to the Associate Dean of Student Affairs. This procedure does not apply to police citations (i.e., "tickets"). Complaints regarding citations must be directed to the Public Safety Office.

If it is reasonable to conclude that, if substantiated, discipline of an employee may follow from a violation, such grievance is not subject to this process. Allegations of this nature will be directed to the appropriate College administrator.

If the grievance is predicated on an alleged unlawful discrimination on the basis of ethnic group identification, religion, age, gender, color, sexual orientation, physical or mental disability, a complaint may be filed with the:

Director of Employee and Labor Relations
Grossmont-Cuyamaca Community College
District
8800 Grossmont College Drive
El Cajon, CA 92020

Information about grievance procedures and a copy of this document should be available to grievant(s) and/or the student respondent(s) upon request.

The appeal procedure for eligibility, disqualification, and reinstatement of financial aid may be obtained in the Financial Aid Office. Information about other procedures is listed in the College catalog or may be obtained from the Vice President of Student Services.

INFORMAL RESOLUTION

All parties involved should be encouraged to seek an informal remedy. Informal meetings and discussion between persons directly involved in a grievance are essential at the outset of the dispute and should be encouraged at all stages. An equitable solution should be sought before persons directly involved in the case have assumed official or public positions that might tend to polarize the dispute and render a solution more difficult.

In an effort to resolve the matter in an informal manner, the student may, if appropriate, schedule a meeting with the person with whom the student has the grievance, schedule a meeting with the person's immediate supervisor, and/or schedule a meeting with the appropriate College administrator.

If the matter is not resolved in an informal manner, the student may, if appropriate, schedule a meeting with the Associate Dean of Student Affairs to explore student rights and responsibilities and receive assistance with an informal resolution.

- The Associate Dean of Student Affairs may gather information, communicate with all parties and attempt to mediate an informal resolution.
 - If the student believes the issue has not been resolved satisfactorily, the student may submit a written Statement of Grievance to the Associate Dean of Student Affairs, specifying the time, place, nature of the complaint, the specific policy or regulation alleged to have been violated if any, and remedy or correction requested.
- This statement must be submitted to the Associate Dean of Student Affairs within thirty (30) days of the incident or thirty (30) days after the student learns of the basis for the grievance, whichever is later, but not to exceed one (1) year of the occurrence.
- At the end of ten (10) days following the receipt of the written Statement of Grievance by the Associate Dean of Student Affairs, if there is no informal resolution of the complaint, the student(s) shall have the right to request a Formal Grievance Hearing.

FORMAL GRIEVANCE HEARING

- The student grievant(s) shall file a Formal Grievance Hearing Request Form with the Associate Dean of Student Affairs no sooner than ten (10) days, but not more than fifteen (15) days from filing the written Statement of Grievance.
- The grievant(s) and/or the respondent(s) may request from the Associate Dean of Student Affairs the assistance of a Student Advocate. The grievant(s) or the respondent(s) shall select an advocate from the panel established by the College President.
- Within five (5) days following receipt of the Formal Grievance Hearing Form, the Associate Dean of Student Affairs shall meet with the grievant and all parties to outline their rights and responsibilities.

FORMAL GRIEVANCE HEARING COMMITTEE COMPOSITION

The College President shall establish annually a standing panel from which one or more Formal Grievance Hearing Committees may be appointed. The panel shall consist of a minimum of:

- Five (5) students recommended by the Associated Student Government of Cuyamaca College;
- Five (5) faculty members recommended by the Academic Senate;
- Five (5) administrators, supervisors or staff selected by the College President.

The College President shall appoint a Formal Grievance Hearing Committee from the standing panel. The College President shall ensure that these Committee members have no possible conflict of interest in hearing the

grievance. The Committee shall include two (2) students, two (2) faculty members, and one (1) College administrator, supervisor or staff member selected from the panel described above.

The Formal Grievance Hearing Committee shall select a chairperson from among its members. Once a Formal Grievance Hearing has commenced, only those Committee members present throughout the Hearing may vote on the recommendation.

No person shall serve as a member of the Formal Grievance Hearing Committee if that person has been personally involved in any matter giving rise to the grievance, has made any public statement on the matters at issue, or could otherwise not act in a neutral manner. The grievant(s) or the respondent(s) may challenge for cause any member of the Formal Grievance Hearing Committee prior to the beginning of the Hearing by addressing a challenge, in writing, to the College President who shall determine whether cause for disqualification has been shown. If the College President believes that sufficient grounds for removal of a member of the Formal Grievance Hearing Committee have been presented, the College President shall remove the challenged member or members and replace them with another member or members from the standing panel.

Within ten (10) days following receipt of the Formal Grievance Hearing Request Form, the Formal Grievance Hearing Committee shall meet to select a chairperson and to determine if the Formal Grievance Hearing Request fulfills all of the following requirements:

- The request contains facts/documentation which, if true, would constitute a grievance;
- The grievant is a student as defined in these procedures, which include applicants and former students;
- The grievant is personally and directly affected by the alleged grievance;
- The grievant conformed with the grievance procedures and the grievance was filed in a timely manner;
- The grievance is not clearly frivolous or without foundation, or not clearly filed for purposes of harassment.

If the Formal Grievance Hearing Committee rejects the request for a Formal Grievance Hearing, the grievant and the Associate Dean of Student Affairs shall be notified in writing, within five (5) days, by the Committee's Chairperson. The specific reason(s) for rejection and the appeal process outlined in this document shall be included in this notification.

If the grievant(s) is dissatisfied with the decision of the Formal Grievance Hearing Committee not to grant a Formal Grievance Hearing, a written appeal may be filed with the Grievance Council within five (5) days after receipt of the Formal Grievance Hearing Committee's decision.

The Grievance Council's decision on the appeal is final.

If the request for a Formal Grievance Hearing satisfies all of the requirements listed above, the Committee Chairperson shall notify the grievant and the Associate Dean of Student Affairs, in writing, within five (5) days.

The Associate Dean of Student Affairs shall schedule a Formal Grievance Hearing which shall commence within ten (10) days following

the decision to grant a Formal Grievance Hearing. All parties to the grievance shall be given no less than five (5) days notice of the date, time and place of the Hearing.

The student may represent him or herself or may be assisted by another person except that an attorney shall not represent him or her.

CONDUCT OF THE HEARING

Opening: The Committee Chairperson shall call the Hearing to order, introduce the participants, and announce the purpose of the Hearing.

Burden of Proof and Producing Evidence: Each party to the grievance may call witnesses and introduce oral and written testimony relevant to the issues of the grievance. The grievant(s) and the respondent(s) have the right to question all witnesses and to review all documents presented to the Formal Grievance Hearing Committee.

Formal rules of evidence shall not apply. Any relevant evidence shall be admitted.

The burden shall be upon the grievant to prove by a preponderance of the evidence that the facts alleged are true.

Student Advocacy: The grievant(s) or the respondent(s) shall have the right to be assisted by a Student Advocate or by an individual of their choice. The grievant and the respondent(s) may assist him or herself, or may be assisted by a person of the party's choice, except that neither the grievant(s) or the respondent(s) shall be entitled to representation by legal counsel.

Exclusion of Witnesses: The Hearing shall be closed and confidential, unless it is the request of both parties that the Hearing be open to the public. Any such request must be made in writing no less than five (5) days prior to the date of the Hearing.

In a closed Hearing, witnesses shall not be present at the Hearing when not testifying unless both parties and the Formal Grievance Hearing Committee agree to the contrary.

Tape Recording: The Hearing shall be tape-recorded in accordance with the following procedures:

- All oral testimony shall be tape-recorded. If a person called upon to give oral testimony refuses to consent to being recorded, they may not testify at the Hearing.
- At the beginning of every Hearing, all parties present for the Hearing shall orally identify themselves by name for the tape recording.
- The Committee chairperson shall instruct all parties present for the Hearing to identify themselves when speaking and instruct all present that only one person is to speak at a time so the tape recording will be understandable.
- Only one tape recorder shall be allowed at the Hearing. No other recording device shall be allowed.

When the presentation of evidence is concluded, the Formal Grievance Hearing Committee's deliberations shall be confidential and closed to all parties. The Formal Grievance Hearing Committee's deliberations shall not be tape-recorded. Only those Committee members present throughout the entire Hearing may vote on the decision.

The grievance file, including tapes and all documents, shall be retained in a secure

location on campus for a period of four (4) years. The grievant(s) and the respondent(s) may have access, upon request, to the files and tapes through the Associate Dean of Student Affairs. The individual making the request pursuant to Board Rule shall pay the costs of any copies requested.

The Formal Grievance Hearing Committee shall meet and consider the relevance and weight of the testimony and evidence presented. This Committee shall reach a decision only upon the record of the Hearing and shall not consider matters outside of that record. Within five (5) days following the conclusion of the Hearing, this Committee shall issue a written recommendation that includes a statement of reasons for its conclusions.

The Committee's recommendation shall be forwarded to the Grievance Council through the Vice President of Student Services with copies to the grievant(s) and the student respondent(s).

GRIEVANCE COUNCIL

The Grievance Council shall be composed of the College Vice President of Student Services, the Vice President of Instruction, and the Vice President of Administrative Services or designees.

Upon receipt of the Formal Grievance Hearing Committee's recommendation, the Vice President of Student Services shall call a meeting of the Grievance Council.

The Grievance Council shall consider the Committee's recommendation, and any materials pertinent to the grievance, but shall not consider matters outside of the record. The Grievance Council shall render a written decision to the grievant(s) and the respondent(s) within five (5) days of receipt of the Formal Grievance Hearing Committee's recommendation.

APPEAL PROCESS

If either party is dissatisfied with a Grievance Council's decision, a written appeal may be filed with the College President within five (5) days of receipt of the Grievance Council's decision. If the College President is a party to the grievance, the appeal will be submitted directly to the District Chancellor.

Within five (5) days, the Grievance Council, or the College President (or District Chancellor if the President is a party to the grievance) shall send copies of the appeal to each party.

The College President (or the District Chancellor if the President is a party to the grievance), after reviewing the record of the Formal Grievance Hearing Committee, shall make a decision on the appeal and notify the parties in writing within five (5) days.

The College President's (or the District Chancellor's if the College President is a party to the grievance) decision shall be in writing and shall include a statement of reasons for the decision. The College President's (or District Chancellor's) decision shall be final.

STUDENT ADVOCATE - PANEL COMPOSITION AND ROLE

The College President shall annually establish a standing panel from which the student who files the grievance or the respondent select Student Advocates. The panel shall consist of a minimum of:

- Two (2) students recommended by the Associated Student Government;

- Two (2) faculty members recommended by the Academic Senate;
- Two (2) administrators, supervisors or staff selected by the College President.

The Associate Dean of Student Affairs will train the Student Advocate(s) regarding process, regulations and procedures. This training shall take place prior to the Student Advocate's assumption of the duties of this position.

The Student Advocate(s) shall assist the grievant(s) or the respondent(s) in understanding the grievance procedures, filing the appropriate forms, meeting all the timelines of these procedures, and communicating with College officials.

TIME LIMITS

Any times specified in these procedures may be shortened or lengthened if there is mutual concurrence by all parties.

CUYAMACA COLLEGE COMPLAINT PROCEDURES

There are established procedures for resolving complaints from not only prospective and current students, but also community members. For example, as a standard practice, the first step should be to seek a resolution at the local level with the appropriate department. If the complainant does not feel that the issue has been solved at this level to his or her satisfaction, the complainant is able to pursue the matter through the established chain of command. The process must be clearly stated and in compliance with Federal regulation (HEA Title 1V, CFR, Sections 600.9 and 668.4 (3) (b) since all Title 1V eligible institutions must not only have, but also state its administered complaint process.

PROCESS FOR SUBMITTING ALL TYPES OF COMPLAINTS BY PROSPECTIVE AND CURRENT STUDENTS:

Send an email to the department supervisor detailing a summary of the problem, including the steps taken to resolve the issue, and the desired outcome. If, after meeting with the department supervisor, you are not satisfied with the outcome, contact the Administrator of the appropriate Department or Division. If, after meeting with the Administrator of the appropriate Department or Division, you are not satisfied with the outcome and have taken the appropriate steps to resolve the matter through the established chain of command, contact the Vice President of that Division.

PROCESS FOR SUBMITTING ALL TYPES OF COMPLAINTS BY COMMUNITY MEMBERS:

Send an email, detailing a summary of the problem, including the steps taken to resolve the issue and the desired outcome to the Vice President of Administrative Services, Vice President of Instruction or the Vice President of Student Services or the College President.

PROCESS FOR SUBMITTING UNRESOLVED COMPLAINTS FROM PROSPECTIVE STUDENTS, CURRENT STUDENTS, AND/OR COMMUNITY MEMBERS TO THE STATE LEVEL:

Although it is our goal to resolve complaints at the campus level, there may be times

when a complainant is not satisfied with the outcome. In these situations, the complainant is encouraged to contact the California Community Colleges Chancellor's Office. The form to submit your complaint can be found at <http://california-communitycolleges.cccco.edu/ComplaintsForm.aspx>. There is a separate link for discrimination complaints.

PROCESS FOR SUBMITTING DISCRIMINATION COMPLAINTS:

If you are submitting a complaint that pertains to unlawful discrimination, you can submit the complaint to the California Community Colleges Chancellor's Office website at <http://www.cccco.edu/ChancellorsOffice/Divisions/Legal/Discrimination/tabid/294/Default.aspx>

PROCESS FOR SUBMITTING ACCREDITATION COMPLAINTS:

If you are submitting a complaint that pertains to the institution's compliance with academic program quality and accrediting standards, please submit the information to the Accrediting Commission for Community and Junior Colleges (ACCJC), which accredits the academic programs of the California Community Colleges. The link to submit your complaint can be found at <http://www.accjc.org/complaint-process>. (Nothing in this disclosure should be construed to limit any right you may have to take civil or criminal legal action to resolve your complaints.)

STUDENT RIGHT-TO-KNOW RATES

For Fall 2007 Cohort:

COMPLETION RATE: 21.28%
TRANSFER RATE: 14.31%

In compliance with the Student-Right-to-Know and Campus Security Act of 1990 (Public Law 101-542), it is the policy of our College District to make available its completion and transfer rates to all current and prospective students. Beginning in Fall 2007, a cohort of all certificate-, degree-, and transfer-seeking first-time, full-time students were tracked over a three-year period. Their completion and transfer rates are listed above. These rates do not represent the success rates of the entire student population at the College nor do they account for student outcomes occurring after this three-year tracking period.

Based upon the cohort defined above, a Completer is a student who attained a certificate or degree or became "transfer prepared" during a three year period, from Fall 2007 to Spring 2010. Students who have completed 60 transferable units with a GPA of 2.0 or better are considered "transfer-prepared." Students who transferred to another post-secondary institution, prior to attaining a degree, certificate, or becoming "transfer-prepared" during a five semester period, from Spring 2008 to Spring 2010, are transfer students.

UNIT VALUE AND STUDENT LOAD

A Carnegie unit—the conventional college unit of credit—represents a minimum of three hours of the student's time each week for one semester: one hour in scheduled classroom

lecture or discussion and two hours minimum per unit in outside preparation. (Outside preparation time may vary per individual student, based on ability and experience.) For laboratory, the college unit represents three hours of work in the laboratory or in comparable experience under classroom supervision. Unit value may differ in certain courses where field experience is involved.

The usual unit load for a college student per semester is 15-16 semester units. No student will be allowed to register in more than 18 semester units a semester (or eight units in summer session) without the approval of a counselor.

WORK EXPERIENCE REQUIREMENTS

In order to participate in Cooperative Work Experience Education, students shall be enrolled as specified in Title 5, Section 55254.

The unit value for work experience or field experience is one semester unit for each five hours of paid work experience per week or four hours of unpaid work experience per week completed during the course. Units will be awarded based upon a 15-week semester. The maximum occupational work experience units allowable in one semester is four.

Specific work experience agreements between the employer-supervisor, the student and the instructor are required by the Grossmont-Cuyamaca Community College District Plan for Cooperative Work Experience Education. All requirements specified in the Plan must be met, including the submittal of records validating attendance and satisfactory completion of course objectives.

198 COURSES—SUPERVISED TUTORING

Supervised tutoring courses use a variety of educational tools to assist students with various learning needs. These courses can be used to assist students to strengthen prerequisite skills prior to enrolling in a specific course or to receive supplemental assistance while enrolled in another course. Supervised tutoring courses may be repeated with different content in various departments. There is no fee charged and no credit given for supervised tutoring.

199 COURSES—SPECIAL STUDY

The special study or project (199) is for the purpose of allowing students to increase their knowledge of a subject matter not included in regular course offerings.

Special studies shall be available to those students who have accumulated the skills and breadth of academic experience necessary to utilize this special learning method. Special study credit shall be limited to nine semester units at Cuyamaca College. The unit value for a special study or project will be determined

on the basis of one semester unit for each 48 hours of work.

A typewritten one-page paper describing the goals and methods of the special study or project is to be written by the student and attached to the contract. This paper will be used as a criterion for acceptance or rejection of the proposal. This paper will also be used by the instructor to evaluate the extent to which the stated goals of the special study have been achieved. Grades will be assigned by the instructor based on the level of this achievement. The Cuyamaca College grading policy applies to 199's.

Contracts for special studies or projects are available in the Admissions and Records Office. The deadline for enrolling in a special study or project will be the end of the second week for full-term classes and the end of the first week for eight week and summer session classes.

298 COURSES—SELECTED TOPICS

Courses of this type are new and experimental and may be offered in a lecture and/or laboratory format. They are not regular catalog offerings and may be found in the various disciplines of the class schedule. Course content and unit credit will be determined by the discipline offering the course. These courses are Pass/No Pass only, non-degree applicable, and are non-transferable.

299 COURSES—SELECTED TOPICS

Courses of this type are new and experimental and may be offered in a lecture and/or laboratory format. They are not regular catalog offerings and may be found in the various disciplines of the class schedule. Course content and unit credit will be determined by the discipline offering the course. These courses do not qualify for general education credit. They are degree applicable and may qualify for transfer to the CSU on a course by course basis.

Degree Requirements and Transfer Information

ASSOCIATE DEGREES

Cuyamaca College provides career, technical and general education to students who plan to complete their formal education at the community college level. In addition, the college provides the lower division requirements in general education and pre-professional majors for those students who plan to transfer to four-year colleges and universities. To assist students in educational planning, this section describes the graduation requirements for the Associate in Science (AS) degree and the Associate in Arts (AA) degree.

Granting of the AS or AA degree indicates successful completion of general educational requirements, plus evidence of proficiency in a specialized field. As a member of the Western Association of Schools and Colleges, most courses taken at Cuyamaca College are fully accepted on transfer by the University of California, all California State University campuses and other universities throughout the United States.

Many of the units earned in programs at Cuyamaca College are accepted toward the bachelor degree at four-year institutions. Students wishing to discuss career planning should consult with a counselor or a representative of the program in which they have special interest prior to registration.

The emphasis on career planning and education at Cuyamaca College is evidenced by the number of programs leading to the AS degree. In curriculum planning for career education, advisory committees composed of persons from various fields of specialization give of their time in order to ensure quality courses that furnish students with proficiencies essential to employment, retention on the job, and for living a more productive and full life.

GENERAL EDUCATION (GE) REQUIREMENTS:

NOTE: GE course choices for the Associate Degree may differ between Cuyamaca College and Grossmont College. Students should check both college catalogs for specific information if they plan to attend both campuses.

AREA A – LANGUAGE AND RATIONALITY

(Minimum of 6 semester units)

One course from each area:

1. Written Communication

ENGL 120

2. Oral Communication and Analytical Thinking

COMM 120, 122, 137, 145

ENGR 100

MATH 103, 110, 120, 125, 150, 160, 170,

175, 176, 178, 180, 245, 280, 281, 284

PHIL 125, 130

PSY 215

AREA B – NATURAL SCIENCES

(Minimum of 4 semester units)

One laboratory course must be included (laboratory courses are underlined):

ANTH 130

ASTR 110, 112

BIO 112, 115, 122, 124, 126, 128, 130, 131,

140, 152, 210, 220, 221, 230, 240

CHEM 102, 105, 113*, 115*, 116, 120*, 141

ET 110

GEOG 120, 121

GEOL 104, 110, 111

OCEA 112, 113

PHYC 110, 120, 121, 130, 131, 190, 200, 210

*Students will not receive credit for more than one of the following courses: CHEM 113, 115, 120.

AREA C – HUMANITIES

(Minimum of 3 semester units)

One of the following courses:

ARAM 120, 121, 220

ARBC 120, 121, 145, 220, 221, 250, 251

ART 100, 120, 124, 129, 140, 141, 143, 144, 145

ASL 120, 121, 140, 220, 221

ENGL 122, 201, 202, 207, 214, 217, 221, 222, 231, 232, 270, 271, 275, 276, 277

FREN 120, 121, 220, 221, 250, 251

HIST 100, 101, 105, 106

HUM 110, 115, 120, 140, 155

ITAL 120, 121, 220

MUS 110, 111, 114, 115, 116, 117

NAKY 120, 121, 220, 221

PHIL 110, 115, 117, 140, 160, 170

RELG 120, 130, 210, 215

SPAN 120, 120A & 120B*, 121, 141, 145, 220, 221, 250, 251

THTR 110, 120, 121

*General education credit for SPAN 120B only after completion of SPAN 120A.

AREA D – SOCIAL AND BEHAVIORAL SCIENCES

(Minimum of 3 semester units)

One of the following courses:

ANTH 120

CD 115, 125, 131, 145

COMM 110, 124

ECON 110, 120, 121

GEOG 106, 130, 132

HED 120, 122, 201, 203, 251

HIST 108, 109, 118, 119, 122, 123, 124, 130,

131, 132, 133, 180, 181

POSC 120, 121, 124, 130, 140

PSY 120, 125, 134, 138, 140, 165, 170, 220

SOC 120, 125, 130

ADDITIONAL REQUIREMENTS:

(Minimum 6 semester units)

Two additional courses from two different areas:

• Area B - Natural Sciences

• Area C - Humanities

• Area D - Social and Behavioral Sciences

GENERAL EDUCATION STUDENT LEARNING OUTCOMES

General education courses allow students to: broaden their knowledge, skills, attitudes, and values; develop analytical ability and critical thinking; and foster interest in life-long learning in educational, scientific and cultural fields essential for effective participation in a complex society.

Upon successful completion of the general education requirements, the Cuyamaca student will be able to:

Language and Rationality

- Form a provable thesis and develop it through factual research;
- Make effective rhetorical choices in relation to audience and purpose;
- Draw reasonable conclusions and/or generate appropriate solutions;
- Use verbal and non-verbal languages in a clear and precise manner;
- Distinguish between fact and opinion;
- Analyze and critically evaluate complex issues or problems;
- Evaluate a variety of quantitative and qualitative symbol expressions and systems;

Natural Sciences

- Use the scientific method to investigate phenomena in the natural world;

- Use concepts, theories and technology to explain phenomena in the natural world;
- Outline the methods and activities of scientific inquiry used to solve problems in science;
- Identify limitations to the types of questions that can be answered scientifically;

Humanities

- Analyze and interpret human thought, achievement, and expression and communicate the results;
- Express appreciation of a wide variety of cultural and artistic expression;
- Articulate the complex relationships between the arts and their cultural, historical, and economic contexts; and
- Evaluate the various elements of artistic works;

Social and Behavioral Sciences

- Critically examine and identify human nature and behavior;
- Critically examine social traditions and institutions;
- Examine interactions and interconnections across cultures;
- Use methods of inquiry and measurement.

DEGREE REQUIREMENTS:

Cuyamaca College will confer the Degree of Associate in Science or Associate in Arts upon students who successfully complete the following requirements:

1. A minimum of 60 semester units of college work.
2. Competency Requirements
 - A. Completion of ENGL 120 with a grade of "C" or better, or a grade of "P".
 - B. Completion of MATH 103 or a higher numbered mathematics class, or a statistics course from another discipline that has intermediate algebra as a prerequisite, with a grade of "C" or better or a grade of "P" or completion of MDTP Assessment placing into a class higher than MATH 103 or 110.
 - C. Successful score on an approved external examination in English and/or Math; see pages 45-46.

3. Exercise Science Degree Requirements

With the exception of the University Studies and AA-T Degrees, two activity courses in exercise science are required for graduation from Cuyamaca College. These courses are marked with an asterisk in the "Course Descriptions" section.

- A. If medical reasons necessitate exclusion from exercise science, a medical statement must be on file with the Admissions and Records Office. Adaptive exercise science classes are available.
 - B. Veterans who have completed at least one year of honorable active service will receive up to 3 units of credit for exercise science which will satisfy the activity requirement for graduation. To receive credit for military service, a DD-214 and appropriate military records must be submitted to the Admissions and Records Office.
4. Achievement of a "C" average (2.0 GPA) in all college work counted toward general education requirements.
 5. Achievement of a "C" grade or better in all courses counted towards a major

requirement. (P/NP grading not accepted for major requirements.)

6. A maximum of 12 "P" semester units taken in regular course work at this institution may be counted toward the 60 semester units required for graduation but shall not be included as part of the requirements for the major.
7. Residency
 - A. Students that have met all graduation requirements may obtain their degree from Cuyamaca College if they are currently enrolled and have satisfactorily completed AT LEAST 12 DEGREE APPLICABLE SEMESTER UNITS of approved course work at Cuyamaca College.
 - B. If a student is NOT enrolled at Cuyamaca College during the semester in which all graduation requirements are met must have a total of 45 units of degree applicable courses in residence in the district, regardless of how much time has elapsed.
 - C. Active military personnel may obtain their degree from Cuyamaca College if they have met all graduation requirements and have completed at least 12 semester units of approved course work at Cuyamaca College, regardless of whether or not they are enrolled during the term in which they graduate.
8. Petition for Graduation
 - A. It is the responsibility of the student who expects to graduate to file a written petition for graduation on the form provided by the Admissions and Records Office. The application should be filed prior to the deadline for the semester in which the student plans to complete requirements for a degree. (See Academic Calendar for deadline dates.)
 - B. Official transcripts from all colleges attended must be on file in the Admissions and Records Office.
 - C. The student may choose to meet requirements in a catalog published after admission provided continuous attendance is maintained. A student not in continuous attendance at Cuyamaca College should be aware that he/she must meet degree requirements listed in the catalog in effect at the time of readmission unless he/she has applied for and been granted a leave of absence.
9. Major Requirements

See "Associate Degree Programs and Certificates" for the major areas for the AS and AA degrees.
10. Additional Associate Degree

An additional associate degree may be earned under the following conditions:

 - A. Having received an AA or AS degree, the student may qualify for an additional AA or AS degree with the exception of the General AA offered for catalog years 1978-79 through 2007-08**.
 - B. Having received a bachelor's degree or higher, the student may qualify for an additional AA or AS degree with the exception of the General AA offered for catalog years 1978-79 through 2007-08**.
 - C. Having received an associate's degree or higher, the student will not receive an AA or AS degree in the same area, unless the field is broad enough that the

new courses would not be a repetition of content from previous education.

- D. All General Education requirements as specified by the current catalog are met.
- E. Completion of a major as specified in this catalog with a minimum of 12 remaining required semester units in the major completed at Cuyamaca College subsequent to the preceding degree(s) at any college.

11. Multiple Majors

Multiple majors differ from additional associate degrees (see section above) in that the student with a multiple major works simultaneously toward the completion of more than one major. Multiple majors must be available and meet general education requirements from the same catalog year. An AA or AS degree with a multiple major can be earned by completion of all general education requirements plus the courses required for both majors as outlined in this catalog. The General AA degree offered for catalog years 1978-79 through 2007-08 may not be included as part of the multiple major.

*A grade of "P" (Pass) represents a "C" grade or better.

**The General AA/AS degrees were modified to comply with Title 5 requirements beginning 2008-09, and were re-titled General Studies degrees with Areas of Specialization.

CERTIFICATES OF ACHIEVEMENT

Certificates of Achievement are awarded to students who have attained well-defined levels of competency in specific areas. To qualify for a Certificate of Achievement, a student must:

1. Complete all courses which are listed for the major area in the Associate Degree Programs and Certificates section of this catalog.
2. Achieve a "C" or better in all courses which are to be applied toward the certificate. (P/NP grading not accepted for certificate requirements.)
3. Complete the last course required for the certificate at Cuyamaca College.
4. File a petition for the certificate in the Admissions and Records Office before the deadline of the semester in which the requirements will be completed. (See Academic Calendar for deadline dates.)
5. Meet the requirements in a catalog published after admission provided continuous attendance is maintained. A student not in continuous attendance at Cuyamaca or Grossmont College should be aware that he/she must meet certificate requirements listed in the catalog in effect at the time of readmission.

CERTIFICATES OF SPECIALIZATION

Certificates of Specialization are awarded to students who have achieved an acceptable foundation of knowledge in a specific area. Students receiving only a Certificate of Specialization are not able to participate in commencement. To qualify for a Certificate of Specialization, a student must:

1. Complete all courses which are listed for the certificate in the Associate Degree Programs and Certificates section of this catalog.
2. Achieve a "C" or better in all courses which are to be applied toward the certificate. (P/NP grading not accepted for certificate requirements.)
3. Complete the last course required for the certificate at Cuyamaca College.
4. File a petition for the certificate in the Admissions and Records Office before the deadline of the semester in which the requirements will be completed. (See Academic Calendar for deadline dates.)
5. Meet the requirements in a catalog published after admission provided continuous attendance is maintained. A student not in continuous attendance at Cuyamaca or Grossmont College should be aware that he/she must meet certificate requirements listed in the catalog in effect at the time of readmission.

TRANSFER INFORMATION

This section of the catalog is designed primarily to assist students who plan to further their education in a four-year institution. Although every effort has been made to assure the accuracy of the following transfer information at the time of catalog publication, changes may occur. Students are encouraged to make an early selection of the four-year institution and to check its catalog for more precise information. Counselors are available to assist students with program selection and planning. It is recommended that students utilize ASSIST (www.assist.org) to access course equivalencies with many UC and CSU campuses. ASSIST is the recognized source of statewide articulation data. Students should also utilize the Cuyamaca College University Transfer Center resources at www.cuyamaca.edu/transfer_center or in Student Services One-Stop Center, Room A-221.

Students who plan to transfer may meet general education transfer requirements through the University Studies major. For requirements, see "University Studies" in the Associate Degree Programs and Certificates section of the catalog.

INTERSEGMENTAL GENERAL EDUCATION TRANSFER CURRICULUM (IGETC) 2012-2013

The Intersegmental General Education Transfer Curriculum (IGETC) is a general education package which community college transfer students can take to fulfill lower division general education requirements for either the CSU or UC system.

Completion of the IGETC is not a requirement for transfer to a CSU or UC campus, nor is it the only way to fulfill lower division general education requirements. Students should see

a counselor before deciding on an alternative that best meets their own needs.

There is no catalog year or rule of continuing attendance for IGETC certification. A course is certifiable if, and only if, it was on the IGETC list at the time the course was taken.

Cuyamaca College students may be "certified" upon completion of IGETC requirements. Courses completed at California Community Colleges and participating institutions will be certified based on approval at the original campus. Courses taken at other colleges and universities; i.e. out-of-state, private, may be used in the certification under certain conditions. Certifications are processed in the Admissions and Records Office.

All courses must be completed with a grade of "C" or better or "Pass." There is a limit to the number of courses taken with a grade of "Pass." Check with a counselor.

Attention students: IGETC choices for transfer may differ between Cuyamaca and Grossmont. If you plan to attend both colleges, it is strongly recommended that you visit the Counseling Centers or visit the individual college websites at www.gcccd.edu for specific information.

Up-to-date at time of catalog printing. Please see a counselor for changes.

AREA 1 – ENGLISH COMMUNICATION

CSU: 3 courses required, one from each group
UC: 2 courses required, one from groups A and B

- A. English Composition:** ENGL 120
B. Critical Thinking: ENGL 124
C. Oral Communication: COMM 122

AREA 2 – MATHEMATICAL CONCEPTS AND QUANTITATIVE REASONING

(1 course, 3 semester units)

BIO 215*
MATH 120*, 125*, 126*, 160, 175, 176, 178*, 180*, 245, 280, 281, 284, 285
PSY 215*

AREA 3 – FINE ARTS AND HUMANITIES

(At least 3 courses, 9 semester units)

At least one course from Fine Arts and one from Humanities.

A. Fine Arts:

ART 100, 140, 141, 143, 144, 145
MUS 110, 111, 114, 115, 116, 117
THTR 110, 120, 121

B. Humanities:

ARAM 220
ARBC 121, 145, 220, 221
ASL 121, 220, 221
ENGL 122, 201, 202, 207, 214, 217, 221, 222, 231, 232, 270, 271
FREN 121, 220, 221
HIST 100, 101, 105, 106
HUM 110, 115, 120, 140, 155
ITAL 121, 220
NAKY 121, 220, 221
PHIL 110, 115, 117, 140, 160, 170
RELG 120, 130, 210, 215
SPAN 121, 141, 220, 221

AREA 4 – SOCIAL AND BEHAVIORAL SCIENCES

(At least 3 courses, 9 semester units)

Courses from at least two categories and two disciplines.

- A.** ANTH 120
B. ECON 110*, 120, 121
C. HIST 118*, 119*, 130*, 131*, 132, 133, 180*, 181*; PSY 125
D. HIST 122*, 123*
E. GEOG 106, 130
F. HIST 100, 101, 105, 106, 108, 109, 118*, 119*, 122, 123, 124, 130*, 131*, 132, 133, 275, 276, 277
G. CD 125; COMM 110, 124
H. POSC 120, 121, 124, 130
I. PSY 120, 125, 134, 138, 140, 165, 170, 220; CD 125
J. SOC 120, 125, 130; PSY 138; CD 115, 131

AREA 5 – BIOLOGICAL AND PHYSICAL SCIENCES

(At least 2 courses required, 7-9 semester units)

One Biological Science course and one Physical Science course; at least one must include a laboratory (laboratory courses are underlined). Laboratory courses must correspond to related lecture courses.

A. Physical Sciences:

ASTR 110, 112
CHEM 102*, 113*, 115*, 116*, 120*, 141, 142, 231
GEOG 120, 121
GEOL 104, 110, 111
OCEA 112, 113
PHYC 110*, 120*, 121, 130*, 131*, 190*, 200*, 210*
PSC 110, 111

B. Biological Sciences:

ANTH 130
BIO 112, 122, 124, 128*, 130*, 131*, 140, 141, 141L, 210*, 220*, 221*, 230, 240

C. Laboratory:

This requirement is met by completing a lab course or a combined lecture/lab in 5A or 5B. Lab courses are underlined. Lab must correspond to its related lecture course.

AREA 6 – LANGUAGE OTHER THAN ENGLISH

UC: 1 course, 3 semester units, any of the following courses.

Students shall demonstrate proficiency in a language other than English equal to two years of high school study. Those students who have satisfied the UC freshman entrance requirement in a language other than English will have fulfilled this requirement. There are other ways to fulfill this area; please see a counselor.

ARAM 121, 220
ARBC 120, 121, 220, 221
ASL 120, 121, 220, 221
FREN 120, 121, 220, 221
ITAL 120, 121, 220
NAKY 120, 121, 220, 221
SPAN 120, 120B, 121, 220, 221

AMERICAN INSTITUTIONS REQUIREMENT: CSU GRADUATION REQUIREMENT IN U.S. HISTORY, CONSTITUTION AND AMERICAN IDEALS

(2 courses, 6 semester units)

(Not part of IGETC; may be completed prior to transfer)

Courses used to meet this requirement may not be used to satisfy requirements for Area 4 Social Sciences in IGETC. UC students meet the American Institutions requirement with a one-year course in U.S. history and government in high school with a grade of

"C" or better. Students who have not met this requirement should discuss with a counselor ways to meet this deficiency. Check with a counselor for approved combinations of courses or go to www.assist.org.

*Indicates that transfer credit may be limited by UC or CSU or both. Please consult with a counselor.

UNIVERSITY OF CALIFORNIA

The University is an integral part of the public education system of California. Its campuses usually accept at full unit value transfer courses completed with satisfactory grades in the public community colleges of the state. Students intending to continue their studies at the University will find it advantageous to complete their lower division requirements at Cuyamaca College. However, students should become familiar with specific requirements of the particular campus to which transfer is planned by examining the University catalogs and separate bulletins of the various schools and colleges of the University.

The campuses of the University of California are located in:

Berkeley	Riverside
Davis	San Diego
Irvine	San Francisco (Medical Center)
Los Angeles	Santa Barbara
Merced	Santa Cruz

UC TRANSFER ADMISSION GUARANTEE (TAG)

UC Berkeley & UC Los Angeles do not participate in the TAG. Students may apply for the TAG at only one school.

- The first step in the UC application process is to fill out an online TAG application during the month of September. Visit uctag.universityofcalifornia.edu/index.cfm for more information.
- The second step is to fill out an online application for admission during the month of November. Visit www.universityofcalifornia.edu/admissions for more information.

UC TAG MINIMUM REQUIREMENTS

- 60 UC-transferable semester units
- Maintain acceptable GPA for your major and for specific UC campus
- Two UC-transferable English composition courses
- One UC-transferable mathematics course
- A full certification of IGETC or 7 course pattern

*Please check each UC campus website for specific TAG requirements

Articulation agreements have been completed with most campuses of the University of California (see www.assist.org). An Intersegmental General Education Transfer Curriculum pattern acceptable at all University of California (IGETC) campuses is available. Specific courses required for major preparation should be discussed with a counselor.

UCSD TRANSFER ADMISSION GUARANTEE (TAG) 2012-2013

The following requirements must be met in order to qualify for the UCSD TAG:

- Students must have a full certification of the IGETC general education pattern. No partial IGETC is allowed. See published deadlines in the University Transfer Center.
- Students must enroll in one or more California community colleges for at least two regular terms (excludes summer sessions).
- The last college before UCSD admission must be a California community college (excludes summer sessions).
- Students must complete at least 30 UC-transferable units at a California community college.
- Students must complete two UC-transferable English composition courses and one UC-transferable math course with "C" grades or better by Fall 2012 if applying for Fall 2013.
- Students must complete 60 UC-transferable units by Spring 2013 if applying for Fall 2013.
- Students must earn and maintain a cumulative GPA of 3.5 in all UC-transferable work and be in good standing through their last regular term.

In addition, all transfer students are strongly advised to complete lower-division major preparation requirements.

TAG RESTRICTIONS

The UCSD TAG applies to general admission, not necessarily to a designated impacted major. Students must meet the screening criteria for designated majors which require lower-division preparation prior to admission into the major. For impacted majors, visit the University Transfer Center at Cuyamaca College.

This agreement is available to U.S. citizens, permanent residents, AB540 students, and former UC students in good standing (not former UCSD students). This agreement does not apply to students with senior class standing (students with 90 or more UC transferable semester units from accredited four-year universities and community colleges combined).

THE LAST YEAR TO APPLY TO UCSD USING TAG IS FALL 2013.

UCSD UNIVERSITY LINK PROGRAM

University Link is the guarantee admission program to UCSD for high school seniors attending Cuyamaca College.

To be eligible for the University Link Program, The University Link agreement must be signed and submitted to UCSD during spring of your senior year or, at the latest, during your first fall term at the community college. Please see a Counselor for more details.

UCSD UNIVERSITY LINK MINIMUM ELIGIBILITY REQUIREMENTS

- 60 UC-transferable semester units
- Meet UC subject eligibility
- Maintain a minimum cumulative GPA of 3.0 in all UC-transferable courses
- Two UC-transferable English composition courses
- One UC-transferable mathematics course
- Completion of 7 course pattern

UNIVERSITY OF CALIFORNIA CREDIT LIMITATION

Up-to-date at time of catalog printing.

Biology	No credit for BIO 128, 130 and 131 if taken after BIO 210, 220, 221. BIO 215 combined with MATH 160 and PSY 215: maximum credit, one course. BIO 128, 130 and 131 combined: maximum credit, four units. No credit for 230 if taken after 220, 221. No credit for 240 if taken after 210.
CADD Technology	CADD 115, 120, 125 and ENGR 119 combined: maximum credit, one course.
Chemistry	No credit for CHEM 102, 113, 115, 116 or 120 if taken after 141. CHEM 102, 113, 115, 116 and 120 combined: maximum credit, one course.
Economics	No credit for ECON 110 if taken after ECON 120 or 121.
Engineering	ENGR 119, CADD 115, 120, 125 combined: maximum credit, one course.
ESL	Any or all courses combined (103, 106, 119): maximum credit, eight units.
Exercise Science	ES 200 and 255 combined: maximum credit, three units. Maximum of four units of credit for Physical Activity courses.
Health Education	HED 120 and 122 combined: maximum credit, one course.
History	HIST 118, 130 and 180 combined: maximum credit, one course. HIST 119, 131 and 181 combined: maximum credit, one course.
Math	Credit only for MATH 120 (3 units) or 125 and 126 combined (6 units). MATH 160, BIO 215 and PSY 215 combined: maximum credit, one course. MATH 175 and 176 combined: only one course. MATH 178 and 180 combined: maximum credit, one course.
Physical Science	No credit for PSC 110 if taken after a college course in Astronomy, Chemistry, Earth Science or Physics.
Physics	No credit for PHYC 110 if taken after PHYC 120 or 130 or 190. PHYC 120 and 121 combined with PHYC 130/131 or PHYC 190, 200, 210: maximum credit, one series. Deduct credit for duplication of topics.

Psychology PSY 215 combined with BIO 215 and MATH 160: maximum credit, one course.

Spanish SPAN 120 or 120B corresponds to two years of high school study. SPAN 120A and 120B combined with SPAN 120: maximum credit, five units.

SPAN 120A and 120B must both be taken in order for transfer credit to be granted.

THE CALIFORNIA STATE UNIVERSITY

As with the University of California, the California system of state universities is a member of the higher education family. Its many campuses provide upper division educational programs for graduates or transfers from over 100 California public community colleges.

Cuyamaca College students wishing to transfer to a California State University may choose from the following campuses:

Bakersfield	Northridge
Channel Islands	Pomona
Chico	Sacramento
Dominguez Hills	San Bernardino
East Bay	San Diego
Fresno	San Francisco
Fullerton	San Jose
Humboldt	San Luis Obispo
Long Beach	San Marcos
Los Angeles	Sonoma
Maritime	Stanislaus
Monterey Bay	

A student is eligible for admission to the California State University with 60 transferable semester units (84 quarter units) if the student:

- Has a college grade point average of 2.0 or better (2.4 for non-California residents) in all transferable college units attempted.
- Is in good standing at the last college or university attended.
- Has completed or will complete at a California Community college prior to transfer at least 30 semester units (45 quarter units) of courses equivalent to general education requirements with a grade of "C" or better. The 30 units must include all of the general education requirements in communication in the English language (English composition, oral communication and critical thinking) and at least one course of at least 3 semester units (4 quarter units) required in college level mathematics.

IMPACTED CAMPUSES MAY HAVE STRICTER REQUIREMENTS; SEE A COUNSELOR.

All California State University campuses are on a "Common Admissions Program." Applications are available online at www.csumentor.edu.

SDSU UPPER DIVISION TRANSFER ADMISSION GUARANTEE (TAG)

Please refer to <http://arweb.sdsu.edu/es/admissions/apply/104/TAG0910.pdf> for more information on the SDSU TAG.

GENERAL EDUCATION BREADTH REQUIREMENTS FOR THE CALIFORNIA STATE UNIVERSITY 2012-2013

Attention students: CSU GE Breadth choices for transfer may differ between Cuyamaca and Grossmont. If you plan to attend both colleges, it is strongly recommended that you visit the Counseling Centers or visit the individual college websites at www.gcccd.edu for specific information.

Up-to-date at time of catalog printing. Please see a counselor for any additional changes.

There is no catalog year or rule of continuing attendance for General Education Breadth Requirements certification. A course is certifiable if, and only if, it was on the General Education Breadth Requirements list at the time the course was taken. Please check with a counselor if you have any questions.

The California State University system has established a requirement of 48 semester units in general education as part of a baccalaureate degree. At least nine of the 48 semester units must be upper division courses. A student attending a community college may complete 39 of the 48 semester units prior to transfer.

The 48 semester units are distributed as follows:

1. A minimum of nine (9) semester units in communication in the English language to include both oral communication and written communication, and in critical thinking to include consideration of common fallacies in reasoning.
2. A minimum of twelve (12) semester units to include inquiry into the physical universe and its life forms with some immediate participation in laboratory activity, and into mathematical concepts and quantitative reasoning and their applications.
3. A minimum of twelve (12) semester units among the arts, literature, philosophy and foreign languages.
4. A minimum of twelve (12) semester units dealing with human social, political and economic institutions and behavior and their historical background.
5. A minimum of three (3) semester units in study designed to equip human beings for lifelong understanding and development of themselves as integrated physiological and psychological entities.

Cuyamaca College students will be "certified" as completing up to 39 lower division semester units of general education at Cuyamaca College for California State University campuses upon completion of the requirements for Areas A through E listed below (courses which are listed in more than one category may be used to certify only one requirement). Courses completed at California Community Colleges and participating institutions will be certified based on approval at the original campus. Courses taken at other colleges and universities; i.e. out-of-state, private, may be used in the certification under certain conditions. CSU GE certifications are processed in the Admissions and Records Office.

NOTE: General Education course choices for transfer and the Associate degree may differ between Cuyamaca College and Grossmont College. Each college strongly recommends that students visit the Counseling Centers for specific information if they plan to attend both campuses.

Courses required in Oral Communication (A1), Written Communication (A2), Critical Thinking (A3) and Mathematics/Quantitative Reasoning (B4) must be completed with grades of "C" or better for admission to most CSU campuses.

AREA A – ENGLISH LANGUAGE COMMUNICATION AND CRITICAL THINKING

(Minimum of 9 semester units)
Minimum of 3 courses, at least one from each category.

1. **Oral Communication:**
COMM 120, 122
2. **Written Communication:**
ENGL 120
3. **Critical Thinking:**
COMM 137, 145
ENGL 122, 124
PHIL 125, 130

AREA B – SCIENTIFIC INQUIRY AND QUANTITATIVE REASONING

(Minimum of 9 semester units)
Minimum of 3 semester units in B1, B2 and B4. One lab course must be included (laboratory courses are underlined). Lab must correspond to its related lecture course.

1. **Physical Sciences:**
ASTR 110, 112
CHEM 102, 105, 113, 115, 116, 120, 141, 142, 231
ET 110
GEOG 120, 121
GEOL 104, 110, 111
OCEA 112, 113
PHYC 110, 120, 121, 130, 131, 190, 200, 210
PSC 110, 111
2. **Life Sciences:**
ANTH 130
BIO 112, 115, 122, 124, 128, 130, 131, 140, 141, 141L, 152, 210, 220, 221, 230, 240
OCEA 112, 113
3. **Laboratory Activity:** This requirement is met by completing a lab course in B1 or B2. Lab courses are underlined. Lab must correspond to its related lecture course.
4. **Mathematics/Quantitative Reasoning:**
BIO 215, PSY 215
MATH 120, 125, 126, 160, 170, 175, 176, 178, 180, 245, 280, 281, 284, 285

AREA C – ARTS AND HUMANITIES

(Minimum of 9 semester units)
At least 1 course in each category.

1. **Arts:**
ART 100, 120, 140, 141, 143, 144, 145
HUM 110, 120, 140
MUS 110, 111, 114, 115, 116, 117
THTR 110, 120, 121
2. **Humanities:**
ARAM 120, 121, 220
ARBC 120, 121, 145, 220, 221, 250, 251
ASL 120, 121, 220, 221
ENGL 122, 201, 202, 207, 214, 217, 221, 222, 231, 232, 270, 271
FREN 120, 121, 220, 221, 250, 251
HIST 100, 101, 105, 106

HUM 110, 115, 120, 140, 155
ITAL 120, 121, 220
NAKY 120, 121, 220, 221
PHIL 110, 115, 117, 140, 160, 170
RELG 120, 130, 210, 215
SPAN 120, 120A & 120B†, 121, 141, 145, 220, 221, 250, 251

† General education credit for SPAN 120B only after completion of SPAN 120A.

AREA D – SOCIAL SCIENCES

(Minimum of 9 semester units)
Courses taken in at least 2 categories and 2 disciplines.

0. SOC 120, 125, 130; PSY 138; CD 115, 131, 145
1. ANTH 120
2. ECON 110, 120, 121
3. ANTH 120; HIST 118*, 119*, 130*, 131*, 132, 133, 180*, 181*; PSY 125; SPAN 145
4. HIST 122*, 123*
5. GEOG 106, 130
6. HIST 100, 101, 105, 106, 108*, 109*, 118*, 119*, 122*, 123*, 124, 130*, 131*, 132, 133, 180*, 181*, 275, 276, 277
7. CD 115, 125; COMM 110, 124; HED 203, 251; PSY 165; SOC 125, 130
8. POSC 120, 121*, 124, 130, 140*
9. PSY 120, 125, 134, 138, 140, 165, 170, 220; CD 125

AREA E – LIFELONG LEARNING AND SELF-DEVELOPMENT

Three semester units from any of the following:

CD 125, 145
COUN 120, 140
ES 019ABCD
HED 120, 122, 155, 158, 201, 203, 251, 255
PSY 134, 140, 220
SOC 125

OR

DD 214 and military transcripts with ACE recommendation of at least 3 units.

AMERICAN INSTITUTIONS REQUIREMENT (CSU GRADUATION REQUIREMENT)

*Fulfills part of the CSU U.S. History, Constitution and American Ideals requirement. Although this requirement is not part of the general education requirement, all students must complete course work in U.S. History, Constitution and Government. May be completed prior to transfer. Two courses (minimum of six units) are required; these courses may also be used to meet part of the requirements in Area D. Choose Option I or Option II:

Option I (one course from A and one course from B):

- A. HIST 108, 118, 122, 130, 180
- B. HIST 109, 119, 123, 131, 181, or POSC 140

Option II (one course from A and one course from B):

- A. POSC 121
- B. HIST 108, 109, 118, 119, 122, 123, 130, 131, 180, 181



Associate Degree for TransferSM

California Community Colleges are now offering associate degrees for transfer to the CSU. These include Associate in Arts (AA-T) and Associate in Science (AS-T) degrees, which are designed to provide a clear pathway to a CSU major and baccalaureate degree. 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 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.

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 including CSU GE Breadth or IGETC CSU. This degree may not be the best option for students intending to transfer to a particular CSU campus or a college not part of the CSU system.

At Cuyamaca College, a student may earn an AA-T in Communications Studies for Transfer, Psychology for Transfer, and Sociology for Transfer. (See Associate Degree Programs and Certificates section of catalog.) To find out which CSU campuses accept each degree, please go to www.sb1440.org, and look under CSU Similar Degrees by major. Students are encouraged to meet with a counselor to review their options for transfer and to develop an educational plan that best meets their goals and needs.

EXTERNAL EXAMS CREDIT

Cuyamaca College grants credit toward its associate degrees for successfully passing external examinations including Advanced Placement (AP), International Baccalaureate (IB) and College Level Examination Program (CLEP). Such exams may also be used to certify areas on CSU GE-Breadth and IGETC. In order to receive credit, students must submit official scores (transcripts) to the Admissions and Records Office. The student's academic transcript will be annotated to designate credit awarded by external examinations. The following charts show the exams, the equivalent course(s), if any, at Cuyamaca College, and the specific area of general education requirements that may be cleared. Semester units apply. For exams not on this list, see the Articulation Officer.

INTERNATIONAL BACCALAUREATE (IB)

Cuyamaca College grants 3-6 units for each International Baccalaureate Higher Level (HL) Subject Examination passed with an appropriate score; see chart. In general, 3 units will count towards GE requirements and 3 will count as elective credits; there are some exceptions. Examinations may be evaluated for specific course credit to satisfy

a major requirement or to clear a prerequisite by the appropriate instructional department. No lab credit is awarded for science exams. Language A1 is for native speakers; it is the study of literature including selections from world literature in the student's first language. Language A2 is a language and literature course for fluent or bilingual students, and Language B is a foreign language course for students with previous experience of the language. Language A2 and B are for non-native speakers.

Students planning to transfer without a CSU or IGETC certification should check the catalog of the four-year institution to see how IB credits are awarded; award varies. In most cases, 6 units per test are awarded for admission, with 3 units going towards GE. To request IB transcripts, students may contact International Baccalaureate at www.ibo.org.

IB EXAM

	Cuyamaca College			CSU		IGETC	
	Score	Total Units	GE Units	Score	GE Area	Score	GE Area
Biology HL	5	6	3 units, B	5	3 units, B2	5	3 units, 5B
Chemistry HL	5	6	3 units, B	5	3 units, B1	5	3 units, 5A
Economics HL	5	6	3 units, D	5	3 units, D2	5	3 units, 4B
Film HL	4	3	NA	4	NA	5	NA
Geography HL	5	6	3 units, D	5	3 units, D5	5	3 units, 4E
History HL (any)	5	6	3 units, C or D	5	3 units, C2 or D6	5	3 units, 3B or 4F
Language A1 HL	4	6	3 units, C	4	3 units, C2	5	3 units, 3B and 6A*
Language A2 HL	4	6	3 units, C	4	3 units, C2	5	3 units, 3B and 6A*
Language B	4	6	NA	4	NA	5	3 units, 6A
Mathematics HL	4	6	3 units, A2	4	3 units, B4	5	3 units, 2A
Physics HL	5	6	3 units, B	5	3 units, B1	5	3 units, 5A
Psychology HL	5	3	3 units, D	5	3 units, D9	5	3 units, 4I
Theatre HL	4	6	3 units, C	4	3 units, C1	5	3 units, 3A

*6A credit awarded for any language except English; English HL A1, A2 will only satisfy 3B.

CLEP EXAM

	Score	Cuyamaca College		CSU GE Area	CSU Admission Units
		Score	GE Area		
American Government	50	3 units, Area D	3 units, Area D8	3	
American Literature	50	3 units, Area C	3 units, Area C2	3	
Analyzing & Interpreting Literature	50	3 units, Area C	3 units, Area C2	3	
Biology	50	3 units, Area B (no lab)	3 units, Area B2 (no lab)	3	
Calculus*	50	3 units, Area A2	3 units, Area B4	3	
Chemistry	50	3 units, Area B (no lab)	3 units, Area B1 (no lab)	3	
College Algebra*	50	3 units, Area A2	3 units, Area B4	3	
College Algebra- Trigonometry*	50	3 units, Area A2	3 units, Area B4	3	
College Mathematics*	50	3 units, Area A2	N/A	N/A	
English Literature	50	3 units, Area C	3 units, Area C2	3	
Financial Accounting	50	3 units, Elective Credit	N/A	3	
French Level I	50	5 units, Area C	N/A	6	
French Level II	59	5 units, Area C, 5 Elective	3 units, Area C2	12	
College Composition**	50	3 units, Area A1	N/A	N/A	
German Level I	50	5 units, Area C	N/A	6	
German Level II	60	5 units, Area C, 5 Elective	3 units, Area C2	12	
History: US I	50	3 units, Area D	3 units, Area D6, (US-1)	3	
History: US II	50	3 units, Area D	3 units, Area D6, (US-1)	3	
Human Growth & Development	50	3 units, Area D	3 units, Area E	3	
Humanities	50	3 units, Area C	3 units, Area C2	3	
Info Systems & Comp Applications	50	3 units, Elective Credit	N/A	3	
Intro to Business Law	50	3 units, Elective Credit	N/A	3	
Intro to Ed Psychology	50	3 units, Elective Credit	N/A	3	
Macroeconomics	50	3 units, Area D	3 units, Area D2	3	
Microeconomics	50	3 units, Area D	3 units, Area D2	3	
Natural Sciences	50	3 units, Area B (no lab)	3 units, B1 or B2 (no lab)	3	
Precalculus*	50	3 units, Area A2	3 units, Area B4	3	
Principles of Accounting	50	3 units, Elective Credit	N/A	3	
Principles of Management	50	3 units, Elective Credit	N/A	3	
Principles of Marketing	50	3 units, Elective Credit	N/A	3	
Psychology, Intro	50	3 units, Area D	3 units, Area D9	3	
Social Sciences & History	50	3 units, Area D	N/A	N/A	
Sociology	50	3 units, Area D	3 units, Area D10	3	
Spanish Level I	50	5 units, Area C	N/A	6	
Spanish Level II	63	5 units, Area C, 5 Elective	3 units, Area C2	12	
Trigonometry	50	3 units, Area A2	3 units, Area B4	3	
Western Civilization I	50	3 units, Area C or D	3 units, Area C2 or D6	3	
Western Civilization II	50	3 units, Area C or D	3 units, Area D6	3	

*No subsequent credit for Math that serves as a prerequisite leading up to this level. Students that pass more than one exam in French, German, & Spanish may have one exam applied to the AA/AS degree and/or baccalaureate.

**New exam effective July 2010; former credit awarded for English Composition with Essay.

ADVANCED PLACEMENT (AP)

Cuyamaca College will award credit for AP examinations passed with a score of 3 or above. AP exams may also be used to certify areas on CSU GE-Breadth and IGETC.

Additional units may count for elective units toward eligibility for admission to a CSU or UC. Students planning to transfer without a CSU or IGETC certification should check the catalog of the four-year institution to see how

AP credits are awarded; award varies. To obtain AP transcripts, students may visit www.collegeboard.org or contact AP Services at 609-771-7300 or toll free at 888-225-5427.

AP EXAM	Cuyamaca College Equivalent Course/GE Area	CSU GE Area	CSU Admission Units	IGETC GE Area	UC Admission Units
Art History	6 units, ART 140, 141	3 units, Area C1 or C2	6 units	3 units, Area 3A or 3B	5.3 units
Art – Studio Art – 2D	3 units, ART 120	N/A	3 units	N/A	5.3 units
Art – Studio Art – 3D	3 units, ART 129	N/A	3 units	N/A	5.3 units
Art – Studio Art – Drawing	3 units, ART 124	N/A	3 units	N/A	5.3 units
Biology	4 units, BIO 130, 131	4 units, Area B2 & B3	6 units	4 units, Area 5B w/lab	5.3 units
Calculus AB*	5 units, MATH 180	3 units, Area B4	3 units	3 units, Area 2A	2.7 units
Calculus BC*	4 units, MATH 280	3 units, Area B4	6 units	3 units, Area 2A	5.3 units
Chemistry	10 units, CHEM 141, 142	4 units, Area B1 & B3	6 units	4 units, Area 5A w/lab	5.3 units
Chinese: Language & Culture	3 units, Area C	3 units, Area C2	6 units	3 units, Area 3B	5.3 units
Computer Science A*	4 units, CS 182	N/A	3 units	N/A	1.3 units
Computer Science AB*	N/A	N/A	6 units	N/A	2.7 units
Economics (Macroeconomics)	3 units, ECON 120	3 units, Area D2	3 units	3 units, Area 4B	2.7 units
Economics (Microeconomics)	3 units, ECON 121	3 units, Area D2	3 units	3 units, Area 4B	2.7 units
English Language & Composition	3 units, ENGL 120	3 units, Area A2	6 units	3 units, Area 1A	5.3 units
English Literature & Composition	6 units, ENGL 120, 122	6 units, Area A2 & C2	6 units	3 units, Area 1A or 3B	5.3 units
Environmental Science	N/A	4 units, Area B1 & B3	4 units	3 units, Area 5A w/lab	2.7 units
French Language	10 units, FREN 120, 121	3 units, Area C2	6 units	3 units, Area 3B and 6A	5.3 units
Geography (Human Geography)	3 units, GEOG 130	3 units, Area D5	3 units	3 units, Area 4E	2.7 units
German Language	3 units, Area C	3 units, Area C2	6 units	3 units, Area 3B and 6A	5.3 units
Government & Politics: Comparative	3 units, POSC 124	3 units, Area D8	3 units	3 units, Area 4H	2.7 units
Government & Politics: United States	3 units, POSC 121	3 units, Area D8, (also fulfills AI US-2)	3 units	3 units, Area 4H	2.7 units
History (European)	6 units, HIST 105, 106	3 units, Area C2 or D6	6 units	3 units, Area 3B or 4F	5.3 units
History (United States)	6 units, HIST 108, 109	3 units, Area C2 or D6, (also fulfills AI US-1)	6 units	3 units, Area 3B or 4F	5.3 units
History (World)	6 units, HIST 100, 101	3 units, Area C2 or D6	6 units	3 units, Area 3B or 4F	5.3 units
Italian: Language & Culture	3 units, Area C	3 units, Area C2	6 units	3 units, Area 3B and 6A	5.3 units
Japanese: Language & Culture	3 units, Area C	3 units, Area C2	6 units	3 units, Area 3B and 6A	5.3 units
Latin: Virgil	3 units, Area C	3 units, Area C2	3 units	3 units, Area 3B and 6A	2.7 units
Music Theory	8 units, MUS 105, 106	N/A	6 units	N/A	5.3 units
Physics B	4 units, Area B w/lab	4 units, Area B1 & B3	6 units	4 units, Area 5A w/lab	5.3 units
Physics C: Electricity & Magnetism	4 units, Area B w/lab	4 units, Area B1 & B3	4 units	3 units, Area 5A w/lab	2.7 units
Physics C: Mechanics	4 units, Area B w/lab	4 units, Area B1 & B3	4 units	3 units, Area 5A w/lab	2.7 units
Psychology	3 units, PSY 120	3 units, Area D9	3 units	3 units, Area 4I	2.7 units
Spanish: Language	10 units, SPAN 120, 121	3 units, Area C2	6 units	3 units, Area 3B and 6A	5.3 units
Spanish: Literature	3 units, Area C	3 units, Area C2	6 units	3 units, Area 3B and 6A	5.3 units
Statistics	3 units, MATH 160	3 units, Area B4	3 units	3 units, Area 2A	2.7 units

* If a student passes more than one AP exam in Calculus or Computer Science, only one examination may be applied to the baccalaureate.

Notes:

1. AP scores must be 3 or better.
2. Students who passed the exam prior to F09 in Chemistry, Environmental Science, French Language, French Literature, German Language, Latin Literature, Music Theory, Physics B, Spanish Language, Spanish Literature should see a counselor.
3. If a student passes more than one AP exam in physics, only 6 units may be applied to the baccalaureate, and only 4 units may be applied to CSU GE Breadth.
4. For students that pass both English Language and English Literature, a maximum of 6 units will be awarded for certification on IGETC and 8 quarter units for UC admission purposes. The CSU will award 12 units for both exams, with 6 units counting towards GE.
5. A maximum of 2.7 semester units will be given by UC for students that pass both Computer Science A and AB. AB supersedes A.

COURSE IDENTIFICATION NUMBERING SYSTEM (C-ID)

The Course Identification Numbering System (C-ID) is a statewide numbering system independent from the course numbers assigned by local California community colleges. A C-ID number next to a course signals 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 number. 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 should consult the ASSIST database at www.assist.org for the latest information on C-ID course designations.

INDEPENDENT CALIFORNIA COLLEGES AND UNIVERSITIES

California's fully accredited independent colleges and universities provide a host of options for students planning to continue their education beyond community college.

Students who transfer to independent colleges or universities find they are given academic credit for most, if not all, of their community college studies. Virtually all institutions give full credit for general education courses and usually for other courses designated for transfer by the community college.

Requirements for independent colleges are outlined in the respective college catalogs, available upon request from the Counseling Center or University Transfer Center. The University Transfer Center's website www.cuyamaca.edu/transfer_center contains information on transfer agreements, transfer guides and articulation agreements to private and independent institutions.

Associate Degree Programs and Certificates

ASSOCIATE DEGREE PROGRAMS AND CERTIFICATES

Courses that satisfy a degree or certificate requirement must be completed with a "C" grade or higher (P/NP grading not accepted).

Program	Associate Degree	Certificate of Achievement	Certificate of Specialization	Program	Associate Degree	Certificate of Achievement	Certificate of Specialization
ACCOUNTING	◆	◆		ENVIRONMENTAL HEALTH AND SAFETY MANAGEMENT			
Bookkeeping		◆		Environmental Management	◆		
ART				Environmental Technician		◆	
Drawing and Painting	◆			Occupational Safety and Health (OSH) Management	◆		
Graphic Design (Transfer)	◆			Occupational Safety and Health (OSH) Technician		◆	
AUTOMOTIVE TECHNOLOGY	◆	◆		EXERCISE SCIENCE	◆		
Advanced Engine Performance and Emissions		◆		Recreational Leadership-School-Based Programs			*
ASEP	◆			GENERAL STUDIES			
ASSET	◆			Business & Technology	◆		
Brakes and Front-End		◆		Communication & Language Arts	◆		
Engine Performance and Drive Train		◆		Humanities & Fine Arts	◆		
BIOLOGICAL SCIENCES	◆			Lifelong Health & Well-Being	◆		
BUSINESS				Science & Mathematics	◆		
Business Administration	◆	◆		Social & Behavioral Sciences	◆		
Business Data Management	◆	◆		GRAPHIC DESIGN	◆	◆	
Business-General	◆	◆		Digital Photography			*
Database Administration			*	Web Graphics			*
BUSINESS OFFICE TECHNOLOGY	◆	◆		HISTORY	◆		
Administrative Assistant	◆	◆		INTERSEGMENTAL GENERAL EDUCATION TRANSFER CURRICULUM (CSU or UC)		◆	
Executive Assistant	◆	◆		KUMEYAAY STUDIES			*
Office Assistant Level I			*	MANAGEMENT	◆	◆	
Office Assistant Level II			*	MATHEMATICS	◆	◆	
Office Professional			*	MUSIC			
Office Software Specialist Level I			*	Music Education	◆		
Office Software Specialist Level II			*	Music Industry Studies	◆		
CADD TECHNOLOGY				ORNAMENTAL HORTICULTURE			
Building Design Industry	◆	◆		Arboriculture	◆	◆	
Manufacturing Industry	◆	◆		Floral Design	◆	◆	
CALIFORNIA STATE UNIVERSITY GENERAL EDUCATION BREADTH		◆		Golf Course and Sports Turf Management	◆	◆	
CHEMISTRY	◆			Irrigation Technology	◆	◆	
CHILD DEVELOPMENT				Landscape Design	◆	◆	
Infants and Toddlers	◆	◆		Landscape Technology	◆	◆	
Preschool Children	◆	◆		Nursery Technology	◆	◆	
School Age Child Care	◆	◆		Sustainable Urban Landscapes	◆	◆	
Recreational Leadership-Outdoor Programs			*	PARALEGAL STUDIES	◆		
COMMUNICATION	◆			PHYSICAL SCIENCE	◆		
COMMUNICATION STUDIES FOR TRANSFER (AA-T)	◆			PHYSICS	◆		
COMPUTATIONAL SCIENCE	◆	◆		PSYCHOLOGY FOR TRANSFER (AA-T)	◆		
COMPUTER AND INFORMATION SCIENCE				REAL ESTATE	◆	◆	
Computer Network Administration	◆	◆		Broker's License		◆	
Telecommunications Networking Technology	◆			Escrow		◆	
Web Development	◆	◆		SOCIAL WORK	◆		
Cisco Certified Network Associate			*	SOCIOLOGY FOR TRANSFER (AA-T)	◆		
Cisco Network Professional			*	SPANISH	◆	◆	
Computer Programming			*	SURVEYING	◆	◆	
Computer Support Technician			*	UNIVERSITY STUDIES			
Web Design			*	Business & Economics	◆		
Web Programming			*	Communication & Language Arts	◆		
ELEMENTARY EDUCATION	◆			Humanities & Fine Arts	◆		
ENGINEERING				Science & Mathematics	◆		
Civil Engineering	◆	◆		Social & Behavioral Sciences	◆		
Electrical & Computer Engineering	◆	◆		WATER/WASTEWATER TECHNOLOGY			
Mechanical & Aerospace Engineering	◆	◆		Cross Connection Control Systems		◆	
Mechatronics			*	Water Distribution Systems	◆	◆	
ENGLISH	◆	◆		Water Treatment Plant Operator	◆	◆	
ENTREPRENEURSHIP-SMALL BUSINESS MANAGEMENT	◆	◆		Wastewater Collection Systems	◆	◆	
				Wastewater Treatment Operator	◆	◆	

ACCOUNTING

This degree program is designed to prepare students to enter the workforce as accounting technicians or tax technicians. The curriculum is supported by related business courses and a strong general education program for students interested in qualifying for responsible positions in accounting. *Designed for a two-year degree or certificate. Students interested in pursuing a bachelor's degree in accounting should consult the catalog of the transfer institution for specific requirements.*

Program Outcomes

Upon completion of this program, students will be able to:

- Articulate economic and industry issues, and the role of accounting within that environment.
- Apply accounting concepts, principles, standards, and processes.
- Demonstrate information technology skills as they apply to today's business environment to solve business problems and to communicate those solutions.
- Demonstrate analytical skills through finding, organizing, assessing and, analyzing data appropriate to a given situation.
- Provide insightful advisory judgments and recommendations regarding the accounting for and the business implications of events, conditions, circumstances, and transactions that give rise to business opportunities or problems.
- Interpret and analyze accounting information for internal control, planning, performance evaluation, and coordination to continuously improve business processes.
- Use personal and ethical frameworks to respond to ethical dilemmas.

CAREER OPPORTUNITIES

- * Auditor
- * Budgeter
- * Bank Examiner
- * Bookkeeper
- * Cost Accountant
- * Certified Accountant
- * Controller
- * Credit Card Clerk
- * Securities Clerk
- * Systems Analyst
- * Tax Specialist/Accountant
- * Treasurer
- * Bachelor Degree or higher required

Associate in Science Degree Requirements:

Course	Title	Units
BUS 120	Financial Accounting	4
BUS 121	Managerial Accounting	4
BUS 122	Intermediate Accounting	4
BUS 124	Auditing	3
BUS 125	Business Law: Legal Environment of Business	3
BUS 128	Business Communication	3
BUS 150	Individual Income Tax Accounting	3
BUS 162	Analysis of Financial Statements	3
BUS 176	Computerized Accounting Applications	2
CIS 110	Principles of Information Systems	4
	Total Required	33
	Plus General Education Requirements	

Certificate of Achievement

Students who complete only the major requirements above qualify for a Certificate in Accounting. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

BOOKKEEPING CERTIFICATE

This certificate is for students who need very specific training in the area of bookkeeping/accounting, either to obtain the necessary skills for an entry level office position, or to provide technical competence for advancement within the office environment.

Certificate Outcomes

Upon completion of this certificate, students will be able to:

- Articulate economic and industry issues and the role of accounting within that environment.
- Apply bookkeeping concepts, principles, standards and processes.
- Demonstrate information technology skills as they apply to today's business environment to solve business problems and to communicate those solutions.
- Demonstrate analytical skills through finding, organizing, assessing and analyzing data appropriate to a given situation.
- Provide insightful advisory judgments and recommendations regarding the accounting for and the business implications of events, conditions, circumstances, and transactions that give rise to business opportunities or problems.
- Use personal and ethical frameworks to respond to ethical dilemmas.

Certificate Requirements:

Course	Title	Units
BOT 123-125	Comprehensive Excel Levels I-III	3
BUS 109	Elementary Accounting	3
	or	
BUS 120	Financial Accounting	4
BUS 121	Managerial Accounting	4
BUS 128	Business Communication	3
BUS 129	Payroll Accounting and Business Taxes	2
BUS 176	Computerized Accounting Applications	2
CIS 105	Introduction to Computing	3
	Total Required	20-21

Note: BUS 109 may be taken instead of BUS 120 for the Bookkeeping certificate only.

Certificate of Achievement

Students who complete the requirements above qualify for a Certificate in Bookkeeping. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

ART

I. ART-DRAWING AND PAINTING

This degree program is designed to provide a fundamental background in two-dimensional studio arts, emphasizing both technique and aesthetic awareness. The curriculum consists of courses in both studio techniques and art history. Students will develop their ability to control line, value, shape, color, perspective and composition in various mediums. The major provides preparation for transfer to a four-year college in fine art or a vocational area related to art.

Program Outcomes

Upon completion of this program, students will be able to:

- Use the vocabulary of the visual arts to express their observations as they perceive and respond to works of art, objects in nature, events and the environment.

- Apply artistic processes and skills, using a variety of media to communicate meaning and intent in original works of art.
- Analyze the role and development of the visual arts in the past and present cultures throughout the world, nothing human diversity as it relates to the visual arts and the artists.
- Analyze, access and derive meaning from works of art, including their own, according to the elements of art, the principles of design and aesthetic qualities.
- Apply what they learned in the visual arts across subject areas, develop competencies and creative skills in problem solving; communication, and management of time and resources that contribute to lifelong learning and career skills, and identify careers in and related to the visual arts.

CAREER OPPORTUNITIES

- * Advertising Specialist
- * Antique Dealer
- * Art Conservator
- * Art Therapist
- * Arts Administration
- * Cartoonist
- * Curator
- * Display Manager
- * Fashion Designer
- * Gallery Owner
- * Illustrator
- * Independent Artist
- * Interior Design
- * Jewelry Designer
- * Museum Technician
- * Painter
- * Police Artist
- * Set Designer
- * Teacher/Professor
- * Bachelor Degree or higher required

Associate in Arts Degree Requirements:

Course	Title	Units
ART 120	Two-Dimensional Design	3
ART 121	Painting I	3
ART 124	Drawing I	3
ART 125	Drawing II	3
ART 140	History of Western Art I: Prehistoric to 1250 A.D.	3
ART 141	History of Western Art II: Circa 1250 A.D. to Present Time	3
ART 230	Figure Drawing I	3
GD 105	Fundamentals of Digital Media	3
		24

Select six units from the following:

ART 129	Three-Dimensional Design	3
ART 135	Watercolor I	3
ART 143	Modern Art	3
ART 145	Contemporary Art History: 1945-Present	3
ART 220	Painting II	3
ART 231	Figure Drawing II	3
GD 126ABCD	Photoshop Digital Imaging	3
GD 225	Digital Illustration	3
		6
	Total Required	30
	Plus General Education Requirements	

Recommended Electives: FREN 120, HIST 105, HUM 155, RELG 120

II. ART-GRAPHIC DESIGN (Transfer)

This degree program emphasizes aesthetics, design and craft using manual and digital mediums. Students will develop their ability to think spatially in two and three dimensions and to use creative problem-solving techniques using images and letter forms. Students will develop a professional portfolio for placement

at a four-year university. *Designed for students interested in pursuing a bachelor's degree in Graphic Design; please consult the catalog of the transfer institution for specific requirements. Students interested in pursuing the entry level, two-year associate degree or certificate in graphic design should refer to the Graphic Design program.*

CAREER OPPORTUNITIES

- * Advertising Director
Advertising
- * Art Director
Desktop Publishing
Display Designer
Graphic Designer
Illustrator
- * Marketing Director
Multimedia
Package Designer
Web Page Designer
- * Bachelor Degree or higher required

Associate in Arts Degree Requirements:

Course	Title	Units
ART 120	Two-Dimensional Design	3
ART 121	Painting I	3
ART 124	Drawing I	3
ART 125	Drawing II	3
ART 129	Three-Dimensional Design	3
ART 140	History of Western Art I: Prehistoric to 1250 A.D.	3
ART 141	History of Western Art II: Circa 1250 A.D. to Present Time	3
ART 230	Figure Drawing I	3
GD 105	Fundamentals of Digital Media	3
GD 110	Graphic Design Principles	3
GD 125	Typography	3
	Total Required	33
	Plus General Education Requirements	

Recommended Electives: ART 150*, BUS 110, GD 230

*Offered at Grossmont College

AUTOMOTIVE TECHNOLOGY

The automotive technology curriculum provides for entry level skills in the automotive field. The program is designed to impart in-depth technical skills as required in today's highly technical automotive field. It prepares students for employment in the automotive and/or transportation trades. For those currently employed, upgrading and specialization skills will be stressed. The major emphasizes practical experience in actual repairs under simulated shop conditions.

Program Outcomes

Upon completion of this program, students will be able to:

- Demonstrate and practice standardized safety and hazardous waste handling practices.
- Diagnose and repair engine mechanical and ignition problems utilizing a variety of diagnostic and repair equipment.
- Evaluate vehicle emission equipment and accurately perform a full smog inspection.
- Diagnose and repair vehicles that fail smog inspections.
- Read and interpret automotive electrical wiring diagrams to aid in the diagnosis of automotive electrical problems.
- Following prescribed industry standards, correctly utilize test equipment and tools to diagnose and repair automotive electrical systems.

- Independently demonstrate ability to perform computer system and fuel system service using related diagnostic equipment.
- Evaluate technical service bulletins for assisting in repairing various drivability concerns.
- Utilize communication skills to effectively deal with disgruntled colleagues in your work place.
- Utilize good customer relations techniques to improve customer satisfaction.
- Correctly adhere to BAR regulations involving writing repair order estimates, revising estimates, and final invoicing.
- Independently apply technical training and skill sets learned at school in an actual automotive repair shop environment.

CAREER OPPORTUNITIES

- Auto Electrician
- Auto Parts Salesperson
- Automotive Air Conditioning Technician
- Brake and Front-End Technician
- Computerized Engine Control Specialist
- Engine Machinist
- General Repair Technician
- High Performance and Racing Specialist
- Licensed Smog Technician
- Manufacturer Service Engineer
- Service Advisor
- Service Manager
- Technical Instructor
- Technical Sales Representative
- Transmission Technician
- Tune-up Technician

I. AUTOMOTIVE TECHNOLOGY

Associate in Science Degree Requirements:

Course	Title	Units
AUTO 120	Engine Performance I - Mechanical and Ignition Systems	5
AUTO 122	Automotive Electrical Systems	5
AUTO 123	Engine Performance II - Fuel Systems	5
AUTO 130	Automotive Brakes and Brake License	5
AUTO 140	Four-Wheel Alignment	5
AUTO 180	Automotive Service Advisor	1
AUTO 182	Automotive Work Experience	3
		29

Select two of the following:

AUTO 124	Engine Performance III - Drivability	5
AUTO 129	Introduction to Hybrid, Electric and Alternative Fueled Vehicles	5
AUTO 152	Drive Train Systems	4
AUTO 160	Air Conditioning and Heating Systems	3
AUTO 170	Engine Overhaul	5
		7-10

Select one of the following:

AUTO 121	Emission Control License	5
AUTO 127	Advanced Automotive Electrical Systems	5
AUTO 135	Advanced Brakes	5
AUTO 145	Advanced Four-Wheel Alignment	5
AUTO 155	Advanced Drive Train Systems	4
AUTO 165	Advanced Air Conditioning and Heating Systems	3
AUTO 175	Advanced Engine Overhaul	5
AUTO 176	Engine Machining	5
		3-5
	Total Required	39-44
	Plus General Education Requirements	

FOR ALL CLASSES: Students are required to provide their own hand tools as required. Students are also required to provide ANSI Z-87.1 (1979) eye protection.

Certificate of Achievement

Students who complete only the major requirements above qualify for a Certificate in Automotive Technology. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

II. AUTOMOTIVE TECHNOLOGY—ADVANCED ENGINE PERFORMANCE AND EMISSIONS

Certificate Outcomes

Upon completion of this certificate, students will be able to:

- Demonstrate and practice standardized safety and hazardous waste handling practices
- Diagnose and repair engine mechanical and ignition problems utilizing a variety of diagnostic and repair equipment.
- Evaluate vehicle emission equipment and accurately perform a full smog inspection.
- Diagnose and repair vehicles that fail smog inspections.
- Read and interpret automotive electrical wiring diagrams to aid in the diagnosis of automotive electrical problems.
- Using prescribed industry standards, correctly utilize test equipment and tools to diagnose and repair automotive electrical systems.
- Independently demonstrate ability to perform computer system and fuel system service using related diagnostic equipment.
- Evaluate technical service bulletins to assist in repair of various drivability concerns.

Certificate Requirements:

Course	Title	Units
AUTO 120	Engine Performance I - Mechanical and Ignition Systems	5
AUTO 121	Emission Control License	5
AUTO 122	Automotive Electrical Systems	5
AUTO 123	Engine Performance II - Fuel Systems	5
AUTO 124	Engine Performance III - Drivability	5
	Total Required	25

Certificate of Achievement

Students who complete the requirements above qualify for a Certificate in Automotive Technology—Advanced Engine Performance and Emissions. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

III. AUTOMOTIVE TECHNOLOGY—ASEP

The General Motors sponsored ASEP degree program offers a unique job training opportunity to those students who are accepted. Training includes all systems of the sponsoring manufacturers' automobiles. In addition, students will be required to further their studies in a sponsoring dealership as a paid (work experience) technician. Students who test low in English, reading or math assessment scores (and are accepted into the program) will be required to take remedial courses in those areas in addition to the general education courses. Students who have previous college credit or an associate degree or higher may be exempt from all or part of the general education requirements; please see a counselor.

Program Outcomes

Upon completion of this program, students will be able to:

- Demonstrate and practice standardized safety and hazardous waste handling practices.
- Describe the work flow processes utilized by new car dealership service departments.
- Perform lubrication maintenance service and minor maintenance services.
- Perform service repair and diagnosis of vehicle suspension, steering and brake systems utilizing a variety of tools and equipment.
- Retrieve manufacturers' repair data and specifications and utilize this information for accurate diagnosis and repair.
- Following prescribed industry guidelines, diagnose, remove, repair and replace automatic and manual transmissions and transaxles.
- Perform engine repairs to prescribed industry standards.
- Following prescribed industry standards, accurately measure and perform various machining processes on engine components.
- Diagnose and repair engine mechanical and ignition problems utilizing a variety of diagnostic and repair equipment.
- Independently demonstrate ability to perform computer system and fuel system service using related diagnostic equipment.
- Evaluate technical service bulletins for assisting in repairing various drivability concerns.
- Independently demonstrate ability to perform electronic engine diagnostics on both gasoline and diesel engines.
- Following prescribed industry standards, correctly utilize test equipment and tools to diagnose and repair automotive electrical systems.
- Utilizing prescribed industry practices, diagnose, repair, remove and replace air conditioning and heating systems and components.
- Independently apply technical training and skill sets learned at school in an actual automotive repair shop environment.
- Evaluate vehicle emission equipment and accurately perform a full smog inspection.
- Diagnose and repair vehicles that fail smog inspections.

Associate in Science Degree Requirements:

Course	Title	Units
AUTO 121	Emission Control License	5
AUTO 200	ASEP–Orientation	1
AUTO 201	ASEP–Electrical	6
AUTO 202	ASEP–Brakes and Alignment	7
AUTO 203	ASEP–Engine Repair	4.5
AUTO 204	ASEP–Power Train	7
AUTO 205	ASEP–Engine Performance and Air Conditioning	7
AUTO 206*	ASEP–Work Experience	15
	Total Required	52.5
	Plus General Education Requirements	

*Must be taken five times for a total of 15 units.

IV. AUTOMOTIVE TECHNOLOGY–ASSET

The Ford sponsored ASSET degree program offers a unique job training opportunity to those students who are accepted. Training includes all systems of the sponsoring manufacturers' automobiles. In addition, students will be required to further their studies in a sponsoring dealership as a paid (work experience) technician. Students who test low in English, reading or math assessment scores (and are accepted into the program) will be required to

take remedial courses in those areas in addition to the general education courses. Students who have previous college credit or an associate degree or higher may be exempt from all or part of the general education requirements; please see a counselor.

Program Outcomes

Upon completion of this program, students will be able to:

- Demonstrate and practice standardized safety and hazardous waste handling practices.
- Describe the work flow processes utilized by new car dealership service departments.
- Prepare new vehicles for customer delivery.
- Perform lubrication maintenance service and minor maintenance services.
- Perform service repair and diagnosis of vehicle suspension, steering and brake systems utilizing a variety of tools and equipment.
- Retrieve manufacturers' repair data and specifications and utilize this information for accurate diagnosis and repair.
- Following prescribed industry guidelines, diagnose, remove, repair and replace automatic and manual transmissions and transaxles.
- Perform engine repairs to prescribed industry standards.
- Following prescribed industry standards, accurately measure and perform various machining processes on engine components.
- Diagnose and repair engine mechanical and ignition problems utilizing a variety of diagnostic and repair equipment.
- Independently demonstrate ability to perform computer system and fuel system service using related diagnostic equipment.
- Evaluate technical service bulletins for assisting in repairing various drivability concerns.
- Independently demonstrate ability to perform electronic engine diagnostics on both gasoline and diesel engines.
- Following prescribed industry standards, correctly utilize test equipment and tools to diagnose and repair automotive electrical systems.
- Utilizing prescribed industry practices, diagnose, repair, remove and replace air conditioning and heating systems and components.
- Independently apply technical training and skill sets learned at school in an actual automotive repair shop environment.
- Evaluate vehicle emission equipment and accurately perform a full smog inspection.
- Diagnose and repair vehicles that fail smog inspections.

Associate in Science Degree Requirements:

Course	Title	Units
AUTO 121	Emission Control License	5
AUTO 190	ASSET–Orientation, PDI and Lubrication	2
AUTO 191	ASSET–Brakes and Alignment	7
AUTO 192	ASSET–Drive Train	8
AUTO 193	ASSET–Engine Repair	4.5
AUTO 195	ASSET–Electronic Engine Controls	7
AUTO 196	ASSET–Electrical, Accessories and Air Conditioning	5
AUTO 197*	ASSET–Work Experience	13
	Total Required	51.5
	Plus General Education Requirements	

*Must be taken five times for a total of 13 units.

V. AUTOMOTIVE TECHNOLOGY–BRAKES AND FRONT-END**Certificate Outcomes**

Upon completion of this certificate, students will be able to:

- Demonstrate and practice standardized safety and hazardous waste handling practices.
- Perform various brake system repairs to prescribed industry standards.
- Diagnose and repair Anti-lock Brake systems.
- Using prescribed industry standards, diagnose and repair/replace steering and suspension components.
- Diagnose wheel alignment and tire related problems and align vehicles to industry specifications.
- Utilize communications skills to effectively deal with disgruntled colleagues in your work place.
- Utilize good customer relations techniques to improve customer satisfaction.
- Correctly adhere to BAR regulations involving writing repair orders estimates, revising estimates and final invoicing.
- Independently apply technical training and skill sets learned at school in an actual automotive repair shop environment.

Certificate Requirements:

Course	Title	Units
AUTO 130	Automotive Brakes and Brake License	5
AUTO 140	Four-Wheel Alignment	5
AUTO 145	Advanced Four-Wheel Alignment	5
AUTO 180	Automotive Service Advisor	1
AUTO 182	Automotive Work Experience	3
	Total Required	19

Certificate of Achievement

Students who complete the requirements above qualify for a Certificate in Automotive Technology–Brakes and Front-End. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

VI. AUTOMOTIVE TECHNOLOGY–ENGINE PERFORMANCE AND DRIVE TRAIN**Certificate Outcomes**

Upon completion of this certificate, students will be able to:

- Demonstrate and practice standardized safety and hazardous waste handling practices.
- Diagnose and repair engine mechanical and ignition problems utilizing a variety of diagnostic and repair equipment.
- Using prescribed industry standards, correctly utilize test equipment and tools to diagnose and repair automotive electrical systems.
- Retrieve manufacturers' repair data and specifications and utilize this information for accurate diagnosis and repair.
- Following prescribed industry guidelines, diagnosis, remove, repair and replace automatic and manual transmissions and transaxles.
- Perform engine repairs to prescribed industry standards.
- Following prescribed industry standards, accurately measure and perform various machining processes on engine components.
- Utilize communications skills to effectively deal with disgruntled colleagues in your work place.
- Utilize good customer relations techniques to improve customer satisfaction.

- Correctly adhere to BAR regulations involving writing repair orders estimates, revising estimates and final invoicing.
- Independently apply technical training and skill sets learned at school in an actual automotive repair shop environment.

Certificate Requirements:

Course	Title	Units
AUTO 120	Engine Performance I - Mechanical and Ignition Systems	5
AUTO 122	Automotive Electrical Systems	5
AUTO 152	Drive Train Systems	4
AUTO 170	Engine Overhaul	5
AUTO 182	Automotive Work Experience	3
Total Required		22

Certificate of Achievement

Students who complete the requirements above qualify for a Certificate in Automotive Technology—Engine Performance and Drive Train. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

BIOLOGICAL SCIENCES

This degree program is designed to provide a two-year transfer program with emphasis on the uniformity and diversity of life. The curriculum fulfills the lower division requirements for majors in biology, dentistry, medicine, nursing, pharmacy, environmental health, microbiology and ecology.

Program Outcomes

Upon completion of this program, students will be able to:

- Explain the basic structures and fundamental processes of life at the molecular, cellular, and organismal levels.
- Identify the evolutionary processes that lead to adaptation and biological diversity.
- Describe the relationship between life forms and their environment and ecosystems.
- Collect, organize, analyze, interpret and present quantitative and qualitative data and incorporate them into the broader context of biological knowledge.
- Effectively apply current technology and scientific methodologies for problem solving.
- Find, select and evaluate various types of scientific information including primary research articles, mass media sources and World Wide Web information.
- Communicate effectively in written and oral formats.

CAREER OPPORTUNITIES

- * Aquatic Biologist
- * Athletic Trainer
- * Biologist
- * Biochemical Engineer
- Biological Technician
- Biomedical Equipment Technician
- Biotechnologist
- * Botanist
- Clinical Lab Technologist
- * Cytologist
- * Ecologist
- * Environmental Engineer
- Environmental Technician
- * Environmental Microbiologist
- Genetic Engineering Technician
- Greenhouse Assistant
- Laboratory Technician
- * Physical Therapist
- * Public Health Biologist
- Purification Technician

- Research Assistant
- Safety Specialist
- * Teacher
- Technical Writer
- Waste Management Technician
- * Bachelor Degree or higher required

Associate in Science Degree Requirements:

Course	Title	Units
BIO 210	Biology II	4
or		
BIO 240	Principles of Ecology, Evolution and Organismal Biology	5
BIO 215	Statistics for Life Sciences	3
BIO 220	Principles of Molecular, Cellular and Evolutionary Biology	3
and		
BIO 221	Principles of Molecular, Cellular and Evolutionary Biology Laboratory	1
or		
BIO 230	Principles of Cellular, Molecular and Evolutionary Biology	4
CHEM 141	General Chemistry I	5
CHEM 142	General Chemistry II	5
CHEM 231	Organic Chemistry I	5
MATH 180	Analytic Geometry and Calculus I	5
PHYC 130	Fundamentals of Physics	4
PHYC 131	Fundamentals of Physics	4
Total Required		39-40
Plus General Education Requirements		

BUSINESS

I. BUSINESS ADMINISTRATION

This degree program is designed to provide students who choose to work toward a bachelor's degree a well-balanced introduction to a professional career in business. The curriculum fulfills the lower division requirements for most majors in the School of Business Administration at San Diego State University and is typical of requirements at other four-year schools. For specific requirements, transfer students should consult the catalog of their selected institution.

Program Outcomes

Upon completion of this program, students will be able to:

- Recognize entrepreneurial opportunities for new business ventures, evaluate potential for business success, and consider implementation issues including financial, legal, operational and administrative procedures involved in starting new business ventures.
- Communicate effectively and professionally in business situations through physical or virtual presence, writing, speaking, listening, and electronic media.
- Work effectively, respectfully, ethically and professionally with people of diverse ethnic, cultural, gender and other backgrounds and with people with different organizational roles, social affiliations, and personalities.
- Lead by using team building skills and facilitating collaborative behaviors in the accomplishment of group goals and objectives.
- Assess how organizations create value in their global supply chains through the integrated production and distribution of goods, services and information.
- Recognize and appropriately respond to ethical and legal concerns relating to human resource and organizational management.

CAREER OPPORTUNITIES

- * Advertising/Marketing Manager
- * Agricultural Marketing Specialist

- * Banker
- * Broker
- Consultant
- * Computer Operations Specialist
- Credit Investigator
- * Economic Forecaster
- * Financial Analyst
- * Hospital Administrator
- Import/Export Agent
- * Market Research Analyst
- * Personnel Manager
- Real Estate Broker/Agent
- Retail Manager
- * Securities Analyst/Trader
- * Bachelor Degree or higher required

Associate in Science Degree Requirements:

Course	Title	Units
BUS 120	Financial Accounting	4
BUS 121	Managerial Accounting	4
BUS 125	Business Law: Legal Environment of Business	3
BUS 128	Business Communication	3
CIS 110	Principles of Information Systems	4
ECON 120	Principles of Macroeconomics	3
ECON 121	Principles of Microeconomics	3
MATH 160	Elementary Statistics	3
MATH 178	Calculus for Business, Social and Behavioral Sciences	4
Total Required		31
Plus General Education Requirements		

Recommended Electives: BUS 146, 156

Certificate of Achievement

Students who complete only the major requirements above qualify for a Certificate in Business Administration. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

II. BUSINESS DATA MANAGEMENT

This degree program prepares students for careers in business using information technology to organize and promote advanced business management policies. Preparation for the Microsoft Certified Database Administrator exams.

Program Outcomes

Upon completion of this program, students will be able to:

- Explain how a DBMS enforces security, recovery from failure, and concurrency control.
- Identify the advances in networking, data communications and the Internet and how they affect the way business is conducted.
- Identify which information technology tools are used to solve various business problems.
- Develop proficiency solving business problems using modern productivity tools (e.g., spreadsheet, database) or creating custom programs.
- Describe how relational databases store business data and provide desired information.
- Analyze organizational information requirements using the entity-relationship approach and model them as Entity-Relationship Diagrams (conceptual database design).
- Map an Entity-Relationship Diagram to a relational database (logical database design).
- Use normal form theory to analyze and improve a database design.
- Create a database and process complex information using the SQL language.

Associate in Science Degree Requirements:

Course	Title	Units
BUS 128	Business Communication	3
BUS 240	SQL for Business Applications	3
BUS 242	Data Mining	3
CIS 110	Principles of Information Systems	4
CIS 140	Databases	3
CIS 190	Windows Operating System	3
CIS 240	Advanced Databases	3
CIS 242	Database Design	3
		<u>25</u>

Select one of the following:

COMM 120	Interpersonal Communication	3
COMM 122	Public Speaking	3
		<u>3</u>

Select one of the following:

CIS 216	Active Server Pages	3
CIS 290	Windows Server-Active Directory	2
CS 180	Introduction to Visual Basic Programming	4
		<u>2-4</u>
	Total Required	30-32
	Plus General Education Requirements	

Certificate of Achievement

Students who complete only the major requirements above qualify for a Certificate in Business Data Management. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

III. BUSINESS-GENERAL

This degree program is designed to develop and foster those skills and understandings which can be utilized for employment in an increasingly challenging business environment. The curriculum provides students with a broad preparation for a career in business. Business courses are included which provide a solid background for future promotion in a chosen occupational area. The degree is designed for students who do not plan to transfer to a four-year college or university.

Program Outcomes

Upon completion of this program, students will be able to:

- Identify and analyze business problems and opportunities and formulate recommendations for courses of action.
- Communicate effectively and professionally in business situations through physical or virtual presence, writing, speaking, listening, and electronic media.
- Demonstrate an awareness of economic, environmental, political, ethical, legal and regulatory contexts of global business practices.
- Describe the concept of competitive advantage and how it may be achieved through strategic and tactical methods.
- Define markets and apply marketing concepts and principles using a customer focus to effectively sell products and services.
- Recognize and appropriately respond to ethical and legal concerns relating to human resource and organizational management.
- Apply accounting concepts and methods to interpret financial statements for evaluating the financial position and performance of organizations.

CAREER OPPORTUNITIES

Administrative Assistant
Bookkeeper

* Budget Consultant
Buyer

Conciliator

* Credit Analyst
Employment Interviewer

* Hospital Administrator

Sales Agent

* Trust Officer

* Bachelor Degree or higher required

Associate in Science Degree Requirements:

Course	Title	Units
BUS 109	Elementary Accounting	3
	or	
BUS 120	Financial Accounting	4
BUS 110	Introduction to Business	3
BUS 115	Human Relations in Business	3
BUS 125	Business Law: Legal Environment of Business	3
BOT 110*	Business English and Communication	3
	or	
BUS 128	Business Communication	3
BUS 146	Marketing	3
BUS 152	Business Mathematics	2
BUS 195	Personal Finance	3
CIS 105	Introduction to Computing	3
	or	
CIS 110	Principles of Information Systems	4
ECON 120	Principles of Macroeconomics	3
	Total Required	<u>29-31</u>
	Plus General Education Requirements	

* Offered at Grossmont College

Certificate of Achievement

Students who complete only the major requirements above qualify for a Certificate in Business-General. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

CERTIFICATE OF SPECIALIZATION:**DATABASE ADMINISTRATION****Certificate Outcomes**

Upon completion of this certificate, students will be able to:

- Analyze organizational information requirements using the entity-relationship approach and model them as Entity-Relationship Diagrams (conceptual database design).
- Develop business solutions using information technology tools such as databases and spreadsheets following the systems development life cycle (SDLC) including problem analysis, solution design, implementation, testing, evaluation and recommendation for improvement.
- Recognize the need to maintain currency with the information technology industry and how changes in information technology can impact business.

Certificate Requirements:

Course	Title	Units
BUS 240	SQL for Business Applications	3
BUS 242	Data Mining	3
CIS 140	Databases	3
CIS 240	Advanced Databases	3
CIS 242	Database Design	3
	Total Required	<u>15</u>

Students who complete the requirements above qualify for a Certificate in Database Administration. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

BUSINESS OFFICE TECHNOLOGY

I. Business Office Technology

This degree program prepares students for employment in today's business offices which are technology intensive. The curriculum is also appropriate for those wishing to update current skills. Emphasis is on the computerized office and development into supervisory positions.

Program Outcomes

Upon completion of this program, students will be able to:

- Explain the basic language and concepts within the field of business office technology.
- Use computer input devices (e.g., keyboard and mouse) to properly and efficiently create and edit documents in word processing, spreadsheet, and presentation programs such as Word, Excel, and PowerPoint, and electronic communications such as email.

CAREER OPPORTUNITIES

Account Clerk
Administrative Assistant
Bank Teller
Billing Clerk
Bookkeeper
Brokerage Clerk
Computer Operator
Court Clerk
Customer Service Representative
Executive Assistant
Executive Secretary
File Clerk
General Office Clerk
Hotel/Motel Desk Clerk
Information Clerk
Insurance Clerk
Legal Secretary
Loan/Credit Clerk
Medical Secretary
Office Manager
Personnel Clerk
Real Estate Clerk
Secretary
Word Processing Specialist

Course Equivalencies:

The following Cuyamaca and Grossmont College courses are considered similar enough to be treated as equivalent. Modification of Major forms are not required.

Cuyamaca Course	Similar Grossmont Course
BOT 120	CSIS 120
BOT 120+121+122	CSIS 173
BOT 121	CSIS 121
BOT 122	CSIS 122
BOT 123	CSIS 123
BOT 123+124+125	CSIS 175
BOT 124	CSIS 124
BOT 125	CSIS 125
BOT 126	CSIS 126
BOT 127	CSIS 127
BOT 128	CSIS 128
BOT 129	CSIS 129
BOT 130	CSIS 130
BOT 131	CSIS 131

Associate in Science Degree Requirements:

Course	Title	Units
BOT 100	Basic Keyboarding	1
BOT 101AB	Keyboarding/Document Processing	3
BOT 102AB	Intermediate Keyboarding/ Document Processing I-II	3
BOT 107	Office Systems and Procedures	2
BOT 120-122	Comprehensive Word Levels I-III	3
BUS 128	Business Communication	3
CIS 105	Introduction to Computing	3

or		
CIS 110	Principles of Information Systems	4
		18-19

Select at least six units from the following:

BOT 108	Using Calculators to Solve Business Problems	1
BOT 123-125	Comprehensive Excel Levels I-III	3
BUS 109	Elementary Accounting	3

or		
BUS 120	Financial Accounting	4
BUS 156	Principles of Management	3
BUS 157	Principles of Leadership	3
BUS 176	Computerized Accounting Applications	2
CIS 140	Databases	3
		6
Total Required		24-25
Plus General Education Requirements		

Certificate of Achievement

Students who complete only the major requirements above qualify for a Certificate in Business Office Technology. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

II. ADMINISTRATIVE ASSISTANT**Program Outcomes**

Upon completion of this program, students will be able to:

- Explain the basic language and concepts within the field of business office technology.
- Use computer input devices (e.g., keyboard and mouse) to properly and efficiently create and edit documents in word processing, spreadsheet, and presentation programs such as Word, Excel, and PowerPoint, and electronic communications such as email.

Associate in Science Degree Requirements:

Course	Title	Units
BOT 102AB	Intermediate Keyboarding/ Document Processing I-II	3
BOT 104	Filing and Records Management	1
BOT 107	Office Systems and Procedures	2
BOT 108	Using Calculators to Solve Business Problems	1
BOT 114	Essential Word	1

or		
BOT 120-122	Comprehensive Word Levels I-III	3
BOT 115	Essential Excel	1

or		
BOT 123-125	Comprehensive Excel Levels I-III	3
BOT 116	Essential Access	1

or		
BOT 126-128	Comprehensive Access Levels I-III	3
BOT 117	Essential PowerPoint	1

or		
BOT 129-131	Comprehensive PowerPoint Levels I-III	3

BOT 118	Integrated Office Projects	1
BOT 223-225	Office Work Experience	1-3
BUS 114	Effective Job Search	1
BUS 128	Business Communication	3
		17-27

Select at least three units from the following:

BOT 103ABC	Building Keyboarding Skill I, II, III	.5
BOT 105	Data Entry Skills	1
BOT 150	Using Microsoft Publisher	1
BOT 151	Using Microsoft Outlook	1
BUS 109	Elementary Accounting	3
BUS 120	Financial Accounting	4

Total Required 20-30
Plus General Education Requirements

Certificate of Achievement

Students who complete only the major requirements above qualify for a Certificate in Administrative Assistant. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

III. EXECUTIVE ASSISTANT**Program Outcomes**

Upon completion of this program, students will be able to:

- Explain the basic language and concepts within the field of business office technology.
- Use computer input devices (e.g., keyboard and mouse) to properly and efficiently create and edit documents in word processing, spreadsheet, and presentation programs such as Word, Excel, and PowerPoint, and electronic communications such as email.

Associate in Science Degree Requirements:

Course	Title	Units
BOT 120-122	Comprehensive Word Levels I-III	3
BOT 123-125	Comprehensive Excel Levels I-III	3
BOT 126-128	Comprehensive Access Levels I-III	3

or		
CIS 140	Databases	3
BOT 129-131	Comprehensive PowerPoint Levels I-III	3
BOT 151	Using Microsoft Outlook	1
BOT 201	Advanced Keyboarding/Document Processing	3
BOT 203	Office Project Coordination	1
BUS 128	Business Communication	3
		20

Select at least three units from the following:

BUS 109	Elementary Accounting	3
BUS 110	Introduction to Business	3
BUS 115	Human Relations in Business	3
BUS 120	Financial Accounting	4
BUS 125	Business Law: Legal Environment of Business	3
		3

Select at least one unit from the following:

BOT 103ABC	Building Keyboarding Skill I, II, III	.5
BOT 150	Using Microsoft Publisher	1
CIS 240	Advanced Databases	3
		1

Total Required 24
Plus General Education Requirements

Certificate of Achievement

Students who complete only the major requirements above qualify for a Certificate in Executive Assistant. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

CERTIFICATES OF SPECIALIZATION:

Students who complete the requirements below qualify for a certificate in that area of emphasis. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

I. OFFICE ASSISTANT LEVEL I

This certificate prepares students for positions that require keyboarding skills, basic knowledge

of filing, and basic computer skills. It is designed for students with no prior computer training and who lack general office background and experience. Upon completion, students will qualify for positions as data entry clerks or other entry level office clerical positions.

Certificate Outcomes

Upon completion of this certificate, students will be able to:

- Explain the basic language and concepts within the field of business office technology.
- Use computer input devices (e.g., keyboard and mouse) to properly and efficiently create and edit documents in word processing, spreadsheet, and presentation programs such as Word, Excel, and PowerPoint, and electronic communications such as email.

Certificate Requirements:

Course	Title	Units
BOT 096	Computer Basics for the Office	1
BOT 097	Windows Basics for the Office	1
BOT 100	Basic Keyboarding	1
BOT 101AB	Keyboarding/Document Processing	3
BOT 104	Filing and Records Management	1
BOT 105	Data Entry Skills	1
BUS 114	Effective Job Search	1
Total Required		9

II. OFFICE ASSISTANT LEVEL II

This certificate is designed for students who have completed the Office Assistant Level I certificate or have the equivalent in keyboarding and computer skills. It prepares students for advancement in office careers in which knowledge of Microsoft Office applications is required.

Certificate Outcomes

Upon completion of this certificate, students will be able to:

- Explain the basic language and concepts within the field of business office technology.
- Use computer input devices (e.g., keyboard and mouse) to properly and efficiently create and edit documents in word processing, spreadsheet, and presentation programs such as Word, Excel, and PowerPoint, and electronic communications such as email.

Certificate Requirements:

Course	Title	Units
BOT 102AB	Intermediate Keyboarding/ Document Processing I-II	3
BOT 107	Office Systems and Procedures	2
BOT 114	Essential Word	1
BOT 115	Essential Excel	1
BOT 116	Essential Access	1
BOT 117	Essential PowerPoint	1
Total Required		9

III. OFFICE PROFESSIONAL

This certificate is designed for students interested in entry-level positions in a broad spectrum of office environments. Utilizing a short-term, intensive format, students are provided with the basic skills necessary to be productive employees. The curriculum provides the foundation for further study and advancement in the clerical field, which is one of the largest employment areas in our information processing society.

Certificate Outcomes

Upon completion of this certificate, students will be able to:

- Explain the basic language and concepts within the field of business office technology.
- Use computer input devices (e.g., keyboard and mouse) to properly and efficiently create and edit documents in word processing,

spreadsheet, and presentation programs such as Word, Excel, and PowerPoint, and electronic communications such as email.

Certificate Requirements:

Course	Title	Units
BOT 100	Basic Keyboarding	1
or		
BOT 101AB	Keyboarding/Document Processing	3
or		
BOT 102AB	Intermediate Keyboarding/ Document Processing I-II	3
BOT 107	Office Systems and Procedures	2
BOT 114	Essential Word	1
BOT 115	Essential Excel	1
BOT 223	Office Work Experience	1
BUS 110	Introduction to Business	3
BUS 128	Business Communication	3
	Total Required	12-14

IV. OFFICE SOFTWARE SPECIALIST LEVEL I

This certificate is designed for students interested in working in an administrative support capacity who need working knowledge of word processing, electronic spreadsheet, database and presentation software. These courses may also be applied to the Office Assistant Level II certificate.

Certificate Outcomes

Upon completion of this certificate, students will be able to:

- Explain the basic language and concepts within the field of business office technology.
- Use computer input devices (e.g., keyboard and mouse) to properly and efficiently create and edit documents in word processing, spreadsheet, and presentation programs such as Word, Excel, and PowerPoint, and electronic communications such as email.

Certificate Requirements:

Course	Title	Units
BOT 100	Basic Keyboarding	1
BOT 114	Essential Word	1
or		
BOT 120-121	Comprehensive Word, Levels I-II	2
BOT 115	Essential Excel	1
or		
BOT 123-124	Comprehensive Excel, Levels I-II	2
BOT 116	Essential Access	1
or		
BOT 126-127	Comprehensive Access, Levels I-II	2
BOT 117	Essential PowerPoint	1
or		
BOT 129-130	Comprehensive PowerPoint, Levels I-II	2
	Total Required	5-9

V. OFFICE SOFTWARE SPECIALIST LEVEL II

This certificate is designed for students interested in working in an administrative support capacity who need working knowledge of word processing, electronic spreadsheet, database and presentation software as well as software integration techniques. Students who complete the certificate may continue taking courses to earn the Executive Assistant Certificate of Achievement.

Certificate Outcomes

Upon completion of this certificate, students will be able to:

- Explain the basic language and concepts within the field of business office technology.
- Use computer input devices (e.g., keyboard and mouse) to properly and efficiently create and edit documents in word processing, spreadsheet, and presentation programs such as Word, Excel, and PowerPoint, and electronic communications such as email.

Certificate Requirements:

Course	Title	Units
BOT 100	Basic Keyboarding	1
BOT 118	Integrated Office Projects	1
BOT 120	Comprehensive Word, Level I	1
or		
BOT 114	Essential Word	1
BOT 121	Comprehensive Word, Level II	1
BOT 122	Comprehensive Word, Level III	1
BOT 123	Comprehensive Excel, Level I	1
or		
BOT 115	Essential Excel	1
BOT 124	Comprehensive Excel, Level II	1
BOT 125	Comprehensive Excel, Level III	1
BOT 126	Comprehensive Access, Level I	1
or		
BOT 116	Essential Access	1
BOT 127	Comprehensive Access, Level II	1
BOT 129	Comprehensive PowerPoint, Level I	1
or		
BOT 117	Essential PowerPoint	1
BOT 130	Comprehensive PowerPoint, Level II	1
	Total Required	12

CADD TECHNOLOGY

Occupational preparation in Computer-Aided Drafting and Design is the primary purpose of the CADD Technology degree program. Students are required to complete two core courses and to select from two potential career paths: Building Design Industry or Manufacturing Industry. Adherence to industrial practices and standards is stressed, including problem solving in a simulated industrial environment.

Program Outcomes

Upon completion of this program, students will be able to:

- Create 3D modeling objects of various orientations including sections and elevations of objects, and identify the relationships of objects or object features to demonstrate visualization proficiency.
- Identify or describe the typical characteristics and uses of common construction or manufacturing materials, products and systems, document them in drawings, and make appropriate selections based on design project requirements.
- Use the latest version of 2D/3D CADD and Solid Modeling software programs (AutoCAD and SolidWorks) to create industry standard architectural or engineering drawings.
- Model the habits and attitudes for success in professional employment as a CADD technician including the preparation and presentation of a professional portfolio.
- Demonstrate computation, communication, critical thinking, and problem-solving skills to perform effectively as a CADD technician in the field of architecture and/or the civil, electronic, mechanical, structural, and surveying engineering fields.

CAREER OPPORTUNITIES

CAD Technician in the field of Architecture and Civil, Electronic, Mechanical, Structural, and Surveying Engineering

Associate in Science Degree Requirements:

Core Curriculum

Course	Title	Units
CADD 115	Engineering Graphics	3
CADD 120	Introduction to Computer-Aided Drafting and Design	3
		6

Areas of Emphasis:

A. BUILDING DESIGN INDUSTRY

CADD 127	Survey Drafting Technology	3
CADD 131	Architectural Computer-Aided Drafting and Design	3
CADD 133	Advanced Architectural Computer- Aided Drafting and Design	3
CADD/OH 200	Introduction to Computer-Aided Landscape Design	3
		12

Select two of the following:

CADD 126	Electronic Drafting	3
CADD 128	Dimensioning and Tolerancing	3
CADD 132	Advanced Computer-Aided Drafting and Design	3
CADD/OH 201	Advanced Computer-Aided Landscape Design	3
		6
	Total Required Including Core Classes	24
	Plus General Education Requirement	

B. MANUFACTURING INDUSTRY

Select four of the following:

CADD/ENGR 125	3D Solid Modeling	3
CADD 126	Electronic Drafting	3
CADD 128	Dimensioning and Tolerancing	3
CADD/ENGR 129	Engineering Solid Modeling	3
CADD 132	Advanced Computer-Aided Drafting and Design	3
		12

Select two of the following:

CADD 127	Survey Drafting Technology	3
CADD 131	Architectural Computer-Aided Drafting and Design	3
CADD 133	Advanced Architectural Computer- Aided Drafting and Design	3
CADD/OH 200	Introduction to Computer-Aided Landscape Design	3
		6
	Total Required Including Core Classes	24
	Plus General Education Requirements	

Certificate of Achievement

Students who complete only the courses required for the major including an area of emphasis qualify for a Certificate in CADD Technology in that area of emphasis. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

CALIFORNIA STATE UNIVERSITY GENERAL EDUCATION BREADTH

The Certificate of Achievement in California State University General Education Breadth (CSU GE) may be awarded upon completion of the CSU GE Breadth requirements (see Degree Requirements and Transfer Information section). Students must complete a minimum of 39 units, which are distributed among five areas. CSU GE Breadth requirements are designed to be taken with a major area of concentration and elective courses in preparation for transfer to the California State University.

Courses completed at California community colleges and participating institutions will be certified based on approval at the original campus. Courses taken at other colleges and universities; i.e., out-of-state, private, may be used in the certification under certain conditions. Although this certificate recognizes

the completion of lower division general education requirements for the CSU, it does not guarantee admission to a four-year institution. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

Certificate Outcomes

Upon completion of this certificate, students will be able to:

- Exhibit proficiency in written communication in English.
- Exhibit proficiency in oral communication in English.
- Analyze, criticize and advocate ideas and reach well-supported conclusions.
- Show skills and understanding beyond the level of intermediate algebra, and apply mathematical concepts to solve problems.
- Analyze and appreciate works of philosophical, historical, literary, aesthetic and cultural importance.
- Reveal an historical understanding of major civilizations and cultures, both Western and non-Western.
- Recognize the contributions to knowledge, civilization, and society that have been made by various ethnic or cultural groups.
- Evaluate the basic concepts of physical and biological sciences.
- Use the scientific method of inquiry and techniques to answer questions about physical and biological processes.
- Cultivate a lifelong understanding and development as an integrated physiological, social, and psychological being.

CHEMISTRY

The chemistry curriculum is designed to provide students who choose to work toward a bachelor's degree a well-balanced, lower division program with a strong emphasis on fundamentals and problem solving. This major fulfills the lower division requirements (except for analytical chemistry) for chemistry majors and is typical of the requirements at four-year colleges and universities.

Program Outcomes

Upon completion of this program, students will be able to:

- Comprehend and describe the nature of matter, including its classification, composition and structure.
- Demonstrate an understanding of the transformations of matter, both physical and chemical.
- Develop critical thinking skills by predicting interactions between different types of matter, both physical and chemical; analyzing matter in the laboratory both qualitatively and quantitatively; performing mathematical calculations related to the transformation and analysis of matter; and solving qualitative and quantitative problems in connection with the transformation and analysis of matter.

CAREER OPPORTUNITIES

Chemists work in a variety of fields, primarily those of the chemical, biotechnological, environmental, biomedical, pharmaceutical, electronics, forensic, agricultural and food industries. They usually work in analysis, research, development or production of materials. Management, marketing and teaching opportunities are also available.

- * Agricultural Chemist
- * Air Quality Control
- * Analytical Chemist
- * Biochemist

- * Chemistry Teacher
- * Dietician
- * Environmental Technologist
- * Fishery Specialist
- * Food And Drug Inspector
- * Forensic Specialist
- * Laboratory Technician
- * Materials Scientist
- * Medical Technologist
- * Microbiologist
- * Organic Chemist
- * Physician
- * Polymer Chemist
- * Sales Representative
- * Sanitarian Technician
- * Bachelor Degree or higher required

Associate in Science Degree Requirements:

Course	Title	Units
CHEM 141	General Chemistry I	5
CHEM 142	General Chemistry II	5
CHEM 231	Organic Chemistry I	5
MATH 180	Analytic Geometry and Calculus I	5
MATH 280	Analytic Geometry and Calculus II	4
MATH 281	Intermediate Calculus	4
PHYC 190	Mechanics and Heat	5
PHYC 200	Electricity and Magnetism	5
PHYC 210	Wave Motion and Modern Physics	5
	Total Required	43
	Plus General Education Requirements	

Note:

1. Students pursuing an emphasis in biochemistry should also take the following courses: BIO 210, 220, 221.
2. Students who intend to enroll at UCSD should take MATH 285 and check with the Counseling Center regarding program options.

CHILD DEVELOPMENT

The child development curriculum is designed to prepare students for employment as teachers, directors and aides in preschools and child care centers, including infant/toddler and extended day facilities. The curriculum is also appropriate for parents, administrators, health care professionals, and others working with children. Course work meets the educational components of the Department of Social Services license regulations for child care programs. The degree meets the educational requirements of the Teacher, Master Teacher and Site Supervisor Child Development Permits. The curriculum meets lower division course preparation for students planning to obtain a bachelor's degree in Child Development at most CSU campuses.

The Department of Social Services Title 22 minimum requirements to be a preschool teacher are 12 units in Child Development which must include: CD 125, CD 131, one curriculum class (CD 123, 126, 127, 128, 129 or 130), and one additional CD course (3 units).

The California Department of Education Title 5 minimum education requirements at the Teacher level on the Child Development Matrix are 24 units in Child Development which must include: CD 125, CD 131, one curriculum class (CD 123, 126, 127, 128, 129 or 130), 12 additional units in CD, and 16 units of general education which must include one degree applicable course in each of four general education categories: English/Language Arts; Math or Science; Social Sciences; Humanities and/or Fine Arts.

Program Outcomes

Upon completion of this program, students will be able to:

- Integrate the key developmental concepts and teaching strategies into a cogently articulated philosophy of early childhood education and care.
- Employ appropriate classroom organizational and management techniques in a variety of early childhood education settings, including the implementation of curriculum that is well planned, developmentally appropriate, and based on the interests and needs of the children.
- Survey, assemble, and expand curricula resources for use in specific early childhood classrooms and centers.
- Apply and implement effective and sensitive discipline and guidance strategies directly with children.
- Clearly demonstrate the ability to plan child development programs which deliberately intend to advance, stimulate or otherwise enhance children's physical, intellectual, emotional and social development in ways which are appropriate to the children's developmental level.
- Assess their own professional competence and progress and develop a plan for professional career steps and growth.

CAREER OPPORTUNITIES

- * Adoption Counselor
- * Camping Guide
- * Child Care Specialist
- * Child Psychologist
- * Curriculum Development
- * Development Specialist (Child, Adolescent and Family)
- * Early Intervention Aide
- * Educational Consultant
- * Infant/Toddler Teacher
- * Outdoor Education Specialist
- * Preschool Director
- * Preschool Teacher
- * Recreation Leader
- * Recreation Specialist
- * School Age Child Care Teacher
- * Social Service Specialist
- * Special Education Assistant – Children with Special Needs
- * Bachelor Degree or higher required

I. CHILD DEVELOPMENT

Associate in Science Degree Requirements:

Core Curriculum:

Course	Title	Units
CD 123	Principles and Practices of Programs and Curriculum for Young Children	3
CD 125	Child Growth and Development	3
CD 126	Art for Child Development	3
CD 127	Science and Mathematics for Child Development	3
CD 128	Music and Movement for Child Development	3
CD 129	Language and Literature for Child Development	3
CD 131	Child, Family and Community	3
CD 134	Health, Safety and Nutrition of Young Children	3
CD 141	Working with Children with Special Needs	3
		<hr/> 27

Areas of Emphasis:

A. INFANTS AND TODDLERS

CD 124	Infant and Toddler Development	3
CD 132	Observation and Assessment: Field Experience Seminar	3
CD 143	Responsive Planning for Infant/Toddler Care	3
CD 170	Field Experience with Infants and Toddlers	2
		<hr/> 11
	Total Required Including Core Courses	38
	Plus General Education Requirements	

B. PRESCHOOL CHILDREN

CD 130	Curriculum: Design and Implementation	3
CD 132	Observation and Assessment: Field Experience Seminar	3
CD 133	Practicum-Field Experience: Student Teaching	2
		<hr/> 8

Select three to four units from the following:

CD 106	Practicum: Beginning Observation and Experience	1
CD 124	Infant and Toddler Development	3
CD 136	Adult Supervision	3
CD 137	Administration of Child Development Programs I	3
CD 138	Administration of Child Development Programs II	3
CD 145	Child Abuse and Family Violence in our Society	3
CD 153	Teaching in a Diverse Society	3
CD 210	Working with Young Children with Challenging Behaviors	3
		<hr/> 3-4
	Total Required Including Core Courses	38-39
	Plus General Education Requirements	

Certificate of Achievement

Students who complete only the courses required for the major including an area of emphasis qualify for a Certificate in Child Development in that area of emphasis. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

II. SCHOOL AGE CHILD CARE

This major is designed to prepare students for employment in child care programs for elementary school age children. The certificate meets the Title 22 licensing standards for teachers in school age child care programs. Some courses also meet prerequisites for students who wish to transfer to elementary education programs.

Associate in Science Degree Requirements:

Course	Title	Units
CD 125	Child Growth and Development	3
CD 131	Child, Family and Community	3
CD 132	Observation and Assessment: Field Experience Seminar	3
CD 134	Health, Safety and Nutrition of Young Children	3
CD 148	Curriculum for School Age Child Care	3
CD 149	School Age Child Care Program Planning	3
CD 150	Field Experience for School Age Child Care	2
		<hr/> 20

Select one of the following:

CD 137	Administration of Child Development Programs I	3
CD 141	Working with Children with Special Needs	3

CD 145	Child Abuse and Family Violence in our Society	3
CD 157	Food and Nutrition for Children	3
ES 253	Physical Education in Elementary Schools	3
MATH 125	Structure and Concepts of Elementary Mathematics I	3
MATH 126	Structure and Concepts of Elementary Mathematics II	3
MUS 118	Introduction to Music	4
		<hr/> 3-4
	Total Required	23-24
	Plus General Education Requirements	

Certificate of Achievement

Students who complete only the major requirements above qualify for a Certificate in School Age Child Care. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

CERTIFICATE OF SPECIALIZATION:

**RECREATIONAL LEADERSHIP-
OUTDOOR PROGRAMS**

This certificate offers specific training for entry-level positions or for advancement in child care and outdoor programs for children and families. It is designed to demonstrate an area of expertise that may be used to attain employment in outdoor recreational programs. Students who complete the requirements below and hold a current First Aid/CPR certification qualify for the certificate. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

Certificate Outcomes

Upon completion of this certificate, students will be able to:

- Demonstrate an understanding of group dynamics and management of groups of children.
- Incorporate resources for working in a camp or outdoor recreation program.
- Practice planning and implementing activities in a camp or recreational program.
- Implement guidance and discipline principles in working with groups of children.
- Complete a self-assessment of ability and interest in the field of recreation leadership.
- Explore and access the range of outdoor leadership opportunities available in the community, including opportunities for professional growth.

Career Opportunities

Students may find employment with school age child care programs and with public, private and commercial park and recreation agencies. They may work with agencies serving youth and families, and with leisure-related businesses and tourism agencies. Career opportunities include naturalists, outdoor education specialists, park interpreters, camping guides, arts and crafts leaders, and park and recreation class teachers and aides.

Certificate Requirements:

Course	Title	Units
CD 125	Child Growth and Development	3
CD 157	Food and Nutrition for Children	3
CD 200	Introduction to Outdoor Education Programs	1
CD 201	Creative Activities for Outdoor Programs	1
CD 202	Field Experience for Recreational Leadership	1
ES 253	Physical Education in Elementary Schools	3
ES 270	Cooperative Games	1
	Total Required	<hr/> 13

COMMUNICATION

This degree program is designed to provide students with a broad base of communication classes that provide training for entry into occupations in which verbal skills are important. Major requirements for the four-year degree in Communication vary from institution to institution. Students should consult the catalog of the transfer institution for specific requirements.

Program Outcomes

Upon completion of this program, students will be able to:

- Research, write and deliver an effective public speech.
- Analyze, critique, and improve interpersonal relationships in both personal and professional contexts.
- Describe and apply specific skills to the communication process, including perception, emotion, listening and conflict management.
- Describe and interpret communication similarities and differences between people from varying cultural backgrounds.
- Interact with others in group settings to collect, analyze, and synthesize information.
- Interact respectfully with others who hold divergent perspectives.
- Critically analyze, critique and synthesize arguments and information.
-

CAREER OPPORTUNITIES

- Advertising Assistant
- Announcer
- Arts Administrator
- College Professor
- Communication Consultant
- Journalist
- Lawyer
- Lobbyist
- Narrator
- Personnel Trainer
- Politician
- Proofreader
- Public Relations Assistant
- Researcher
- Sales Manager
- Teacher/Instructor

Associate in Arts Degree Requirements:

Course	Title	Units
COMM 110	Introduction to Mass Communication	3
COMM 120	Interpersonal Communication	3
COMM 122	Public Speaking	3
COMM 123	Advanced Public Speaking	3
COMM 145	Argumentation	3
		<hr/> 15

Select three of the following:

COMM 124	Intercultural Communication	3
COMM 128*	Global Communication	3
COMM 135	Oral Interpretation of Literature	3
COMM 136	Readers Theatre	3
COMM 137	Critical Thinking in Group Communication	3
COMM 144*	Communication Studies: Race and Ethnicity	3
COMM 240A	Intercollegiate Forensics	3
COMM 240B	Intercollegiate Forensics	3
COMM 240C	Intercollegiate Forensics	3
COMM 240D	Intercollegiate Forensics	3
		<hr/> 9
	Total Required	24
	Plus General Education Requirements	

*Offered at Grossmont College



Associate Degree for TransferSM

COMMUNICATION STUDIES FOR TRANSFER (AA-T)

This degree program is designed to provide students with a broad base of communication courses that provide training for entry into occupations in which public contact and verbal skills are important. Students will explore and analyze verbal communication methods, as well as develop and advance their oral communication skills. Students completing this degree may be interested in pursuing careers in community service, sales, performing arts, teaching, and other communication professions.

The following is required for the Associate in Arts in Communication Studies for Transfer degree:

1. Minimum of 60 CSU-transferable semester units.
2. Minimum grade point average (GPA) of at least 2.0 in all CSU-transferable coursework. While a minimum of 2.0 is required for admission, some majors may require a higher GPA. Please consult with a counselor for more information.
3. Minimum of 18 semester units in the major as detailed below.
4. Certified completion of the California State University General Education Breadth pattern (CSU GE Breadth) OR the Intersegmental General Education Transfer Curriculum (IGETC) pattern; see Degree Requirements and Transfer Information section for more information. Note: If following IGETC GE pattern, IGETC-CSU pattern must be followed for admission to a CSU.

Program Outcomes

Upon completion of this program, students will be able to:

- Research, write and deliver an effective public speech.
- Analyze, critique, and improve interpersonal relationships in both personal and professional contexts.
- Describe and apply specific skills to the communication process, including perception, emotion, listening and conflict management.
- Describe and interpret communication similarities and differences between people from varying cultural backgrounds.
- Interact with others in group settings to collect, analyze, and synthesize information.
- Interact respectfully with others who hold divergent perspectives.
- Critically analyze, critique and synthesize arguments and information.
- Meet basic admission requirements to the California State University by having 60 transferable units, a 2.0 GPA, and completion of general education requirements through the CSU GE Breadth or IGETC-CSU GE pattern.

Associate in Arts Degree Requirements:

Core Curriculum:

Course	Title	Units
COMM 122	Public Speaking	3

Group A: Select two of the following:

COMM 120	Interpersonal Communication	3
COMM 137	Critical Thinking in Group Communication	3
COMM 145	Argumentation	3
		<hr/> 6

Group B: Select two of the following:

COMM 110	Introduction to Mass Communication	3
COMM 124	Intercultural Communication	3
	Any course not selected above	3
		<hr/> 6

Group C: Select one of the following:

ANTH 120	Cultural Anthropology	3
ENGL 122	Introduction to Literature	3
ENGL 124	Advanced Composition: Critical Reasoning and Writing	3
SOC 120	Introductory Sociology	3
	Any course not selected above	3
		<hr/> 3

Total Units for Major	18
Total Units for CSU GE Breadth or IGETC-CSU	37-39
Total Transferable Elective Units	3
Total Units for Degree	60

COMPUTATIONAL SCIENCE

To meet the needs of the successful computer science, computational science, or applied mathematics graduate, this degree program integrates the study of mathematical and computer sciences and prepares the student for immediate entry into a vocational field related to computer programming and/or further study in computer science, computational science or applied mathematics.

Program Outcomes

Upon completion of this program, students will be able to:

- Recognize the connections between mathematics, computer programming, and the sciences.
- Begin to utilize modern computational tools (programming combined with mathematical reasoning and skills) to analyze, interpret, and/or model application problems in the sciences and/or engineering.
- Identify when computational methods (programming combined with mathematical reasoning and skills) are required to solve problems in sciences and/or engineering.
- Translate the skills developed in the diverse disciplines of mathematics, computer programming, and a scientific or engineering course of study to an appropriate problem-solving experience.
- Communicate effectively in the disciplines of mathematics, computer programming, and a chosen scientific field of study.
- Collaborate effectively with others in the disciplines of mathematics, computer programming, and a chosen scientific field of study.

CAREER OPPORTUNITIES

- * Actuary
- * Computational Scientist
- * Computer Engineer
- * Mathematician
- * Programmer Analyst
- * Semiconductor Technician
- * Software Engineer

- Software Technician
- * Statistician
- † Systems Analyst
- * Systems Engineer
- Technical Support Representative
- * Bachelor Degree or higher required
- † Bachelor Degree normally recommended

Associate in Science Degree Requirements:

Course	Title	Units
CS 182	Introduction to Java Programming	4
CS 282	Intermediate Java Programming and Fundamental Data Structures	4
CS 289	Computer Organization and Systems Programming	4
MATH 180	Analytic Geometry and Calculus I	5
MATH 245	Discrete Mathematics	3
MATH 280	Analytic Geometry and Calculus II	4
MATH 284	Linear Algebra	3
		<hr/> 27

Select one of the following:

MATH 150	Introduction to Computer Programming Applications in Mathematics	3
MATH 160	Elementary Statistics	3
MATH 281	Intermediate Calculus	4
		<hr/> 3-4

Select one of the following sequences:

BIO 130*	General Biology I	3
BIO 131*	General Biology I Laboratory	1
BIO 210	Biology II	4
	or	
CHEM 141	General Chemistry I	5
CHEM 142	General Chemistry II	5
	or	
PHYC 190	Mechanics and Heat	5
PHYC 200	Electricity and Magnetism	5
PHYC 210	Wave Motion and Modern Physics	5
		<hr/> 8-15
	Total Required	38-46
	Plus General Education Requirements	

*BIO 220 and 221 may be substituted for BIO 130 and 131.

Certificate of Achievement

Students who complete only the major requirements above qualify for a Certificate in Computational Science. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

COMPUTER AND INFORMATION SCIENCE

See *Business Office Technology for specific Microsoft applications (Word, Excel, PowerPoint, etc.)*.

CAREER OPPORTUNITIES

- Communications Specialist
- Computer Game Programmer
- Computer Graphics Designer
- Computer Hardware Specialist
- Computer Help Desk Technician
- Computer Maintenance Technician
- Computer Software Technician
- * Computer Systems Engineer
- * Computing Analyst
- Cyber Café Owner
- * Database Manager
- GIS (Geographic Information Systems) Specialist
- Information Specialist
- * Information Systems Programmer
- LAN/WAN Manager
- Manufacturer's Representative

- Multimedia Designer
- Network Administrator
- *Network Analyst
- Network Consultant
- Network Control Technician
- Network Training and Support Specialist
- *Programmer Analyst
- Sales and Service
- *Scientific Programmer
- Software Consultant
- *Software Engineer/Designer
- *Systems Analyst
- *Systems Programmer
- Technical Support Representative
- *Telecommunications Programmer
- Telecommunications Technician
- *Telecommunications Technical Engineer
- Training Specialist
- Virtual Reality Developer
- Web Master
- Web Page Designer
- *Bachelor Degree or higher required

Course Equivalencies:

The following Cuyamaca and Grossmont College courses are considered similar enough to be treated as equivalent. Modification of Major forms are not required.

<i>Cuyamaca Course</i>	<i>Similar Grossmont Course</i>
CIS 105.....	CSIS 172
CIS 110.....	CSIS 110
CIS 120.....	CSIS 114
CIS 140.....	CSIS 174
CIS 190.....	CSIS 112
CIS 191.....	CSIS 113
CIS 211.....	CSIS 134
CIS 212.....	CSIS 133
CIS 215.....	CSIS 135
CIS 216.....	CSIS 136
CIS 240.....	CSIS 276
CIS 291.....	CSIS 213
CS 119.....	CSIS 119
CS 180.....	CSIS 288
CS 181.....	CSIS 296
CS 182.....	CSIS 293
CS 280.....	CSIS 289
CS 281.....	CSIS 297
CS 282.....	CSIS 294
CS 289.....	CSIS 165
GD 222.....	CSIS 137

I. COMPUTER NETWORK ADMINISTRATION

This degree program prepares students for careers in computer networking and related fields. Upon completion, students may find entry-level positions as network administrators, hardware technicians, data/voice/video cabling technicians, project managers, designers/estimators or technical support personnel. The major prepares students to work as team members in an information technology group which designs, evaluates, tests, installs and maintains corporate networks. Preparation for the following industry certifications: A+, Security+ and CCNA (Cisco Certified Network Associate).

Program Outcomes

Upon completion of this program, students will be able to:

- Describe and demonstrate the ability to install, configure, upgrade, diagnose and troubleshoot personal computer and networking hardware and system software.
- Describe and design a copper, optical fiber, and wireless network infrastructure in accordance with industry standards.
- Install, test, certify, secure and troubleshoot a copper, optical fiber, and wireless network

- infrastructure by constructing a system in accordance with industry standards.
- Plan and design an Ethernet and TCP/IP network, including switches and routers in a multiprotocol internetwork using LAN and WAN interfaces, networking mathematics, and terminology.
- Install, operate, and troubleshoot an Ethernet and TCP/IP network, including the installation and configuration of switches and routers in a multiprotocol internetwork using LAN and WAN interfaces networking mathematics and terminology.

Associate in Science Degree Requirements:

<i>Course</i>	<i>Title</i>	<i>Units</i>
CIS 120	Computer Maintenance and A+ Certification	3
CIS 121	Network Cabling Systems	3
CIS 140	Databases	3
CIS 190	Windows Operating System	3
CIS 191	Linux Operating System	3
CIS 201	Cisco Networking Academy I Exploration	3
CIS 202	Cisco Networking Academy II	3
or		
CIS 125	Network+ Certification	3
CIS 263	Fundamentals of Network Security	3
		24

Select one of the following:

CS 119	Program Design and Development	3
CS 180	Introduction to Visual Basic Programming	4
CS 182	Introduction to Java Programming	4
		3-4

Select three of the following:

CIS 203	Cisco Networking Academy III	3
CIS 204	Cisco Networking Academy IV	3
CIS 205	Cisco Networking Academy V	3
CIS 206	Cisco Networking Academy VI	3
CIS 207	Cisco Networking Academy VII	3
CIS 208	Cisco Networking Academy VIII	3
CIS 209	Cisco Networking Academy IX	3
CIS 212	Introduction to Web Development	3
CIS 240	Advanced Databases	3
CIS 262	Wireless Networking	3
CIS 290	Windows Server-Active Directory	2
CIS 291	Linux System Administration	3
		8-9
	Total Required	35-37
	Plus General Education Requirements	

Certificate of Achievement

Students who complete only the major requirements above qualify for a Certificate in Computer Network Administration. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

II. TELECOMMUNICATIONS NETWORKING TECHNOLOGY

This degree program prepares students with the technical and management skills necessary to enter careers in design, application, installation, management, operation and/or maintenance of computer and telecommunications networking systems including convergent voice, data and video communications over IP networks. Graduates will have specific strengths in the building, testing, operation and maintenance of computer and telecommunications networking systems.

Program Outcomes

Upon completion of this program, students will be able to:

- Describe and demonstrate the ability to install, configure, upgrade, diagnose and troubleshoot personal computer, networking, and telecommunications hardware and system software.

- Describe and design a copper, optical fiber, and wireless telecommunications infrastructure in accordance with industry standards.
- Install, test, certify, secure and troubleshoot a copper, optical fiber, and wireless telecommunications infrastructure by constructing a system in accordance with industry standards.
- Plan and design an Ethernet and TCP/IP network, including switches and routers in a multiprotocol internetwork using LAN and WAN interfaces, networking mathematics, and terminology.
- Using appropriate written and oral communication skills, function as a member of a team to analyze, compose, and present a response to a Request for Proposal including both technical and cost components.

Associate in Science Degree Requirements:

<i>Course</i>	<i>Title</i>	<i>Units</i>
CIS 120	Computer Maintenance and A+ Certification	3
CIS 121	Network Cabling Systems	3
CIS 161	Fundamentals of Telecommunications	3
CIS 162	Technical Diagramming Using Microsoft Visio	2
CIS 190	Windows Operating System	3
or		
CIS 191	Linux Operating System	3
CIS 201	Cisco Networking Academy I Exploration	3
CIS 202	Cisco Networking Academy II	3
or		
CIS 125	Network+ Certification	3
CIS 261	Convergent/Unified Technologies and Degree Capstone	3
CIS 262	Wireless Networking	3
CIS 263	Fundamentals of Network Security	3
ET 110	Introduction to Basic Electronics	4
		33

Select one of the following:

CS 119	Program Design and Development	3
CS 180	Introduction to Visual Basic Programming	4
CS 182	Introduction to Java Programming	4
		3-4
	Total Required	36-37
	Plus General Education Requirements	

III. WEB DEVELOPMENT

This degree program provides students with practical experience creating websites and prepares them for entry-level positions as web designers, web programmers or web server administrators. The curriculum uses state of the art software and hardware typically found in the field of professional web development.

Program Outcomes

Upon completion of this program, students will be able to:

- Use technologies commonly found in industry and apply screen, navigation, site, and graphic design principles to develop a site that is functional, attractive, and easy to use.
- Use Cascading Style Sheet technology to efficiently and consistently control site presentation.
- Write markup language code that conforms to standards such as XHTML.
- Use scripting and/or a WYSIWYG application to develop a dynamic web application with a database backend and database-integrated (dynamic) web pages.
- Describe the functional aspects of a site (e.g., shopping cart, feedback form, product list, site search) and recommend appropriate technologies to implement functions.

Associate in Science Degree Requirements:

Course	Title	Units
CIS 140	Databases	3
CIS 211	Web Markup Languages	3
CIS 212	Introduction to Web Development	3
CIS 213	Advanced Web Development	3
		12

Select two of the following:

CIS 110	Principles of Information Systems	4
CIS 190	Windows Operating System	3
CIS 191	Linux Operating System	3
CIS 290	Windows Server-Active Directory	2
		5-7

Select two of the following:

CIS 215	JavaScript Programming	3
CIS 216	Active Server Pages	3
CIS 219	PHP/MySQL Dynamic Web-Based Applications	3
CS 119	Program Design and Development	3
CS 180	Introduction to Visual Basic Programming	4
		6-7

Select three of the following:

CIS 240	Advanced Databases	3
CIS 267	Directed Work Experience in CIS	1-4
GD 126	Photoshop Digital Imaging	3
GD 130	Professional Business Practices	3
GD 210	Professional Digital Photography I	3
GD 217	Web Graphics	3
GD 222	Flash Web Animation	3
GD 223	Advanced Flash Web Animation	3
		7-10
	Total Required	30-36
	Plus General Education Requirements	

Certificate of Achievement

Students who complete only the major requirements above qualify for a Certificate in Web Development. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

CERTIFICATES OF SPECIALIZATION:

These certificates offer specific training for either entry-level positions or to augment related programs such as Computer Network Administration, Web Development, Business Office Technology or Graphic Design. The certificates are designed to demonstrate a relatively narrow expertise or skill area that may be used to attain a computer industry "niche" job.

Students who complete the requirements below qualify for a certificate in that area of emphasis. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

I. CISCO CERTIFIED NETWORK ASSOCIATE

Certificate Outcomes

Upon completion of this certificate, students will be able to:

- Describe the operational characteristics and troubleshooting techniques for: the OSI and TCP/IP networking models; general LAN design; network routers, switches, and wireless routers; the RIP, EIGRP, and OSPF interior gateway protocols (IGP); network switching principles including VLANs, inter-VLAN routing, VTP, STP and security; the HDLC, PPP and Frame-Relay WAN protocols; network security using Access Control Lists (ACL); NAT; and DHCP.
- Plan and design basic network topologies including switches and routers in a multiprotocol internetwork using LAN and WAN interfaces, networking addressing techniques, and terminology.

- Configure, test, and troubleshoot network topologies consisting of routers, switches, wireless routers, and PCs using: the Cisco IOS CLI; ip addressing; interior gateway protocols; HDLC, PPP and Frame-Relay WAN protocols; VLANs; NAT; DHCP; router and switch security techniques.

Certificate Requirements:

Course	Title	Units
CIS 201	Cisco Networking Academy I Exploration	3
CIS 202	Cisco Networking Academy II	3
CIS 203	Cisco Networking Academy III	3
CIS 204	Cisco Networking Academy IV	3
CIS 209	Cisco Networking Academy IX	3
	Total Required	15

II. CISCO NETWORK PROFESSIONAL

Certificate Outcomes

Upon completion of this certificate, students will be able to:

- Describe advanced routing, switching, and troubleshooting concepts for complex enterprise networks including; enterprise network design, development, and maintenance; advanced routing protocols; VPN technologies; IPv6 ; advanced VLAN topologies; high availability and redundancy protocols; and LAN security protocols and techniques.
- Configure, diagnose, and troubleshoot complex enterprise router and switch networking solutions including: network performance; advanced routing protocols; VPNs; IPv6; advanced VLAN topologies; high availability and redundancy protocols; and LAN security.

Certificate Requirements:

Course	Title	Units
CIS 205	Cisco Networking Academy V	3
CIS 206	Cisco Networking Academy VI	3
CIS 207	Cisco Networking Academy VII	3
CIS 208	Cisco Networking Academy VIII	3
	Total Required	12

III. COMPUTER PROGRAMMING

Certificate Outcomes

Upon completion of this certificate, students will be able to:

- Develop a software solution following the systems development life cycle (SDLC) including problem analysis, solution design, implementation, testing, evaluation and recommendation for improvement.
- Be proficient in at least one high-level programming language and an ability to use that language to implement software solutions in a variety of settings following the SDLC.
- Recognize the need to maintain currency with software industry changes in the computing profession.

Certificate Requirements:

Course	Title	Units
CS 119	Program Design and Development	3
CS 119L	Program Design and Development Lab	1
CS 181	Introduction to C++ Programming	4
or		
CS 182	Introduction to Java Programming	4
CS 281	Intermediate C++ Programming and Fundamental Data Structures	4
or		
CS 282	Intermediate Java Programming and Fundamental Data Structures	4
	Total Required	12

IV. COMPUTER SUPPORT TECHNICIAN

Certificate Outcomes

Upon completion of this certificate, students will be able to:

- Describe and demonstrate the ability to install, configure, upgrade, diagnose and troubleshoot a personal computer and its associated networking hardware and system software.

Certificate Requirements:

Course	Title	Units
CIS 120	Computer Maintenance and A+ Certification	3
CIS 121	Network Cabling Systems	3
CIS 125	Network+ Certification	3
CIS 190	Windows Operating System	3
CIS 191	Linux Operating System	3
	Total Required	15

V. WEB DESIGN

Certificate Outcomes

Upon completion of this certificate, students will be able to:

- Use technologies commonly found in industry and apply screen, navigation, site, and graphic design principles to develop a site that is functional, attractive, and easy to use.
- Use Cascading Style Sheet technology to efficiently and consistently control site presentation.

Certificate Requirements:

Course	Title	Units
CIS 211	Web Markup Languages	3
CIS 212	Introduction to Web Development	3
CIS 213	Advanced Web Development	3
		9

Select two of the following:

CIS 215	JavaScript Programming	3
GD 126	Photoshop Digital Imaging	3
GD 210	Professional Digital Photography I	3
GD 217	Web Graphics	3
GD 222	Flash Web Animation	3
GD 223	Advanced Flash Web Animation	3
		6
	Total Required	15

VI. WEB PROGRAMMING

Certificate Outcomes

Upon completion of this certificate, students will be able to:

- Write markup language code that conforms to standards such as XHTML.
- Use programming or scripting language to develop a dynamic web application with a database backend and database-integrated (dynamic) web pages.

Certificate Requirements:

Course	Title	Units
CIS 140	Databases	3
CIS 211	Web Markup Languages	3
		6

Select three of the following:

CIS 215	JavaScript Programming	3
CIS 216	Active Server Pages	3
CIS 219	PHP/MySQL Dynamic Web-Based Applications	3
CIS 240	Advanced Databases	3
CS 119	Program Design and Development	3
and		
CS 119L	Program Design and Development Lab	1
GD 223	Advanced Flash Web Animation	3
		9-10
	Total Required	15-16

ELEMENTARY EDUCATION

This degree program is designed to provide lower division preparation for transfer to San Diego State University as a Liberal Studies major. Because the degree emphasizes a strong general education approach, it may be an appropriate major for a variety of career options. Students are encouraged to refer to the San Diego State University catalog and/or consult with an academic advisor before selecting the various options listed below. Upon completion, students may request certification of lower division general education course work required by the California State University system. Students interested in transferring to another college or university should check the requirements of that institution.

Program Outcomes

Upon completion of this program, students will be able to:

- Demonstrate global awareness and cultural sensitivity.
- Demonstrate interpersonal skills in a diverse setting.
- Demonstrate effective communication in teaching and learning environments.
- Demonstrate technological awareness.
- Be prepared to request certification of lower division general education course work required by the California State University system.

CAREER OPPORTUNITIES

- * Administrator
 - Audiovisual Specialist
 - School Clerical Worker
- * Counselor
- * Educational Consultant
- * Educational Psychologist
- * Educational Therapist
- * Educational Writer
 - Food Service
- * Guidance Worker
- * Librarian
 - Library Technician
- * Social Psychologist
- * Speech Pathologist/Audiologist
- * Teacher
 - Teacher's Aide
 - Tutor
- * Bachelor Degree or higher required

Associate in Arts Degree Requirements:

Course	Title	Units
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COMPOSITION, ORAL COMMUNICATION, AND LITERATURE

1. Composition (minimum six units)

ENGL 120	College Composition and Reading	3
and one of the following:		
COMM 137	Critical Thinking in Group Communication	3
COMM 145	Argumentation	3
ENGL 124*	Advanced Composition: Critical Reasoning and Writing	3
PHIL 125	Critical Thinking	3
PHIL 130	Logic	3
*Preferred		

2. Communication (minimum three units)

COMM 120	Interpersonal Communication	3
COMM 122	Public Speaking	3

3. Literature (minimum three units)

ENGL 122	Introduction to Literature	3
ENGL 270	World Literature I	3
ENGL 271	World Literature II	3

MATHEMATICS AND SCIENCES

4. Mathematics

MATH 125	Structure and Concepts of Elementary Mathematics I	3
MATH 126	Structure and Concepts of Elementary Mathematics II	3
MATH 128	Children's Mathematical Thinking	1.5

5. Biological Sciences

BIO 128	Principles of Biology for Future Educators	4
or		
BIO 130	General Biology I	3
and		
BIO 131	General Biology I Laboratory	1

6. Physical Sciences

GEOL 104	Earth Science	3
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SOCIAL SCIENCE AND HISTORY

7. Global Perspective

GEOG 106	World Regional Geography	3
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8. American Institutions (minimum six units)

HIST 108	Early American History	3
and		
HIST 109	Modern American History	3
For other options, see a counselor		

9. Civilizations

HIST 100	Early World History	3
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VISUAL AND PERFORMING ARTS/HUMANITIES

10. Music

MUS 118	Introduction to Music	4
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11. Art/Humanities

ART 100	Art Appreciation	3
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12. Human Growth and Development (choose one option):

<u>Option I:</u>		
CD 125	Child Growth and Development	3
<u>Option II:</u>		
PSY 120	Introductory Psychology	3
and		
PSY 165	Developmental Psychology	3

13. General Education/Humanities (choose one option):

<u>Option I:</u>		
ARBC 121, ASL 121, FREN 121, ITAL 121 or SPAN 121		4-5
<u>Option II:</u>		
PHIL 140 or RELG 120 or RELG 130 (choose this option only if 3 years of foreign language have been taken in high school)		3
<u>Option III:</u>		
ARBC 220, ASL 220, FREN 220, ITAL 220 or SPAN 220 (choose this option only if 3 years of foreign language have been taken in high school)		4-5

14. Additional Requirements

ED 200	Teaching as a Profession	3
ES 253	Physical Education in Elementary Schools	3
HED 105	Health Education for Teachers	1
ES Activity	(At least two courses marked with an asterisk)	2-3
Total Required		60.5-66.5

Recommended Elective:

PSC 100*	Physical Science for Elementary Education	3
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*Offered at Grossmont College; required for major at SDSU

ENGINEERING

This degree program is designed to cover the first two years of a four-year program leading to the bachelor's degree in engineering at most four-year colleges and universities. While the bachelor's degree is usually the minimum needed to practice as an engineer, the associate degree will permit an individual to find work in most engineering firms as an engineering aide. The certificate will permit an individual to work as an engineering technician.

CAREER OPPORTUNITIES

- * Aerospace Engineer
- * Agricultural Engineer
- * Architectural Engineer
- * Biomedical Engineer
- * CAD/CAM Engineer
- * Chemical Engineer
- * Civil Engineer
 - Civil Engineering Technician
- * Computer Engineer
- * Electrical Engineer
 - Electrical Engineering Technician
- * Environmental Engineer
- * Geological Engineer
- * Industrial Engineer
 - Industrial Engineering Technician
- * Manufacturing Engineer
- * Marine Engineer
- * Materials Engineer
- * Mechanical Engineer
 - Mechanical Engineering Technician
- * Mining Engineer
- * Nuclear Engineer
- * Petroleum Engineer
- * Structural Engineer
- * Systems Engineer
- * Robotics Engineer
- * Bachelor's degree or higher required

I. CIVIL ENGINEERING

Program Outcomes

Upon completion of this program, students will be able to:

- Visualize 3D objects and draw them in 2D, both by sketching and through the use of computer-aided drafting software; produce a complete set of drawings sufficient to manufacture a part, including dimensions and tolerances.
- Solve engineering problems through computer modeling, employing an engineering computer language such as Matlab.
- Design a rigid structure such as a bridge, determining forces in each part of the structure. Determine the weight and location of the center of gravity of the structure.
- Design a dynamic system such as a piston or linkage, and compute forces, accelerations, and speeds of all components of the system.
- Apply the tools of surveying, including total station instruments, to analyze the topography of land, construction staking, and setting property boundaries.
- Model vibrating systems using systems of 2nd order differential equations.
- Analyze experimental data to determine summary statistics (e.g., mean, variance), apply appropriate statistical tests to data sets, and design statistical experiments.

Associate in Science Degree Requirements:

Course	Title	Units
CHEM 141	General Chemistry I	5
ENGR 100	Introduction to Engineering and Design	3
ENGR 119	Basic Engineering CAD	3
or		
CADD 120	Introduction to Computer-Aided Drafting and Design	3
ENGR 120	Engineering Computer Applications	3
ENGR 200	Engineering Mechanics–Statics	3
ENGR/SURV 218	Plane Surveying	4
ENGR 220	Engineering Mechanics–Dynamics	3
MATH 160	Elementary Statistics	3
MATH 180	Analytic Geometry and Calculus I	5
MATH 280	Analytic Geometry and Calculus II	4
MATH 281	Intermediate Calculus	4
MATH 285	Differential Equations	3
PHYC 190	Mechanics and Heat	5
PHYC 200	Electricity and Magnetism	5
Total Required		53
Plus General Education Requirements		

II. CIVIL ENGINEERING**Certificate Outcomes**

Upon completion of this certificate, students will be able to:

- Visualize 3D objects and draw them in 2D, both by sketching and through the use of computer-aided drafting software; produce a complete set of drawings sufficient to manufacture a part, including dimensions and tolerances.
- Solve engineering problems through computer modeling, employing an engineering computer language such as Matlab.
- Design a rigid structure such as a bridge, determining forces in each part of the structure. Determine the weight and location of the center of gravity of the structure.
- Design a dynamic system such as a piston or linkage, and compute forces, accelerations, and speeds of all components of the system.
- Apply the tools of surveying, including total station instruments, to analyze the topography of land, construction staking, and setting property boundaries.
- Model vibrating systems using systems of 2nd order differential equations.
- Analyze experimental data to determine summary statistics (e.g., mean, variance), apply appropriate statistical tests to data sets, and design statistical experiments.

Certificate Requirements:

Course	Title	Units
CADD 127	Survey Drafting Technology	3
CHEM 141	General Chemistry I	5
ENGR 100	Introduction to Engineering and Design	3
ENGR 119	Basic Engineering CAD	3
or		
CADD 120	Introduction to Computer-Aided Drafting and Design	3
ENGR 120	Engineering Computer Applications	3
ENGR 200	Engineering Mechanics–Statics	3
ENGR/SURV 218	Plane Surveying	4
ENGR 220	Engineering Mechanics–Dynamics	3
MATH 180	Analytic Geometry and Calculus I	5
MATH 280	Analytic Geometry and Calculus II	4
PHYC 190	Mechanics and Heat	5
Total Required		41

Certificate of Achievement

Students who complete the certificate requirements above qualify for a Certificate in Civil Engineering. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

III. ELECTRICAL AND COMPUTER ENGINEERING**Program Outcomes**

Upon completion of this program, students will be able to:

- Visualize 3D objects and sketch them accurately in 2D.
- Solve engineering problems through computer modeling, employing a computer language such as C or Java.
- Design and write computer programs that employ linked list memory management, stacks, tree data structures, and searching and sorting algorithms.
- Determine the DC and steady-state AC voltages and currents everywhere in an electric circuit composed of passive components.
- Model linear systems of arbitrary size and complexity using linear algebra.
- Model transient and steady-state electrical systems using systems of 2nd order differential equations.
- Apply Green's theorem, Stokes' theorem, and Maxwell's equations to solve simple problems in electrostatics and electromagnetism.
- Analyze and design combinational and sequential digital logic systems of arbitrary complexity, including (for example) Moore and Mealy sequential machines.

Associate in Science Degree Requirements:

Course	Title	Units
CHEM 141	General Chemistry I	5
CS 181	Introduction to C++ Programming	4
or		
CS 182	Introduction to Java Programming	4
CS 281	Intermediate C++ Programming	4
or		
CS 282	Intermediate Java Programming and Fundamental Data Structures	4
ENGR 100	Introduction to Engineering and Design	3
ENGR 210	Electric Circuits	3
ENGR 270	Digital Design	4
MATH 180	Analytic Geometry and Calculus I	5
MATH 280	Analytic Geometry and Calculus II	4
MATH 281	Intermediate Calculus	4
MATH 284	Linear Algebra	3
MATH 285	Differential Equations	3
PHYC 190	Mechanics and Heat	5
PHYC 200	Electricity and Magnetism	5
Total Required		52
Plus General Education Requirements		

IV. ELECTRICAL AND COMPUTER ENGINEERING**Certificate Outcomes**

Upon completion of this certificate, students will be able to:

- Visualize 3D objects and sketch them accurately in 2D.
- Solve engineering problems through computer modeling, employing a computer language such as C or Java.
- Design and write computer programs that employ linked list memory management, stacks, tree data structures, and searching and sorting algorithms.
- Determine the DC and steady-state AC voltages and currents everywhere in an electric circuit composed of passive components.
- Model linear systems of arbitrary size and complexity using linear algebra.
- Model transient and steady-state electrical systems using systems of 2nd order differential equations.

- Apply Green's theorem, Stokes' theorem, and Maxwell's equations to solve simple problems in electrostatics and electromagnetism.
- Analyze and design combinational and sequential digital logic systems of arbitrary complexity, including (for example) Moore and Mealy sequential machines.

Certificate Requirements:

Course	Title	Units
CADD 126	Electronic Drafting	3
CS 181	Introduction to C++ Programming	4
or		
CS 182	Introduction to Java Programming	4
CS 281	Intermediate C++ Programming	4
or		
CS 282	Intermediate Java Programming and Functional Data Structures	4
ENGR 100	Introduction to Engineering and Design	3
ENGR 119	Basic Engineering CAD	3
or		
CADD 120	Introduction to Computer-Aided Drafting and Design	3
ENGR 210	Electric Circuits	3
ENGR 270	Digital Design	4
ET 110	Introduction to Basic Electronics	4
MATH 180	Analytic Geometry and Calculus I	5
MATH 280	Analytic Geometry and Calculus II	4
MATH 284	Linear Algebra	3
PHYC 190	Mechanics and Heat	5
PHYC 200	Electricity and Magnetism	5
Total Required		50

Certificate of Achievement

Students who complete the certificate requirements above qualify for a Certificate in Electrical and Computer Engineering. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

V. MECHANICAL AND AEROSPACE ENGINEERING**Program Outcomes**

Upon completion of this program, students will be able to:

- Visualize 3D objects and draw them in 2D, both by sketching and through the use of computer-aided drafting software; produce a complete set of drawings sufficient to manufacture a part, including dimensions and tolerances.
- Solve engineering problems through computer modeling, employing an engineering computer language such as Matlab.
- Design a rigid structure such as a bridge, determining forces in each part of the structure. Determine the weight and location of the structure's center of gravity.
- Design a dynamic system such as a piston or linkage and compute forces, accelerations, and speeds of all components of the system.
- Select an appropriate material for manufacturing a part or product and determine the appropriate material processing techniques to produce the part. Justify the choice of material on the basis of macroscopic mechanical properties as well as microstructure.
- Determine the DC and steady-state AC voltages and currents everywhere in an electric circuit composed of passive components.
- Model vibrating systems using systems of 2nd order differential equations.

Associate in Science Degree Requirements:

Course	Title	Units
CHEM 141	General Chemistry I	5
ENGR 100	Introduction to Engineering and Design	3
ENGR 119	Basic Engineering CAD	3
or		
CADD 120	Introduction to Computer-Aided Drafting and Design	3
ENGR 120	Engineering Computer Applications	3
ENGR 200	Engineering Mechanics–Statics	3
ENGR 210	Electric Circuits	3
ENGR 220	Engineering Mechanics–Dynamics	3
ENGR 260	Engineering Materials	3
MATH 180	Analytic Geometry and Calculus I	5
MATH 280	Analytic Geometry and Calculus II	4
MATH 281	Intermediate Calculus	4
MATH 285	Differential Equations	3
PHYC 190	Mechanics and Heat	5
PHYC 200	Electricity and Magnetism	5
PHYC 210	Wave Motion and Modern Physics	5
Total Required		57
Plus General Education Requirements		

VI. MECHANICAL AND AEROSPACE ENGINEERING**Certificate Outcomes**

Upon completion of this certificate, students will be able to:

- Visualize 3D objects and draw them in 2D, both by sketching and through the use of computer-aided drafting software; produce a complete set of drawings sufficient to manufacture a part, including dimensions and tolerances.
- Solve engineering problems through computer modeling, employing an engineering computer language such as Matlab.
- Design a rigid structure such as a bridge, determining forces in each part of the structure. Determine the weight and location of the structure's center of gravity.
- Design a dynamic system such as a piston or linkage and compute forces, accelerations, and speeds of all components of the system.
- Select an appropriate material for manufacturing a part or product and determine the appropriate material processing techniques to produce the part. Justify the choice of material on the basis of macroscopic mechanical properties as well as microstructure.
- Determine the DC and steady-state AC voltages and currents everywhere in an electric circuit composed of passive components.
- Model vibrating systems using systems of 2nd order differential equations.

Certificate Requirements:

Course	Title	Units
CHEM 141	General Chemistry I	5
ENGR 100	Introduction to Engineering and Design	3
ENGR 119	Basic Engineering CAD	3
or		
CADD 120	Introduction to Computer-Aided Drafting and Design	3
ENGR 120	Engineering Computer Applications	3
ENGR/CADD 125	3D Solid Modeling	3
ENGR 200	Engineering Mechanics–Statics	3
ENGR 220	Engineering Mechanics–Dynamics	3
ENGR 260	Engineering Materials	3
MATH 180	Analytic Geometry and Calculus I	5
MATH 280	Analytic Geometry and Calculus II	4
PHYC 190	Mechanics and Heat	5
Total Required		40

Certificate of Achievement

Students who complete the certificate requirements above qualify for a Certificate in Mechanical and Aerospace Engineering. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

CERTIFICATE OF SPECIALIZATION:**MECHATRONICS**

This certificate is designed for students interested in designing automatic electromechanical devices and systems. The curriculum provides the foundation for further studies in electrical and mechanical engineering.

Certificate Outcomes

Upon completion of this certificate, students will be able to:

- Write computer programs in high-level languages such as C or Basic and, when appropriate, in assembly language to control the operation of a microcontroller. In particular, students will be able to apply the following microcontroller capabilities: memory-mapped I/O (input/output), analog-to-digital (A/D) conversion, and volatile and non-volatile memory.
- Design automatic devices and control systems which can respond to inputs from sensors with appropriate outputs in the form of motion, light, and sound.
- Control servo, DC, AC, and stepper motors.
- Design an autonomous robot that can survive in an uncertain environment by building up complex behaviors from a combination of simple and robust responses to stimuli.

Certificate Requirements:

Course	Title	Units
ENGR 170	Mechatronics: Introduction to Microcontrollers	2
and		
ENGR 171	Mechatronics: Introduction to Robotics	2
or		
ENGR 175	Mechatronics: Introduction to Microcontrollers and Robotics	2
ENGR 172	Mechatronics: Intermediate Microcontrollers	2
and		
ENGR 173	Mechatronics: Intermediate Robotics	2
or		
ENGR 176	Mechatronics: Intermediate Microcontrollers and Robotics	2
Total Required		4-8

Students who complete the requirements above qualify for a Certificate in Mechatronics. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

ENGLISH

This major fulfills lower division requirements at most four-year colleges and universities and thus provides a broad-based foundation for transfer. For particular requirements, transfer students should consult the appropriate four-year college or university catalog.

The study of English gives lifelong pleasure to students in exploring and understanding how language works to express human ideas and feelings. English course work also helps people succeed in such diverse fields as teaching, writing, editing, journalism, advertising, public relations, law, film and video work, politics, business and medicine.

Program Outcomes

Upon completion of this program, students will be able to:

- Demonstrate the ability to express themselves effectively in largely error-free writing in multiple modes and genres.
- Demonstrate the ability to analyze a variety of texts including fiction and non-fiction.
- Utilize the writing process to approach, complete and refine writing projects.
- Demonstrate familiarity with major British, American, and world authors and literary movements.
- Locate, evaluate, and effectively integrate outside research into their own writing to support their explicit theses while avoiding plagiarism and adhering to scholarly standards for citation of information.

CAREER OPPORTUNITIES

- Actor/Actress
- * College English Professor
- * Copywriter
- * Editor
- Fiction/Nonfiction Writer
- Foreign Service Officer
- †Freelance Writer
- * Lawyer
- * Librarian
- * Media Planner
- * Museum Curator
- †Newscaster
- †Playwright
- * Publisher
- * Reporter
- * Researcher
- * Secondary School Teacher
- * Bachelor Degree or higher required
- †Bachelor Degree normally recommended

Associate in Arts Degree Requirements:

Course	Title	Units
ENGL 120	College Composition and Reading	3
ENGL 122	Introduction to Literature	3
ENGL 124	Advanced Composition: Critical Reasoning and Writing	3
ENGL 126	Creative Writing	3
ENGL 270	World Literature I	3
ENGL 271	World Literature II	3
		18

Select two of the following:

ENGL 221	British Literature I	3
ENGL 222	British Literature II	3
ENGL 231	American Literature I	3
ENGL 232	American Literature II	3
ENGL 275	Literary Period	3
ENGL 276	Major Author	3
ENGL 277	Literary Theme	3
		6

Select one of the following:

ENGL 201	Introduction to Images of Women in Literature	3
ENGL 202	Introduction to Film as Literature	3
ENGL 207	Romantic Fiction	3
ENGL 214	Masterpieces of Drama	3
ENGL 217	Fantasy and Science Fiction	3
		3

Select one of the following:

ANTH 120	Cultural Anthropology	3
HIST 100	Early World History	3
HIST 101	Modern World History	3
HIST 105	Early Western Civilization	3
HIST 106	Modern Western Civilization	3
HUM 120	European Humanities	3
HUM 140	American Humanities	3
HUM 155	Mythology	3
PHIL 115	History of Philosophy I: Ancient and Medieval	3

PHIL 117	History of Philosophy II: Modern and Contemporary	3
RELG 215	Introduction to the New Testament	3
		3
	Total Required	30
	Plus General Education Requirements	

Recommended Electives: Students planning to transfer to four-year institutions to complete a bachelor's degree in English are STRONGLY urged to take the following courses, depending on the requirements at those schools: Two sequential semesters of a single foreign language (10 units).

Certificate of Achievement

Students who complete only the major requirements above qualify for a Certificate in English. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

ENTREPRENEURSHIP- SMALL BUSINESS MANAGEMENT

This degree program provides a course of study for students who are interested in developing an appreciation and understanding of the functional areas within the small business environment. The degree provides a working knowledge of small business operations to both the prospective business person as well as the owner/manager of an existing business, and is co-sponsored by the Small Business Administration.

Program Outcomes

Upon completion of this program, students will be able to:

- Demonstrate entrepreneurial thinking as it applies to their chosen discipline by successfully completing practicum in which they apply principles of innovation to a project or develop an idea for a new business outside of the practicum.
- Understand what it takes to start a new venture, including the basics of finance, marketing and management for a new and growing business.
- Learn how to identify their personal strengths as an entrepreneur and how to build an effective leadership team for a new business.
- Establish connections with the entrepreneur community within their profession.

CAREER OPPORTUNITIES

Administrative Assistant
Assistant Manager
Bookkeeper
Small Business Owner/Manager

Associate in Science Degree Requirements:

Course	Title	Units
BUS 109	Elementary Accounting	3
	or	
BUS 120	Financial Accounting	4
BUS 110	Introduction to Business	3
BUS 111	Entrepreneurship: Starting and Developing a Business	3
BUS 125	Business Law: Legal Environment of Business	3
BUS 128	Business Communication	3
		15-16

Select two of the following:

BUS 112	Entrepreneurship: Successful Marketing	3
BUS 141	Entrepreneurship: Managing a New Business	3
BUS 146	Marketing	3

BUS 156	Principles of Management	3
BUS 176	Computerized Accounting Applications	2
CIS 212	Introduction to Web Development	3
		5-6

Select at least three units from the following:

BOT 100	Basic Keyboarding	1
BOT 101AB	Keyboarding/Document Processing	1.5
BOT 102AB	Intermediate Keyboarding/ Document Processing I-II	3
BOT 114	Essential Word	1
BOT 115	Essential Excel	1
BOT 116	Essential Access	1
BOT 117	Essential PowerPoint	1
CIS 105	Introduction to Computing	3
CIS 110	Principles of Information Systems	4
		3
	Total Required	23-25
	Plus General Education Requirements	

Certificate of Achievement

Students who complete only the major requirements above qualify for a Certificate in Entrepreneurship–Small Business Management. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

ENVIRONMENTAL HEALTH AND SAFETY MANAGEMENT

This degree and certificate program provides entry level skills as well as upgrading and/or refining of existing skills of individuals employed in the field of Environmental Health and Safety Management. The curriculum prepares students for transfer to four-year institutions in an environmental technology or related major. Courses are designed for students pursuing careers in Environmental Management and Occupational Safety and Health with an emphasis on training, regulatory compliance and program development, consulting, pollution prevention, recycling, remediation, conservation, and program management.

CAREER OPPORTUNITIES

- * Air Quality Engineer
- Asbestos Materials Building Remover
- Associate Toxic Waste Specialist
- Chemical Handler
- * Environmental Engineer
- Environmental Hazardous Material Technician
- Environmental Health and Safety Specialist
- * Environmental Journalist
- * Environmental Lawyer
- Environmental Manager
- * Environmental Protection Specialist
- Environmental Research – Test Technician
- Game or Fishery Technician
- * Geologist
- Health and Safety Technician
- Industrial Hygiene Technician
- Land Use and Planning Technician
- Mold Remediation Technician
- Occupational Health and Safety Technician
- Pollution Control Technician
- Recycling Coordinator
- Risk Management Officer
- Risk Management Technician
- Safety Officer
- Safety Specialist
- * Soils Analyst
- Solar Energy Installer
- Wastewater Treatment Operator
- Water Treatment Operator
- * Bachelor Degree or higher required

I. ENVIRONMENTAL MANAGEMENT

Program Outcomes

Upon completion of this program, students will be able to:

- Identify and interpret Federal, State and local regulations related to Environmental Health and Safety Management.
- Understand and analyze historical environmental laws and regulations which impact hazardous material management and their effect on the environment.
- Identify and Interpret Federal, state and local regulations related to air pollution.
- Define and describe the components of the Hazard Communication Standards required "Hazardous Communication Plan."
- Identify and describe components of Storm Water Pollution Prevention Plans in accordance with the Clean Water Act.
- Describe and define Regional Water Quality Control Board role in Clean Water Act over site and enforcement of National Pollution Discharge Elimination System (NPDES) permitting and inspections.
- Understand and analyze historical environmental laws and regulations which impact hazardous material management and their effect on the environment.
- Describe and apply terms common to the hazardous materials industry.
- Describe agencies that regulate specific hazardous materials.

Associate in Science Degree Requirements:

Course	Title	Units
BIO 112	Contemporary Issues in Environmental Resources	3
BIO 130	General Biology I	3
BIO 131	General Biology I Laboratory	1
CHEM 115	Fundamentals of Chemistry	4
EHSM 100	Introduction to Environmental and Occupational Safety and Health (OSH) Technology	4
EHSM 110	Pollution Prevention	3
EHSM 150	Hazardous Waste Management Applications	4
EHSM 200	Hazardous Materials Management (HMM) Applications	4
EHSM 210	Industrial Wastewater and Stormwater Management	4
EHSM 215	Air Quality Management	3
EHSM 230	Safety and Emergency Response	4
EHSM 240	Cooperative Work Experience	1-4
		38-41

Select one of the following:

CIS 110	Principles of Information Systems	4
COMM 122	Public Speaking	3
SPAN 120	Spanish I	5
		3-5
	Total Required	41-46
	Plus General Education Requirements	

II. ENVIRONMENTAL TECHNICIAN

Certificate Outcomes

Upon completion of this certificate, students will be able to:

- Identify and interpret Federal, State and local regulations related to Environmental Health and Safety Management.
- Understand and analyze historical environmental laws and regulations which impact hazardous material management and their effect on the environment.
- Identify and Interpret Federal, state and local regulations related to air pollution.
- Define and describe the components of the Hazard Communication Standards required "Hazardous Communication Plan."

- Identify and describe components of Storm Water Pollution Prevention Plans in accordance with the Clean Water Act.
- Describe and define Regional Water Quality Control Board role in Clean Water Act over site and enforcement of National Pollution Discharge Elimination System (NPDES) permitting and inspections.
- Understand and analyze historical environmental laws and regulations which impact hazardous material management and their effect on the environment.
- Describe and apply terms common to the hazardous materials industry.
- Describe agencies that regulate specific hazardous materials.

Certificate Requirements:

Course	Title	Units
EHSM 100	Introduction to Environmental and Occupational Safety and Health (OSH) Technology	4
EHSM 110	Pollution Prevention	3
EHSM 150	Hazardous Waste Management Applications	4
EHSM 200	Hazardous Materials Management (HMM) Applications	4
EHSM 210	Industrial Wastewater and Stormwater Management	4
EHSM 215	Air Quality Management	3
EHSM 230	Safety and Emergency Response	4
EHSM 240	Cooperative Work Experience	1-3
Total Required		27-29

Certificate of Achievement

Students who complete the requirements above qualify for a Certificate in Environmental Technician. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

III. OCCUPATIONAL SAFETY AND HEALTH (OSH) MANAGEMENT

Program Outcomes

Upon completion of this program, students will be able to:

- Identify and evaluated hazardous material routes of entry, toxic effect, risk evaluation and control measures to reduce their exposure and effects.
- Describe and apply terms common to the hazardous materials industry.
- Apply California and Federal safety standards to assess worksites and recognize hazardous conditions and/or noncompliance.
- Assess and evaluate job processes to identify and implement appropriate risk management strategies.
- Describe agencies that regulate specific hazardous materials.
- Interpret Federal, State and Local regulations governing Construction Safety.
- Define and apply "safe work practices", "worker Right to Know" and Community Right to Know" requirements.
- Identify and evaluated hazardous material routes of entry, toxic effect, risk evaluation and control measures to reduce their exposure and effects.
- Identify key mandatory components of an Injury Illness Prevention Plan (IIPP) in compliance with SB198.

Associate in Science Degree Requirements:

Course	Title	Units
BIO 130	General Biology I	3
BIO 131	General Biology I Laboratory	1
CHEM 115	Fundamentals of Chemistry	4
EHSM 100	Introduction to Environmental and Occupational Safety and Health (OSH) Technology	4
EHSM 130	Environmental/Occupational Health Effects of Hazardous Materials	3
EHSM 135	General Industry Safety Standards	3
EHSM 145	Construction Safety Standards	3
EHSM 200	Hazardous Materials Management (HMM) Applications	4
EHSM 201	Introduction to Industrial Hygiene and Occupational Health	4
EHSM 205	Safety and Risk Management Administration	4
EHSM 230	Safety and Emergency Response	4
EHSM 240	Cooperative Work Experience	1-4
		38-41

Select one of the following:

CIS 110	Principles of Information Systems	4
COMM 122	Public Speaking	3
SPAN 120	Spanish I	5
		3-5
Total Required		41-46
Plus General Education Requirements		

IV. OCCUPATIONAL SAFETY AND HEALTH (OSH) TECHNICIAN

Certificate Outcomes

Upon completion of this certificate, students will be able to:

- Identify and evaluated hazardous material routes of entry, toxic effect, risk evaluation and control measures to reduce their exposure and effects.
- Describe and apply terms common to the hazardous materials industry.
- Apply California and Federal safety standards to assess worksites and recognize hazardous conditions and/or noncompliance.
- Assess and evaluate job processes to identify and implement appropriate risk management strategies.
- Describe agencies that regulate specific hazardous materials.
- Interpret Federal, State and Local regulations governing Construction Safety.
- Define and apply "safe work practices", "worker Right to Know" and Community Right to Know" requirements.
- Identify and evaluated hazardous material routes of entry, toxic effect, risk evaluation and control measures to reduce their exposure and effects.
- Identify key mandatory components of an Injury Illness Prevention Plan (IIPP) in compliance with SB198.

Certificate Requirements:

Course	Title	Units
EHSM 100	Introduction to Environmental and Occupational Safety and Health (OSH) Technology	4
EHSM 130	Environmental/Occupational Health Effects of Hazardous Materials	3
EHSM 135	General Industry Safety Standards	3
EHSM 200	Hazardous Materials Management (HMM) Applications	4
EHSM 201	Introduction to Industrial Hygiene and Occupational Health	4
EHSM 240	Cooperative Work Experience	1-4
		19-22

Select two of the following:

EHSM 145	Construction Safety Standards	3
EHSM 205	Safety and Risk Management Administration	4
EHSM 230	Safety and Emergency Response	4
		7-8
Total Required		26-30

Certificate of Achievement

Students who complete the requirements above qualify for a Certificate in Occupational Safety and Health (OSH) Technician. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

EXERCISE SCIENCE

This degree program is designed to prepare students for a variety of careers including education, physical therapy, coaching, personal training and other allied health professions by providing classes oriented toward fitness, wellness and health promotion throughout the lifespan. The major also provides preparation for transfer to a four-year college in physical education, exercise physiology, kinesiology, nutrition or athletic training, as well as teacher credentialing programs.

Program Outcomes

Upon completion of this program, students will be able to:

- List and define the five basic components of physical fitness.
- Describe the concepts of frequency, intensity and time, and how they relate to personal fitness goals.
- Outline a basic strategy for achieving fitness through the lifespan.
- List options within the community for continued lifelong physical activity.
- List benefits of daily physical activity.
- Demonstrate competence in acquiring sound nutritional information.
- Demonstrate improvement in sport skills.
- Outline appropriate goals and activities for increasing the fitness of children.
- Describe appropriate preventive measures as well as treatments for various sport injuries.
- List and describe opportunities for employment in the field.
- Describe their field of interest and a course of instruction that will meet their professional needs.

CAREER OPPORTUNITIES

- Aerobics Instructor
- Athletics Coach
- *Athletics Trainer
- *Cardiovascular Rehabilitation
- *College Professor
- *Elementary School Teacher
- *Exercise Physiologist
- *Health Club Manager
- Personal Trainer
- *Physical Therapist/ Assistant
- *Registered Dietician
- *Secondary School Teacher
- *Teaching
- *Bachelor Degree or higher required

Associate in Science Degree Requirements:

Course	Title	Units
BIO 130	General Biology I	3
BIO 131	General Biology I Laboratory	1
BIO 140	Human Anatomy	5
CHEM 115	Fundamentals of Chemistry	4
COMM 122	Public Speaking	3
ES 014ABC	Body Building	1.5
ES 250	Introduction to Kinesiology	3
ES 255	Care and Prevention of Athletic Injuries	3
HED 158	Nutrition for Fitness and Sports	3
or		
HED 255*	Science of Nutrition	3
PSY 120	Introductory Psychology	3
SOC 120	Introductory Sociology	3
		32.5

Select one of the following:

BIO 215	Statistics for Life Sciences	3
MATH 160	Elementary Statistics	3
PSY 215	Statistics for the Behavioral Sciences	3
		3

Select two of the following (fulfills the activity requirement for the associate degree):

ES 001	Adapted Physical Exercise	1
ES 009	Aerobic Dance Exercise	1
ES 019ABC	Physical Fitness	1.5
ES 060ABC	Badminton	1
ES 076ABC	Tennis	1
ES 125ABC	Golf	1
ES 155ABC	Basketball	1
ES 170ABC	Soccer	1
ES 171ABC	Softball	1
ES 175ABC	Volleyball	1
		2-2.5
Total Required		37.5-38
Plus General Education Requirements		

*Students planning to transfer to SDSU must take HED 255.

CERTIFICATE OF SPECIALIZATION:**RECREATIONAL LEADERSHIP–SCHOOL-BASED PROGRAMS**

This certificate offers specific training for entry-level positions or for advancement in child care and outdoor programs for children and families. It is designed to demonstrate an area of expertise that may be used to attain employment in areas of school-based recreation and fitness programs.

Certificate Outcomes

Upon completion of this certificate, students will be able to:

- Describe and/or demonstrate an hour of cooperative activity for children.
- Describe how principles learned in class may be applied to improve cardiovascular endurance, muscle strength, muscle endurance, and flexibility and body composition, (the five basic components of fitness) in children using walking as a primary conditioning activity.
- Investigate and list causes and risk factor associated with childhood obesity.
- Describe and prepare appropriate snacks for children.
- Demonstrate appropriate classroom organizational and management techniques.
- Demonstrate the ability to plan school-based recreational programs which deliberately intend to advance, stimulate or otherwise enhance children's physical, emotional and social development in ways which are appropriate to their developmental level.
- Describe tested and proven teaching approaches to analyze and enhance movement competencies.

Career Opportunities

Students may find positions in an elementary or middle school, YMCA, recreation center, day or residential camp, or after school day care program. This is a great "stepping-stone" training for those who want to major in exercise science, recreation, elementary education or child development. Provides students with the expertise to enter the entry-level job market with knowledge of sound principles of fitness and developmentally appropriate recreation.

Students who complete the requirements below and hold a current First Aid/CPR certification qualify for a Certificate in Recreational Leadership–School-Based Programs. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

Certificate Requirements:

Course	Title	Units
CD 125	Child Growth and Development	3
CD 157	Food and Nutrition for Children	3
ES 253	Physical Education in Elementary Schools	3
ES 270	Cooperative Games	1
ES 271	Fitness Walking with Children	1
ES 272	Issues in Childhood Obesity	1
ES 273	Field Experience in School-Based Recreational Leadership	1
Total Required		13

GENERAL STUDIES

The Associate Degree in General Studies with an Area of Emphasis provides an opportunity for students to design a program of study meaningful and appropriate to their own needs and academic interests. The degree includes general education and a focused area of study. Students may choose to earn this degree for preparation for employment or for personal development.

REQUIREMENTS

To meet the General Studies degree requirements, a student must complete the following:

I. AS or AA General Education Requirements (see Degree Requirements and Transfer Information section)**AND****II. Areas of Emphasis**

Choose a minimum of 18 units from one Area of Emphasis:

- Business and Technology
- Communication and Language Arts
- Humanities and Fine Arts
- Lifelong Health and Fitness
- Science and Mathematics
- Social and Behavioral Sciences

A. Business and Technology

The Associate in Science in General Studies with an Emphasis in Business and Technology will be awarded to students upon completion of general education degree requirements and 18 units in this area. These courses emphasize the study of business transaction theory and practice, the operations and strategies of business decisions, legal concepts, and the place of business in the American and global economy as a whole. Students will apply mathematical and quantitative reasoning skills to the discipline's methodologies, as well as evaluate and interpret basic economic principles and theories related to performance

and specific economic sectors. Students must take a minimum of three units from each area. The remaining units may be taken from any area.

Program Outcomes

Upon completion of this program, students will be able to:

- Contribute to an effective and ethical organization.
- Use information technology to support effective decision making in the business organization.
- Analyze markets, economic environments and associated trends at the macro and micro levels.
- Express and apply quantitative information in order to make sound decisions and solve problems in the business environment.

Business

BUS 109, 110, 111, 112, 114, 115, 119, 120, 121, 122, 124, 125, 128, 129, 141, 146, 150, 154, 155, 156, 157, 159ABCD, 162, 176, 195, 240, 242

Computer and Information Science

CIS 105, 110, 120, 121, 125, 140, 161, 162, 190, 191, 201, 202, 203, 204, 205, 211, 212, 213, 215, 216, 219, 240, 242, 261, 262, 263, 290, 291

Economics

ECON 110, 120, 121

Mathematics

MATH 160, 178, 180

B. Communication and Language Arts

The Associate in Arts in General Studies with an Emphasis in Communication and Language Arts will be awarded to students upon completion of general education degree requirements and 18 units in this area. These courses emphasize the study of how language works to express human ideas and feelings. Students will explore and analyze written and verbal communication methods, as well as develop and advance their oral and written communication skills. Students must complete a minimum of six units in Communication and six units in Language Arts. The remaining six units may be taken from either category.

Program Outcomes

Upon completion of this program, students will be able to:

- Demonstrate the ability to write effectively.
- Demonstrate the ability to locate relevant, reliable information and read it effectively.
- Organize thoughts and ideas in both oral and written format.
- Communicate effectively with diverse audiences.

Communication

COMM 110, 120, 122, 123, 124, 135, 136, 137, 145

Language Arts

ARAM 120, 121, 220, 221
ARBC 120, 121, 220, 221, 250, 251
ASL 120, 121, 220, 221
ENGL 122, 124, 126, 135-138, 201, 202, 207, 214, 217, 221, 222, 231, 232, 270, 271, 275, 276, 277
FREN 120, 121, 220, 221, 250, 251
ITAL 120, 121, 220
LIR 110
NAKY 120, 121, 220, 221
SPAN 120, 120A, 120B, 121, 220, 221, 250, 251

C. Humanities and Fine Arts

The Associate in Arts in General Studies with an Emphasis in Humanities and Fine Arts will be awarded to students upon completion of general education degree requirements and 18 units in this area. These courses emphasize the study of cultural, humanistic activities and 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 through artistic and cultural creation. Students will develop an aesthetic awareness and incorporate these concepts when constructing value judgments. Students must complete a minimum of six units in Humanities and six units in Fine Arts. The remaining six units may be taken from either category.

Program Outcomes

Upon completion of this program, students will be able to:

- Analyze the principle elements of representative examples of art, architecture, literature, theater, philosophy, music, dance, film, or other relevant areas of cultural and/or intellectual creativity.
- Demonstrate an awareness of the historical and philosophical contexts of representative areas, movements, media, works, or styles of cultural and/or intellectual creativity.
- Employ the language, concepts and methods of interpretive criticism as applicable to the respective categories of human creativity.
- When applicable, apply artistic processes and skills as a creative expression, using a variety of media to communicate meaning and intent in original works of art.

Humanities

ARAM 120, 121, 220
 ARBC 120, 121, 220, 221, 250, 251
 ASL 120, 121, 220, 221
 COMM 124
 ENGL 201, 202, 207, 214, 217, 221, 222, 231, 232, 270, 271, 275, 276, 277
 FREN 120, 121, 220, 221, 250, 251
 HIST 100, 101, 105, 106
 HUM 110, 115, 120, 140, 155
 ITAL 120, 121, 220
 NAKY 120, 121, 220, 221
 PHIL 110, 115, 117
 RELG 120, 130, 210, 215
 SPAN 120, 120A, 120B, 121, 220, 221, 250, 251

Fine Arts

ART 100, 120, 121, 124, 125, 129, 135, 140, 141, 143, 144, 145, 220, 221, 222, 224, 225, 230, 231, 232, 233, 235, 236
 MUS 110, 111, 114, 115, 116, 117
 THTR 110, 120, 121

D. Lifelong Health and Well-Being

The Associate in Arts in General Studies with an Emphasis in Lifelong Health and Well-Being will be awarded to students upon completion of general education degree requirements and 18 units in this area. These courses focus on the improvement of health and well-being and are designed to provide knowledge of how to obtain optimal health, physical skill, and fitness throughout the lifespan. Potential career fields that students will be prepared for upon completion include recreation leaders, personal trainers, coaches, and commercial fitness center staff. Students must take a minimum of six units in Health, six units in Exercise Science, and three units in Nutrition. The remaining three units may be taken from any category.

Program Outcomes

Upon completion of this program, students will be able to:

- Demonstrate an understanding of optimal health and fitness in daily life through informed decision-making.
- Describe basic principles of nutrition.
- Value the importance of physical activity through the lifespan.

Health

HED 105, 120, 122, 201, 202, 203, 251

Exercise Science

CD 200, 201, 202
 ES 207, 219, 225, 231, 250, 253, 254, 254L, 255, 270, 271, 272, 273

Nutrition

HED 155, 158, 255

E. Science and Mathematics

The Associate in Science in General Studies with an Emphasis in Science and Mathematics will be awarded to students upon completion of general education degree requirements and 18 units in this area. These courses emphasize the study of mathematical and quantitative reasoning skills and apply the facts and principles that form the foundations of living and non-living systems. Students will recognize and utilize the methodologies of science as investigative tools, as well as the limitations of science. Students will use basic mathematical skills to solve numerical problems encountered in daily life, and more advanced skills for applications in the physical and life sciences. Students must complete a minimum of six units in Science and six units in Mathematics. The remaining six units may be taken from any category.

Program Outcomes

Upon completion of this program, students will be able to:

- Use algebraic methods to solve problems.
- Interpret basic mathematical models and draw inferences from them.
- Represent mathematical information symbolically, visually, numerically and verbally.
- Use the scientific method of inquiry and techniques to answer questions about physical and biological processes.
- Analyze basic concepts of physical and biological science to evaluate scientific information and solve scientific problems.

Science

ANTH 130
 ASTR 110, 112
 BIO 112, 115, 122, 124, 128, 130, 131, 140, 141, 141L, 152, 210, 220, 221, 230, 240, 251
 CHEM 102, 105, 113, 115, 116, 120, 141, 142, 230, 231, 240, 251
 ET 110
 GEOG 120, 121
 GEOL 104, 110, 111
 OCEA 112, 113
 PHYC 110, 120, 121, 130, 131, 190, 200, 210
 PSC 110, 111

Mathematics

BIO 215
 MATH 103 or 110, 120, 125, 126, 150, 160, 170, 175, 176, 178, 180, 245, 280, 281, 284, 285
 PSY 215

CADD and Engineering

CADD 115, 120, 125
 ENGR 100, 119, 120, 125, 175, 176, 218, 270

Computer Science

CS 119, 119L, 180, 181, 182, 280, 281, 282, 289

F. Social and Behavioral Sciences

The Associate in Arts in General Studies with an Emphasis in Social and Behavioral Sciences will be awarded to students upon completion of general education degree requirements and 18 units in this area. These courses emphasize the study and understanding of human behavior. Students will evaluate and interpret human societies; the institutions, organizations and groups that form them; the ways in which individuals and groups relate to one another; and various approaches and methodologies of the disciplines. Students must complete a minimum of six units in Social Science and six units in Behavioral Science. The remaining six units may be taken from either category.

Program Outcomes

Upon completion of this program, students will be able to:

- Describe general principles of the political institutions and government of the United States.
- Demonstrate an understanding and appreciation of social, political, and economic institutions within a historical perspective.
- Evaluate the ways people act and interact in cultures, societies and social subgroups.
- Assess how social issues are influenced by geographical and historical processes.
- Apply knowledge of social and behavioral sciences theories and scientific methods in an assessment of real-world problems.

Social Science

ANTH 120
 ARBC 145
 ECON 110, 120, 121, 124
 GEOG 106, 122, 130, 132
 HIST 100, 101, 105, 106, 108, 109, 118, 119, 122, 123, 124, 130, 131, 132, 180, 181, 271, 275, 276, 277
 POSC 120, 121, 124, 130, 140
 SOC 120, 125, 130

Behavioral Science

CD 115, 125, 131
 COMM 110, 124
 HED 203, 251
 PSY 120, 125, 134, 138, 140, 165, 170, 220

GRAPHIC DESIGN

Students in this degree program develop entry level skills in design aesthetics, typography, illustration, digital imaging, page layout, web design and professional business practices. The course work provides training with state of the art computer hardware and software used in the graphic design profession. Students develop a professional portfolio for job interviews. *Designed for a two-year degree or certificate only. Students interested in pursuing a bachelor's degree should refer to the Art-Graphic Design (Transfer) degree; please consult the catalog of the transfer institution for specific requirements.*

Program Outcomes

Upon completion of this program, students will be able to:

- Analyze the historical and cultural context of graphic design.
- Apply the principles of design and use the design process to create graphic works.
- Evaluate the aesthetic qualities and criticize works of graphic design.
- Integrate typography as part of design communication.
- Apply business methods, procedures, ethics, and connections to industry.

CAREER OPPORTUNITIES

- * Advertising Director
- * Art Director
 - Cartoonist
 - Desktop Publisher
 - Display Designer
 - Graphic Designer
 - Illustrator
- * Marketing Director
 - Multimedia Designer
 - Package Designer
 - Technical Illustrator
 - Web Page Designer

* Bachelor Degree or higher required

Course Equivalencies:

The following Cuyamaca and Grossmont College courses are considered similar enough to be treated as equivalent. Modification of Major forms are not required.

	<i>Similar</i>	<i>Grossmont</i>
<i>Cuyamaca</i>		<i>Cuyamaca</i>
<i>Course</i>		<i>Course</i>
GD 222	CSIS 137	

Associate in Science Degree Requirements:

<i>Course</i>	<i>Title</i>	<i>Units</i>
ART 124	Drawing I	3
CIS 212	Introduction to Web Development	3
GD 105	Fundamentals of Digital Media	3
GD 110	Graphic Design Principles	3
GD 125	Typography	3
GD 126	Photoshop Digital Imaging	3
GD 129	Page Layout	3
GD 130	Professional Business Practices	3
GD 225	Digital Illustration	3
		27

Select three of the following:

ART 230	Figure Drawing I	3
GD 210	Professional Digital Photography I	3
GD 211	Professional Digital Photography II	3
GD 217	Web Graphics	3
GD 222	Flash Web Animation	3
GD 223	Advanced Flash Web Animation	3
GD 230	Graphic Design Work Experience	1-4
		7-10
	Total Required	34-37
	Plus General Education Requirements	

Certificate of Achievement

Students who complete only the major requirements above qualify for a Certificate in Graphic Design. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

CERTIFICATES OF SPECIALIZATION:

These certificates offer specific training either for entry-level positions or to augment related programs such as Web Development or Graphic Design. They are designed to demonstrate a relatively narrow expertise or skill area that may be used to attain a graphic design "niche" job.

Students who complete the requirements below qualify for a certificate in that area of emphasis. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

I. DIGITAL PHOTOGRAPHY

Certificate Outcomes

Upon completion of this certificate, students will be able to:

- Create photographic images applying the principles of design.

- Evaluate the aesthetic qualities and criticize works of photography.
- Demonstrate the use of digital cameras and scanners.

Certificate Requirements:

<i>Course</i>	<i>Title</i>	<i>Units</i>
GD 110	Graphic Design Principles	3
GD 126	Photoshop Digital Imaging	3
GD 130	Professional Business Practices	3
GD 210	Professional Digital Photography I	3
GD 211	Professional Digital Photography II	3
	Total Required	15

II. WEB GRAPHICS

Certificate Outcomes

Upon completion of this certificate, students will be able to:

- Create graphic images in the proper formats for use on the web.
- Develop web pages using proper typographic treatment and navigational devices.

Certificate Requirements:

<i>Course</i>	<i>Title</i>	<i>Units</i>
CIS 212	Introduction to Web Development	3
GD 110	Graphic Design Principles	3
GD 210	Professional Digital Photography I	3
GD 217	Web Graphics	3
GD 222	Flash Web Animation	3
	Total Required	15

HISTORY

This major prepares students for transfer to four-year institutions for continued study in the field of history. The degree program fulfills the lower division requirements for most majors in the history department at San Diego State University and is typical of requirements at other four-year schools. For special requirements, transfer students should consult the catalog of the college or university of their choice. History classes provide useful background for students in such fields as history, education, political science and law.

Program Outcomes

Upon completion of this program, students will be able to:

- Recognize theories of historical interpretation.
- Distinguish between primary and secondary sources.
- Describe historical and philosophical underpinnings of government systems and ideologies.
- Demonstrate how literature and the arts help us understand the past.
- Define historical periods and transitions.

CAREER OPPORTUNITIES

- * Anthropologist
- * Archaeologist
- * Attorney
- * Cartographer
- * College History Professor
- * Historian
- * Intelligence Analyst
- * Journalist
 - Legislative Assistant
 - Politician
- * Research Historian
- * Secondary School Teacher
- * Travel Advisor
- * Technical Writer
- * Textbook Writer/Editor
- * Bachelor Degree or higher required

Associate in Arts Degree Requirements:

Select twelve units from any two of the following sequences:

<i>Course</i>	<i>Title</i>	<i>Units</i>
HIST 100	Early World History	
HIST 101	Modern World History	6
HIST 105	Early Western Civilization	
HIST 106	Modern Western Civilization	6
HIST 108	Early American History	
HIST 109	Modern American History	6
		12

Select six units from the following:

HIST 118	U.S. History: Chicano/Chicana Perspectives I	3
HIST 119	U.S. History: Chicano/Chicana Perspectives II	3
HIST 122	Women in Early American History	3
HIST 123	Women in Modern American History	3
HIST 124	History of California	3
HIST 180	U.S. History: Black Perspectives I	3
HIST 181	U.S. History: Black Perspectives II	3
HIST 210	Women in Western Civilization	3
		6
	Total Required	18
	Plus General Education Requirements	

Recommended Electives: ART 140, 141; ENGL 221, 222, 231, 232; GEOG 130; POSC 121, 124, 140; RELG 120, 130

INTERSEGMENTAL GENERAL EDUCATION TRANSFER CURRICULUM (CSU OR UC)

The Certificate of Achievement in Intersegmental General Education Transfer Curriculum (IGETC) may be awarded upon completion of the IGETC requirements (see Degree Requirements and Transfer Information section). Students must complete a minimum of 39 units, which are distributed among six areas. IGETC requirements are designed to be taken with a major area of concentration and elective courses in preparation for transfer to the California State University or the University of California.

Courses completed at California Community Colleges and participating institutions will be certified based on approval at the original campus. Courses taken at other colleges and universities; i.e. out-of-state, private, may be used in the certification under certain conditions. Although this certificate recognizes the completion of lower division general education requirements for IGETC, it does not guarantee admission to a four-year institution. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

Certificate Outcomes

Upon completion of this certificate, students will be able to:

- Exhibit proficiency in written communication in English.
- Exhibit proficiency in oral communication in English (IGETC-CSU).
- Analyze, criticize and advocate ideas and reach well-supported conclusions.
- Show skills and understanding beyond the level of intermediate algebra, and apply mathematical concepts to solve problems.
- Analyze and appreciate works of philosophical, historical, literary, aesthetic and cultural importance.

- Reveal an historical understanding of major civilizations and cultures, both Western and non-Western.
- Recognize the contributions to knowledge, civilization, and society that have been made by various ethnic or cultural groups.
- Evaluate the basic concepts of physical and biological sciences.
- Use the scientific method of inquiry and techniques to answer questions about physical and biological processes.
- Cultivate a lifelong understanding and development as an integrated physiological, social, and psychological being (IGETC-CSU).
- Demonstrate proficiency in a language other than English equal to two years of high school study (IGETC-UC).

KUMEYAAY STUDIES

Certificate of Specialization

Students who complete the requirements below qualify for a Certificate in Kumeyaay Studies. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

Certificate Outcomes

Upon completion of this certificate, students will be able to:

- Communicate in the Kumeyaay language at a basic level in a variety of settings.
- Acquire an understanding of Kumeyaay heritage, history, society and traditions.
- Gain sensitivity, globalism and cultural competence of a unique peoples.

Certificate Requirements:

Course	Title	Units
GEOG 132	Cultural Ethnobotany	3
HIST 132	Kumeyaay History I: Precontact-1900	3
NAKY 120	Kumeyaay I	5
		<hr/> 11

Select one of the following:

HIST 133	Kumeyaay History II: 1900-Present	3
NAKY 121	Kumeyaay II	5
NAKY 220	Kumeyaay III	5
NAKY 221	Kumeyaay IV	5
		<hr/> 3-5
	Total Required	14-16

MANAGEMENT

This degree program is designed to provide students with the skills necessary to be successful as a manager in today's demanding organizational climate. The curriculum is beneficial to men or women who aspire to mid-level or higher management positions in any type of organization including business, government and service organizations.

Program Outcomes

Upon completion of this program, students will be able to:

- Identify and analyze business problems and opportunities and formulate recommendations for courses of action.
- Communicate effectively and professionally in business situations through physical or virtual presence, writing, speaking, listening, and electronic media.
- Demonstrate awareness of economic, environmental, political, ethical, legal and regulatory contexts of global business practices.
- Describe the concept of competitive advantage and how it may be achieved

through strategic and tactical methods and management decisions.

- Define markets and apply marketing concepts and principles using a customer focus to effectively sell products and services.
- Recognize and appropriately respond to ethical and legal concerns relating to human resource and organizational management.
- Apply accounting concepts and methods to interpret financial statements for evaluating the financial position and performance of organizations from a management perspective.

CAREER OPPORTUNITIES

- * Bank Officer
- Claim Adjuster
- † Computer Operations Supervisor
- * Director, Research and Development
- Employment Interviewer
- Financial Planner
- * Hospital Administrator
- Import-Export Agent
- Management Trainee
- † Management Consultant
- Office Manager
- Stock Broker
- * Teacher, College

- * Bachelor Degree or higher required
- † Bachelor Degree normally recommended

Associate in Science Degree Requirements:

Course	Title	Units
BUS 115	Human Relations in Business	3
BUS 120	Financial Accounting	4
BUS 125	Business Law: Legal Environment of Business	3
BUS 128	Business Communication	3
BUS 155	Human Resources Management	3
BUS 156	Principles of Management	3
COMM 122	Public Speaking	3
		<hr/> 22

Select two of the following:

BOT 123-125	Comprehensive Excel Levels I-III	3
BUS 176	Computerized Accounting Applications	2
CIS 105	Introduction to Computing	3
CIS 110	Principles of Information Systems	4
		<hr/> 5-7

Select one of the following:

BUS 110	Introduction to Business	3
BUS 121	Managerial Accounting	4
BUS 146	Marketing	3
BUS 154	Diversity in the Workplace	3
BUS 157	Principles of Leadership	3
BUS 159	Management Internship	3
BUS 195	Personal Finance	3
ECON 120	Principles of Macroeconomics	3
		<hr/> 3-4
	Total Required	30-33
	Plus General Education Requirements	

Certificate of Achievement

Students who complete only the major requirements above qualify for a Certificate in Management. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

MATHEMATICS

Since jobs requiring mathematical skills such as data analysis, problem solving, pattern recognition, statistics, and probability are in high demand, the mathematics major may benefit both educationally and economically from developing and pursuing an interest in mathematics. Mathematical skills and statistical methods are employed regularly by researchers

testing hypotheses, by workers applying quality control in manufacturing, and by informed citizens who must evaluate information from the media in tabular, graphical, and report form in order to reach solutions. This major offers a foundation in these necessary skills. The emphasis is to prepare students for transfer to a four-year institution and/or for career preparation in a vocational or professional field.

Program Outcomes

Upon completion of this program, students will be able to:

- Apply mathematical reasoning and problem solving strategies to analyze, interpret, and model applications from degree and transfer-level courses and programs in math, science, engineering, business, and technology.
- Select and apply appropriate definitions, postulates, and theorems to prove mathematical statements.

CAREER OPPORTUNITIES

- * Accountant
- * Actuary
- Air Traffic Controller
- * Auditor
- † Bank Officer
- * Budget Analyst
- Computer Operator
- * Computer Programmer
- † Cost Estimator
- † Credit and Collection Manager
- Data Processing Manager
- * Economist
- * Engineer
- * Financial Planner
- Insurance Agent/Broker
- Insurance Claim Examiner
- Laboratory Examiner
- Loan Officer
- * Market Research Analyst
- * Mathematician
- * Mathematics Teacher
- * Securities Trader
- Semiconductor Technician
- * Statistician
- Surveyor
- * Systems Analyst
- * Bachelor Degree or higher required
- † Bachelor Degree normally recommended

Associate in Science Degree Requirements:

Course	Title	Units
MATH 180	Analytic Geometry and Calculus I	5
MATH 280	Analytic Geometry and Calculus II	4
MATH 281	Intermediate Calculus	4
MATH 284	Linear Algebra	3
		<hr/> 16

Select one of the following:

MATH 245	Discrete Math	3
MATH 285	Differential Equations	3
		<hr/> 3

Select one of the following:

ENGR 120	Engineering Computer Applications	3
MATH 160	Elementary Statistics	3
PHYC 190	Mechanics and Heat	5
PHYC 200	Electricity and Magnetism	5
PHYC 210	Wave Motion and Modern Physics	5
		<hr/> 3-5
	Total Required	22-24
	Plus General Education Requirements	

Recommended Electives: Students planning to transfer to four-year institutions to complete a bachelor's degree in Pure Mathematics, Applied Mathematics, or Statistics should select an emphasis in an applied discipline such as accounting, chemistry, computer science, economics, engineering, or physics. In particular, transfer students are strongly

urged to elect the following physics courses: PHYC 190, 200, 210. Students preparing for a vocational or professional career are strongly encouraged to select an emphasis in a vocational/professional discipline such as business, computer and information science, CADD technology, electronics technology, or environmental health and safety management.

Certificate of Achievement

Students who complete only the major requirements above qualify for a Certificate in Mathematics. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

MUSIC

I. MUSIC EDUCATION

This degree program offers lower division preparation for students who want to pursue a bachelor's degree in music education and a California teaching credential in music. The primary emphasis is to prepare students for transfer to four-year music education programs.

Program Outcomes

Upon completion of this program, students will be able to:

- Analyze a musical score to determine its key, harmonic structure, musical style, and form.
- Use the piano keyboard to demonstrate musical concepts and play intermediate level compositions.
- Use a digital audio workstation to record and edit digital audio files and notate musical ideas.
- Identify musical elements in performances and relate them to their cultural and historical contexts.
- Describe the typical duties of a secondary school music teacher.
- Use either the voice or a musical instrument to perform an intermediate level work with reliable technique and appropriate stylistic interpretation.
- Perform musical works in a large vocal or instrumental ensemble.

CAREER OPPORTUNITIES

- * Arranger
- * Choral Director
- * Composer
- * Conductor
- * Copyist
- * Critic
- * Instrumentalist
- * Music Instructor/Professor
- * Music Librarian
- * Music Therapist
- * Music Typographer
- * Performer, Vocalist
- * Radio Programmer
- * Recording Company Representative
- * Teacher
- * Bachelor Degree or higher required

Associate in Arts Degree Requirements:

Course	Title	Units
MUS 105	Music Theory and Practice I	4
MUS 106	Music Theory and Practice II	4
MUS 110	Great Music Listening	3
MUS 116	Introduction to World Music	3
MUS 119	Cooperative Work Experience in Music Education	1
MUS 120	Introduction to Music Technology	3
MUS 126	Class Guitar I	2
MUS 132	Class Piano I	3
MUS 133	Class Piano II	3

MUS 170	Class Voice	2
MUS 190	Performance Studies	1
MUS 191	Performance Studies	1
MUS 232	Class Piano III	3
MUS 233	Class Piano IV	3
MUS 290	Performance Studies	1
MUS 291	Performance Studies	1
		<hr/>
		38

Select four of the following:

MUS 108	Rock, Pop and Soul Ensemble	1
MUS 109	Rock, Pop and Soul Ensemble	1
MUS 136	Chamber Singers	1
MUS 137	Chamber Singers	1
MUS 152	Concert Band	1
MUS 153	Concert Band	1
MUS 156	Jazz Ensemble	1
MUS 157	Jazz Ensemble	1
MUS 158	Chorus	1
MUS 159	Chorus	1
MUS 208	Rock, Pop and Soul Ensemble	1
MUS 209	Rock, Pop and Soul Ensemble	1
MUS 236	Chamber Singers	1
MUS 237	Chamber Singers	1
MUS 252	Concert Band	1
MUS 253	Concert Band	1
MUS 256	Jazz Ensemble	1
MUS 257	Jazz Ensemble	1
MUS 258	Chorus	1
MUS 259	Chorus	1
		<hr/>
		4
	Total Required	42
	Plus General Education Requirements	

II. MUSIC INDUSTRY STUDIES

This degree program provides lower division preparation for students wishing to transfer to a four-year program in Music Industry Studies. The curriculum combines training in music theory, literature and performance with studies in music technology and business. Transfer students should select the CSU GE Breadth or the IGETC transfer pattern (see Degree Requirements and Transfer Information section).

Program Outcomes

Upon completion of this program, students will be able to:

- Analyze a musical score to determine its key, harmonic structure, musical style, and form.
- Use the piano keyboard to demonstrate musical concepts and play beginning level compositions.
- Use a digital audio workstation to record and edit digital audio files and notate musical ideas.
- Identify musical elements in performances and relate them to their cultural and historical contexts.
- Describe the structure, components, and various career paths of the music industry.
- Demonstrate proficiency on either a musical instrument or with the voice.

CAREER OPPORTUNITIES

- * Advertising Jingle Writer
- * Arranger
- * Artist and Repertoire Manager
- * Artist Representative
- * Arts Administrator
- * Attorney specializing in Performing Arts
- * Composer
- * Concert Producer
- * Copyist
- * Instrumentalist
- * Musical Instrument Manufacturer Representative
- * Music Publisher
- * Music Retail Manager
- * Professional Songwriter
- * Publicist
- * Radio Programmer

- * Record Company representative
- * Record Producer
- * Recording Studio Engineer
- * Teacher
- * Video Game Composer
- * Vocalist
- * Bachelor Degree or higher required

Associate in Art Degree Requirements:

Course	Title	Units
MUS 104	Introduction to the Music Industry	3
MUS 105	Music Theory and Practice I	4
MUS 106	Music Theory and Practice II	4
MUS 120	Introduction to Music Technology	3
MUS 121	Music Industry Seminar	1
MUS 122	Music Industry Seminar	1
MUS 132	Class Piano I	3
MUS 133	Class Piano II	3
MUS 161	Cooperative Work Experience in Music Industry	1
MUS 221	Music Industry Seminar	1
MUS 222	Music Industry Seminar	1
		<hr/>
		25

Select two of the following:

MUS 110	Great Music Listening	3
MUS 111	History of Jazz	3
MUS 114	Music in the United States	3
MUS 115	History of Rock Music	3
MUS 116	Introduction to World Music	3
MUS 117	Introduction to Music History and Literature	3
MUS 184	Digital Audio Recording and Production	3
		<hr/>
		6

Select one of the following:

BUS 120	Financial Accounting	4
BUS 125	Business Law: Legal Environment of Business	3
		<hr/>
		3-4

Select four of the following:

MUS 108	Rock, Pop and Soul Ensemble	1
MUS 109	Rock, Pop and Soul Ensemble	1
MUS 136	Chamber Singers	1
MUS 137	Chamber Singers	1
MUS 152	Concert Band	1
MUS 153	Concert Band	1
MUS 156	Jazz Ensemble	1
MUS 157	Jazz Ensemble	1
MUS 158	Chorus	1
MUS 159	Chorus	1
MUS 190	Performance Studies	1
MUS 191	Performance Studies	1
MUS 208	Rock, Pop and Soul Ensemble	1
MUS 209	Rock, Pop and Soul Ensemble	1
MUS 236	Chamber Singers	1
MUS 237	Chamber Singers	1
MUS 252	Concert Band	1
MUS 253	Concert Band	1
MUS 256	Jazz Ensemble	1
MUS 257	Jazz Ensemble	1
MUS 258	Chorus	1
MUS 259	Chorus	1
MUS 290	Performance Studies	1
MUS 291	Performance Studies	1
		<hr/>
		4

Total Required 38-39
Plus General Education Requirements

ORNAMENTAL HORTICULTURE

This degree program provides students with entry level skills, upgrading of existing skills, and preparation for further training. It is designed for those interested in careers in nursery and greenhouse management, landscape design and construction, grounds management, retail nursery operations, irrigation system

design, installation and maintenance of interior landscaping, arboriculture and other related fields. Students will learn modern horticultural methods and procedures as well as the use of tools and equipment common to the field.

CAREER OPPORTUNITIES

†Agricultural Inspector
 *Agricultural Researcher
 †Arboretum/Park Director
 Arboretum Technician
 Botanical Illustrator
 †County/State Agricultural Advisor
 *Environmental Designer
 Floral Designer
 Flower Shop Manager
 Golf Course Superintendent
 Golf Course Worker
 Greenhouse Manager
 Grounds Maintenance Manager
 Grower/Production Manager
 †Horticultural Journalist
 Irrigation Consultant
 †Landscape Architect
 Landscape Contractor
 Landscape Designer
 Landscape Technician
 Nursery/Garden Center Manager
 †Park Planner/Manager
 Plant Breeder/Propagator
 Sports Field Manager
 Turf Manager
 Urban Forester
 Water Auditor
 †Water Conservationist

*Bachelor Degree or higher required.

†Bachelor Degree normally recommended.

I. ARBORICULTURE

This major encompasses urban forestry, professional tree care, and tree trimming. Students will learn care and pruning of landscape trees, palms and related plants as well as common fruit trees. Course work includes skill development in tree climbing and pruning techniques, basic tree maintenance, and principles of urban forestry. Graduates are employed by private tree care companies, public agencies, or may be self-employed.

Program Outcomes

Upon completion of this program, students will be able to:

- Demonstrate and practice standardized safety procedures as they apply to arboriculture.
- Describe the principles of tree biology and physiology for growth management.
- Demonstrate proper tree pruning and tree removal procedures per industry standards.
- Conduct a site evaluation for drafting a cultural tree management plan.
- Draft a tree planting plan including cultural requirements for establishment.
- Identify common biotic and abiotic problems for trees common to Southern California landscapes and list appropriate control measures.
- Conduct a visual tree assessment for tree risk or value appraisal.
- Draft a tree preservation plan for a construction site.
- Design a tree support system with stakes, cables and bracing.
- Demonstrate best management practices (BMPs) and American National Standards Institute (ANSI) practices for cultural management of tree growth.

Associate in Science Degree Requirements:

Course	Title	Units
OH 120	Fundamentals of Ornamental Horticulture	3
OH 130	Plant Pest Control	3
OH 140	Soils	3
OH 170	Plant Materials: Trees and Shrubs	3
OH 260	Arboriculture	3
OH 261	Tree Surgery and Specialized Pruning Techniques	1
OH 262	Arboriculture: Palms and Related Plants	1
OH 263	Urban Forestry	1
OH 275	Diagnosing Horticultural Problems	1.5
OH 290*	Cooperative Work Experience Education	3
		<u>22.5</u>

Select eleven units from the following:

OH 102	Xeriscape: Water Conservation in the Landscape	2
OH 172	Introduction to Landscape Design	3
OH 235	Principles of Landscape Irrigation	4
OH 276	Horticultural Equipment Repair and Maintenance	3
OH 278	Business Management for Ornamental Horticulture	3
SPAN 120	Spanish I	5
		<u>11</u>
	Total Required	33.5
	Plus General Education Requirements	

*Student must complete six units within the major at Cuyamaca College to be eligible for this course.

Certificate of Achievement

Students who complete only the major requirements above qualify for a Certificate in Arboriculture. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

II. FLORAL DESIGN

This degree program is designed for those individuals seeking careers in the floral industry, or for those seeking to upgrade their existing skills and prepare for further training. Course work is directed toward skills, concepts and practices used in the commercial floral industry with an emphasis in hands-on training.

Program Outcomes

Upon completion of this program, students will be able to:

- Identify and explain the principles and elements of design common to the retail floral industry and utilize these guidelines in the reproduction and construction of independent floral arrangements.
- Assemble flowers to be worn or carried and reproduce floral arrangements following current design trends in the retail industry.
- Differentiate characteristics common to various abstract, geometric, botanical, European and oriental design styles and select floral arrangements to accompany these styles.
- Recognize and demonstrate methods of design mechanics for stable construction of floral arrangements.
- Identify and practice design techniques used to create aesthetically pleasing floral designs.
- Identify, evaluate and discuss in correct industry vocabulary fresh floral product and permanent botanical materials and hard goods.
- Analyze a site and determine needs and opportunities to develop a customized design plan to fulfill client requests.

- Prepare an original design proposal and evaluate equipment needs for a special occasion to include an appropriate wholesale budget, estimate design recipes, and list fresh and hard goods product needs.
- Compare and contrast retail florist businesses in shop operations, workstations, sales and consultation areas, visual displays, customer relations, and typical business practices including labor relations, insurance, advertising, accounting and license requirements.
- Observe and investigate current retail and wholesale market and fashion trends to determine resources for new and changing product and materials.

Associate in Science Degree Requirements:

Course	Title	Units
OH 114	Floral Design I	3
OH 116	Floral Design II	3
OH 117	Wedding Design I	3
OH 118	Special Occasion Floral Design	3
OH 119	Wedding Design II	3
OH 120	Fundamentals of Ornamental Horticulture	3
OH 278	Business Management for Ornamental Horticulture	3
OH 290*	Cooperative Work Experience Education	3
		<u>24</u>

Select nine units from the following:

ART 100	Art Appreciation	3
ART 120	Two-Dimensional Design	3
ART 124	Drawing I	3
ART 141	History of Western Art II: 1250 A.D. to Present Time	3
ART 145	Contemporary Art History: 1945-Present	3
OH 170	Plant Materials: Trees and Shrubs	3
OH 180	Plant Materials: Annuals and Perennials	3
		<u>9</u>
	Total Required	33
	Plus General Education Requirements	

*Student must complete six units within the major at Cuyamaca College to be eligible for this course.

Certificate of Achievement

Students who complete only the major requirements above qualify for a Certificate in Floral Design. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

III. GOLF COURSE AND SPORTS TURF MANAGEMENT

Students in this major pursue careers as golf course superintendents or sports turf managers. The program is intended for those individuals wishing to enter the field as well as those who desire to upgrade their existing skills. Students may also transfer to a four-year degree program in agronomy, turf management, or related field. Course work is designed to study environmentally sound solutions for the efficient production and management of golf and sports turf.

Program Outcomes

Upon completion of this program, students will be able to:

- Demonstrate and practice standardized safety procedures as they apply to golf and sports turf management.
- Identify warm and cool season turf cultivars common to Southern California.

- Identify and manage primary and secondary noxious weeds.
- Identify and manage common biotic and abiotic problems associated with turf management in Southern California.
- Demonstrate knowledge of appropriate use and maintenance of equipment common to golf and sports turf management.
- Identify 88 trees and shrubs common to Southern California.
- Identify water quality impact on turfgrass and plant material species and the relationship to soil conditions.
- Demonstrate the impact of various water sources on golf course maintenance budgets.
- Using principles of irrigation hydraulics, calculate friction loss in pipe, determine proper pipe sizing using the friction factor and velocity limit method, and determine appropriate component sizing.
- Identify and describe the proper installation of irrigation system components.
- Using standard industry practices, develop guidelines and demonstrate the ability to perform proper fertilizing, pruning, mulch application and irrigation of Southern California landscapes.
- Identify and explain labor relations, business plans, and licensure requirements for the golf and sports turf industry.
- Demonstrate the ability to install concrete, masonry and plant material.

Associate in Science Degree Requirements:

Course	Title	Units
BUS 156	Principles of Management	3
OH 120	Fundamentals of Ornamental Horticulture	3
OH 130	Plant Pest Control	3
OH 140	Soils	3
OH 170	Plant Materials: Trees and Shrubs	3
OH 174	Turf and Ground Cover Management	3
OH 220	Landscape Construction: Concrete and Masonry	3
OH 235	Principles of Landscape Irrigation	4
OH 265	Golf Course and Sports Turf Management	3
OH 276	Horticultural Equipment Repair and Maintenance	3
OH 290*	Cooperative Work Experience Education	5
	Total Required	36
	Plus General Education Requirements	

*Student must complete six units within the major at Cuyamaca College to be eligible for this course.

Certificate of Achievement

Students who complete only the major requirements above qualify for a Certificate in Golf Course and Sports Turf Management. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

IV. IRRIGATION TECHNOLOGY

This specialized field focuses on the design, installation and management of landscape irrigation systems. The program is designed for entry level students, those seeking to upgrade existing skills, or those wishing to transfer to a four-year degree program at Cal Poly or other institution. The use of current design theory, installation techniques, and management programs form the heart of the curriculum. Graduates are employed by landscape architects, irrigation consultants, landscape contractors, public agencies or may be self-employed.

Program Outcomes

Upon completion of this program, students will be able to:

- Demonstrate and practice standardized safety and public health protection procedures as they apply to the irrigation industry.
- Explain the relationships between plants and their soil and water environment including the use of recycled water.
- Demonstrate an understanding of landscape irrigation hydraulics.
- Identify irrigation system components and demonstrate their proper installation.
- Design efficient new and retrofitted spray and drip landscape irrigation systems for residential and commercial projects.
- Develop proper irrigation schedules with the use of evapotranspiration rates, precipitation rates, proper cycling of application and controller programming.
- Demonstrate the ability to diagnose irrigation system problems related to valves, wiring and hydraulics.
- Explain the importance of, and best practices for, water conservation in regards to water sources, water quality and regulations.
- Gain practical experience working in the landscape industry.
- Install a complete irrigation system per plan, including but not limited to sprinklers, valves, valve boxes, drip irrigation, and controllers.

Associate in Science Degree Requirements:

Course	Title	Units
OH 102	Xeriscape: Water Conservation in the Landscape	2
OH 120	Fundamentals of Ornamental Horticulture	3
OH 140	Soils	3
OH 174	Turf and Ground Cover Management	3
OH 221	Landscape Construction: Irrigation and Carpentry	3
OH 235	Principles of Landscape Irrigation	4
OH 238	Irrigation System Design	3
OH 290*	Cooperative Work Experience Education	3
		24

Select nine units from the following:

ENGR/SURV/218	Plane Surveying	4
OH 130	Plant Pest Control	3
OH 171	Landscape Drafting	1
OH 172	Introduction to Landscape Design	3
OH/CADD200**	Introduction to Computer-Aided Landscape Design	3
OH 225	Landscape Contracting	3
OH 276	Horticultural Equipment Repair and Maintenance	3
SPAN 120	Spanish I	5
		9
	Total Required	33
	Plus General Education Requirements	

*Student must complete six units within the major at Cuyamaca College to be eligible for this course.

**May also be offered at Southwestern College as LA 200.

Certificate of Achievement

Students who complete only the major requirements above qualify for a Certificate in Irrigation Technology. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

V. LANDSCAPE DESIGN

This major provides students with a systematic, process-oriented approach to landscape design for residential landscapes. The curriculum is designed to investigate the current trends in landscape design and the technologies used in the construction of the projects. Course work is designed for entry level skills, upgrading of existing skills, and for transfer to four-year degree programs. Graduates are employed by landscape architects, landscape contractors, public agencies or may be self-employed.

Program Outcomes

Upon completion of this program, students will be able to:

- Prepare conceptual landscape plans for residential clients.
- Measure a site then draft a site plan using hand drafting and computer aided drafting.
- Analyze project sites for assets and constraints.
- Create an aesthetically pleasing, sustainable, and feasible landscape design.
- Produce graphically pleasing landscape concept plans, elevations, and sections using both hand drafting and computer aided drafting techniques.
- Analyze site topography (including relief, slope and aspect) as required to prepare fine grading plans.
- Identify and describe the palate of materials used in landscape construction.
- Identify at least 250 trees, shrubs, annuals, and perennials used in Southern California landscaping.
- Demonstrate the ability to locate plants appropriately on a planting plan.
- Apply water conserving and sustainable landscape ideas to designs.
- Quantify the irrigation needs of the specified plants and prepare effective irrigation plans.
- Identify and explain business practices and legal considerations associated with a developing a landscape business.
- Gain practical experience working in the landscape industry.

Associate in Science Degree Requirements:

Course	Title	Units
OH 102	Xeriscape: Water Conservation in the Landscape	2
OH 170	Plant Materials: Trees and Shrubs	3
OH 171	Landscape Drafting	1
OH 172	Introduction to Landscape Design	3
OH 173	Intermediate Landscape Design	3
OH 175	Advanced Landscape Design	3
OH 180	Plant Materials: Annuals and Perennials	3
OH/CADD200*	Introduction to Computer-Aided Landscape Design	3
OH/CADD201**	Advanced Computer-Aided Landscape Design	3
OH 220	Landscape Construction: Concrete and Masonry	3
OH 235	Principles of Landscape Irrigation	4
OH 278	Business Management for Ornamental Horticulture	3
OH 290***	Cooperative Work Experience Education	3
	Total Required	37
	Plus General Education Requirements	

*May also be offered at Southwestern College as LA 200.

**May also be offered at Southwestern College as LA 201.

***Student must complete six units within the major at Cuyamaca College to be eligible for this course.

Certificate of Achievement

Students who complete only the major requirements above qualify for a Certificate in Landscape Design. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

VI. LANDSCAPE TECHNOLOGY

Landscape installation and management forms the focus of this program. Students will learn the latest methods, materials and techniques in the landscape industry. Those seeking careers in landscape technology are entering a challenging career field that requires knowledge of plant material, turfgrass, landscape and irrigation design, soils, pest control and landscape construction. A professional in the field has the opportunity to be involved in working with people as well as plants as the manager must direct and supervise employees, deal with clients and suppliers, and may become involved in professional organizations. Students entering the landscape industry, those already employed but seeking to upgrade their skills, and those wishing to transfer to Cal Poly or other four-year degree programs will benefit from the curriculum. Graduates are employed by landscape contractors, public agencies or may be self-employed.

Program Outcomes

Upon completion of this program, students will be able to:

- Demonstrate and practice standardized safety procedures as they apply to landscape installation and maintenance.
- Explain the principles of plant structure function and plant growth.
- Identify 175 trees, shrubs, annuals, perennials and turf grass species commonly used in Southern California landscapes.
- Using standard industry practices, develop guidelines and demonstrate the ability to perform proper fertilizing, pruning, mulch application and irrigation of Southern California landscapes.
- Establish guidelines for best management practices (BMPs) in water conservation including plant selection, soil management and water management.
- Demonstrate the ability to install concrete, masonry, plant material, and irrigation systems.
- Identify and describe labor relations, business plans, and cost estimating and licensure requirements for the landscape industry.
- Identify common biotic and abiotic problems common to Southern California landscapes and list appropriate control measures.
- Gain practical experience working in the landscape industry.

Associate in Science Degree Requirements:

Course	Title	Units
OH 120	Fundamentals of Ornamental Horticulture	3
OH 130	Plant Pest Control	3
OH 140	Soils	3
OH 170	Plant Materials: Trees and Shrubs	3
OH 172	Introduction to Landscape Design	3
OH 180	Plant Materials: Annuals and Perennials	3
OH 220	Landscape Construction: Concrete and Masonry	3
OH 235	Principles of Landscape Irrigation	4
OH 290*	Cooperative Work Experience Education	3
		<u>28</u>

Select five units from the following:

OH 102	Xeriscape: Water Conservation in the Landscape	2
OH 173	Intermediate Landscape Design	3
OH 174	Turf and Ground Cover Management	3
OH 221	Landscape Construction: Irrigation and Carpentry	3
OH 222	Japanese Garden Construction and Maintenance	1
OH 225	Landscape Contracting	3
OH 276	Horticultural Equipment Repair and Maintenance	3
OH 278	Business Management for Ornamental Horticulture	3
SPAN 120	Spanish I	5
		<u>5</u>
	Total Required	33
	Plus General Education Requirements	

*Student must complete six units within the major at Cuyamaca College to be eligible for this course.

Certificate of Achievement

Students who complete only the major requirements above qualify for a Certificate in Landscape Technology. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

VII. NURSERY TECHNOLOGY

Students enrolled in this major pursue careers in the wholesale production and retail sales of horticultural crops. Course work will focus on plant propagation, greenhouse plant production, and horticultural practices related to production and sales of landscape and greenhouse plant material. Students entering the nursery industry, those already employed but seeking upgraded skills, and those wishing to transfer to Cal Poly or other four-year degree programs will benefit from the curriculum. Graduates are employed by wholesale and retail nurseries, public agencies or may be self employed.

Program Outcomes

Upon completion of this program, students will be able to:

- Identify 250 trees, shrubs, annuals, perennials and turf grass species commonly used in Southern California landscapes.
- Explain the principles of plant structure function and plant growth.
- Perform propagation of plants, both sexually and asexually, with standard industry tools, techniques and media.
- Cultivate horticultural crops in both natural and artificial environments common in the horticulture industry, including diagnosing and correcting biotic and abiotic problems affecting these crops.
- Identify soil composition and correct soil problems to enhance plant growth.
- Utilize principles of landscape design to assist clients in the selection of appropriate plant materials for landscape use.
- Identify and describe labor relations, business plans, and cost estimating and regulatory requirements for the nursery industry.
- Gain practical experience working in the landscape industry.

Associate in Science Degree Requirements:

Course	Title	Units
OH 120	Fundamentals of Ornamental Horticulture	3
OH 121	Plant Propagation	3
OH 130	Plant Pest Control	3
OH 140	Soils	3
OH 170	Plant Materials: Trees and Shrubs	3

OH 180	Plant Materials: Annuals and Perennials	3
OH 240	Greenhouse Plant Production	3
OH 290*	Cooperative Work Experience Education	3
		<u>24</u>

Select nine units from the following:

BIO 122	The Secret Life of Plants	4
OH 114	Floral Design I	3
OH 172	Introduction to Landscape Design	3
OH 276	Horticultural Equipment Repair and Maintenance	3
OH 278	Business Management for Ornamental Horticulture	3
SPAN 120	Spanish I	5
		<u>9</u>
	Total Required	33
	Plus General Education Requirements	

*Student must complete six units within the major at Cuyamaca College to be eligible for this course.

Certificate of Achievement

Students who complete only the major requirements above qualify for a Certificate in Nursery Technology. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

VIII. SUSTAINABLE URBAN LANDSCAPES

This curriculum is designed to investigate the current trends and provide practical experience in sustainable landscape design, construction and maintenance. Students will use technology, materials and methods that enhance the urban landscape with minimal input of labor and materials while reducing negative environmental impacts. Students entering the landscape industry, those already employed but seeking upgraded skills, and those wishing to transfer to four-year degree programs will benefit from the curriculum. Graduates are employed by landscape contractors, landscape architects and designers, public agencies, or are self-employed.

Program Outcomes

Upon completion of this program, students will be able to:

- Use industry accepted standards to conduct site evaluations and determine site assets and constraints for the development of aesthetically pleasing, sustainable, and feasible landscape designs, planting plans, and tree management plans.
- Identify common biotic and abiotic problems common to Southern California landscapes and list appropriate control measures including identification of soil problems and sustainable soil management practices.
- Utilize standard industry practices and principles of plant structure, function and plant growth to develop guidelines and demonstrate the ability to perform proper fertilizing, pruning, mulch application and irrigation of Southern California landscapes.
- With an understanding of the relationships between plants and their soil and water environment, develop proper irrigation schedules with the use of evapotranspiration rates, precipitation rates, proper cycling of application, and controller programming.
- Use currently accepted research in the area of water conservation relating to water sources, water quality and regulations to establish guidelines for best management practices in water conservation including plant selection, soil management, and water management.

- Identify sustainable elements of landscape design, installation, and management, including 175 trees, shrubs, annuals, perennials and turf grass species commonly used in Southern California landscapes, hardscape alternatives, and management practices including business practices and legal considerations.
- Gain practical experience working in the landscape industry.

CAREER OPPORTUNITIES

Irrigation Manager
Landscape Design Consultant
Landscape Maintenance Supervisor
Landscape Manager
Landscape Water Auditor
Water Conservation Specialist

Associate in Science Degree Requirements:

Course	Title	Units
OH 102	Xeriscape: Water Conservation in the Landscape	2
OH 120	Fundamentals of Ornamental Horticulture	3
OH 130	Plant Pest Control	3
OH 140	Soils	3
OH 170	Plant Materials: Trees and Shrubs	3
OH 172	Introduction to Landscape Design	3
OH 180	Plant Materials: Annuals and Perennials	3
OH 220	Landscape Construction: Concrete and Masonry	3
OH 221	Landscape Construction: Irrigation and Carpentry	3
OH 250	Landscape Water Management	2
OH 255	Sustainable Urban Landscape Principles	2
OH 263	Urban Forestry	1
OH 275	Diagnosing Horticultural Problems	1.5
OH 290*	Cooperative Work Experience Education	3
	Total Required	35.5
	Plus General Education Requirements	

*Student must complete six units within the major at Cuyamaca College to be eligible for this course.

Certificate of Achievement

Students who complete only the major requirements above qualify for a Certificate in Sustainable Urban Landscape. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

PARALEGAL STUDIES

The legal profession has evolved, like the medical profession, into a profession of specialties. Based on this development, lawyers need qualified assistants to better help them provide legal services to their clients. Paralegals are trained, professional technicians able to provide this needed legal assistance.

This degree program is specifically designed to prepare and provide students with the analytical skills and written abilities necessary to assist attorneys in the practice of law. The technical curriculum goals and objectives emphasize three primary areas:

- Legal Research, Analysis and Writing
- Ethics and the Mechanics of Law
- Integration of Substantive and Procedural Law

The successful paralegal degree candidate will possess a broad educational background with an opportunity to gain specialized skills in specific areas of law. The large curriculum

offering also allows practicing paralegals to attend college refresher or new skills development courses.

This program does not prepare students for law school or the practice of law.

Program Outcomes

Upon completion of this program, students will be able to:

- Apply the research, analytical skills and college-level writing abilities necessary to assist attorneys in the practice of law.
- Conduct oneself in an ethical and professional manner when confronted with a law office related conflict scenario.

CAREER OPPORTUNITIES

Claim Examiner
Compensation and Benefits Manager
Compliance and Enforcement Inspector

†Contract Consultant
Forms and Procedures Specialist
Freelance Paralegal

*Labor Relations Specialist

Law Clerk
Legal Aide
Legal Assistant
Legal Research Assistant
Legal Technician
Occupational Safety and Health Worker

†Paralegal

Patent Agent
Title Examiner

*Bachelor Degree or higher required

†Bachelor Degree normally recommended

Associate in Science Degree Requirements:

Course	Title	Units
BOT 120-122	Comprehensive Word Levels I-III	3
BUS 125	Business Law: Legal Environment of Business	3
PARA 100	Introduction to Paralegal Studies	3
PARA 110	Civil Litigation Practice and Procedures	3
PARA 130	Legal Research and Writing	3
PARA 132	Computer Assisted Legal Research (CALR)	3
PARA 135	Bankruptcy Law	3
		21

Select at least six units from the following:

PARA 120	Administrative Law	3
PARA 125	Business Organizations	1
PARA 140	Criminal Law and Procedures	3
PARA 145	Estate Planning	3
PARA 150	Family Law	3
PARA 160	Personal Injury	1
PARA 170	Worker's Compensation	1
PARA 250*	Internship	1-3
		6

Total Required 27
Plus General Education Requirements

*Student must complete 18 units within the major to be eligible for this course.

Recommended Elective: BUS 128

GENERAL EDUCATION REQUIREMENTS FOR THE PARALEGAL STUDIES DEGREE:**AREA A—LANGUAGE AND RATIONALITY**

(Minimum of 6 semester units)

One course from each area:

- Written Communication**
ENGL 120
- Oral Communication and Analytical Thinking**
COMM 120, 122, 137, 145
ENGR 100

MATH 103, 110, 120, 125, 150, 160, 170, 175, 176, 178, 180, 245, 280, 281, 284
PHIL 125, 130
PSY 215

AREA B—NATURAL SCIENCES

(Minimum of 4 semester units)

A course that includes a laboratory (laboratory courses are underlined):

ANTH 130
ASTR 110, 112
BIO 112, 115, 122, 124, 126, 128, 130, 131, 140, 152, 210, 220, 221, 230, 240
CHEM 102, 105, 113, 115, 116, 120, 141
GEOG 120, 121
GEOL 104, 110, 111
OCEA 112, 113
PHYC 110, 120, 121, 130, 131, 190, 200, 210

AREA C—HUMANITIES

(Minimum of 3 semester units)

One of the following courses:

ARAM 120, 121, 220
ARBC 120, 121, 145, 220, 221, 250, 251
ART 100, 120, 124, 129, 140, 141, 143, 144, 145
ASL 120, 121, 140, 220, 221
ENGL 122, 201, 202, 207, 214, 217, 221, 222, 231, 232, 270, 271, 275, 276, 277
FREN 120, 121, 220, 221, 250, 251
HIST 100, 101, 105, 106
HUM 110, 115, 120, 140, 155
ITAL 120, 121, 220
MUS 110, 111, 114, 115, 116, 117
NAKY 120, 121, 220, 221
PHIL 110, 115, 117, 140, 160, 170
RELG 120, 130, 210, 215
SPAN 120, 120A & 120B*, 121, 141, 145, 220, 221, 250, 251
THTR 110, 120, 121

AREA D—SOCIAL AND BEHAVIORAL SCIENCES

(Minimum of 3 semester units)

One of the following courses:

ANTH 120
CD 115, 125, 131, 145
COMM 110, 124
ECON 110, 120, 121
GEOG 106, 130, 132
HED 120, 122, 201
HIST 108, 109, 118, 119, 122, 123, 124, 130, 131, 132, 133, 180, 181
POSC 120, 121, 124, 130, 140
PSY 120, 125, 134, 138, 140, 165, 170, 220
SOC 120, 125, 130

ADDITIONAL REQUIREMENTS:

(Minimum 6 semester units)

Two courses from two different areas:

- Area B - Natural Sciences
- Area C - Humanities
- Area D - Social and Behavioral Sciences

*Will receive general education credit for SPAN 120B only after completion of SPAN 120A.

DEGREE REQUIREMENTS:

Cuyamaca College will confer the Degree of Associate in Science in Paralegal Studies upon students who successfully complete the following requirements:

- A minimum of 60 semester units of college work.
- Competency Requirements
 - Completion of ENGL 120 with a grade of "C" or better or "P".

- B. Completion of MATH 103 or a higher numbered mathematics class with a grade of "C" or better or "P"* or completion of MDTP Assessment placing into a class higher than MATH 103 or 110.
- 3. Exercise Science Degree Requirements
Two activity courses in exercise science are required for graduation from Cuyamaca College. These courses are marked with an asterisk in the Course Descriptions section.
 - A. If medical reasons necessitate exclusion from exercise science, a medical statement must be on file with the Admissions and Records Office. Adaptive exercise science classes are available.
 - B. Veterans who have completed at least one year of honorable active service will receive two units of credit for exercise science which will satisfy the activity requirement for graduation. To receive credit for military service, a DD-214 or appropriate military records must be submitted to the Admissions and Records Office.
- 4. Achievement of a "C" average (2.0 GPA) in all college work counted toward general education requirements.
- 5. Achievement of a "C" grade or better in all courses counted toward the major. (P/NP grading not accepted for the major.)
- 6. A maximum of 12 "P"* semester units taken in regular course work at this institution may be counted toward the 60 semester units required for graduation but shall not be included as part of the requirements for the major.
- 7. A minimum of 12 semester units of Legal Specialty courses must be completed at Cuyamaca College.

*A grade of "P" (Pass) represents a "C" grade or better.

For more information regarding degree requirements, see Degree Requirements and Transfer Information section.

PHYSICAL SCIENCE

The physical science major is designed to give students working toward a bachelor's degree a well-balanced, lower division program. The curriculum emphasizes fundamental concepts and problem solving. The degree requirements are typical of what four-year colleges and universities require; see www.assist.org for requirements of specific transfer institution.

Program Outcomes

Upon completion of this program, students will be able to:

- Analyze how astronomers obtain information about stars, what information can be obtained and how the information is used.
- Predict periodic trends in ionization energy, atomic size, electron affinity and acid-base properties.
- Calculate changes in enthalpy, entropy, and free energy for chemical reactions, phase changes, solution processes, and elementary molecular processes using tables of thermodynamic data.
- Write systematic names for carbon based compounds.
- Working knowledge of the Theory of Plate Tectonics as it relates to sea floor spreading, subduction, continental drift and the evolution of ocean basins, continents and mountains.

- Evaluate derivatives of algebraic, trigonometric, logarithmic and exponential functions.
- Evaluate integrals using appropriate techniques (such as: by parts, trig substitution, etc.)
- Apply Green's, Stokes' and Gauss' Theorems.
- Use conservation of energy and conservation of momentum concepts.
- Use Maxwell's Equations to solve problems in electricity and magnetism.
- Use the basic concepts of modern physics: special relativity, photon behavior, matter waves, the uncertainty principle, quantum mechanics in one and three dimensions, statistical physics and nuclear physics.

CAREER OPPORTUNITIES

This degree program trains students for a wide variety of diverse professions such as technical administration in industry and government, legal work with patents, scientific librarianship, scientific journalism, and physical science teacher.

- * Astronomer
- Cartographic Technician
- * Chemist
- Geodetic Technician
- * Geologist
- * Meteorologist
- Meteorological Technician
- * Oceanographer
- * Patent Lawyer
- * Physical Science Teacher
- Physical Science Technician
- * Physicist
- Range Technician
- Soil Conservation Technician
- * Bachelor Degree or higher required

Associate in Science Degree Requirements:

Course	Title	Units
ASTR 110	Descriptive Astronomy	3
CHEM 141	General Chemistry I	5
CHEM 142	General Chemistry II	5
CHEM 231	Organic Chemistry I	5
GEOL 110	General Geology	3
MATH 180	Analytical Geometry and Calculus I	5
MATH 280	Analytical Geometry and Calculus II	4
MATH 281	Intermediate Calculus	4
PHYC 190	Mechanics and Heat	5
PHYC 200	Electricity and Magnetism	5
PHYC 210	Wave Motion and Modern Physics	5
Total Required		49
Plus General Education Requirements		

PHYSICS

Physics is the study of the relationship between matter and energy in the universe. The curriculum is designed to provide students working toward a bachelor's degree a well-balanced, lower division program by emphasizing fundamental concepts and problem solving. The degree requirements are typical of what four-year colleges and universities require; see www.assist.org for requirements of specific transfer institution.

Program Outcomes

Upon completion of this program, students will be able to:

- Predict periodic trends in ionization energy, atomic size, electron affinity and acid-base properties.
- Calculate changes in enthalpy, entropy, and free energy for chemical reactions, phase changes, solution processes, and elementary molecular processes using tables of thermodynamic data.

- Write systematic names for carbon based compounds.
- Evaluate derivatives of algebraic, trigonometric, logarithmic and exponential functions.
- Evaluate integrals using appropriate techniques (such as: by parts, trig substitution, etc.)
- Apply Green's, Stokes' and Gauss' Theorems.
- Use conservation of energy and conservation of momentum concepts.
- Use Maxwell's Equations to solve problems in electricity and magnetism.
- Use the basic concepts of modern physics: special relativity, photon behavior, matter waves, the uncertainty principle, quantum mechanics in one and three dimensions, statistical physics and nuclear physics.

CAREER OPPORTUNITIES

- Air Pollution Operating Specialist
- * Astronomer
- * Astrophysicist
- * Biomedical Engineer
- * Biophysicist
- * Chemical Physicist
- Consumer Safety Officer
- * Cryogenic Engineer
- Electrician
- Food and Drug Inspector
- * Fusion Engineer
- * Geophysicist
- Government Claims Representative
- Health Program Representative
- * High Energy Physicist
- Laser Specialist
- * Metallurgist
- * Meteorologist
- * Nuclear Physicist
- * Physical Oceanographer
- * Physicist
- * Plasma Physicist
- Quality Control Technician
- * Quantum Physicist
- * Seismologist
- * Bachelor Degree or higher required

Associate in Science Degree Requirements:

Course	Title	Units
CHEM 141	General Chemistry I	5
CHEM 142	General Chemistry II	5
MATH 180	Analytical Geometry and Calculus I	5
MATH 280	Analytical Geometry and Calculus II	4
MATH 281	Intermediate Calculus	4
PHYC 190	Mechanics and Heat	5
PHYC 200	Electricity and Magnetism	5
PHYC 210	Wave Motion and Modern Physics	5
Total Required		38
Plus General Education Requirements		



Associate Degree
for TransferSM

PSYCHOLOGY FOR TRANSFER (AA-T)

This degree program is designed to present students with a broad base understanding of human behavior so that they may explore human thought and behavior, and various methodologies. Students completing this degree may be interested in pursuing careers in research, counseling, teaching, and other behavioral science professions.

The following is required for the Associate in Arts in Psychology for Transfer degree:

1. Minimum of 60 CSU-transferable semester units.
2. Minimum grade point average (GPA) of at least 2.0 in all CSU-transferable coursework. While a minimum of 2.0 is required for admission, some majors may require a higher GPA. Please consult with a counselor for more information.
3. Minimum of 18 semester units in the major as detailed below.
4. Certified completion of the California State University General Education Breadth pattern (CSU GE Breadth) OR the Intersegmental General Education Transfer Curriculum (IGETC) pattern; see Degree Requirements and Transfer Information section for more information. Note: If following IGETC GE pattern, IGETC-CSU pattern must be followed for admission to a CSU.

Associate in Arts Degree Requirements:

Core Curriculum:

Course	Title	Units
PSY 120	Introductory Psychology	3
PSY 205	Research Methods for Psychology	3
PSY 215	Statistics for the Behavioral Sciences	3
		<u>9</u>

Group A: Select one of the following:

BIO 130	General Biology I	3
PSY 140	Physiological Psychology	3
		<u>3</u>

Group B: Select two of the following:

PSY 165	Development Psychology	3
PSY 220	Learning	3
Any course not selected above		3
		<u>6</u>
Total Units for Major		18
Total Units for CSU GE Breadth or IGETC-CSU		37-39
Total Transferable Elective Units		3
Total Units for Degree		60

REAL ESTATE

I. REAL ESTATE

This degree program is designed to prepare students for employment in real estate or related fields. It also meets the educational requirements for the California Real Estate Broker's License and helps prepare both the salesperson and broker for the state examination. Most real estate classes also meet educational requirements for appraisal licensing.

Program Outcomes

Upon completion of this program, students will be able to:

- Describe the essential elements and legal effects of a real estate contract and secured note.
- Apply the steps involved in opening, processing, and closing an escrow.
- Explain the various alternate mortgage instruments and various sources of real estate financing.
- Apply various real estate valuation techniques.
- Explain how leverage affects real estate investment risk and describe the legal aspects of real properties.
- Describe the basic process of real estate development or its risks and returns.

CAREER OPPORTUNITIES

Agent
 †Appraiser
 Broker
 Builder/Developer
 *Economist
 Escrow Officer/Trust Manager
 Investor
 Lender/Financial Institution
 Property Manager
 Salesperson
 Title Officer
 *Bachelor Degree or higher required
 †Office of Real Estate Appraisal License required

Associate in Science Degree Requirements:

Course	Title	Units
RE 190	Real Estate Principles	3
RE 191	Real Estate Practice	3
RE 192	Real Estate Finance	3
RE 193	Real Estate Legal Aspects	3
RE 194	Real Estate Appraisal	3
		<u>15</u>

Select three of the following including one Accounting or Economics course:

BUS 110*	Introduction to Business	3
BUS 120	Financial Accounting	4
ECON 110	Economic Issues and Policies	3
or		
ECON 120	Principles of Macroeconomics	3
or		
ECON 121	Principles of Microeconomics	3
or		
RE 197	Real Estate Economics	3
RE 201	Real Estate Property Management	3
RE 250*	Real Estate Internship	1-4
RE 294	Advanced Real Estate Appraisal	3
Elective (select one elective from below)		3
		<u>7-11</u>

Electives:

BUS 125	Business Law: Legal Environment of Business	3
RE 125	Escrow Procedures I	3
RE 204	Real Estate Office Administration	3
RE 292	Mortgage Loan Brokering and Lending	3
Total Required		22-26
	Plus General Education Requirements	

*Non-Department of Real Estate Licensing course

Certificate of Achievement

Students who complete only the major requirements above qualify for a Certificate in Real Estate. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

II. BROKER'S LICENSE

Students may satisfy the California State Education requirement for a Broker's License by completing the following:

Course	Title	Units
RE 190	Real Estate Principles	3
RE 191	Real Estate Practice	3
RE 192	Real Estate Finance	3
RE 193	Real Estate Legal Aspects	3
RE 194	Real Estate Appraisal	3
One Accounting or Economics course		3-4
Electives (select two electives from above)		6
Total Required		<u>24-25</u>

Certificate of Achievement

Students who complete the requirements above qualify for a Certificate in Broker's License. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

III. ESCROW

Certificate Outcomes

Upon completion of this certificate, students will be able to:

- Describe the essential elements and legal effects of a real estate contract and secured note.
- Apply the steps involved in opening, processing, and closing an escrow.
- Explain the various alternate mortgage instruments and various sources of real estate financing.
- Apply various real estate valuation techniques.
- Explain how leverage affects real estate investment risk and describe the legal aspects of real properties.
- Describe the ethics and legal duties of escrow personnel.

Certificate Requirements:

Course	Title	Units
RE 125	Escrow Procedures I	3
RE 126	Escrow Procedures II	3
RE 127	Escrow Procedures III	3
RE 190	Real Estate Principles	3
RE 192	Real Estate Finance	3
RE 193	Real Estate Legal Aspects	3
		<u>18</u>

Select two of the following:

BUS 120	Financial Accounting	4
BUS 121	Managerial Accounting	4
BUS 125	Business Law: Legal Environment of Business	3
ECON 120	Principles of Macroeconomics	3
ECON 121	Principles of Microeconomics	3
RE 191	Real Estate Practice	3
RE 194	Real Estate Appraisal	3
RE 197	Real Estate Economics	3
RE 201	Real Estate Property Management	3
RE 204	Real Estate Office Administration	3
		<u>6-8</u>
Total Required		24-26

Certificate of Achievement

Students who complete the requirements above qualify for a Certificate in Escrow. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

SOCIAL WORK

This degree offers lower division preparation for students who wish to pursue a bachelor's degree in social work. The program is designed to prepare students for transfer to four-year social work programs.

CAREER OPPORTUNITIES

- *Administration
- *Child Welfare Clinical:
 - *Counseling, Therapy
- Community Organizations:
 - *Advocacy, Politics, Education
- *Criminal Justice/Corrections
- *Developmental Disabilities
- *Gerontology
- *Health Care Occupational:
 - *Counseling
 - *Organizational Development
 - *Teaching
 - *Wellness Promotion
 - *Human Resources
- Public Welfare:
 - *Social Work
- *Research
- *Bachelor degree or higher recommended

Associate in Arts Degree Requirements:

Course	Title	Units
BIO 130	General Biology I	3
ECON 120	Principles of Macroeconomics	3
or		
ECON 121	Principles of Microeconomics	3
HED 201	Introduction to Public Health	3
MATH 160	Elementary Statistics	3
or		
PSY 215	Statistics for the Behavioral Sciences	3
or		
BIO 215	Statistics for Life Sciences	3
PSY 120	Introductory Psychology	3
SOC 120	Introductory Sociology	3
SW 110	Social Work Fields of Service	3
SW 120	Introduction to Social Work	3
Total Required		24
Plus General Education Requirements		



Associate Degree for TransferSM

SOCIOLOGY FOR TRANSFER (AA-T)

This degree program is designed to provide students with a broad understanding of human interaction, social processes, social structures, and tools of sociological investigation. Students completing this degree may be interested in pursuing careers in teaching, research, social work, and other behavioral science professions.

The following is required for the Associate in Arts in Sociology for Transfer degree:

1. Minimum of 60 CSU-transferable semester units.
2. Minimum grade point average (GPA) of at least 2.0 in all CSU-transferable coursework. While a minimum of 2.0 is required for admission, some majors may require a higher GPA. Please consult with a counselor for more information.
3. Minimum of 18 semester units in the major as detailed below.
4. Certified completion of the California State University General Education Breadth pattern (CSU GE Breadth) OR the Intersegmental General Education Transfer Curriculum (IGETC) pattern; see Degree Requirements and Transfer Information section for more information. Note: If following IGETC GE pattern, IGETC-CSU pattern must be followed for admission to a CSU.

Program Outcomes

Upon completion of this program, students will be able to:

- Evaluate society and make appropriate suggestions for improvement directed at social change.
- Analyze and interpret the diversity of social experience using a sociological perspective.
- Engage in critical thinking, analysis and problem solving about social issues.
- Employ theoretical and methodological approaches to sociological observations of everyday life.
- Evaluate the implications of multicultural diversity and global interdependence.

Associate in Arts Degree Requirements:

Core Curriculum:

Course	Title	Units
MATH 160	Elementary Statistics	3
PSY 138	Social Psychology	3
SOC 120	Introductory Sociology	3
SOC 125	Marriage, Family and Alternative Lifestyles	3
SOC 130	Contemporary Social Problems	3
Total Required		15

Group A: Select one of the following:

ANTH 120	Cultural Anthropology	3
PSY 120	Introductory Psychology	3
Total Units for Major		18
Total Units for CSU GE Breadth or IGETC-CSU		37-39
Total Transferable Elective Units		3
Total Units for Degree		60

SPANISH

This degree program is designed to provide students with communicative skills in understanding, speaking, reading, and writing Spanish. It also gives students a greater understanding of Spanish culture and civilization, and prepares them for greater international and domestic career opportunities. For the suggested sequence of courses to be taken and/or assistance in transferring to a four-year institution, contact the Counseling Center or the Department of World Languages.

Program Outcomes

Upon completion of this program, students will be able to:

- Utilize more complex vocabulary and grammatical structures to communicate and discuss hypothetical situations dealing with nature, city, life, health, and well-being, professions and occupations, the arts, current events, and politics.
- Utilize more complex vocabulary and grammatical structures to write about situations dealing with nature, city life, health and well-being, profession, and occupations, the arts, current events, and politics.
- Use language and vocabulary skills developed in class to read, analyze, and interpret authentic texts.

CAREER OPPORTUNITIES

- Bilingual Aide
- Border Patrol Officer
- Buyer
- Court Interpreter
- Counseling
- Customs Agent/Inspector
- Foreign Exchange Clerk
- * Foreign Student Advisor
- Interpreter
- * Journalist
- * Museum Curator
- * Physician
- * Scientific Linguist
- Tour Guide
- Tutor
- * Bachelor Degree or higher required

Associate in Arts Degree Requirements:

Course	Title	Units
SPAN 120	Spanish I	5
or		
SPAN 120A	Spanish I	2.5
and		
SPAN 120B	Spanish I	2.5
SPAN 121	Spanish II	5
SPAN 220	Spanish III	5

SPAN 221	Spanish IV	5
SPAN 250	Conversational Spanish I	3
SPAN 251	Conversational Spanish II	3
Total Required		26

Select one of the following:

HIST 118	U.S. History: Chicano/Chicana Perspectives I	3
HIST 119	U.S. History: Chicano/Chicana Perspectives II	3
SPAN 141	Spanish and Latin American Cultures	3
SPAN 145	Hispanic Civilizations	3
Total Required		29
Plus General Education Requirements		

Certificate of Achievement

Students who complete only the major requirements above qualify for a Certificate in Spanish. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

SURVEYING

This degree program prepares students to enter the civil engineering field. Competency in care and operation of field instruments, solution of problems in the laboratory, drafting of land survey maps and civil engineering plans, and application of studies to field practice are thoroughly explored.

CAREER OPPORTUNITIES

- Geodetic Surveyor
- Geophysical Prospecting Surveyor
- Instruments Surveyor Assistant
- Land Surveyor
- Marine Surveyor
- Mine Surveyor
- Oil-Well Directional Surveyor

Associate in Science Degree Requirements:

Course	Title	Units
CADD 115	Engineering Graphics	3
or		
ENGR 100	Introduction to Engineering and Design	3
CADD 120	Introduction to Computer-Aided Drafting and Design	3
CADD 127	Survey Drafting Technology	3
MATH 170	Analytic Trigonometry	3
PHYC 110	Introductory Physics	4
SUR/ENGR218	Plane Surveying	4
SURV 220	Boundary Control and Legal Principles	3
SURV 240	Advanced Surveying	4
Total Required		27
Plus General Education Requirements		

Certificate of Achievement

Students who complete only the major requirements above qualify for a Certificate in Surveying. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

UNIVERSITY STUDIES

The Associate Degree in University Studies with an Area of Emphasis is intended to accommodate the differing requirements of a wide variety of transfer institutions and major options. Because admission and major preparation requirements vary at each four-year transfer institution, courses used to complete this degree should be selected with the assistance of a counselor. The completion of the University Studies Degree does not guarantee acceptance into either a baccalaureate major or a four-year institution.

REQUIREMENTS:**I. California State University (CSU) General Education Breadth**

1. Complete CSU General Education Breadth (see Degree Requirements and Transfer Information section).
2. Earn a grade of "C" or better in 30 of the required 39 semester units of general education to include all courses in Area A and the Mathematical/Quantitative Reasoning courses in Area B.
3. Credit earned through external examinations, i.e., AP, will be applied towards general education in accordance with Cuyamaca College policies. Please note: This may be different than how the external exam is used on a CSU certification.
4. Complete a minimum of 18 units in an Area of Emphasis (listed below).
5. Complete a minimum of 60 degree applicable CSU transferable semester units.
6. Earn a cumulative GPA of 2.0 in all college course work completed.
7. Meet Cuyamaca College residence requirements for graduation (see Admission Information).

OR**II. Intersegmental General Education Transfer Curriculum (IGETC) for CSU or UC**

1. Complete IGETC Certification (see Degree Requirements and Transfer Information section).
2. Earn a grade of "C" or better in all IGETC courses.
3. Credit earned through external examinations, i.e., AP, will be applied in accordance with Cuyamaca College policies. Please note: This may be different than how the external exam is used on an IGETC certification.
4. Complete a minimum of 18 units in an Area of Emphasis (listed below).
5. Complete a minimum of 60 degree applicable UC transferable semester units for UC University Studies.
6. Earn a cumulative GPA of 2.0 in all college course work completed.
7. Meet Cuyamaca College residence requirements for graduation (see Admission Information).

AND**III. Area of Emphasis**

- A. Business and Economics
- B. Communication and Language Arts
- C. Humanities and Fine Arts
- D. Science and Mathematics
- E. Social and Behavioral Sciences

While 18 units are required in a specific area to meet the requirements of the degree, it is strongly recommended that as many lower division preparation for the major courses as possible be completed at the community college prior to transfer. Some baccalaureate majors and four-year institutions require a higher GPA than is necessary for the associate degree. Courses that are not UC-transferable will not be used in the UC University Studies Area of Emphasis Degrees. Completion of the University Studies degree does not guarantee admission to a four-year institution.

A. Business and Economics

Courses for the Associate in Science in University Studies with an Emphasis in Business and Economics focus on the study of business transaction theory and practice, the operations and strategies of business decisions, legal concepts, and the place of business in the American and global economy as a whole. Students will apply mathematical and quantitative reasoning skills to the discipline's methodologies, as well as evaluate and interpret basic economic principles and theories related to performance and specific economic sectors. Students completing this area may be interested in the following baccalaureate majors: accounting, business, economics, finance, information and decision systems, international business, management, and marketing. Students must complete a minimum of six units in Business, six units in Economics, and six units from the Electives category.

Program Outcomes

Upon completion of this program, students will be able to:

- Contribute to an effective and ethical organization.
- Prepare and analyze financial statements.
- Use information technology to support effective decision making in the business organization.
- Analyze markets, economic environments and associated trends at the macro and micro levels.
- Express and apply quantitative information in order to make sound decisions and solve problems in the business environment.
- Communicate clearly in the business environment.

Business

BUS 110, 120, 121, 125, 128*

Economics

ECON 110, 120, 121

Electives

CIS 110, MATH 160, 178, 180

B. Communication and Language Arts

Courses for the Associate in Science in University Studies with an Emphasis in Communication and Language Arts focus on the study of how language works to express human ideas and feelings. Students will explore and analyze written and verbal communication methods, as well as develop and advance their oral and written communication skills. Students completing this area may be interested in the following baccalaureate majors: communication, English, foreign language, literature, journalism, and linguistics. Students must complete a minimum of six units in Communication and six units in Language Arts. The remaining six units may be taken from either category.

Program Outcomes

Upon completion of this program, students will be able to:

- Demonstrate the ability to write effectively.
- Demonstrate the ability to locate relevant, reliable information and read it effectively.
- Organize thoughts and ideas in both oral and written format.
- Communicate effectively with diverse audiences.

Communication

COMM 110, 120*, 122, 123, 124, 137, 145

Language Arts

ARAM 120, 121, 220
ARBC 120, 121, 220, 221
ASL 120, 121, 220, 221
ENGL 122, 124, 126, 201, 202, 207, 214, 221, 222, 231, 232, 270, 271
FREN 120, 121, 220, 221, 250, 251
ITAL 120, 121, 220
NAKY 120, 121, 220, 221
SPAN 120, 120A, 120B, 121, 220, 221, 250, 251

C. Humanities and Fine Arts

Courses for the Associate in Science in University Studies with an Emphasis in Humanities and Fine Arts focus on the study of cultural, humanistic activities, and 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 through artistic and cultural creation. Students will develop an aesthetic awareness and incorporate these concepts when constructing value judgments. Students completing this area may be interested in the following baccalaureate majors: art, humanities, music, philosophy, religious studies, and theatre arts. Students must complete a minimum of six units in Humanities and six units in Fine Arts. The remaining six units may be taken from either category.

Program Outcomes

Upon completion of this program, students will be able to:

- Analyze the principle elements of representative examples of art, architecture, literature, theater, philosophy, music, dance, film, or other relevant areas of cultural and/or intellectual creativity.
- Demonstrate an awareness of the historical and philosophical contexts of representative areas, movements, media, works, or styles of cultural and/or intellectual creativity.
- Employ the language, concepts and methods of interpretive criticism as applicable to the respective categories of human creativity.
- When applicable, apply artistic processes and skills as a creative expression, using a variety of media to communicate meaning and intent in original works of art.

Humanities

ARAM 120, 121, 220
ARBC 120, 121, 220, 221
ART 140, 141, 145
ASL 120, 121, 220, 221
ENGL 122, 201, 202, 207, 214, 217, 221, 222, 231, 232, 270, 271
FREN 120, 121, 220, 221
HIST 100, 101, 105, 106, 210
HUM 110, 115, 120, 155
ITAL 120, 121, 220
NAKY 120, 121, 220, 221
PHIL 110, 115, 117
RELG 120, 130, 210, 215
SPAN 120, 120A, 120B, 121, 220, 221, 250, 251

Fine Arts

ART 100, 120, 124, 125, 129, 140, 141, 143*, 144, 145
MUS 110, 111, 114, 115, 116, 117
THTR 110, 120, 121

D. Science and Mathematics

Courses for the Associate in Science in University Studies with an Emphasis in Science and Mathematics focus on the study of mathematical and quantitative reasoning skills and the application of facts and principles that form the foundations of living and non-living systems. Students will recognize and utilize the

methodologies of science as investigative tools, as well as the limitations of science. Students will use basic mathematical skills to solve numerical problems encountered in daily life, as well as more advanced skills for applications in the physical and life sciences. Students completing this area may be interested in the following baccalaureate majors: astronomy, biological sciences, chemistry, computer science, engineering, geography, geology, mathematics, oceanography, physical science, and physics. Students must complete a minimum of six units in Science and six units in Mathematics. The remaining six units may be taken from either category.

Program Outcomes

Upon completion of this program, students will be able to:

- Use arithmetical, algebraic, geometric and statistical methods to solve problems.
- Interpret mathematical models such as formulas, graphs, tables and schematics, and draw inferences from them.
- Represent mathematical information symbolically, visually, numerically and verbally.
- Use the scientific method of inquiry and techniques to answer questions about physical and biological processes.
- Analyze basic concepts of physical and biological science to evaluate scientific information and solve scientific problems.

Science

ANTH 130
 ASTR 110, 112
 BIO 115, 122, 124, 128, 130, 131, 140, 141, 141L, 152*, 210, 220, 221, 230, 240, 251
 CHEM 102, 105*, 113, 115, 116, 120, 141, 142, 231
 CS 119, 119L, 180, 181, 182, 280, 281, 282, 289
 GEOG 120, 121
 GEOL 104, 110, 111
 OCEA 112, 113
 PHYC 110, 120, 121, 130, 131, 190, 200, 210
 PSC 110, 111

Mathematics

BIO 215
 MATH 120, 125, 126, 150, 160, 170*, 175, 176, 178, 180, 245, 280, 281, 284, 285
 PSY 215

*Course not UC-transferable

E. Social and Behavioral Sciences

Courses for the Associate in Science in University Studies with an Emphasis in Social and Behavioral Sciences focus on the study and understanding of human behavior. Students will evaluate and interpret human societies; the institutions, organizations, and the groups that form them; the ways in which individuals and groups relate to one another; and various approaches and methodologies of the disciplines. Students completing this area may be interested in the following baccalaureate majors: anthropology, child development, education, history, nutrition, political science, psychology, social work, and sociology. Students must complete a minimum of six units in Social Science and six units in Behavioral Science. The remaining six units may be taken from either category.

Program Outcomes

Upon completion of this program, students will be able to:

- Describe general principles of the political institutions and government of the United States.
- Demonstrate an understanding and appreciation of social, political, and economic institutions within a historical perspective.
- Evaluate the ways people act and interact in cultures, societies and social subgroups.
- Assess how social issues are influenced by geographical and historical processes.
- Apply knowledge of social and behavioral sciences theories and scientific methods in an assessment of real-world problems.

Social Science

ANTH 120
 ECON 110, 120, 121
 GEOG 106, 130, 132
 HIST 100, 101, 105, 106, 108, 109, 118, 119, 122, 123, 130, 131, 132, 180, 181, 275, 276, 277
 POSC 120, 121, 124, 130, 140
 SOC 120, 125, 130

Behavioral Science

CD 115, 125, 131
 COMM 110, 124
 HED 203, 251*
 PSY 120, 125, 134, 138, 140, 165, 170, 220

*Course not UC-transferable

WATER/WASTEWATER TECHNOLOGY

This degree program is designed to prepare students for employment by municipal drinking water and wastewater treatment departments or industrial treatment facilities. Careers in water/wastewater technology generally involve the administration, operation and maintenance of both drinking water and wastewater treatment facilities as well as distribution and collection systems.

CAREER OPPORTUNITIES

Backflow Program Manager
 *Chemist
 Construction Inspector
 Cross Connection Control Specialist
 Electronic Technician
 *Engineer, Civil
 *Engineer, Electrical
 Engineer Technician
 Equipment Maintenance Operator
 Field Operations Supervisor
 GIS/Mapping Specialist
 Inspector
 Instrumentation and Control Technician
 Instrumentation and Control Supervisor
 Laboratory Analyst
 Machinist
 Mechanical Systems Technician
 Meter Maintenance Technician
 Plant Operator
 Plant Process Control Electrician
 Plant Process Control Supervisor
 Recycled Water Inspector
 *Safety and Risk Manager
 Survey Technician
 Utility Worker
 Wastewater Plant Operator
 Wastewater Treatment Superintendent
 *Water Distribution Operator
 *Water Quality and Treatment Manager
 Water Systems Technician
 *Bachelor Degree recommended

I. CROSS CONNECTION CONTROL SYSTEMS

Program Outcomes

Upon completion of this program, students will be able to:

- Identify and classify the major types of backflow prevention and cross-connection control devices and procedures.
- Identify and classify water distribution and wastewater collections system components and explain their use.
- Identify the major regulatory agencies that monitor and regulate the water/wastewater industry.
- Use appropriate methods to solve problems relating to cross connection control and backflow prevention.
- Use appropriate methods and/or equations needed to solve problems relating to hydraulics, dilutions rates, and chemical analysis of water/wastewater treatment systems.

Associate in Science Degree Requirements:

Course	Title	Units
WWTR 101	Fundamentals of Water/Wastewater Technology	3
WWTR 102	Calculations in Water/Wastewater Technology	3
WWTR 104	Applied Hydraulics	3
WWTR 130	Water Distribution Systems	3
WWTR 280	Backflow Tester Training	2
WWTR 282	Cross Connection Control Specialist	3
WWTR 284	Cross Connection Control Specialist—Recycled Water	3
		20

Select eight to ten units from the following:

EHSM 100	Introduction to Environmental and Occupational Safety and Health (OSH) Technology	4
EHSM 110	Pollution Prevention	3
EHSM 210	Industrial Wastewater and Stormwater Management	4
WWTR 110	Laboratory Analysis for Water/Wastewater	3
WWTR 290	Cooperative Work Experience	3
		8-10
	Total Required	28-30
	Plus General Education Requirements	

Certificate of Achievement

Students who complete only the major requirements above qualify for a Certificate in Cross Connection Control Systems. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

II. WATER DISTRIBUTION SYSTEMS

Program Outcomes

Upon completion of this program, students will be able to:

- Identify the safety precautions required in the water/wastewater technology industry.
- Identify the major regulatory agencies that monitor and regulate the water/wastewater industry.
- Use appropriate methods and/or equations needed to solve problems relating to hydraulics, dilutions rates, and chemical analysis of water/wastewater treatment systems.
- Identify and classify water distribution and wastewater collections system components and explain their use.

Associate in Science Degree Requirements:

Course	Title	Units
WWTR 101	Fundamentals of Water/Wastewater Technology	3
WWTR 102	Calculations in Water/Wastewater Technology	3
WWTR 104	Applied Hydraulics	3
WWTR 106	Introduction to Electrical and Instrumentation Processes	3
WWTR 130	Water Distribution Systems	3
WWTR 134	Mechanical Maintenance	3
WWTR 265	Water Distribution Systems II	3
		<u>21</u>

Select eight to nine units from the following:

EHSM 100	Introduction to Environmental and Occupational Safety and Health (OSH) Technology	4
EHSM 110	Pollution Prevention	3
EHSM 210	Industrial Wastewater and Stormwater Management	4
WWTR 112	Basic Plant Operations: Water Treatment	3
WWTR 270	Public Works Supervision	3
WWTR 280	Backflow Tester Training	2
WWTR 282	Cross Connection Control Specialist	3
WWTR 284	Cross Connection Control Specialist-Recycled Water	3
WWTR 290	Cooperative Work Experience	3
		<u>8-9</u>
	Total Required	29-30
	Plus General Education Requirements	

Certificate of Achievement

Students who complete only the major requirements above qualify for a Certificate in Water Distribution Systems. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

III. WATER TREATMENT PLANT OPERATOR**Program Outcomes**

Upon completion of this program, students will be able to:

- Explain the major processes used to treat, disinfect, and safeguard the public water supply.
- Identify the major regulatory agencies that monitor and regulate the water industry.
- Use appropriate methods and/or equations needed to solve problems relating to hydraulics, dilutions rates, and chemical analysis of water treatment and distribution systems.
- Identify and classify water distribution system components and explain their use.
- Identify the safety precautions required in the water industry.

Associate in Science Degree Requirements:

Course	Title	Units
WWTR 101	Fundamentals of Water/Wastewater Technology	3
WWTR 102	Calculations in Water/Wastewater Technology	3
WWTR 104	Applied Hydraulics	3
WWTR 106	Introduction to Electrical and Instrumentation Processes	3
WWTR 110	Laboratory Analysis for Water/Wastewater	3
WWTR 112	Basic Plant Operations: Water Treatment	3
WWTR 117	Advanced Plant Operations: Water Treatment	3
		<u>21</u>

Select one of the following:

WWTR 114	Basic Plant Operations: Wastewater Treatment	3
WWTR 130	Water Distribution Systems	3

WWTR 132	Wastewater Collection Systems	3
WWTR 134	Mechanical Maintenance	3
WWTR 270	Public Works Supervision	3
WWTR 290	Cooperative Work Experience	3
		<u>3</u>

Select two of the following:

EHSM 100	Introduction to Environmental and Occupational Safety and Health (OSH) Technology	4
EHSM 110	Pollution Prevention	3
EHSM 210	Industrial Wastewater and Stormwater Management	4
WWTR 280	Backflow Tester Training	2
WWTR 282	Cross Connection Control Specialist	3
		<u>5-8</u>
	Total Required	29-32
	Plus General Education Requirements	

Certificate of Achievement

Students who complete only the major requirements above qualify for a Certificate in Water Treatment Plant Operator. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

IV. WASTEWATER COLLECTION SYSTEMS**Program Outcomes**

Upon completion of this program, students will be able to:

- Identify and classify wastewater collections system components and explain their use.
- Identify the major regulatory agencies that monitor and regulate the water/wastewater industry.
- Use appropriate methods and/or equations needed to solve problems relating to hydraulics, dilutions rates, and chemical analysis of wastewater collection and treatment systems.
- Identify the safety precautions required in the water/wastewater industry.

Associate in Science Degree Requirements:

Course	Title	Units
WWTR 101	Fundamentals of Water/Wastewater Technology	3
WWTR 102	Calculations in Water/Wastewater Technology	3
WWTR 104	Applied Hydraulics	3
WWTR 106	Introduction to Electrical and Instrumentation Processes	3
WWTR 132	Wastewater Collection Systems	3
WWTR 134	Mechanical Maintenance	3
WWTR 267	Wastewater Collection Systems II	3
		<u>21</u>

Select eight to nine units from the following:

EHSM 100	Introduction to Environmental and Occupational Safety and Health (OSH) Technology	4
EHSM 110	Pollution Prevention	3
EHSM 210	Industrial Wastewater and Stormwater Management	4
WWTR 114	Basic Plant Operations: Wastewater Treatment	3
WWTR 270	Public Works Supervision	3
WWTR 280	Backflow Tester Training	2
WWTR 282	Cross Connection Control Specialist	3
WWTR 284	Cross Connection Control Specialist-Recycled Water	3
WWTR 290	Cooperative Work Experience	3
		<u>8-9</u>
	Total Required	29-30
	Plus General Education Requirements	

Certificate of Achievement

Students who complete only the major requirements above qualify for a Certificate in Wastewater Collection Systems. An official

request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

V. WASTEWATER TREATMENT OPERATOR**Program Outcomes**

Upon completion of this program, students will be able to:

- Name and explain the major steps involved in the treatment and disposal of wastewater.
- Identify the major regulatory agencies that monitor and regulate the wastewater industry.
- Use appropriate methods and/or equations needed to solve problems relating to hydraulics, dilutions rates, pathogens, and chemical analysis of wastewater treatment systems.
- Identify and classify wastewater collections system components and explain their use.
- Identify the safety precautions required in the water/wastewater industry.

Associate in Science Degree Requirements:

Course	Title	Units
WWTR 101	Fundamentals of Water/Wastewater Technology	3
WWTR 102	Calculations in Water/Wastewater Technology	3
WWTR 104	Applied Hydraulics	3
WWTR 106	Introduction to Electrical and Instrumentation Processes	3
WWTR 110	Laboratory Analysis for Water/Wastewater	3
WWTR 114	Basic Plant Operations: Wastewater Treatment	3
WWTR 120	Advanced Plant Operations: Wastewater Treatment	3
		<u>21</u>

Select one of the following:

WWTR 112	Basic Plant Operations: Water Treatment	3
WWTR 130	Water Distribution Systems	3
WWTR 132	Wastewater Collection Systems	3
WWTR 134	Mechanical Maintenance	3
WWTR 270	Public Works Supervision	3
WWTR 290	Cooperative Work Experience	3
		<u>3</u>

Select two of the following:

EHSM 100	Introduction to Environmental and Occupational Safety and Health (OSH) Technology	4
EHSM 110	Pollution Prevention	3
EHSM 210	Industrial Wastewater and Stormwater Management	4
WWTR 280	Backflow Tester Training	2
WWTR 282	Cross Connection Control Specialist	3
		<u>5-8</u>
	Total Required	29-32
	Plus General Education Requirements	

Certificate of Achievement

Students who complete only the major requirements above qualify for a Certificate in Wastewater Treatment Operator. An official request must be filed with the Admissions and Records Office prior to the deadline as stated in the Academic Calendar.

Course Descriptions

EXPLANATION OF ABBREVIATIONS AND COURSE NOTES

Courses which meet the requirements for General Education for the Associate Degree, CSU GE, and the Intersegmental General Education Transfer Curriculum (IGETC) are identified after each course description. The CSU and UC indicators are also included and mean that the courses transfer for at least elective credit to these two public systems of higher education in California.

If you would like more information on how courses meet your specific degree or transfer objectives, please see a counselor.

AA/AS GE = Meets general education for the Associate degree.

CSU = Transfers to the CSU for at least elective credit.

CSU GE = Meets general education requirements for the California State University system.

IGETC = Meets Intersegmental General Education Transfer Curriculum requirements.

UC = Transferable to the University of California campuses.

UC credit limit = Limits the total amount of credit awarded for a series or sequence of courses in the same discipline.

AMERICAN SIGN LANGUAGE

120 AMERICAN SIGN LANGUAGE I 4 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
4 hours lecture

The beginning course in a series of four American Sign Language (ASL) courses. Introduction to ASL as it is used within American Deaf culture. Instruction in the basic structure of the language and the development of its use. Introduction to Deaf culture and history of the language.

AA/AS GE, CSU, CSU GE, IGETC, UC

121 AMERICAN SIGN LANGUAGE II 4 UNITS

Prerequisite: "C" grade or higher or "Pass" in ASL 120 or equivalent.
Corequisite: None
Recommended Preparation: None
4 hours lecture

The second in a series of four American Sign Language (ASL) courses. Students are provided an opportunity to progress and enhance their ability to communicate in ASL. Students will continue the study of cultural analysis and comparisons, receptive skill comprehension, expressive skill production, and ASL linguistics.

AA/AS GE, CSU, CSU GE, IGETC, UC

125 AMERICAN SIGN LANGUAGE WITH INFANTS AND TODDLERS 1 UNIT

Prerequisite: None
Corequisite: None
Recommended Preparation: None
1 hour lecture

Explore the methods and benefits of using American Sign Language (ASL) with hearing infants and toddlers. Areas emphasized will be methods, benefits, and philosophies of teaching infants and toddlers to communicate using ASL. Upon completion, students will be

able to introduce these techniques in early childhood classrooms and/or at home.

CSU

126 AMERICAN SIGN LANGUAGE WITH SCHOOL AGE CHILDREN 1 UNIT

Prerequisite: None
Corequisite: None
Recommended Preparation: None
1 hour lecture

Explore the methods and benefits of using American Sign Language (ASL) with hearing school age children. Areas emphasized will be methods, benefits, and philosophies of teaching school age children to communicate using ASL. Upon completion, students will be able to introduce these techniques in elementary school classrooms and/or at home.

CSU

130 SIGN LANGUAGE: FINGERSPELLING 3 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: "C" grade or higher or "Pass" in ASL 120 or equivalent.
3 hours lecture

This course is taught using American Sign Language (ASL). Introduction to the American manual alphabet (Fingerspelling) and its use within ASL. Upon completion, students will demonstrate increased ability to accurately produce and comprehend ASL number systems and fingerspelling uses. Extensive drills and practice in both receptive and expressive use will be implemented.

CSU

140 PERSPECTIVES ON DEAF CULTURE 3 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture

This course will introduce students to the Deaf community and American Deaf culture. Deaf heritage, values, behaviors, historical perspectives, and the grammar structure of sign language will be examined. American Sign Language (ASL) literature, Deaf artists, social and political influences, and emerging technology for Deaf people will be studied.

AA/AS GE, CSU

199 SPECIAL STUDIES OR PROJECTS IN AMERICAN SIGN LANGUAGE 1-3 UNITS

Prerequisite: Consent of instructor
3-9 hours
Individual study, research or projects under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. *May be taken for a maximum of 9 units.*

220 AMERICAN SIGN LANGUAGE III 4 UNITS

Prerequisite: "C" grade or higher or "Pass" in ASL 121 or equivalent.
Corequisite: None
Recommended Preparation: None
4 hours lecture

The third in a series of four American Sign Language (ASL) courses. Students are provided an opportunity to increase their receptive skill comprehension and expressive skill production. Cultural analysis and comparisons will focus on American Deaf cultural processes, practices, and products of Deaf culture.

AA/AS GE, CSU, CSU GE, IGETC, UC

221 AMERICAN SIGN LANGUAGE IV 4 UNITS

Prerequisite: "C" grade or higher or "Pass" in ASL 220 or equivalent.
Corequisite: None
Recommended Preparation: None
4 hours lecture

The fourth in a series of four American Sign Language (ASL) courses. Students are provided an opportunity to increase their receptive skill comprehension and expressive skill production. Cultural analysis and comparisons will focus on American Deaf cultural processes, practices, and products of Deaf culture.

AA/AS GE, CSU, CSU GE, IGETC, UC

298 SELECTED TOPICS IN AMERICAN SIGN LANGUAGE 1-4 UNITS

Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-12 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format. **Pass/No Pass only. Non-degree applicable.**

299 SELECTED TOPICS IN AMERICAN SIGN LANGUAGE 1-4 UNITS

Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-12 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format.

CSU

ANTHROPOLOGY

120 CULTURAL ANTHROPOLOGY 3 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture

The nature of culture; cultural growth and history; survey of the range of cultural phenomena including material culture, social organization, kinship systems, religion, language and other topics; systematic study of similarities and differences among cultures through investigation of selected societies.

AA/AS GE, CSU, CSU GE, IGETC, UC

130 INTRODUCTION TO PHYSICAL ANTHROPOLOGY 3 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture

People's place in nature; physical and behavioral characteristics of primates; principles of evolution and basic outline of human genetics; description of the record of early humans and explanation of fossils; present day variability among human populations.

AA/AS GE, CSU, CSU GE, IGETC, UC

199 SPECIAL STUDIES OR PROJECTS IN ANTHROPOLOGY 1-3 UNITS

Prerequisite: Consent of instructor
3-9 hours
Individual study, research or projects under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. *May be taken for a maximum of 9 units.*

298 SELECTED TOPICS IN ANTHROPOLOGY 1-3 UNITS

Prerequisite: Varies with topic
 Corequisite: Varies with topic
 Recommended Preparation: Varies with topic
 1-9 hours
 Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format. **Pass/No Pass only. Non-degree applicable.**

299 SELECTED TOPICS IN ANTHROPOLOGY 1-3 UNITS

Prerequisite: Varies with topic
 Corequisite: Varies with topic
 Recommended Preparation: Varies with topic
 1-9 hours
 Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format.
 CSU

ARABIC

120 ARABIC I 5 UNITS

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 5 hours lecture
 Introduction to the Arabic language and the culture of its speakers. Facilitates the practical application of the language in everyday oral and written communication at the beginning novice level. Since the focus is on basic communication skills, the class will be conducted in modern standard Arabic as much as possible. While becoming familiar with the Arabic speaking world, students will learn structures that will enable them to function in Arabic in everyday contexts.

AA/AS GE, CSU, CSU GE, IGETC, UC

121 ARABIC II 5 UNITS

Prerequisite: "C" grade or higher or "Pass" in ARBC 120 or two years of high school Arabic or equivalent.
 Corequisite: None
 Recommended Preparation: None
 5 hours lecture
 Continuation of Arabic I. Continues to develop oral and written skills based on practical everyday needs. Students with three years of high school Arabic should enroll in ARBC 220.
 AA/AS GE, CSU, CSU GE, IGETC, UC

145 ARABIC CIVILIZATIONS 3 UNITS

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 3 hours lecture
 Introduction to the major characteristics of Arabic civilization as reflected in literature, philosophy, architecture, and the arts of Arabic countries. This course may have an emphasis on a selected Arabic country or countries.
 AA/AS GE, CSU, CSU GE, IGETC, UC

199 SPECIAL STUDIES OR PROJECTS IN ARABIC 1-3 UNITS

Prerequisite: Consent of instructor
 3-9 hours
 Individual study, research or projects under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. *May be taken for a maximum of 9 units.*

220 ARABIC III 5 UNITS

Prerequisite: "C" grade or higher or "Pass" in ARBC 121 or three years of high school Arabic or equivalent.
 Corequisite: None
 Recommended Preparation: None
 5 hours lecture
 Continuation of Arabic II. Continues to develop oral, listening, reading and writing skills in order to acquire proficiency in Arabic. Students with four years of high school Arabic should enroll in ARBC 221.
 AA/AS GE, CSU, CSU GE, IGETC, UC

221 ARABIC IV 5 UNITS

Prerequisite: "C" grade or higher or "Pass" in ARBC 220 or four years of high school Arabic or equivalent.
 Corequisite: None
 Recommended Preparation: None
 5 hours lecture
 Continuation of Arabic III. Continues to develop oral, reading, writing and listening skills in order to improve proficiency in Arabic.
 AA/AS GE, CSU, CSU GE, IGETC, UC

250 CONVERSATIONAL ARABIC I 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in ARBC 121 or three years of high school Arabic or equivalent.
 Corequisite: None
 Recommended Preparation: None
 3 hours lecture
 Continues to develop oral, reading, writing and listening skills, but with an emphasis in oral proficiency.
 AA/AS GE, CSU, CSU GE, UC

251 CONVERSATIONAL ARABIC II 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in ARBC 250 or four years of high school Arabic or equivalent.
 Corequisite: None
 Recommended Preparation: None
 3 hours lecture
 Continues to develop oral, reading, writing and listening skills, but with an emphasis in oral proficiency.
 AA/AS GE, CSU, CSU GE, UC

298 SELECTED TOPICS IN ARABIC 1-5 UNITS

Prerequisite: Varies with topic
 Corequisite: Varies with topic
 Recommended Preparation: Varies with topic
 1-15 hours
 Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format. **Pass/No Pass only. Non-degree applicable.**

299 SELECTED TOPICS IN ARABIC 1-5 UNITS

Prerequisite: Varies with topic
 Corequisite: Varies with topic
 Recommended Preparation: Varies with topic
 1-15 hours
 Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format.
 CSU

ARAMAIC

120 ARAMAIC I 5 UNITS

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 5 hours lecture
 Introductory course to the classical-modern Aramaic language, essentials of grammar and pronunciation, and the Chaldean-Assyrian culture and civilization. Facilitates the practical

application of the language in everyday oral and written communication at the beginning level. Students will learn structures that will enable them to function in Aramaic in everyday contexts while becoming familiar with the Aramaic speaking world. The origin of the Semitic languages will be surveyed through selected readings and discussions. *Content equivalent to two years of high school language study.*

AA/AS GE, CSU, CSU GE, UC

121 ARAMAIC II 5 UNITS

Prerequisite: "C" grade or higher or "Pass" in ARAM 120 or equivalent.
 Corequisite: None
 Recommended Preparation: None
 5 hours lecture
 Continuation of Aramaic I. Covers the classical-modern Aramaic alphabet, essentials of grammar and pronunciation, and the language of Chaldean-Assyrian culture and civilization.
 AA/AS GE, CSU, CSU GE, IGETC, UC

199 SPECIAL STUDIES OR PROJECTS IN ARAMAIC 1-3 UNITS

Prerequisite: Consent of instructor
 3-9 hours
 Individual study, research or projects under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. *May be taken for a maximum of 9 units.*

220 ARAMAIC III 5 UNITS

Prerequisite: "C" grade or higher or "Pass" in ARAM 121 or equivalent.
 Corequisite: None
 Recommended Preparation: None
 5 hours lecture
 Continuation of Aramaic II. Students will further their knowledge of classical-modern Aramaic grammar. The primary emphasis is on the conjugation of verbs, introduction to Aramaic literature, and the translation of ancient and modern text materials. Students will also learn how to compose and write essays in modern Aramaic (Chaldean).

AA/AS GE, CSU, CSU GE, IGETC, UC

298 SELECTED TOPICS IN ARAMAIC 1-5 UNITS

Prerequisite: Varies with topic
 Corequisite: Varies with topic
 Recommended Preparation: Varies with topic
 1-15 hours
 Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format. **Pass/No Pass only. Non-degree applicable.**

299 SELECTED TOPICS IN ARAMAIC 1-5 UNITS

Prerequisite: Varies with topic
 Corequisite: Varies with topic
 Recommended Preparation: Varies with topic
 1-15 hours
 Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format.
 CSU

ART

100 ART APPRECIATION 3 UNITS

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 3 hours lecture

In this introductory course, students will learn how to examine, compare, analyze, evaluate, interpret, and discuss works of visual art within their cultural contexts. Art media for study will include drawing, painting, printmaking, photography, sculpture, ceramics, textiles, film, architecture, etc. Works for examination will encompass representative artistic styles from western and other major world cultures, and will also include the artistic contributions of women and minority cultures.

AA/AS GE, CSU, CSU GE, IGETC, UC

120 TWO-DIMENSIONAL DESIGN 3 UNITS

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 2 hours lecture, 4 hours laboratory

Introduction to the two-dimensional arts. Students will study the great works of the human imagination while focusing on those of historical, theoretical and cultural relevance. Students will examine form and content through the application of art elements and principles of design.

AA/AS GE, CSU, CSU GE, UC

121 PAINTING I 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in ART 120 or equivalent.
 Corequisite: None
 Recommended Preparation: None
 2 hours lecture, 4 hours laboratory

Introduction to painting with an emphasis on painting tools, materials, techniques and color principles. Students will develop skill in handling form, space, and plastic aspects of acrylic and/or oil paints.

CSU, UC

124 DRAWING I 3 UNITS

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 2 hours lecture, 4 hours laboratory

Introduction to drawing theory and practice. Students will study major works of art in relation to drawing techniques, illusion of space, and composition through a variety of media.

AA/AS GE, CSU, UC

125 DRAWING II 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in ART 124 or equivalent.
 Corequisite: None
 Recommended Preparation: None
 2 hours lecture, 4 hours laboratory

Builds on the drawing techniques and composition concepts covered in ART 124 to include new mediums to address creative problem solving and refine drawing skills. Introduces brush, pen and ink into the drawing process with an emphasis on line quality and modeling using washes, hatching and stippling. Colored pencil and mixed media are explored using a variety of linear and tonal techniques. Scientific perspective is extended from ART 124 to include measuring, inclining planes, circles, shadows and reflections.

CSU, UC

129 THREE-DIMENSIONAL DESIGN 3 UNITS

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 2 hours lecture, 4 hours laboratory

Introduction to the fundamental principles of three-dimensional composition emphasizing the formal elements and language of design. Basic visual, tactile and conceptual methods of defining space are examined in a series of compositional exercises. A variety of materials are used to explore the elements of line, shape, mass, texture and volume through the application of design principles such as balance, emphasis, rhythm, harmony, contrast, repetition, proportion, scale and unity. The historical development of design and aesthetics is studied along with how social, political and cultural beliefs have influenced artists and design professionals. Assignments are non-technical and do not require prior knowledge of tools and equipment. This is a comprehensive introductory course that could lead to future study in a diverse range of art and design professions.

AA/AS GE, CSU, UC

135 WATERCOLOR I 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in ART 124 or equivalent.
 Corequisite: None
 Recommended Preparation: None
 2 hours lecture, 4 hours laboratory

Introduction to basic watercolor tools, materials and techniques. Emphasizes color principles and skill development in handling form and space.

CSU, UC

140 HISTORY OF WESTERN ART I: PREHISTORIC TO 1250 A.D. 3 UNITS

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 3 hours lecture

Historical survey of the major art forms (primarily architecture, sculpture, ceramics, painting) of the western world from prehistory to circa 1250 A.D.

AA/AS GE, CSU, CSU GE, IGETC, UC

141 HISTORY OF WESTERN ART II: CIRCA 1250 A.D. TO PRESENT TIME 3 UNITS

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 3 hours lecture

Historical survey of the major art forms (primarily architecture, sculpture, ceramics, painting, printmaking, photography) of the western world from the late Gothic era to the present.

AA/AS GE, CSU, CSU GE, IGETC, UC

143 MODERN ART 3 UNITS

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 3 hours lecture

Historical survey of the major art forms (primarily architecture, sculpture, ceramics, painting, printmaking and photography) of the late nineteenth and twentieth centuries with geographical emphasis on Europe and America.

AA/AS GE, CSU, CSU GE, IGETC, UC

144 ARCHITECTURE OF THE 20TH CENTURY 3 UNITS

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 3 hours lecture

Historical survey of the 20th century masters of the major movements in architecture and environmental spaces. Global political and

social economic influences on concepts, styles, philosophy and artistic expressions in architecture will be studied.

AA/AS GE, CSU, CSU GE, IGETC, UC

145 CONTEMPORARY ART HISTORY: 1945-PRESENT 3 UNITS

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 3 hours lecture

Survey of the major artists and art movements from 1945 to the present. Includes such major topics as the analysis and summary of Modernism, the transition from Modern to Post-Modern art, the emergence of non-traditional art media, and the analysis of the influence of global multiculturalism in art. Specific art practices such as painting, sculpture, earthworks, photography, performance, installation, printmaking and architecture will be discussed in relation to the cultural dialogue they establish or to which they respond.

AA/AS GE, CSU, CSU GE, IGETC, UC

199 SPECIAL STUDIES OR PROJECTS IN ART 1-3 UNITS

Prerequisite: Consent of instructor
 3-9 hours

Individual study, research or projects under instructor guidance. Written reports and periodic conferences are required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. *May be taken for a maximum of 9 units.*

220 PAINTING II 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in ART 121 or equivalent.
 Corequisite: None
 Recommended Preparation: None
 2 hours lecture, 4 hours laboratory

Continuation of Painting I with an emphasis on creative problem-solving skills. Students will develop a personal style of expression.

CSU, UC

221 PAINTING III 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in ART 220 or equivalent.
 Corequisite: None
 Recommended Preparation: None
 2 hours lecture, 4 hours laboratory

Offers a wider selection of painting mediums to include acrylic, oil, egg tempera, casein and encaustic. Students will continue developing a personal style of expression.

CSU, UC

222 PAINTING IV 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in ART 221 or equivalent.
 Corequisite: None
 Recommended Preparation: None
 2 hours lecture, 4 hours laboratory

Focuses on a series of paintings that develop a personal theme or statement. Advanced painting techniques will be combined with advanced compositional devices.

CSU

224 DRAWING III 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in ART 125 or equivalent.
 Corequisite: None
 Recommended Preparation: None
 2 hours lecture, 4 hours laboratory

The drawing mediums, skills, techniques and composition concepts used in ART 124 and 125 will be applied to a variety of subject matters. Students will draw different subject matters including but not limited to animals, plants, still life, landscapes, seascapes, cityscapes, etc.

Emphasis is on making effective compositions with good craft.

CSU, UC

225 DRAWING IV 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in ART 224 or equivalent.

Corequisite: None

Recommended Preparation: None

2 hours lecture, 4 hours laboratory

Focuses on drawing-based artwork that results in artwork that has a personal theme or statement. Students will explore several advanced compositional devices while pursuing their themes. Portfolio preparation is emphasized.

CSU, UC

230 FIGURE DRAWING I 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in ART 124 or equivalent.

Corequisite: None

Recommended Preparation: None

2 hours lecture, 4 hours laboratory

Utilizes the skills and concepts developed in ART 124 to address the drawing of the nude human figure. Students will learn how articulation, standard proportion, bones and muscles influence the rendering of the human form. Drawing will be done from live models with studio lighting. Emphasis is on representational drawing with line and value. This course is important for anyone dealing with the human figure, i.e., drawing, painting, sculpture, photography, illustration, graphic design, fashion design, etc.

CSU, UC

231 FIGURE DRAWING II 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in ART 230 or equivalent.

Corequisite: None

Recommended Preparation: None

2 hours lecture, 4 hours laboratory

Builds on the concepts and skills developed in ART 230. Surface anatomy related to the bone and muscle structure of the nude human form is studied along with the proportions and anatomy of the human head. Students will work with achromatic and chromatic drawing mediums.

CSU, UC

232 FIGURE DRAWING III 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in ART 231 or equivalent.

Corequisite: None

Recommended Preparation: None

2 hours lecture, 4 hours laboratory

Concentrates on integrating the human figure into a compositional environment. Figure drawing techniques from ART 230 and 231 will be integrated into the design process.

CSU, UC

233 FIGURE DRAWING IV 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in ART 232 or equivalent.

Corequisite: None

Recommended Preparation: None

2 hours lecture, 4 hours laboratory

Focuses on figurative artwork that develops a personal theme or statement. Students will be asked to explore several advanced compositional devices while pursuing their themes. This class emphasizes portfolio preparation.

CSU

235 WATERCOLOR II 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in ART 135 or equivalent.

Corequisite: None

Recommended Preparation: None

2 hours lecture, 4 hours laboratory

Continuation of Watercolor I techniques with an emphasis on creative problem solving and aesthetic compositions.

CSU, UC

236 WATERCOLOR III 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in ART 235 or equivalent.

Corequisite: None

Recommended Preparation: None

2 hours lecture, 4 hours laboratory

Continuation of Watercolor II skill and composition techniques. Students will develop a personal style of expression.

CSU, UC

298 SELECTED TOPICS IN ART 1-3 UNITS

Prerequisite: Varies with topic

Corequisite: Varies with topic

Recommended Preparation: Varies with topic

1-9 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format. **Pass/No Pass only. Non-degree applicable.**

299 SELECTED TOPICS IN ART 1-3 UNITS

Prerequisite: Varies with topic

Corequisite: Varies with topic

Recommended Preparation: Varies with topic

1-9 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format.

CSU

ASTRONOMY

110 DESCRIPTIVE ASTRONOMY 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

3 hours lecture

The development of modern astronomy and its techniques with an emphasis on the vocabulary of astronomy and the current understanding of our solar system, stellar evolution, our galaxy, and the structure of the universe.

AA/AS GE, CSU, CSU GE, IGETC, UC

112 GENERAL ASTRONOMY LABORATORY 1 UNIT

Prerequisite: "C" grade or higher or "Pass" in ASTR 110 or equivalent or concurrent enrollment.

Corequisite: None

Recommended Preparation: None

3 hours laboratory

Planet, stellar and lunar studies; acquaintance with constellations and astronomical coordinates; and use of astronomical instruments.

AA/AS GE, CSU, CSU GE, IGETC, UC

199 SPECIAL STUDIES OR PROJECTS IN ASTRONOMY 1-3 UNITS

Prerequisite: Consent of instructor

3-9 hours

Individual study, research or projects under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. *May be taken for a maximum of 9 units.*

298 SELECTED TOPICS IN ASTRONOMY 1-3 UNITS

Prerequisite: Varies with topic

Corequisite: Varies with topic

Recommended Preparation: Varies with topic

1-9 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format. **Pass/No Pass only. Non-degree applicable.**

299 SELECTED TOPICS IN ASTRONOMY 1-3 UNITS

Prerequisite: Varies with topic

Corequisite: Varies with topic

Recommended Preparation: Varies with topic

1-9 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format.

CSU

AUTOMOTIVE TECHNOLOGY

099 INTRODUCTION TO AUTOMOTIVE TECHNOLOGY 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

3 hours lecture

This course presents basic information about automotive systems. Serves as a recommended preparation course for students interested in the Automotive Technology major.

CSU

100 INTRODUCTION TO AUTOMOTIVE TECHNOLOGY LAB 1 UNIT

Prerequisite: None

Corequisite: None

Recommended Preparation: None

3 hours laboratory

Basic laboratory environment designed to prepare students for entry into the Automotive Technology major. Covers repairing, servicing and basic diagnostic procedures of a typical passenger car or light truck.

CSU

120 ENGINE PERFORMANCE I - MECHANICAL AND IGNITION SYSTEMS 5 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: "C" grade or higher or "Pass" in AUTO 099, 100 or equivalent

3 hours lecture, 6 hours laboratory

First in a three course series dealing with engine performance. Begins with a review of basic engine mechanical systems and an introduction to vehicle emissions and computer scanners, followed by a detailed study of current ignition systems. Students will be required to complete associated tasks in the shop as specified by NATEF (National Automotive Training Educational Foundation). Initial preparation for ASE Engine Performance (A-8) Certification.

CSU

121 EMISSION CONTROL LICENSE 5 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

3 hours lecture, 6 hours laboratory

Theory of operation, repair and maintenance of emission control devices with strong emphasis on laws and regulations required for licensing. Additional training covers: loaded mode dyno

testing, NOx failure analysis and diagnostics, OBD II, catalytic converter testing and oxygen sensor diagnosis with a digital storage oscilloscope (DSO). This course is approved by the State of California Bureau of Automotive Repair (BAR) and includes the basic and advanced clean air car courses. Preparation for the BAR Advanced Emission Specialist Technician (EA) License test.

CSU

122 AUTOMOTIVE ELECTRICAL SYSTEMS 5 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture, 6 hours laboratory
Basic principles of electricity as applied to automobiles. Comprehensive investigation of automotive electrical systems including periodic maintenance, diagnosis, component servicing and adjustment. Students will be expected to complete associated tasks in the shop as specified by NATEF (National Automotive Training Educational Foundation). Preparation for ASE A-6 Certification.

CSU

123 ENGINE PERFORMANCE II - FUEL SYSTEMS 5 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: "C" grade or higher or "Pass" in AUTO 120 or equivalent.
3 hours lecture, 6 hours laboratory
Second in a three course series dealing with engine performance. Emphasizes the use of computers for the control of fuel and air delivery to the engine. Topics include: input and output devices, basic computer operation, closed loop fuel control, computer-assisted carburetion, computer-controlled fuel injection, turbochargers and superchargers, scan tool diagnostics, digital lab scope diagnostics, and OBD II diagnostic. Students will be required to complete associated tasks in the shop as specified by NATEF (National Automotive Training Educational Foundation). Final preparation for ASE Engine Performance (A-8) Certification.

CSU

124 ENGINE PERFORMANCE III - DRIVABILITY 5 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: "C" grade or higher or "Pass" in AUTO 123 or equivalent.
3 hours lecture, 6 hours laboratory
The capstone course in a three course engine performance series. Students will utilize skills developed in the first two courses to perform drivability diagnostics on all related engine systems. Emphasis on advanced application of scan tools and digital storage oscilloscopes (DSO) in the diagnosis of hard to find system problems, especially intermittent concerns. Students will be required to complete associated tasks in the shop as specified by NATEF (National Automotive Training Educational Foundation). Preparation for ASE Advanced Engine Performance (L-1) Certification.

CSU

127 ADVANCED AUTOMOTIVE ELECTRICAL SYSTEMS 5 UNITS

Prerequisite: "C" grade or higher or "Pass" in AUTO 122 or equivalent.
Corequisite: None
Recommended Preparation: None
3 hours lecture, 6 hours laboratory
Advanced course in electrical systems designed to develop greater student performance under simulated industry conditions. Students will

be expected to complete associated tasks in the shop as specified by NATEF (National Automotive Training Educational Foundation). Preparation for ASE A-6 Certification.

CSU

129 INTRODUCTION TO HYBRID, ELECTRIC AND ALTERNATIVE FUELED VEHICLES 5 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture, 6 hours laboratory
Introductory course in the study of hybrid, electric, alternative fuels and their delivery systems for automotive and light trucks. The main focus is on hybrid vehicles; additionally, electric and alternative fueled vehicles will be covered to include alcohol, diesel, CNG (Compressed Natural Gas) and LPG (Liquefied Petroleum Gas) systems. Fuel cell technologies will be discussed. Topics include environmental and political concerns, pros and cons of various alternative fuels, and hybrid and electric options. Proper safety procedures for CNG, LPG, hybrid, electric and diesel systems will be emphasized. The properties, chemical structure, and safety concerns of various alternative fuels will be stressed. Electrical/electronic diagnosis of the various systems will be covered in detail with specific case studies on live vehicles. Students are recommended to have a working knowledge of automotive electricity, drivability diagnosis, and automotive computer systems.

CSU

130 AUTOMOTIVE BRAKES AND BRAKE LICENSE 5 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture, 6 hours laboratory
Detailed study of automotive brake system service procedures. Laboratory experience covers drum and disc brake system inspection, adjustment and repair procedures, and antilock brake systems. Students will be required to complete associated tasks in the shop as specified by NATEF (National Automotive Training Educational Foundation). Preparation for State of California Official Brake Adjusters License and ASE A-5 Certification.

CSU

135 ADVANCED BRAKES 5 UNITS

Prerequisite: "C" grade or higher or "Pass" in AUTO 130 or equivalent.
Corequisite: None
Recommended Preparation: None
3 hours lecture, 6 hours laboratory
Advanced course in automotive brake systems emphasizing diagnosis. Designed to develop greater student performance under simulated industry conditions. Students will be required to complete associated tasks in the shop as specified by NATEF (National Automotive Training Educational Foundation). Preparation for State of California Official Brake Adjusters License and ASE A-5 Certification.

CSU

140 FOUR WHEEL ALIGNMENT 5 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture, 6 hours laboratory
Four wheel alignment principles as applied to checking and correcting alignment settings. Repair and replacement of suspension components, computerized steering and ride controls. Additional training in wheel balancing. Emphasis on practical experience on "live" automobiles. Students will be required to

complete associated tasks in the shop as specified by NATEF (National Automotive Training Educational Foundation). Preparation for ASE A-4 Certification.

CSU

145 ADVANCED FOUR WHEEL ALIGNMENT 5 UNITS

Prerequisite: "C" grade or higher or "Pass" in AUTO 140 or equivalent.
Corequisite: None
Recommended Preparation: None
3 hours lecture, 6 hours laboratory
Advanced course in four wheel alignment emphasizing diagnosis and complete suspension system repair. Designed to develop greater student performance under simulated industry conditions. Students will be required to complete associated tasks in the shop as specified by NATEF (National Automotive Training Educational Foundation). Preparation for ASE A-4 Certification.

CSU

152 DRIVE TRAIN SYSTEMS 4 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
2.5 hours lecture, 4.5 hours laboratory
In-depth study of hydraulic power transmission and control systems used in automatic transmissions including diagnosis and overhaul of actual transmissions to precise industry standards. Plus, theory of operation, diagnosis, repair and overhaul of manual transmissions, clutches, drivelines and differentials including four wheel drive and front wheel drive. Students will be required to complete associated tasks in the shop as specified by NATEF (National Automotive Training Educational Foundation). Preparation for ASE A-2 and A-3 Certification.

CSU

155 ADVANCED DRIVE TRAIN SYSTEMS 4 UNITS

Prerequisite: "C" grade or higher or "Pass" in AUTO 152 or equivalent.
Corequisite: None
Recommended Preparation: None
2.5 hours lecture, 4.5 hours laboratory
Advanced course in power drive systems emphasizing advanced diagnosis and repair of drive train systems and components. Designed to develop greater student performance under simulated industry conditions. Students will be required to complete associated tasks in the shop as specified by NATEF (National Automotive Training Educational Foundation). Preparation for ASE A-2 and A-3 Certification.

CSU

160 AIR CONDITIONING AND HEATING SYSTEMS 3 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
2 hours lecture, 3 hours laboratory
Study of refrigeration principles with emphasis on servicing, diagnosing, testing and repair or replacement of components. Emphasis on practical experience performing actual repairs. Students will be required to complete associated tasks in the shop as specified by NATEF (National Automotive Training Educational Foundation). Preparation for ASE A-7 Certification and EPA-approved CFC Technician Certification.

CSU

165 ADVANCED AIR CONDITIONING AND HEATING SYSTEMS 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in AUTO 160 or equivalent.

Corequisite: None

Recommended Preparation: None

2 hours lecture, 3 hours laboratory

Advanced course in automotive environmental control systems emphasizing advanced diagnosis and repair. Designed to develop greater student performance under simulated industry conditions. Students will be required to complete associated tasks in the shop as specified by NATEF (National Automotive Training Educational Foundation). Preparation for ASE A-7 Certification.

CSU

170 ENGINE OVERHAUL 5 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

3 hours lecture, 6 hours laboratory

Diagnosis of engine failures, engine removal and disassembly techniques, engine cleaning and measuring practices, machining principles, and assembly procedures. Emphasis is on practical experience through actual shop training. Students are required to provide an auto engine for overhaul and complete associated tasks in the shop as specified by NATEF (National Automotive Training Educational Foundation). Preparation for ASE A-1 Certification.

CSU

175 ADVANCED ENGINE OVERHAUL 5 UNITS

Prerequisite: "C" grade or higher or "Pass" in AUTO 170 or equivalent.

Corequisite: None

Recommended Preparation: None

3 hours lecture, 6 hours laboratory

Advanced course in engine overhaul designed to develop greater student performance under simulated industry conditions. Students will be required to complete associated tasks in the shop as specified by NATEF (National Automotive Training Educational Foundation). Preparation for ASE A-1 Certification.

CSU

176 ENGINE MACHINING 5 UNITS

Prerequisite: "C" grade or higher or "Pass" in AUTO 175 or equivalent.

Corequisite: None

Recommended Preparation: None

3 hours lecture, 6 hours laboratory

Third course in the engine repair sequence. Students must have credit in engine overhaul and advanced engine overhaul prior to enrolling in this course. Topics include cylinder boring and honing, rod resizing, replacing valve guides and seats, thread repair, king-pin fitting, replacing wheel studs, pressing bearings, etc. Preparation for employment in the automotive machine shop field, and for the ASE Engine Machinist exams.

CSU

180 AUTOMOTIVE SERVICE ADVISOR 1 UNIT

Prerequisite: None

Corequisite: None

Recommended Preparation: None

1 hour lecture

Prepares students for working as service advisors for large independent garages or dealerships. Covers service procedures, customer relations, repair orders and warranty policies.

CSU

182 AUTOMOTIVE WORK EXPERIENCE 1-3 UNITS

Prerequisite: Completion of a minimum of 10 units in Automotive Program. Must meet state guidelines for work experience.

Corequisite: None

Recommended Preparation: None

5 hours paid or 4 hours unpaid work experience per week per unit

Students who are employed in the automotive trade full-time or part-time (paid or unpaid) and able to work the minimum required hours during the semester are eligible to enroll in this course. Assessment of student will be performed by instructor in discussion with appropriate supervisor at place of employment. Students will further develop skills attained in the classroom setting. *May be taken up to 5 times for a maximum of 15 units.*

CSU

190 ASSET-ORIENTATION, PDI AND LUBRICATION 2 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

1 hour lecture, 3 hours laboratory

Introduction to the Ford sponsored ASSET program. Students will become familiar with dealership operations, vehicle pre-delivery inspection, and proper lubrication of the various systems of the modern automobile. Complemented by required work experience in the dealership.

CSU

191 ASSET-BRAKES AND ALIGNMENT 7 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

5 hours lecture, 6 hours laboratory

Ford ASSET course to include a detailed study of modern automotive braking systems and service procedures. The laboratory will cover drum and disc brake systems inspection, adjustment and repair procedures. Also covers four wheel alignment principles as applied to checking and correcting alignment settings. Repair and replacement of suspension components. Additional training in wheel balancing. Emphasis on practical experience on "live" automobiles. Preparation for ASE Certification. Complemented by required work experience in the dealership.

CSU

192 ASSET-DRIVE TRAIN 8 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

5.5 hours lecture, 7.5 hours laboratory

Ford ASSET course encompassing the study of modern drive train systems. Includes theory of operation, diagnosis, repair and overhaul of manual transmissions, clutches, drivelines and differentials including four wheel drive and front wheel drive. The course also includes the theory of operation, diagnosis, repair and overhaul of automatic transmissions and transaxles. Current computerized control system operation and diagnosis of the drive train will be emphasized. Includes Ford Motor Company certification and preparation for ASE Certification. Complemented by work experience in the dealership.

CSU

193 ASSET-ENGINE REPAIR 4.5 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

3 hours lecture, 4.5 hours laboratory

Ford ASSET course to include diagnosis of engine failures, engine removal and disassembly techniques, engine cleaning and measuring practices, machining principles, assembly procedures and in-car repairs. Engine design theory will be discussed. Preparation for ASE Certification. Complemented by required work experience in the dealership.

CSU

195 ASSET-ELECTRONIC ENGINE CONTROLS 7 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

5 hours lecture, 6 hours laboratory

Ford ASSET course to include an in-depth study of engine drivability and electronic engine controls on modern automobiles and trucks. Includes the study of basic and electronic ignition systems, early and modern fuel systems, and the repair and diagnosis of these systems. Emphasis is on electronic engine control system theory of operation and repair to include discussion of sensors, processors and actuators, and system diagnosis and repair. On-board computer logic and strategies will also be presented. Preparation for ASE Certification. Students who successfully complete this course will receive Ford Motor Company certification in Electronic Engine Control and Diesel Engine Performance Diagnosis.

CSU

196 ASSET-ELECTRICAL, ACCESSORIES AND AIR CONDITIONING 5 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

4 hours lecture, 3 hours laboratory

Ford ASSET course to include electrical systems, theory, diagnosis and repair procedures utilizing state of the art equipment. Systems covered will be storage, generating and starting. Coverage of accessory systems such as lighting, power seats, power door locks, cruise controls, electric windows, electronic dashboards, radios, windshield wipers, etc. Also covered are all major topics dealing with automotive air conditioning including refrigeration theory, system evacuation and recovery, leak repair, compressor repair, component replacement, and manual and automatic temperature control. Preparation for ASE Certification. Complemented by required work experience in the dealership.

CSU

197 ASSET-WORK EXPERIENCE 1-3 UNITS

Prerequisite: Admission to the ASSET program.

Corequisite: None

Recommended Preparation: None

75 hours paid work experience per unit

Ford ASSET work experience. Students will be placed with a sponsoring dealer at the start of the training program. This course is based on paid work experience at the sponsoring dealership. Assessment of students will be performed by the ASSET coordinator in discussion with appropriate dealership personnel. Students are expected to work in the area of emphasis that is concurrent with area of training most recently completed at the college in order to further develop skills attained in the classroom setting. *Must be taken 5 times for a total of 13 units.*

CSU

199 SPECIAL STUDIES OR PROJECTS IN AUTOMOTIVE TECHNOLOGY 1-3 UNITS

Prerequisite: Consent of instructor
3-9 hours

Individual study, research or projects under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. *May be taken for a maximum of 9 units.*

200 ASEP-ORIENTATION 1 UNIT

Prerequisite: None
Corequisite: None
Recommended Preparation: None
1 hour lecture

Introduction to the General Motors sponsored ASEP program. Students will become familiar with dealer operations. Complemented by required work experience in a dealership.

CSU

201 ASEP-ELECTRICAL 6 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
4 hours lecture, 6 hours laboratory

General Motors ASEP course to include electrical systems, theory, diagnosis and repair procedures utilizing state of the art equipment. Major topics include electrical laws, batteries, starting and charging systems, wiring diagrams, and introduction to computer controls. Accessory systems such as lighting, power seats, power door locks, cruise controls, electric windows, electronic dashboards, radios, windshield wipers, etc., are also covered. Preparation for ASE and GM certification.

CSU

202 ASEP-BRAKES AND ALIGNMENT 7 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
5 hours lecture, 6 hours laboratory

General Motors ASEP course to include a detailed study of modern automotive braking systems and service procedures including two and four wheel electronic anti-lock brake system operation and repair. Laboratory experience will cover drum and disc brake system inspection, adjustment and repair procedures. Also covers modern suspension and steering systems including electronic ride control, steering, and four wheel alignment principles as applied to checking and correcting alignment settings. Repair and replacement of suspension components. Additional training in wheel balancing. Emphasis on practical experience on "live" automobiles. Preparation for ASE and GM certification.

CSU

203 ASEP-ENGINE REPAIR 4.5 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture, 4.5 hours laboratory

General Motors ASEP course to include diagnosis of engine failures, engine removal and disassembly techniques, engine cleaning and measuring practices, machining principles and assembly procedures in car repairs. Engine design theory will be discussed. Preparation for ASE and GM certification.

CSU

204 ASEP-POWER TRAIN 7 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
5 hours lecture, 6 hours laboratory

General Motors ASEP course to include an in-depth study of hydraulic power transmission

and control systems used in automatic transmissions, including diagnosis and overhaul of actual transmissions to precise industry standards. Plus, theory of operation, diagnosis, repair and overhaul of manual transmissions, clutches, drivelines and differentials including four wheel drive and front wheel drive. Preparation for ASE and GM certification.

CSU

205 ASEP-ENGINE PERFORMANCE AND AIR CONDITIONING 7 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
5 hours lecture, 6 hours laboratory

General Motors ASEP course to include a detailed study of electronic engine controls on modern automobiles. Emphasis is on electronic engine control system theory of operation and repair to include discussion of sensors, processors and actuators, and system diagnosis and repair. On-board computer logic and strategies will be presented. Covers all major topics dealing with automotive air conditioning including refrigeration theory, system evacuation and recovery, leak repair, compressor repair, component replacement, and manual and automatic temperature control. Preparation for ASE and GM certification.

CSU

206 ASEP-WORK EXPERIENCE 1-4 UNITS

Prerequisite: "C" grade or higher or "Pass" in AUTO 200 or equivalent.
Corequisite: None
Recommended Preparation: None

75 hours paid work experience per unit
General Motors ASEP work experience. Students will be placed with a sponsoring dealer at the start of the training program. This course is based on paid work experience at the sponsoring dealership. Assessment of students will be performed by the ASEP coordinator in discussion with appropriate dealership personnel. Students are expected to work in the area of emphasis that is concurrent with area of training most recently completed at the college in order to further develop skills attained in the classroom setting. *Must be taken for a total of 15 units.*

CSU

298 SELECTED TOPICS IN AUTOMOTIVE TECHNOLOGY 1-8 UNITS

Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-24 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format. **Pass/No Pass only. Non-degree applicable.**

299 SELECTED TOPICS IN AUTOMOTIVE TECHNOLOGY 1-8 UNITS

Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-24 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format.

CSU

BIOLOGICAL SCIENCES**112 CONTEMPORARY ISSUES IN ENVIRONMENTAL RESOURCES 3 UNITS**

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture

Through the scientific study of basic concepts in ecology, students apply their knowledge and scientific reasoning to the study of contemporary problems dealing with renewable and nonrenewable resources. Environmental resource problems involving air, water, energy, human population growth, and plant and animal diversity are examined in context of their scientific, political, economic and social implications. Alternatives for resolving existing problems and preventing future ones will be explored.

AA/AS GE, CSU, CSU GE, IGETC, UC

115 BIOLOGY OF ALCOHOL AND OTHER DRUGS 3 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture

Study of the biological principles underlying the effects of the major legal and illegal drugs on the human body. Survey of the commonly abused drugs with regard to their chemical nature, where and how they act, and the factors that modify their effects. Heavy emphasis is placed on how drugs act on neurons in the central nervous system.

AA/AS GE, CSU, CSU GE, UC

122 THE SECRET LIFE OF PLANTS 4 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture, 3 hours laboratory

Examines the fundamentals of plant biology: how plants grow, develop and respond to environmental stimuli, photosynthesis, water relations and phloem transport, reproduction, and evolution. Emphasis is on structural and functional aspects of plants while focusing on seed producers. Covers contemporary topics in plant biology including the basics of genetic engineering and biotechnology, and revealing the impacts on agriculture, the environment and society.

AA/AS GE, CSU, CSU GE, IGETC, UC

124 HUMAN GENETICS IN MODERN SOCIETY 4 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture, 3 hours laboratory

Introduction to the essential elements of human genetics and the application of modern genetic technologies in solving problems in human genetics. Examples include genetic screening, counseling and therapy, forensic genetics, genetic engineering, and human genomics. Social impacts and ethical implications of human genetic understanding and technologies will be discussed.

AA/AS GE, CSU, CSU GE, IGETC, UC

126 INTRODUCTION TO BIOTECHNOLOGY 3 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture

Comprehensive look at how the use of living organisms or their products can enhance our

lives and impact society. Fundamentals of molecular biology and immunology, historical review of the developments leading to modern biotechnology, studies of the development and manufacturing of biotechnology products based on the isolation, analysis and manipulation of genes, and applications of the technological developments will be evaluated in their social, legal and ethical contexts.

AA/AS GE, CSU, UC

128 PRINCIPLES OF BIOLOGY FOR FUTURE EDUCATORS 4 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

3 hours lecture, 3 hours laboratory

This course addresses the major principles underlying all of biology with an emphasis on evolution, inheritance, cellular life, biodiversity, ecology, and behavior of living organisms. Designed to prepare prospective educators to evaluate their own learning strategies while gaining biological content knowledge, and to explore ways to incorporate biology content into K-12 curricula. Incorporates some of the National Science Education Standards (NSES) for undergraduate professional preparation of teachers. *Not open to students with credit in BIO 130, 131 or BIO 210, 220, 221.*

AA/AS GE, CSU, CSU GE, IGETC, UC, UC credit limit

130 GENERAL BIOLOGY I 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

3 hours lecture

Survey of the basic biological principles with particular emphasis on the molecular and cellular aspects of the organism. The unifying concepts of biology such as organization, metabolism, genetics and evolution are discussed.

AA/AS GE, CSU, CSU GE, IGETC, UC credit limit

131 GENERAL BIOLOGY I LABORATORY 1 UNIT

Prerequisite: "C" grade or higher or "Pass" in BIO 130 or equivalent or concurrent enrollment.

Corequisite: None

Recommended Preparation: None

3 hours laboratory

Laboratory experiments on the basic biological principles with particular emphasis on the molecular and cellular aspects of the organism.

AA/AS GE, CSU, CSU GE, IGETC, UC credit limit

140 HUMAN ANATOMY 5 UNITS

Prerequisite: "C" grade or higher or "Pass" in BIO 130, 131 or equivalent.

Corequisite: None

Recommended Preparation: None

3 hours lecture, 6 hours laboratory

Students will embark on a study of the systems of the human body. This is accomplished through a study of the organization of the body's systems from a microscopic level of organization to the gross anatomy level. The relationship between structure and function will be examined through the study of histological slides, photomicrographs, anatomical models and charts, and mammalian (cat) dissection.

AA/AS GE, CSU, CSU GE, IGETC, UC

141 HUMAN PHYSIOLOGY 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in BIO 130, 131 or equivalent.

Corequisite: None

Recommended Preparation: None

3 hours lecture

Study of the function and interrelationships of the nervous, endocrine, muscular, circulatory, respiratory, digestive, and reproductive systems of the human body. Relates these systems to the maintenance of homeostasis and the effects

of exercise, behavior and disease on human physiology.

CSU, CSU GE, IGETC, UC

141L LABORATORY IN HUMAN PHYSIOLOGY 1 UNIT

Prerequisite: "C" grade or higher or "Pass" in BIO 130, 131 or equivalent, BIO 141 or equivalent or concurrent enrollment.

Corequisite: None

Recommended Preparation: None

3 hours laboratory

Laboratory course designed to illustrate the physiological principles studied in BIO 141. Emphasis is on lab-based investigations of human physiological processes.

CSU, CSU GE, IGETC, UC

152 PARAMEDICAL MICROBIOLOGY 5 UNITS

Prerequisite: "C" grade or higher or "Pass" in BIO 130, 131 or equivalent.

Corequisite: None

Recommended Preparation: "C" grade or higher or "Pass" in CHEM 115 or equivalent.

3 hours lecture, 6 hours laboratory

Introduction to the major groups of microorganisms and the diseases they cause. Emphasizes the concepts and techniques relevant to the student entering paramedical professions: identifying and handling bacteria, basic principles of immunology, medical microbiology and epidemiology. Principles of microbial physiology, genetics, growth and microbial control are discussed. This course satisfies the introductory microbiology requirement needed by students majoring in nursing and other paramedical fields leading to a B.S. or B.A. degree.

AA/AS GE, CSU, CSU GE

199 SPECIAL STUDIES OR PROJECTS IN BIOLOGY 1-3 UNITS

Prerequisite: Consent of instructor

3-9 hours

Individual study, research or projects under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. *May be taken for a maximum of 9 units.*

210 BIOLOGY II 4 UNITS

Prerequisite: "C" grade or higher or "Pass" in MATH 103 or 110 or an equivalent intermediate algebra course.

Corequisite: None

Recommended Preparation: None

3 hours lecture, 3 hours laboratory

Study of the origin and nature of the different forms of life utilizing evolution as a unifying theme and presenting organismal diversity within a phylogenetic framework. The relationships of environment and lifestyles to form and function will be explored through examination of comparative structure and the physiology, nutrition, circulation, gas exchange, reproduction and development of organisms found in the three domains of life.

AA/AS GE, CSU, CSU GE, IGETC, UC

215 STATISTICS FOR LIFE SCIENCES 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in BIO 130, MATH 110 or equivalent.

Corequisite: None

Recommended Preparation: None

2 hours lecture, 3 hours laboratory

Methods and experience in defining and solving quantitative problems in the life sciences. Emphasis is on the design of experiments and the application of a variety of parametric and nonparametric techniques to the analysis of data.

CSU, CSU GE, IGETC, UC, UC credit limit

220 PRINCIPLES OF MOLECULAR, CELLULAR AND EVOLUTIONARY BIOLOGY 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in CHEM 141 or equivalent.

Corequisite: BIO 221

Recommended Preparation: None

3 hours lecture

Study of the unifying principles of life manifested by cellular structures, functions and evolutionary history. Emphasis is on the following topics: cellular processes including energy metabolism, membrane transport and cell division; classical and molecular genetics including recombinant DNA; communication between cells; population genetics and the mechanism of evolution; and the evolutionary basis of species classification. This course, along with BIO 210, is the recommended two-semester sequence for biology majors.

AA/AS GE, CSU, CSU GE, IGETC, UC credit limit

221 PRINCIPLES OF MOLECULAR, CELLULAR AND EVOLUTIONARY BIOLOGY LABORATORY 1 UNIT

Prerequisite: "C" grade or higher or "Pass" in CHEM 141 or equivalent.

Corequisite: BIO 220

Recommended Preparation: None

3 hours laboratory

Investigates some of the general principles of biology presented in BIO 220, allowing students to observe examples of the phenomena using live materials where possible and providing the opportunity to apply concepts learned in BIO 220. Laboratory exercises involve observations, demonstrations, experiments, data analyses, computer laboratory simulations and written reports.

AA/AS GE, CSU, CSU GE, IGETC, UC credit limit

230 PRINCIPLES OF CELLULAR, MOLECULAR AND EVOLUTIONARY BIOLOGY 4 UNITS

Prerequisite: "C" grade or higher or "Pass" in CHEM 141 or equivalent.

Corequisite: None

Recommended Preparation: "C" grade or higher or "Pass" in ENGL 110 or equivalent.

3 hours lecture, 3 hours laboratory

Survey of the general principles of cell, molecular and evolutionary biology at an advanced level. Emphasis is on the following topics: cellular structure and processes including energy metabolism, membrane transport and cell cycle/cell division; molecular genetics including recombinant DNA; Mendelian and non-Mendelian genetics; communication between cells; and the current models for cellular evolution. Laboratory exercises emphasize the application of these topics to biotechnology. This course along with BIO 240 is the recommended biology sequence for life science majors. It is suggested that students contact the anticipated transfer institution to ascertain specific transfer requirements for their major. *Not open to students with credit in BIO 220, 221.*

AA/AS GE, CSU, CSU GE, IGETC, UC

240 PRINCIPLES OF ECOLOGY, EVOLUTION AND ORGANISMAL BIOLOGY 5 UNITS

Prerequisite: "C" grade or higher or "Pass" in MATH 110 or equivalent.

Corequisite: None

Recommended Preparation: "C" grade or higher or "Pass" in ENGL 109 or 110 or equivalent.

4 hours lecture, 3 hours laboratory

Study of the origin and nature of the different forms of life utilizing evolution as a unifying theme and presenting organismal diversity within a phylogenetic framework. The relationships of environment and fundamental

ecological principles, trophic roles and lifestyles to form and function will be explored through examination of comparative structure and the physiology, nutrition, circulation, gas exchange, reproduction, and development of organisms found in the three domains of life. The laboratory component emphasizes the systematics and diversity of prokaryotes, protists, fungi, plants and animals, as well as activities investigating ecological and evolutionary processes using the methods of scientific inquiry. This course along with BIO 230 is the recommended biology sequence for life science majors. It is suggested that students contact the anticipated transfer institution to ascertain specific transfer requirements for their major. *Not open to students with credit in BIO 210.*

AA/AS GE, CSU, CSU GE, IGETC, UC

251 HUMAN DISSECTION 1 UNIT

Prerequisite: "C" grade or higher or "Pass" in BIO 140 or equivalent and recommendation from the student's Human Anatomy instructor.

Corequisite: None

Recommended Preparation: None

3 hours laboratory

Supervised study of human anatomy through dissection of a human cadaver. Enhances knowledge gained from BIO 140 (Human Anatomy) by observing and relating those organ systems learned to an actual human cadaver. Students will identify surface landmarks and relate them to successively deeper structures, and will develop and refine dissecting skills used on human cadavers. Instruction of human anatomy at this level is intended to assist students pursuing careers in nursing and other allied health professions. *Preregistration counseling with instructor is required; class size is limited. May be taken for a maximum of 3 units.*

CSU, UC

298 SELECTED TOPICS IN BIOLOGY 1-5 UNITS

Prerequisite: Varies with topic

Corequisite: Varies with topic

Recommended Preparation: Varies with topic

1-15 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format. **Pass/No Pass only. Non-degree applicable.**

299 SELECTED TOPICS IN BIOLOGY 1-5 UNITS

Prerequisite: Varies with topic

Corequisite: Varies with topic

Recommended Preparation: Varies with topic

1-15 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format.

CSU

BUSINESS

109 ELEMENTARY ACCOUNTING 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

3 hours lecture

Introduction to elementary accounting principles. Includes journals, ledgers, worksheets and financial statements for the single proprietorship. Designed for the clerical employee or for those who do not intend further

study of accounting. *Not open to students with credit in BUS 120.*

CSU

110 INTRODUCTION TO BUSINESS 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

3 hours lecture

Provides a comprehensive view of today's dynamic American business and the global economy. Topics include: starting a small business, satisfying customers, managing operations, motivating employees and building self-managed teams, developing and implementing customer-oriented marketing plans, managing information, managing financial resources, and exploring ethical and social responsibilities of American business.

CSU, UC

111 ENTREPRENEURSHIP: STARTING AND DEVELOPING A BUSINESS 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

3 hours lecture

Provides the prospective small business manager with the most up-to-date skills necessary in the planning function of opening one's own business. Emphasis is on sources of financing, site locations, legal problems, marketing surveys, organizational structure, and self-analysis to determine one's personal readiness for entrepreneurship.

CSU

112 ENTREPRENEURSHIP: SUCCESSFUL MARKETING 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

3 hours lecture

Provides the small business owner with the necessary skills to market a product or service. Examines the essential elements of a marketing strategy, the four P's: Product, Place (Distribution), Price and Promotion. Includes the relationship between sales and marketing and how they function together in the small business environment.

CSU

114 EFFECTIVE JOB SEARCH 1 UNIT

Prerequisite: None

Corequisite: None

Recommended Preparation: None

1 hour lecture

Provides students with comprehensive and valuable skills needed to successfully secure employment. Examines the continuous process of career/life planning through effective, well-planned and efficiently organized job search procedures.

CSU

115 HUMAN RELATIONS IN BUSINESS 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

3 hours lecture

Examines the human aspects of the organization with an emphasis on the role of the individual in the formal and informal structure of the organization. Leadership and group dynamics, motivation, job enrichment, organizational change, and communications—both verbal and nonverbal—within the organization will be covered.

CSU

119 ENTREPRENEURSHIP: FINANCING AND WRITING A BUSINESS PLAN 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

3 hours lecture

Provides prospective small business owners or managers with the knowledge required to write a business plan and understand and control the cash management function of their business. Emphasis is on the types of financing, understanding debt vs. equity financing, cash flow analysis, borrowing and investment, forecasting and budgeting.

CSU

120 FINANCIAL ACCOUNTING 4 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

4 hours lecture

Introduces the accounting function and how it is used within our economic society. Accounting is viewed as an information-generating system that communicates financial data to support end users in their economic decision-making. Topics include 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. Issues related to asset, liability and equity valuation, revenue and expense recognition, cash flow, internal controls, and ethics will be covered. Designed for students who have an understanding of computer applications in word processing and spreadsheets, basic math skills, and the ability to write in a business-like manner.

CSU, UC

121 MANAGERIAL ACCOUNTING 4 UNITS

Prerequisite: "C" grade or higher or "Pass" in BUS 120 or equivalent.

Corequisite: None

Recommended Preparation: None

4 hours lecture

Introduces the concepts, methods, and procedures for the development and use of accounting information to support and assist management in their internal cost accounting processes and financial decision making. Areas examined are: cost terms and concepts, cost behavior, cost structure, product costing in a manufacturing environment (including activity based costing), cost-volume-profit analysis, budgeting, standard costing, differential analysis, capital budgeting, variable and absorption costing, and responsibility accounting.

CSU, UC

122 INTERMEDIATE ACCOUNTING 4 UNITS

Prerequisite: "C" grade or higher or "Pass" in BUS 120 or equivalent.

Corequisite: None

Recommended Preparation: None

4 hours lecture

In-depth study of accounting theories and principles underlying financial statements and the determination of net income. Survey of basic accounting principles. Study of corporate balance sheet items and the analytical processes of statement preparation which include funds-flow and cash-flow reporting.

CSU

124 AUDITING 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in BUS 120 or equivalent.

Corequisite: None

Recommended Preparation: None

3 hours lecture

Study of the role of the auditor in the American economy including the general principles and concepts of auditing duties, ethics, liability and responsibilities of the auditor, and procedures for verification of financial statements including EDP statements.

CSU

125 BUSINESS LAW: LEGAL ENVIRONMENT OF BUSINESS 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

3 hours lecture

Legal environment of business, sources of law, constitutional bases of regulation, social and ethical influences, corporate responsibility, judicial and administrative systems, contracts, torts, agency, business organizations, bankruptcy, securities regulation, regulation of property and protection of intellectual property interests, consumer protection, regulation of businesses to prevent market failures.

CSU, UC

128 BUSINESS COMMUNICATION 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in ENGL 109 or 110 or equivalent.

Corequisite: None

Recommended Preparation: None

3 hours lecture

Development of the ability to analyze, organize, and compose various types of written and oral business communications with an emphasis on writing clear, concise and persuasive letters, memos and reports.

CSU

129 PAYROLL ACCOUNTING AND BUSINESS TAXES 2 UNITS

Prerequisite: "C" grade or higher or "Pass" in BUS 120 or equivalent.

Corequisite: None

Recommended Preparation: None

2 hours lecture

In-depth study of payroll accounting. Covers calculations of gross to net pay, federal and state withholdings and deductions, recording of payroll transactions into the accounting records, and filing of federal and state payroll tax forms. Includes a consideration of factors which determine employee versus independent contractor status, and business taxes such as sales and property taxes and their filing requirements.

CSU

141 ENTREPRENEURSHIP: MANAGING A NEW BUSINESS 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

3 hours lecture

Application of theories of marketing, management, personnel, finance and production to problems encountered daily in managing a business. Focuses on practical solutions to common business management problems.

CSU

146 MARKETING 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

3 hours lecture

Explores the function of marketing in an organization by examining the essential elements of a marketing strategy: product,

promotion, distribution, price, the effect of the business environment on marketing decisions, consumer behavior, identification of markets, and current issues in marketing.

CSU

150 INDIVIDUAL INCOME TAX ACCOUNTING 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

3 hours lecture

Introduction to federal taxation and tax preparation as applied to the individual taxpayer. Overview of the income tax environment. Topics include filing status, personal and dependency exemption, itemized and standard deductions, and solving specific problems related to filing Federal Form 1040.

CSU

152 BUSINESS MATHEMATICS 2 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

2 hours lecture

Introduction to arithmetic applications used in business transactions including fractions, percentages, interest, discounts, depreciation, payrolls, merchandising markups, and taxes.

CSU

154 DIVERSITY IN THE WORKPLACE 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

3 hours lecture

Study of the historical perspective of diversity in the workplace as it relates to defining and developing a manager's responsibilities. Explores and sensitizes students to the unique problems of diversity in the workplace; and assists them in developing effective solutions to problems.

CSU

155 HUMAN RESOURCES MANAGEMENT 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

3 hours lecture

Introduction to the management of human resources and an understanding of the impact and accountability of human resource activities to the organization. Covers global human resource strategies; social and organizational realities; legal implications affecting people at work; union/non-union practices; employee compensation and benefits; employee rights; safety issues.

CSU

156 PRINCIPLES OF MANAGEMENT 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

3 hours lecture

Planning, organizing, directing and controlling for management. Interaction of the functions including setting objectives, MBO, decision-making tools, alternative organization structures, leadership, motivation, communication, group dynamics, management of stress and change, time management, and women in management. Survey of the quantitative tools available to the manager.

CSU

157 PRINCIPLES OF LEADERSHIP 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

3 hours lecture

Study of the multiplicity of roles and responsibilities that the leader must fulfill, focusing on personal, work and social environments. Examines leadership as a function of selecting, motivating and directing others toward an agreed upon goal.

CSU

159ABCD MANAGEMENT INTERNSHIP 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

225 hours paid or 180 hours unpaid work experience

Field work in management. Students will be required to maintain a diary of their weekly activities and to submit a comprehensive report of their observations upon completion. Students will meet at least once during the semester to compare field experiences and submit paperwork.

CSU

162 ANALYSIS OF FINANCIAL STATEMENTS 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in BUS 120 or equivalent.

Corequisite: None

Recommended Preparation: None

3 hours lecture

The characteristics and analysis of financial statements. Students will learn how to apply ratios to financial statements and interpret their outcomes in order to draw various inferences and/or conclusions from their results.

CSU

176 COMPUTERIZED ACCOUNTING APPLICATIONS 2 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

1 hour lecture, 3 hours laboratory

Beginning course in small business accounting using QuickBooks software. Especially beneficial to students, teachers and professionals who are using, or plan to use, personal computers to create a chart of accounts, record customer and vendor transactions, process payroll, and print reports.

CSU

195 PERSONAL FINANCE 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

3 hours lecture

Explores the theories and techniques of managing personal income by setting life planning goals that will culminate in the development of a personal plan for students to manage their finances throughout the lifespan. Within the broad backdrop of business and economics in the United States, topics will include lifelong financial planning, budgeting, managing checking and savings accounts, building and maintaining good credit, retirement and estate planning, insurance, home ownership, and creating an investment portfolio.

CSU

199 SPECIAL STUDIES OR PROJECTS IN BUSINESS 1-3 UNITS

Prerequisite: Consent of instructor

3-9 hours

Individual study, research or projects under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor

conferences and the Office of Instruction. *May be taken for a maximum of 9 units.*

240 SQL FOR BUSINESS APPLICATIONS 3 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: "C" grade or higher or "Pass" in CIS 140 or equivalent.
2 hours lecture, 3 hours laboratory
Structured Query Language (SQL) provides a unified language to query, manipulate or control data in a business applications environment. This hands-on course provides basic knowledge of how to extract data from databases including Oracle and Microsoft SQL Server using SQL, Transact-SQL, SQL*Plus, and PL/SQL. Covers topics necessary to query data for use in typical business applications analysis from an Oracle9i/10g or Microsoft SQL Server database.

CSU

242 DATA MINING 3 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: "C" grade or higher or "Pass" in CIS 140 or equivalent.
2 hours lecture, 3 hours laboratory
Introduction to the fundamental concepts of data mining. Explores motivation for and applications of data mining and survey current techniques and models used in data mining. The data mining development cycle and potential pitfalls of machine learning will be included.

CSU

298 SELECTED TOPICS IN BUSINESS 1-4 UNITS

Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-12 hours
Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format. **Pass/No Pass only. Non-degree applicable.**

299 SELECTED TOPICS IN BUSINESS 1-4 UNITS

Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-12 hours
Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format.

CSU

BUSINESS OFFICE TECHNOLOGY

094 PRACTICAL INTERNET BASICS .5 UNIT

Prerequisite: None
Corequisite: None
Recommended Preparation: "C" grade or higher or "Pass" in BOT 097 or equivalent, ENGL 098R or ESL 105 or equivalent reading level.
1.5 hours laboratory

This course will enable students to use the Internet which includes understanding basics such as searching and navigating the Internet, and accessing email. Introduces the concepts of downloading files and using and organizing bookmarks and favorites. **Pass/No Pass only.**

095 KEYBOARDING SKILL REINFORCEMENT 1 UNIT

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours laboratory
Designed for students who have completed BOT 100 and want to reinforce their skills before advancing to the next level of keyboarding. Begins with a keyboard review, then progresses to practice and timings designed to improve keyboarding speed and accuracy. **Pass/No Pass only. Non-degree applicable.**

096 COMPUTER BASICS FOR THE OFFICE 1 UNIT

Prerequisite: None
Corequisite: None
Recommended Preparation: "C" grade or higher or "Pass" in BOT 100 or equivalent, ENGL 098R or ESL 105 or equivalent reading level.
.5 hour lecture, 1.5 hours laboratory
Students with little or no computer experience will be provided with the basic information and skills needed to operate a computer efficiently in an office environment. Includes an overview of the components of a computer system hardware and software, proficiency in using a mouse, storing information, using the Internet, and purchasing and maintaining a computer. Recommended that students complete a basic keyboarding course prior to enrolling in this course. **Pass/No Pass only. Non-degree applicable.**

097 WINDOWS BASICS FOR THE OFFICE 1 UNIT

Prerequisite: None
Corequisite: None
Recommended Preparation: "C" grade or higher or "Pass" in BOT 100 or equivalent, BOT 096 or equivalent or concurrent enrollment, ENGL 098R or ESL 105 or equivalent reading level.
.5 hour lecture, 1.5 hours laboratory
Students with little or no computer experience will learn to use the Windows operating system efficiently to create and manage files and folders. **Pass/No Pass only. Non-degree applicable.**

100 BASIC KEYBOARDING 1 UNIT

Prerequisite: None
Corequisite: None
Recommended Preparation: "C" grade or higher or "Pass" in ENGL 098R or ESL 105 or equivalent reading level.
3 hours laboratory
Beginning keyboarding techniques for students who wish to use keyboarding skills for inputting information on computers. This course is taught on computers using appropriate software. Emphasis on the development of speed and accuracy by use of touch keyboarding methods, development of touch skills on the 10-key pad, understanding of basic vocabulary and concepts used in keyboarding operations for inputting and retrieving information, and composition at the keyboard. For students with physical disabilities that may impair proficiency, emphasis will be on quality of output instead of speed, and on the use of alternative input devices.

CSU

101A KEYBOARDING/DOCUMENT PROCESSING 1.5 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: "C" grade or higher or "Pass" in BOT 100 or equivalent, ENGL 098R or ESL 105 or equivalent reading level.
1 hour lecture, 1.5 hours laboratory
Equivalent to the first half of BOT 101. Focuses on learning or reviewing the alphabetic and numeric keyboard including the 10-key pad for

numeric data entry. Students will learn basic features of Microsoft Word to produce simple memos, letters and reports. Keyboarding software will be used to build speed and accuracy. Students wishing to progress to BOT 102AB should also complete BOT 101B.

CSU

101B KEYBOARDING/DOCUMENT PROCESSING 1.5 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: "C" grade or higher or "Pass" in BOT 101A or equivalent, ENGL 098R or ESL 105 or equivalent reading level.
.5 hour lecture, 3 hours laboratory
Equivalent to the second half of BOT 101. Students will use Microsoft Word to produce correctly formatted and accurate business documents including letters, reports and tables. Keyboarding software is used to build speed and accuracy.

CSU

102A INTERMEDIATE KEYBOARDING/DOCUMENT PROCESSING I 1.5 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: "C" grade or higher or "Pass" in BOT 101AB or equivalent.
1 hour lecture, 1.5 hours laboratory
Equivalent to the first half of BOT 102. Students will review and create business documents to apply formatting skills taught in BOT 101 or 101AB and are then introduced to new formatting and report styles options including agendas, formal reports and multipage tables. This course begins with intermediate Microsoft Word functions; entering students should be proficient in using basic Word features and should key a minimum of 30 net words per minute on a 5-minute timed writing.

CSU

102B INTERMEDIATE KEYBOARDING/DOCUMENT PROCESSING II 1.5 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: "C" grade or higher or "Pass" in BOT 102A or equivalent.
.5 hour lecture, 3 hours laboratory
Equivalent to the second half of BOT 102. Students continue to create business documents, applying new formatting skills including using templates, designing letterheads and office forms, and learning specialized applications such as medical and legal forms. This course begins with intermediate Microsoft Word functions; entering students should be proficient in using basic Word features and should key a minimum of 35 net words per minute on a 5-minute timed writing.

CSU

103A BUILDING KEYBOARDING SKILL I .5 UNIT

Prerequisite: None
Corequisite: None
Recommended Preparation: "C" grade or higher or "Pass" in BOT 100 or equivalent.
1.5 hours laboratory
Designed for students who have completed a keyboarding course but wish to work further on developing speed and accuracy. Students should know the alphabetic keyboard by touch and key at a minimum rate of 20 net words per minute on a 5-minute timed writing. Those keying at a lower rate should enroll in BOT 095.

CSU

103B BUILDING KEYBOARDING**SKILL II****.5 UNIT**

Prerequisite: None

Corequisite: None

Recommended Preparation: "C" grade or higher or "Pass" in BOT 103A or equivalent.

1.5 hours laboratory

Continuation in building keyboarding speed and accuracy. Students should be keying by touch at a minimum rate of 30 net words per minute on a 5-minute timed writing. Those keying at a lower rate should enroll in BOT 103A.

CSU

103C BUILDING KEYBOARDING**SKILL III****.5 UNIT**

Prerequisite: None

Corequisite: None

Recommended Preparation: "C" grade or higher or "Pass" in BOT 103B or equivalent.

1.5 hours laboratory

Continuation in building keyboarding speed and accuracy. Entering students should be keying by touch at a minimum rate of 40 net words per minute on a 5-minute timed writing. Those keying at a lower rate should enroll in BOT 103B.

CSU

104 FILING AND RECORDS MANAGEMENT**1 UNIT**

Prerequisite: None

Corequisite: None

Recommended Preparation: "C" grade or higher or "Pass" in ENGL 098R or ESL 105 or equivalent reading level.

.5 hour lecture, 1.5 hours laboratory

Instruction in the Association of Records Managers and Administrators (ARMA) filing rules and techniques which are widely used in business to create and maintain files. Covers alphabetic, numeric, geographic and subject filing rules; and records management including rules for retention, transfer and disposition of records. Students will use a software package to learn basic filing rules.

CSU

105 DATA ENTRY SKILLS**1 UNIT**

Prerequisite: "C" grade or higher or "Pass" in BOT 100 or equivalent.

Corequisite: None

Recommended Preparation: Grade of "Pass" in BOT 096 or equivalent.

.5 hour lecture, 1.5 hours laboratory

Designed for students who wish to prepare for employment in the data entry field. Emphasizes the development of speed and accuracy in the use of the microcomputer alphabetic keyboard and numeric keypad to reach employable levels of skill. Students will complete assignments, drills, and timed speed and accuracy tests.

CSU

107 OFFICE SYSTEMS AND PROCEDURES**2 UNITS**

Prerequisite: None

Corequisite: None

Recommended Preparation: "C" grade or higher or "Pass" in BOT 096, 097, 101AB or equivalent or concurrent enrollment, ENGL 098R or ESL 105 or equivalent reading level.

2 hours lecture

Study of office ethics and professionalism; prioritizing and productivity; human relations; working in teams; customer service skills; telephone skills; scheduling appointments; using email, copiers, fax machines and scanners; handling office mail; and using the Internet for common office functions such as travel reservations and ordering supplies.

CSU

108 USING CALCULATORS TO SOLVE BUSINESS PROBLEMS**1 UNIT**

Prerequisite: None

Corequisite: None

Recommended Preparation: "C" grade or higher or "Pass" in ENGL 098R or ESL 105 or equivalent reading level.

.5 hour lecture, 1.5 hours laboratory

Introduces the 10-key, digital display electronic calculator. Students will build skill in performing fundamental arithmetic operations using a calculator, including using decimals, fractions, constants, discounts, percentages and memory keys.

CSU

114 ESSENTIAL WORD**1 UNIT**

Prerequisite: None

Corequisite: None

Recommended Preparation: "C" grade or higher or "Pass" in BOT 096, 097, 101AB or equivalent, ENGL 098R or ESL 105 or equivalent reading level.

.5 hour lecture, 1.5 hours laboratory

Designed for students who want to learn the most commonly used features of a popular word processing software package. Upon completion, students will be proficient in using text editing and formatting commands to produce typical business documents, and in using the mail merge feature to produce form letters, labels and envelopes. Those desiring more in-depth coverage of these and additional topics should consider enrolling in BOT 120, 121, 122. *Not open to students with credit in BOT 121, 122.*

CSU

115 ESSENTIAL EXCEL**1 UNIT**

Prerequisite: None

Corequisite: None

Recommended Preparation: "C" grade or higher or "Pass" in BOT 096, 097, 100 or equivalent, ENGL 098R or ESL 105 or equivalent reading level.

.5 hour lecture, 1.5 hours laboratory

Designed for students who want to become proficient in the most commonly used features of Microsoft Excel. Basic spreadsheet concepts and terms will be introduced. Students will learn how to create, format and revise spreadsheets, charts, basic formulas, and templates. The use of simple macros will be introduced. Those desiring more in-depth coverage of these and additional topics should consider enrolling in BOT 123, 124, 125. *Not open to students with credit in BOT 124, 125.*

CSU

116 ESSENTIAL ACCESS**1 UNIT**

Prerequisite: None

Corequisite: None

Recommended Preparation: "C" grade or higher or "Pass" in BOT 096, 097, 100 or equivalent, ENGL 098R or ESL 105 or equivalent reading level.

.5 hour lecture, 1.5 hours laboratory

Designed for students who want to become proficient in the most commonly used features of Microsoft Access. Basic database concepts and terms will be introduced. Students will learn how to create, format, edit and revise simple databases, sort and filter records, use queries, and create forms, reports and labels. Those desiring more in-depth coverage of these and additional topics should consider enrolling in CIS 140 or BOT 126, 127, 128. *Not open to students with credit in BOT 127, 128.*

CSU

117 ESSENTIAL POWERPOINT**1 UNIT**

Prerequisite: None

Corequisite: None

Recommended Preparation: "C" grade or higher or "Pass" in BOT 096, 097, 114 or equivalent, ENGL 098R or ESL 105 or equivalent reading level.

.5 hour lecture, 1.5 hours laboratory

Designed for students who want to become proficient in the most commonly used features

of Microsoft PowerPoint. Basic concepts and terms will be introduced. Students will learn how to create, format and revise PowerPoint presentations, including animation effects. Those desiring more in-depth coverage of these and additional topics should consider enrolling in BOT 129, 130, 131. *Not open to students with credit in BOT 130, 131.*

CSU

118 INTEGRATED OFFICE PROJECTS**1 UNIT**

Prerequisite: "C" grade or higher or "Pass" in BOT 102AB, 107, 114, 115, 116, 117 or equivalent.

Corequisite: None

Recommended Preparation: "C" grade or higher or "Pass" in ENGL 098R or ESL 105 or equivalent reading level.

3 hours laboratory

Capstone course for BOT majors who have completed prerequisite courses in all applications of the Microsoft Office suite (Word, Excel, Access, PowerPoint) and have keyboarding skills of 40 net words per minute, minimum. Students will apply their skills and use the Internet to complete projects that integrate these applications.

CSU

120 COMPREHENSIVE WORD, LEVEL I**1 UNIT**

Prerequisite: None

Corequisite: None

Recommended Preparation: "C" grade or higher or "Pass" in BOT 096, 097, 101AB or equivalent, ENGL 098R or ESL 105 or equivalent reading level.

.5 hour lecture, 1.5 hours laboratory

First in a three-level course sequence providing thorough coverage of most features of Microsoft Word. Students who complete all three levels will be prepared to take the Microsoft Office User Specialist (MOUS) certification examination or similar examinations. Those desiring less comprehensive coverage of Word should consider enrolling in BOT 114.

CSU

121 COMPREHENSIVE WORD, LEVEL II**1 UNIT**

Prerequisite: None

Corequisite: None

Recommended Preparation: "C" grade or higher or "Pass" in BOT 120 or equivalent.

.5 hour lecture, 1.5 hours laboratory

Second in a three-level course sequence providing thorough coverage of most features of Microsoft Word. Students who complete all three levels will be prepared to take the Microsoft Office User Specialist (MOUS) certification examination or similar examinations.

CSU

122 COMPREHENSIVE WORD, LEVEL III**1 UNIT**

Prerequisite: "C" grade or higher or "Pass" in BOT 121 or equivalent.

Corequisite: None

Recommended Preparation: None

.5 hour lecture, 1.5 hours laboratory

Third in a three-level course sequence providing thorough coverage of most features of Microsoft Word. Students who complete all three levels will be prepared to take the Microsoft Office User Specialist (MOUS) certification examination or similar examinations. Students should consider enrolling in BOT 280 prior to taking the examination.

CSU

- 123 COMPREHENSIVE EXCEL, LEVEL I** 1 UNIT
Prerequisite: None
Corequisite: None
Recommended Preparation: "C" grade or higher or "Pass" in BOT 096, 097, 100 or equivalent.
.5 hour lecture, 1.5 hours laboratory
First in a three-level course sequence providing thorough coverage of most features of Microsoft Excel. Students who complete all three levels will be prepared to take the Microsoft Office User Specialist (MOUS) certification examination or similar examinations. Those desiring less comprehensive coverage of Excel should consider enrolling in BOT 115.
CSU
- 124 COMPREHENSIVE EXCEL, LEVEL II** 1 UNIT
Prerequisite: None
Corequisite: None
Recommended Preparation: "C" grade or higher or "Pass" in BOT 123 or equivalent.
.5 hour lecture, 1.5 hours laboratory
Second in a three-level course sequence providing thorough coverage of most features of Microsoft Excel. Students who complete all three levels will be prepared to take the Microsoft Office User Specialist (MOUS) certification examination or similar examinations.
CSU
- 125 COMPREHENSIVE EXCEL, LEVEL III** 1 UNIT
Prerequisite: "C" grade or higher or "Pass" in BOT 124 or equivalent.
Corequisite: None
Recommended Preparation: None
.5 hour lecture, 1.5 hours laboratory
Third in a three-level course sequence providing thorough coverage of most features of Microsoft Excel. Students who complete all three levels will be prepared to take the Microsoft Office User Specialist (MOUS) certification examination or similar examinations. Students should consider enrolling in BOT 281 prior to taking the examination.
CSU
- 126 COMPREHENSIVE ACCESS, LEVEL I** 1 UNIT
Prerequisite: None
Corequisite: None
Recommended Preparation: "C" grade or higher or "Pass" in BOT 096, 097, 100, 116 or equivalent, ENGL 098R or ESL 105 or equivalent reading level.
.5 hour lecture, 1.5 hours laboratory
First in a three-level course sequence providing thorough coverage of most features of Microsoft Access. Students who complete all three levels will be prepared to take the Microsoft Office User Specialist (MOUS) certification examination or similar examinations. Those desiring less comprehensive coverage of Access should consider enrolling in BOT 116.
CSU
- 127 COMPREHENSIVE ACCESS, LEVEL II** 1 UNIT
Prerequisite: None
Corequisite: None
Recommended Preparation: "C" grade or higher or "Pass" in BOT 126 or equivalent.
.5 hour lecture, 1.5 hours laboratory
Second in a three-level course sequence providing thorough coverage of most features of Microsoft Access. Students who complete all three levels will be prepared to take the Microsoft Office User Specialist (MOUS) certification examination or similar examinations.
CSU
- 128 COMPREHENSIVE ACCESS, LEVEL III** 1 UNIT
Prerequisite: "C" grade or higher or "Pass" in BOT 127 or equivalent.
Corequisite: None
Recommended Preparation: None
.5 hour lecture, 1.5 hours laboratory
Third in a three-level course sequence providing thorough coverage of most features of Microsoft Access. Students who complete all three levels will be prepared to take the Microsoft Office User Specialist (MOUS) certification examination or similar examinations. Students should consider enrolling in BOT 282 prior to taking the examination.
CSU
- 129 COMPREHENSIVE POWERPOINT, LEVEL I** 1 UNIT
Prerequisite: None
Corequisite: None
Recommended Preparation: "C" grade or higher or "Pass" in BOT 101AB, 114, 120 or equivalent, ENGL 098R or ESL 105 or equivalent reading level.
.5 hour lecture, 1.5 hours laboratory
First in a three-level course sequence providing thorough coverage of most features of Microsoft PowerPoint. Students who complete all three levels will be prepared to take the Microsoft Office User Specialist (MOUS) certification examination or similar examinations. Those desiring less comprehensive coverage of PowerPoint should consider enrolling in BOT 117.
CSU
- 130 COMPREHENSIVE POWERPOINT, LEVEL II** 1 UNIT
Prerequisite: None
Corequisite: None
Recommended Preparation: "C" grade or higher or "Pass" in BOT 129 or equivalent.
.5 hour lecture, 1.5 hours laboratory
Second in a three-level course sequence providing thorough coverage of most features in Microsoft PowerPoint. Students who complete all three levels will be prepared to take the Microsoft Office User Specialist (MOUS) certification examination or similar examinations.
CSU
- 131 COMPREHENSIVE POWERPOINT, LEVEL III** 1 UNIT
Prerequisite: "C" grade or higher or "Pass" in BOT 130 or equivalent.
Corequisite: None
Recommended Preparation: None
.5 hour lecture, 1.5 hours laboratory
Third in a three-level course sequence providing thorough coverage of most features in Microsoft PowerPoint. Students who complete all three levels will be prepared to take the Microsoft Office User Specialist (MOUS) certification examination or similar examinations. Students should consider enrolling in BOT 283 prior to taking the examination.
CSU
- 150 USING MICROSOFT PUBLISHER** 1 UNIT
Prerequisite: None
Corequisite: None
Recommended Preparation: "C" grade or higher or "Pass" in BOT 101AB or 121 or equivalent.
.5 hour lecture, 1.5 hours laboratory
Introductory course in Microsoft Publisher for students who wish to acquire a basic understanding of concepts and terminology for the production and design of professional quality publications. Emphasizes graphics, word processing and page layout.
CSU
- 151 USING MICROSOFT OUTLOOK** 1 UNIT
Prerequisite: None
Corequisite: None
Recommended Preparation: "C" grade or higher or "Pass" in BOT 096, 097, 101AB, 114 or 120 or equivalent.
.5 hour lecture, 1.5 hours laboratory
Designed to offer students proficiency in the use of Microsoft Outlook to create email messages, maintain personal calendars and schedules, plan work, maintain contact lists, and organize information.
CSU
- 199 SPECIAL STUDIES OR PROJECTS IN BUSINESS OFFICE TECHNOLOGY** 1-3 UNITS
Prerequisite: Consent of instructor
3-9 hours
Individual study, research or projects under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. *May be taken for a maximum of 9 units.*
- 201 ADVANCED KEYBOARDING/ DOCUMENT PROCESSING** 3 UNITS
Prerequisite: "C" grade or higher or "Pass" in BOT 102AB or equivalent.
Corequisite: None
Recommended Preparation: None
1.5 hours lecture, 4.5 hours laboratory
Advanced keyboarding for further development of keyboarding skills to meet professional placement requirements. Students will apply intermediate and advanced features of Microsoft Word to create complex business documents with minimum instruction. Utilizes software for building speed and accuracy on 5-minute timed writings to attain the speed and accuracy required for professional office positions.
CSU
- 203 OFFICE PROJECT COORDINATION** 1 UNIT
Prerequisite: "C" grade or higher or "Pass" in BOT 122, 125, 128, 131, 151 or equivalent.
Corequisite: None
Recommended Preparation: None
3 hours laboratory
Capstone course providing students who have comprehensive knowledge of Microsoft Word, Excel, Access, PowerPoint and Outlook the opportunity to integrate those skills by assuming responsibility for completing a given project from inception to completion.
CSU
- 223* OFFICE WORK EXPERIENCE** 1 UNIT
Prerequisite: Limited to BOT majors who have completed at least 12 units in the major.
Corequisite: None
Recommended Preparation: Keyboarding and computer skills as well as training in a variety of office procedures as required by most worksites.
60 hours unpaid or 75 hours paid work experience per semester
Work experience in an office setting. Trainee spends 60 hours unpaid or 75 hours paid per semester in on-the-job training.
CSU
- 224* OFFICE WORK EXPERIENCE** 2 UNITS
Prerequisite: Limited to BOT majors who have completed at least 12 units in the major.
Corequisite: None
Recommended Preparation: Keyboarding and computer skills as well as training in a variety of office procedures as required by most worksites.
120 hours unpaid or 150 hours paid work experience per semester
Work experience in an office setting. Trainee spends 120 hours unpaid or 150 hours paid per semester in on-the-job training.
CSU

225* OFFICE WORK EXPERIENCE 3 UNITS

Prerequisite: Limited to BOT majors who have completed at least 12 units in the major.

Corequisite: None

Recommended Preparation: Keyboarding and computer skills as well as training in a variety of office procedures as required by most worksites.

180 hours unpaid or 225 hours paid work experience per semester

Work experience in an office setting. Trainee spends 180 hours unpaid or 225 hours paid per semester in on-the-job training.

CSU

298 SELECTED TOPICS IN BUSINESS OFFICE TECHNOLOGY 1-3 UNITS

Prerequisite: Varies with topic

Corequisite: Varies with topic

Recommended Preparation: Varies with topic
1-9 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format. **Pass/No Pass only. Non-degree applicable.**

299 SELECTED TOPICS IN BUSINESS OFFICE TECHNOLOGY 1-3 UNITS

Prerequisite: Varies with topic

Corequisite: Varies with topic

Recommended Preparation: Varies with topic
1-9 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format.

CSU

*For additional information, see Work Experience Requirements under Academic Policies and Procedures.

CADD TECHNOLOGY

115 ENGINEERING GRAPHICS 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

2 hours lecture, 4 hours laboratory

Introduction to engineering drafting. Covers the fundamentals of drafting using both mechanical instruments and the computer as drafting tools. Students will learn the fundamentals of engineering graphics as a universal language of communication in all engineering fields. Includes organization and drawing layouts, text, dimensions, scales, multiview projections, and pictorial drawings to visualize, represent and document basic engineering problems. *Not open to students with credit in ENGR 115, 124.*
CSU, UC, UC credit limit

120 INTRODUCTION TO COMPUTER-AIDED DRAFTING AND DESIGN 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in CADD 115 or ENGR 100 or equivalent.

Corequisite: None

Recommended Preparation: Working knowledge of basic computer operations and file administration.

2 hours lecture, 4 hours laboratory

Concepts, techniques and procedures of Computer-Aided Drafting and Design (CADD). Introduces AutoCAD software as a drafting tool. Students will develop a basic functional understanding of computer-aided drafting. *Not open to students with credit in CADD 120ABCD, ENGR 119.*

CSU, UC, UC credit limit

125 3D SOLID MODELING 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in CADD 115 or ENGR 100 or equivalent.

Corequisite: None

Recommended Preparation: Working knowledge of basic computer operations and file administration.

2 hours lecture, 4 hours laboratory

Advanced graphic communication using solid modeling techniques and software (SolidWorks). Techniques include feature based part construction using extrudes, cuts and revolves; advanced surface shaping using lofts and sweeps; and assembly construction and constraining in an engineering design environment. Students will continue to develop 2D drafting skills including proper organization and layout of component drawing views, dimensioning and tolerancing, sectioning and detailing, detail descriptive geometry, and manufacturing processes. *Also listed as ENGR 125.* *Not open to students with credit in ENGR 125*
CSU, UC, UC credit limit

126 ELECTRONIC DRAFTING 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in CADD 120 or equivalent.

Corequisite: None

Recommended Preparation: None

3 hours lecture

Application of electronic graphics to create all aspects of engineering support documentation. Includes all types: block diagrams, flow charts, wiring, and mechanical enclosures. Covers Schematic Capture and Printed Circuit Board (PCB) layout and design using AutoCAD. Other software may be incorporated. ASME, ANSI, Military and NASA standards for engineering are discussed.

CSU

127 SURVEY DRAFTING TECHNOLOGY 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in CADD 120 or equivalent.

Corequisite: None

Recommended Preparation: None

2 hours lecture, 4 hours laboratory

Professional Civil Engineering/Surveyor's office method drafting course that applies the basic skills and techniques acquired in CADD 115. Land surveying, land development procedures, legal descriptions, topographical analysis, earthworks, geographic control and subdivision processes will be covered.

CSU

128 DIMENSIONING AND TOLERANCING 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in CADD 120 or equivalent.

Corequisite: None

Recommended Preparation: "C" grade or higher or "Pass" in CADD/ENGR 125 or equivalent.

3 hours lecture

Basic study in dimensioning and tolerancing of engineering drawings using ASME/ANSI Y14.5M-1994 specification.

CSU

129 ENGINEERING SOLID MODELING 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in CADD 115 or ENGR 100 or equivalent

Corequisite: None

Recommended Preparation: None

2 hours lecture, 4 hours laboratory

Advanced 3D computer-aided mechanical design and drafting. This parametric modeling course provides skills and knowledge of appropriate software (Pro/Engineer) and feature based part construction using extrudes, cuts, revolves, lofts and sweeps. Students will enhance their skills in model assembly and assembly drawings including proper organization and layout of component drawing

views, dimensioning and tolerancing, sectioning and detailing. *Also listed as ENGR 129.* *Not open to students with credit in ENGR 129.*

CSU

131 ARCHITECTURAL COMPUTER-AIDED DRAFTING AND DESIGN 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in CADD 120 or ENGR 119 or equivalent.

Corequisite: None

Recommended Preparation: None

2 hours lecture, 4 hours laboratory

Application of architectural graphics, symbols, patterns, layouts, text, dimensions and scales to develop design drawings for small architecture, interior design, and space planning projects. Uses the parametric CADD program Revit and associated commands, techniques, and processes required for the creation of contract documents for residential projects using professional standards.

CSU

132 ADVANCED COMPUTER-AIDED DRAFTING AND DESIGN 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in CADD 120 or equivalent.

Corequisite: None

Recommended Preparation: Working knowledge of basic computer operations and file administration.

2 hours lecture, 4 hours laboratory

Advanced Computer-Aided Drafting and Design (CADD) topics such as concepts and application of three-dimensional constructions, editing and viewing capabilities of AutoCAD, 3D modeling, and AutoCAD customization. Includes techniques for creating lights, scenes, surface texture (bit-mapped/raster) materials, rendering and animation.

CSU

133 ADVANCED ARCHITECTURAL COMPUTER-AIDED DRAFTING AND DESIGN 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in CADD 131 or equivalent.

Corequisite: None

Recommended Preparation: None

2 hours lecture, 4 hours laboratory

Advanced application of architectural graphics, symbols, patterns, layouts, text, dimensions and scales to develop design drawings for small architecture, interior design and space planning projects. Uses the parametric CADD program Revit and associated commands, techniques and processes required for the creation of contract documents for residential projects using professional standards.

CSU

199 SPECIAL STUDIES OR PROJECTS IN CADD TECHNOLOGY 1-3 UNITS

Prerequisite: Consent of instructor

3-9 hours

Individual study, research or projects under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. *May be taken for a maximum of 9 units.*

200 INTRODUCTION TO COMPUTER-AIDED LANDSCAPE DESIGN 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

2 hours lecture, 3 hours laboratory

Introduction to computer-aided landscape design using AutoCAD software. Creation of site plans, landscape plans, sprinkler plans, contour maps and landscape estimates. Elevation and perspective drawings are also created. *Also listed as OH 200.* *Not open to students with credit in OH 200.*

CSU

201 ADVANCED COMPUTER-AIDED LANDSCAPE DESIGN 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in CADD/OH 200 or equivalent
Corequisite: None

Recommended Preparation: None
2 hours lecture, 3 hours laboratory
Use of computer-aided landscape design software for the application of graphics, symbols, patterns, layouts, text and scales for the development of design drawings, concept plans, construction documents, and cost estimates for residential landscape projects. *Also listed as OH 201. Not open to students with credit in OH 201.*

CSU

298 SELECTED TOPICS IN CADD TECHNOLOGY 1-3 UNITS

Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format. **Pass/No Pass only. Non-degree applicable.**

299 SELECTED TOPICS IN CADD TECHNOLOGY 1-3 UNITS

Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format.

CSU

CHEMISTRY

102 INTRODUCTION TO GENERAL, ORGANIC AND BIOLOGICAL CHEMISTRY 5 UNITS

Prerequisite: Grade of "Pass" in MATH 090 or equivalent.
Corequisite: None

Recommended Preparation: None
4 hours lecture, 3 hours laboratory

A one-semester course covering the basic principles of general, organic and biochemistry as needed to understand the biochemistry, physiology and pharmacology of the human body. Intended for students planning to transfer to a California State University nursing program. *Students with a grade of "C" or better in CHEM 115, 116 are not eligible for this class.*

AA/AS GE, CSU, CSU GE, IGETC, UC, UC credit limit

105 CHEMISTRY AND CRIME 3 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture

Elementary principles of chemistry and their application to the field of forensic chemistry. Students will learn basic chemical principles and apply them to the chemical analysis of evidence.

AA/AS GE, CSU, CSU GE

113 FORENSIC CHEMISTRY 4 UNITS

Prerequisite: Grade of "Pass" in MATH 090 or equivalent.
Corequisite: None

Recommended Preparation: None
3 hours lecture, 3 hours laboratory
Elementary principles of chemistry with application to the field of forensic science. Students will learn basic chemical terminology

and problem-solving techniques with a forensic science application. Chemical techniques for analyzing evidence will be studied in lecture and practiced in lab. *Students will not receive credit toward graduation for more than one of the following courses: CHEM 113, 115, 120.*

AA/AS GE, CSU, CSU GE, IGETC, UC, UC credit limit

115 FUNDAMENTALS OF CHEMISTRY 4 UNITS

Prerequisite: Grade of "Pass" in MATH 090 or equivalent.
Corequisite: None

Recommended Preparation: None
3 hours lecture, 3 hours laboratory

Elementary principles of inorganic and general chemistry with a brief introduction to organic and biochemistry. Previous chemistry background is not required. Recommended for students who need only a one-semester general chemistry course and for students entering paramedical and allied health fields. *Students will not receive credit toward graduation for more than one of the following courses: CHEM 113, 115, 120.*

AA/AS GE, CSU, CSU GE, IGETC, UC credit limit

116 INTRODUCTORY ORGANIC AND BIOCHEMISTRY 4 UNITS

Prerequisite: "C" grade or higher or "Pass" in CHEM 115 or equivalent.
Corequisite: None

Recommended Preparation: None
3 hours lecture, 3 hours laboratory

Study of carbon compounds with an emphasis on their structure, properties and reactivity. Introduction to the structure of the major classes of biomolecules—carbohydrates, lipids and proteins—and their relationship to the major classes of organic compounds.

AA/AS GE, CSU, CSU GE, IGETC, UC, UC credit limit

120 PREPARATION FOR GENERAL CHEMISTRY 4 UNITS

Prerequisite: "C" grade or higher or "Pass" in MATH 110 or equivalent.
Corequisite: None

Recommended Preparation: None
3 hours lecture, 3 hours laboratory

Elementary principles of chemistry approached from a problem-solving perspective necessary to succeed in CHEM 141. Intensive study in the areas of problem solving, stoichiometry, chemical nomenclature, basic atomic theory and bonding, solutions, acid-base chemistry, redox reactions and gas laws. The laboratory will be an introduction to quantitative techniques, descriptive chemistry, gas laws, error analysis and data treatment. *Students will not receive credit toward graduation for more than one of the following courses: CHEM 113, 115, 120.*

AA/AS GE, CSU, CSU GE, IGETC, UC, UC credit limit

141 GENERAL CHEMISTRY I 5 UNITS

Prerequisite: "C" grade or higher or "Pass" in CHEM 120 or equivalent or the CHEM 141 assessment and "C" grade or higher or "Pass" in MATH 110 or equivalent.
Corequisite: None

Recommended Preparation: None
3 hours lecture, 6 hours laboratory

Basic principles and concepts of chemistry with an emphasis in the areas of stoichiometry, thermochemistry, atomic structure, chemical bonding and gas laws. The laboratory is an introduction to quantitative analysis and the principles of atomic and molecular structures.

AA/AS GE, CSU, CSU GE, IGETC, UC credit limit

142 GENERAL CHEMISTRY II 5 UNITS

Prerequisite: "C" grade or higher or "Pass" in CHEM 141 or equivalent.
Corequisite: None

Recommended Preparation: None
3 hours lecture, 6 hours laboratory

Basic principles and calculations of chemistry with emphasis in the areas of equilibrium,

thermodynamics, descriptive chemistry of the periodic table, intermolecular forces, properties of liquids, solids and solutions, kinetics, electrochemistry, coordination compounds and nuclear chemistry. The laboratory will continue on the same basis as CHEM 141 but will also include qualitative analysis.

CSU, CSU GE, IGETC, UC

199 SPECIAL STUDIES OR PROJECTS IN CHEMISTRY 1-3 UNITS

Prerequisite: Consent of instructor
3-9 hours

Individual study, research or projects under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. *May be taken for a maximum of 9 units.*

231 ORGANIC CHEMISTRY I 5 UNITS

Prerequisite: "C" grade or higher or "Pass" in CHEM 142 or equivalent.
Corequisite: None

Recommended Preparation: None
3 hours lecture, 6 hours laboratory

First of a two semester organic chemistry sequence. Includes nomenclature of organic compounds, stereochemistry, reaction mechanisms, and the study of representative reactions for certain classes of organic compounds. The relationship of structure to properties, reactivity, and mechanism or reaction will be emphasized. This course is intended for biology, chemistry and pre-medical majors needing either one or two semesters of organic chemistry.

CSU, CSU GE, IGETC, UC

298 SELECTED TOPICS IN CHEMISTRY 1-5 UNITS

Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-15 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format. **Pass/No Pass only. Non-degree applicable.**

299 SELECTED TOPICS IN CHEMISTRY 1-5 UNITS

Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-15 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format.

CSU

CHILD DEVELOPMENT

101 PARENT EDUCATION 1 UNIT

Prerequisite: None
Corequisite: None
Recommended Preparation: None
1 hour lecture

This course is primarily designed for parents of children enrolled in the Cuyamaca College Child Development Center. Includes an overview of child development principles and an exploration of the role of parents in supporting the development of their children. Provides guidance in effective parenting strategies reflecting family and cultural beliefs.

CSU

106 PRACTICUM: BEGINNING OBSERVATION AND EXPERIENCE 1 UNIT

Prerequisite: None

Corequisite: CD 123 or 125 or previous completion of either course with a "C" grade or higher or "Pass."

Recommended Preparation: None

3 hours laboratory

Laboratory experience at an approved placement site that includes observing and recording the behavior of infant through preschool children and working directly with preschool children. Designed to reinforce and augment an understanding of principles and techniques for observing, assessing, planning and working with young children through direct experience.

CSU

110 PARENT PARTICIPATION 1 UNIT

Prerequisite: None

Corequisite: None

Recommended Preparation: None

3 hours laboratory

Laboratory of planned experiences and activities for parents of children enrolled in the Cuyamaca College Child Development Center. Designed to reinforce and augment an understanding of principles of parent-child interaction covered in CD 101. **Pass/No Pass only.**

CSU

115 CHANGING AMERICAN FAMILY 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

3 hours lecture

Survey of the contemporary American family with an emphasis on changes in form, functions and expectations. The history of the family, both public and private, will be considered and examined in relation to the effects of class, ethnicity and social policy. The effects on the family of common life events experienced by individuals and family members will be covered including sexuality, mate selection, marriage, childbearing, the working family, divorce, domestic violence, and aging. The future of the family including implications for the individual and society will be discussed.

AA/AS GE, CSU, CSU GE, IGETC, UC

116 PARENT EDUCATION II 1 UNIT

Prerequisite: None

Corequisite: None

Recommended Preparation: None

1 hour lecture

Primarily designed for parents of children enrolled in the Child Development Center. Builds on the basic foundation of child development principles and explores the role of parents in supporting the development of their children. Guidance techniques and effective parenting skills will be emphasized.

CSU

123 PRINCIPLES AND PRACTICES OF PROGRAMS AND CURRICULUM FOR YOUNG CHILDREN 3 UNITS

Prerequisite: None

Corequisite: CD 106 or concurrent enrollment in a licensed child care program.

Recommended Preparation: None

3 hours lecture

Examination of theoretical principles of developmentally appropriate practices applied to programs and environments. Emphasizes the key role of relationships, constructive adult-child interactions, and teaching strategies in supporting physical, social, creative, and intellectual development for all children. Reviews the historical roots of early childhood programs and the evolution of the professional practices promoting advocacy, ethics and

professional identity. Includes the legal requirements for programs in California including Title 22 and Title 5.

CSU

124 INFANT AND TODDLER DEVELOPMENT 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

3 hours lecture

Study of infants and toddlers, ages 0-3, focusing on the development of social-emotional, cognitive, language, and motor domains including variations due to linguistic, cultural, socioeconomic, and special needs. Emphasis is on development as it relates to care in a group setting. Theories and current issues related to group care and appropriate methods of guidance and socialization are examined. Focuses on the importance of the cultural context as it relates to meeting individual needs and building positive relationships with both child and family.

CSU

125 CHILD GROWTH AND DEVELOPMENT 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

3 hours lecture

Study of child growth and development from conception through adolescence as determined by the interaction of the biosocial, cognitive and social/emotional domains of development within the family and the cultural context with implications for raising successful adults. Observations of children of various ages are an integral part of this course.

AA/AS GE, CSU, CSU GE, IGETC, UC

126 ART FOR CHILD DEVELOPMENT 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

3 hours lecture

Exploration of the importance and value of creative art activities for young children. Includes experiences with a variety of art media, and evaluation and selection of materials appropriate for toddlers, preschool children and children with special needs.

CSU

127 SCIENCE AND MATHEMATICS FOR CHILD DEVELOPMENT 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: "C" grade or higher or "Pass" in CD 125 or equivalent.

3 hours lecture

Exploration of the importance and value of science and mathematics in programs for young children. Students will examine and apply theories, methods and materials to facilitate children's understanding and appreciation for the concepts of math and science with an emphasis on problem-solving skills and strategies. Includes California Preschool Foundations for Mathematics and Science and the construction and presentation of appropriate materials for young children including children with special needs.

CSU

128 MUSIC AND MOVEMENT FOR CHILD DEVELOPMENT 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

3 hours lecture

Exploration of the importance and meaning of music and movement for toddlers, preschool

children, and children with special needs. Listening skills, singing, movement education, and creating instruments will be emphasized.

CSU

129 LANGUAGE AND LITERATURE FOR CHILD DEVELOPMENT 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: "C" grade or higher or "Pass" in CD 125 or equivalent.

3 hours lecture

Designed to help teachers build language opportunities into every curriculum area. Explores methods of fostering language and emerging literacy skills for young children and children with special needs. Includes the study of children's literature, standards for evaluating books and computer software, and techniques of storytelling and puppetry.

CSU

130 CURRICULUM: DESIGN AND IMPLEMENTATION 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: "C" grade or higher or "Pass" in CD 123, 125, 126, 127, 128, 129, 131 or equivalent.

3 hours lecture

Examination of a variety of approaches to curriculum development. Emphasizes a co-constructive process of observation, implementation, and documentation for designing environments that generate meaningful relevant learning that is responsive to the child in the context of family and culture.

CSU

131 CHILD, FAMILY AND COMMUNITY 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: "C" grade or higher or "Pass" in CD 123, 125 or equivalent.

3 hours lecture

Examination of the socialization process including the role families, school, media, peers, and community play in children's development. Strategies to support children and families in a diverse society, developing and maintaining effective teacher and family relationships, and community resources and agencies that strengthen families will be examined. This course is required by the California Department of Social Services for teachers and directors.

AA/AS GE, CSU, CSU GE, IGETC, UC

132 OBSERVATION AND ASSESSMENT: FIELD EXPERIENCE SEMINAR 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in CD 106, 123, 125, 126, 127, 128, 129, 131 and 130 or 143 or equivalent.

Corequisite: CD 133 or 150 or 170.

Recommended Preparation: None

3 hours lecture

Seminar for students participating in field experience as student teachers in early childhood education programs. Students will develop skills in observation, authentic assessment and portfolio development for children, and positive communication and guidance skills for working with children and families. These skills will be implemented in CD 133, 150 or 170. Reexamines professional ethics, responsibilities, and expectations of the work force, and explores strategies for job search.

CSU

133 PRACTICUM—FIELD EXPERIENCE: STUDENT TEACHING 2 UNITS

Prerequisite: "C" grade or higher or "Pass" in CD 106, 123, 125, 126, 127, 128, 129, 130, 131 or equivalent.

Corequisite: CD 132.

Recommended Preparation: None

10 hours paid or 8 hours unpaid work experience per week

Under supervision at approved field placement sites, student teachers will design, implement, and evaluate curriculum experiences, apply previous coursework to make connections between theory and practice, demonstrate professional behavior, and build a comprehensive understanding of children in the group environment. Respectful workplace relationships among children and adults that serve as a foundation for co-construction of curriculum and positive guidance will be emphasized.

CSU

134 HEALTH, SAFETY AND NUTRITION OF YOUNG CHILDREN 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

3 hours lecture

Strategies for applying holistic health, safety and nutrition in early childhood settings. Designed for teachers, parents or others who desire current information on concepts of health, safety and nutrition as it applies to children from infancy through school age. Covers laws, practices, and curriculum regarding physical and mental health, safety, fitness and nutrition. An emphasis on program planning will include collaboration with families and healthcare providers leading to the development of good habits, attitudes and responses promoting healthy and safe lifestyles.

CSU

136 ADULT SUPERVISION 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: 12 units of Child Development as defined by Title 22 licensing regulations: 3 units in Child Growth and Development (CD 125), 3 units in Child, Family and Community (CD 131), 6 units in Program Curriculum (CD 123 or 126 or 127 or 128 or 129 or 130)

3 hours lecture

This course provides an opportunity for students to develop skills in establishing and maintaining supportive working relationships with adults in early childhood settings. Explores positive communication strategies including team building, collaboration, and effective problem solving.

CSU

137 ADMINISTRATION OF CHILD DEVELOPMENT PROGRAMS I 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: "C" grade or higher or "Pass" in 12 CD units as required by Title 22 licensing regulations: CD 125, 131 and 6 units in program curriculum (CD 123 and 126 or 127 or 128 or 129 or 130).

3 hours lecture

Designed for the beginning director of child care and preschool programs. Includes administrative tools, knowledge and techniques needed to organize, open and operate a child development facility; budget; management; regulatory laws; and development of school policies and procedures. This course is required by the California Department of Social Services and California Department of Education for child care and preschool program directors and site supervisors.

CSU

138 ADMINISTRATION OF CHILD DEVELOPMENT PROGRAMS II 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: "C" grade or higher or "Pass" in CD 137 or equivalent.

3 hours lecture

Designed for the experienced director of child care and preschool programs. The focus is on human relationships in the professional setting with an emphasis on political, fiscal, and working conditions and how they affect turnover and staff morale, support for families in the program, and managing personal growth and development.

CSU

141 WORKING WITH CHILDREN WITH SPECIAL NEEDS 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

3 hours lecture

Strategies for working with children with special needs, including physical challenges, learning difficulties, prenatal exposure to drugs, limited English skills, giftedness, and behavior disorders. With an emphasis on inclusion in regular classroom and child care settings, topics will include compliance with legislation, referral processes, working with families, and modification of environment and curriculum.

CSU

143 RESPONSIVE PLANNING FOR INFANT/TODDLER CARE 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: "C" grade or higher or "Pass" in CD 124 or 125 or equivalent.

3 hours lecture

Examination of programs, philosophies and components of high quality group care for infants and toddlers. Students will develop planning skills for environments, experiences, and caregiving routines that are based on respectful relationships and needs of diverse children and families. Emphasis is on building relationships between the family, child and caregiver in the context of linguistic, cultural, socioeconomic, and individual family differences and special needs.

CSU

145 CHILD ABUSE AND FAMILY VIOLENCE IN OUR SOCIETY 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

3 hours lecture

Examination of child abuse and neglect, domestic violence, elder abuse, and community violence. Safety and self protection will be studied with an emphasis on how the classroom teacher, foster parents, and members of the general public can recognize, prevent, report, and intervene in cases of child abuse and domestic violence.

AA/AS GE, CSU

148 CURRICULUM FOR SCHOOL AGE CHILD CARE 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: "C" grade or higher or "Pass" in CD 125 or equivalent.

3 hours lecture

Developmental needs, appropriate curriculum, and guidance techniques for children ages 6 to 12 in a child care setting. Meets Title 22 curriculum requirements for teachers and directors in extended day care programs. Also useful for recreation and youth group activities.

CSU

149 SCHOOL AGE CHILD CARE PROGRAM PLANNING 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: "C" grade or higher or "Pass" in CD 148 or equivalent.

3 hours lecture

Continuation and expansion of principles introduced in CD 148 with a focus on overall program design for school age child care. Special emphasis on working with children labeled "at risk" and parent communication.

CSU

150 FIELD EXPERIENCE FOR SCHOOL AGE CHILD CARE 2 UNITS

Prerequisite: "C" grade or higher or "Pass" in CD 125, 131, 134, 148, 149 or equivalent.

Corequisite: CD 132 or previous enrollment.

Recommended Preparation: None

10 hours paid or 8 hours unpaid work experience per week

Under supervision at an approved field placement site in a school age child care program, students will participate in all activities and will develop and supervise learning experiences, conduct activities, handle daily routines, and respond to individual and group needs.

CSU

153 TEACHING IN A DIVERSE SOCIETY 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

3 hours lecture

Analysis of the many contexts and variables related to an individual's socialization process and how these factors impact one's work with children and families. Using an anti-bias approach, the class will examine and discuss topics related to ethnicity, religion, race, sex, disability and lifestyles as they are represented in our schools and society at large. Includes self reflection as a tool for personal growth. Students will better understand their own attitudes regarding diversity and will apply this knowledge to their work with children and families.

CSU

157 FOOD AND NUTRITION FOR CHILDREN 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

3 hours lecture

Provides information and resources related to the nutritional needs of children from birth until approximately 12 years of age. Topics include menu planning, nutrition education, food safety, storage and preparation appropriate for a wide variety of indoor and outdoor settings.

CSU

170 FIELD EXPERIENCE WITH INFANTS AND TODDLERS 2 UNITS

Prerequisite: "C" grade or higher or "Pass" in CD 123, 124, 125, 126, 127, 128, 129, 143 or equivalent.

Corequisite: CD 132 or previous enrollment.

Recommended Preparation: None

10 hours paid or 8 hours unpaid work experience per week

Under supervision at an approved field placement site, students will participate in all classroom activities and will design and modify the environment, develop and supervise learning experiences, handle routines, and respond to individual and group needs under two years of age.

CSU

**199 SPECIAL STUDIES OR PROJECTS
IN CHILD DEVELOPMENT 1-3 UNITS**

Prerequisite: Consent of instructor
3-9 hours

Individual study, research or projects under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. *May be taken for a maximum of 9 units.*

**200 INTRODUCTION TO OUTDOOR
EDUCATION PROGRAMS 1 UNIT**

Prerequisite: None
Corequisite: None
Recommended Preparation: "C" grade or higher or "Pass" in CD 125 or equivalent.

1 hour lecture
Introduction and exploration of outdoor education programs for students considering employment in camp settings. Introduces a variety of program philosophies and special interest camps. Outdoor safety, environmental awareness, and designing meaningful activities that are engaging and appropriate for children are the main emphasis of the course. The class will have a practical application component; students will be expected to participate in a field trip to a local outdoor outfitter. Provides an overview of classes required in the Outdoor Leadership certificate of proficiency and may assist students in determining future educational goals.

CSU

**201 CREATIVE ACTIVITIES FOR
OUTDOOR PROGRAMS 1 UNIT**

Prerequisite: None
Corequisite: None
Recommended Preparation: "C" grade or higher or "Pass" in CD 125 or equivalent.

1 hour lecture
Designed for students planning to work in outdoor education or environmental education programs. Focuses on the planning and development of craft projects appropriate for outdoor education settings. Projects will incorporate environmental and science-related concepts. Emphasis is on practical application including arts and crafts materials and using craft activities and projects as instructional tools. Students will present projects and compile a resource of the ideas presented in class for future reference.

CSU

**202 FIELD EXPERIENCE FOR
RECREATIONAL LEADERSHIP 1 UNIT**

Prerequisite: "C" grade or higher or "Pass" in CD 125, 200, 201 or equivalent.
Corequisite: None
Recommended Preparation: None

75 hours paid or 60 hours unpaid work experience

Under supervision at an approved field placement site, students will participate in recreational program activities in an outdoor education or camp facility. Students will take part in planned recreational activities, develop and implement learning adventures, supervise groups of multi-aged children using positive group management techniques, respond to individual needs, participate in all aspects of camp life including meal preparation and service, setting up, taking down and maintaining outdoor equipment, and assuring the health, safety and enjoyment of camp participants. *Fingerprinting will be required for field experience site and some sites may require CPR certification.*

CSU

**203 COOKING EXPERIENCES
WITH YOUNG CHILDREN 1 UNIT**

Prerequisite: None
Corequisite: None
Recommended Preparation: None
1 hour lecture

Designed for child development students and teachers currently working in the field. Introduces the educational, cross-curricular, and multicultural benefits of cooking experiences with young children. Areas of emphasis include benefits of cooking activities, nutrition, health and safety issues, and the connections to language, science and math learning. **Pass/No Pass only.**

CSU

**210 WORKING WITH YOUNG CHILDREN
WITH CHALLENGING BEHAVIORS 3 UNITS**

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture

Provides a practical foundation for working with children with challenging behaviors in early childhood programs. Key components are developmentally appropriate guidance and proactive management techniques, preventative and intervention strategies, and adaptations of environment and settings. The importance of a child's developmental age, family involvement, and community resources will be included.

CSU

**211 FIELD EXPERIENCE IN EARLY
CHILDHOOD INTERVENTION 2 UNITS**

Prerequisite: "C" grade or higher or "Pass" in CD 125, 141, 145, 210 and two of the following: CD 126, 127, 128, 129 or equivalent.
Corequisite: CD 132 or previous enrollment.
Recommended Preparation: "C" grade or higher or "Pass" in CD 131, 134 or equivalent.

10 hours paid or 8 hours unpaid work experience per week

Supervised field experience as an assistant in an inclusive early childhood group or special education program, or an individual early intervention setting. Students will participate in routines and procedures and will develop and implement appropriate activities as required.

CSU

**298 SELECTED TOPICS IN
CHILD DEVELOPMENT 1-3 UNITS**

Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format. **Pass/No Pass only. Non-degree applicable.**

**299 SELECTED TOPICS IN
CHILD DEVELOPMENT 1-3 UNITS**

Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format.

CSU

COMMUNICATION**110 INTRODUCTION TO MASS
COMMUNICATION 3 UNITS**

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture

Introduction to mass media practices and influences in the United States (and globally). Topics include current media practices, problems, issues, and significant trends with special emphasis on the ways media and society influence and change each other. The history of mass media theories, ethics, roles and responsibilities, contributions of diverse groups, gender issues, and legal rights and restrictions will be explored. Mass media contexts will include news advertising, public relations, photojournalism, newspapers, radio, television, film, recording industry, book publishing, network/cable and online communication.

AA/AS GE, CSU, CSU GE, IGETC, UC

**120 INTERPERSONAL
COMMUNICATION 3 UNITS**

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture

Provides an opportunity to learn and apply in daily life practical principles of interpersonal communication. The emphasis is on personal, situational and cultural influences and interaction. Designed to assist students in improving their own interpersonal communication skills. Attention is given to human perception, interpersonal dynamics, listening, conflict management, verbal and nonverbal symbol systems.

AA/AS GE, CSU, CSU GE

122 PUBLIC SPEAKING 3 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture

Provides an opportunity for general improvement in the basic process of public speaking with an emphasis on individual to audience contexts. Introduction to rhetorical theory. Attention is given to the basic elements of topic selection, analysis of diverse audiences, research, organization, argumentation, and delivery of speeches and presentations.

AA/AS GE, CSU, CSU GE, IGETC, UC

123 ADVANCED PUBLIC SPEAKING 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in COMM 122 or equivalent.
Corequisite: None
Recommended Preparation: None
3 hours lecture

Advanced training in the preparation and delivery of common types of public speaking. Emphasis is on new theoretical approaches to the process of oral communication.

CSU, UC

**124 INTERCULTURAL
COMMUNICATION 3 UNITS**

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture

Experience and learn about intercultural communication: the study of face-to-face communication between persons with significantly different beliefs, values, expectations and assumptions. A theoretical overview is presented; however, the course emphasis relies on its unique composition of students from a variety of cultural backgrounds

(national origin, ethnicity, age, gender, etc.) who are encouraged to enroll. The resulting student-to-student dynamic offers a unique opportunity to experience and learn about practical similarities and differences between people of different cultural backgrounds.

AA/AS GE, CSU, CSU GE, IGETC, UC

135 ORAL INTERPRETATION OF LITERATURE 3 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture

Provides an opportunity to develop skills in oral interpretation of various types of literature. Draws on the traditions of oral interpretation and literary analysis. Students will explore works of poetry, prose and dramatic literature with an emphasis on the insight to be gained from analyzing fine literature and sharing it with others.

CSU, UC

136 READERS THEATRE 3 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture

Study of the theory, concepts and history of Readers Theatre to include the principles of literary analysis and oral interpretation, and methodologies and techniques in the development of written material from text into a medium of group communication.

CSU, UC

137 CRITICAL THINKING IN GROUP COMMUNICATION 3 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture

Designed to facilitate the development of critical thinking and decision making skills in the small group communication context. Emphasizes the basic elements of critical thinking such as evidence, reasoning and language. Students will become familiar with leadership strategies, discussion techniques, and conflict management used in groups.

AA/AS GE, CSU, CSU GE, UC

145 ARGUMENTATION 3 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture

Study of the construction and analysis of public argument. Covers the theory of argument, the processes and development of arguments, and the application of argument to decision making.

AA/AS GE, CSU, CSU GE, UC

199 SPECIAL STUDIES OR PROJECTS IN COMMUNICATION 1-3 UNITS

Prerequisite: Consent of instructor
3-9 hours

Individual study, research or projects under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. *May be taken for a maximum of 9 units.*

240ABCD INTERCOLLEGIATE FORENSICS 3 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
2 hours lecture, 3 hours laboratory

Provides an opportunity for students to improve their public speaking skills through intercollegiate forensic competition and other realistic speaking situations outside the

classroom. Class and individual instruction is provided in the following speaking categories: public address, oral interpretation, impromptu, debate, and readers theatre. *May be taken for 4 semesters.*

CSU

298 SELECTED TOPICS IN COMMUNICATION 1-3 UNITS

Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format. **Pass/No Pass only. Non-degree applicable.**

299 SELECTED TOPICS IN COMMUNICATION 1-3 UNITS

Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format.

CSU

COMPUTER AND INFORMATION SCIENCE

See Business Office Technology for specific Microsoft applications such as Word, PowerPoint, Excel, and Access.

105 INTRODUCTION TO COMPUTING 3 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
2 hours lecture, 3 hours laboratory
Introductory computing course for those desiring beginning computer knowledge and skills. Includes an overview of a typical personal computer system including input and output devices, the processor, and storage devices. Provides hands-on experience with a computer and popular application software. Emphasis is on those skills and knowledge needed to use and maintain a home or small business computer.

CSU

110 PRINCIPLES OF INFORMATION SYSTEMS 4 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture, 3 hours laboratory
An introductory course in information technology with an emphasis on business and business-related applications. Concepts include computer organization, data processing systems, decision support systems, systems analysis and design. The laboratory component consists of hands-on problem solving using software applications including spreadsheets and databases.

CSU, UC

120 COMPUTER MAINTENANCE AND A+ CERTIFICATION 3 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: Basic computer skills (basic knowledge of hardware, operating systems, applications software)

2 hours lecture, 3 hours laboratory
Preparation for the A+ Certification exam, an industry-sponsored test that establishes a benchmark level of knowledge and competence expected of computer service technicians in entry-level positions. A+ Certification also serves as the foundation for computer service professionals who are pursuing other valuable industry certifications such as the Cisco Certified Networking Associate (CCNA), Network+, and Microsoft Certified Professional (MCP). Students will gain a comprehensive knowledge base in computer hardware, DOS and Windows operating systems, networking basics, printers, and customer service. Hands-on labs using the latest computer components and operating systems provide an opportunity for students to enhance their skills in assembling, disassembling, servicing, troubleshooting, and upgrading advanced computer and networking systems.

CSU

121 NETWORK CABLING SYSTEMS 3 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
2 hours lecture, 3 hours laboratory

This course introduces students to the basic concepts of network cabling systems. It focuses on network cabling design, installation, testing, certification and troubleshooting. Students will develop knowledge and skills in installing and testing voice and data cable connectors and jacks, horizontal links and channels, pulling and terminating cables, cable system certification, telecommunications room design, and patch panel installation. The laboratory component allows students to verify concepts introduced in class and to develop the knowledge and skills required to build, test, operate and maintain the physical aspects of voice, video and data networks.

CSU

125 NETWORK+ CERTIFICATION 3 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: Basic computer skills (basic knowledge of hardware, operating systems, applications software).

2 hours lecture, 3 hours laboratory
Practical course intended for those interested in learning computer networking with an emphasis on earning the Computing Technology Industry Association's certification Network+, a foundation-level, vendor-neutral international industry credential that validates the knowledge of networking professionals. Earning this certification demonstrates that a candidate can describe the features and functions of networking components, and possesses the knowledge and skills needed to install, configure and troubleshoot basic networking hardware, protocols and services. It also indicates technical ability in the areas of media and topologies, protocols and standards, network implementation, and network support. Throughout the course, theory will be demonstrated and practiced in laboratory exercises. Lectures, laboratories and practical assignments will emphasize skills needed to work effectively in the networking environment and to earn the Network+ certification.

CSU

140 DATABASES**3 UNITS**

Prerequisite: None

Corequisite: None

Recommended Preparation: "C" grade or higher or "Pass" in CIS 110 or equivalent.

2 hours lecture, 3 hours laboratory

Beginning course in database software that provides a solid background in database applications and operation. Students will create, update and retrieve information using a computer and database software. Beneficial for those who wish to use the computer to file, organize, retrieve and create reports from data.

CSU

161 FUNDAMENTALS OF TELECOMMUNICATIONS**3 UNITS**

Prerequisite: None

Corequisite: None

Recommended Preparation: "C" grade or higher or "Pass" in CIS 120, 121 or equivalent.

2 hours lecture, 3 hours laboratory

This course introduces students to the basic concepts of telecommunications, beginning with how communication signals are generated, encoded, transmitted and received over telecommunications channels. Theory of analog and digital signals, frequency spectra, bandwidth, modulation, and multiplexing techniques are introduced and demonstrated. Covers the history of telecommunications technologies, industry and governmental policy, and how this history has led to the modern public telecommunications networks. Networking systems and equipment are explored including transmission and reception technology, switching systems, and transmission media such as optical fiber, copper and wireless. Technological advances in broadband and convergence technologies and the merging of voice, data and video applications on a single network are introduced. The laboratory component allows students to verify concepts introduced in class and develop the knowledge and skills required to build, test, operate and maintain telecommunications networks.

CSU

162 TECHNICAL DIAGRAMMING USING MICROSOFT VISIO**2 UNITS**

Prerequisite: None

Corequisite: None

Recommended Preparation: Basic computer skills.

1 hour lecture, 3 hours laboratory

Networking and telecommunications professionals must know how to create technical diagrams and drawings, and use computer tools to manage Information Technology (IT) projects. Using Microsoft Visio, students will learn how to create basic and advanced networking and telecommunications diagrams and drawings, building plans, project schedules, and flow charts. Students will also learn how to visualize and create presentations of complex technical and business information systems. Challenging case studies will provide real-world technical and business experiences.

CSU

190 WINDOWS OPERATING SYSTEM**3 UNITS**

Prerequisite: "C" grade or higher or "Pass" in CIS 120 or 125 or equivalent or current CompTIA A+ or N+ certification.

Corequisite: None

Recommended Preparation: None

2 hours lecture, 3 hours laboratory

Comprehensive hands-on application, use and training on a Windows client computer operating system for both beginning and intermediate-level students. Instruction will include: operating system installation and configuration, graphical user interface and command-line commands, hardware installation and configuration, file system management, user

and group management, security configuration, network configuration and management, troubleshooting and disaster recovery. Course maps to the Microsoft Certified Technology Specialist exam for windows clients.

CSU

191 LINUX OPERATING SYSTEM**3 UNITS**

Prerequisite: "C" grade or higher or "Pass" in CIS 120 or 125 or equivalent or current CompTIA A+ or N+ certification.

Corequisite: None

Recommended Preparation: None

2 hours lecture, 3 hours laboratory

Comprehensive hands-on application, use and training on a Linux client computer operating system for both beginning and intermediate-level students. Instruction will include: operating system installation and configuration, graphical user interface and command-line commands, hardware installation and configuration, file system management, user and group management, security configuration, network configuration and management, troubleshooting and disaster recovery. Course maps to the Computer Technology Industry Association (CompTIA) Linux+ and Linux Professional Institute (LPI) Certification Level 1 certification exams.

CSU

199 SPECIAL STUDIES OR PROJECTS IN COMPUTER AND INFORMATION SCIENCE**1-3 UNITS**

Prerequisite: Consent of instructor

3-9 hours

Individual study, research or projects under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. *May be taken for a maximum of 9 units.*

201 CISCO NETWORKING ACADEMY I EXPLORATION**3 UNITS**

Prerequisite: None

Corequisite: None

Recommended Preparation: "C" grade or higher or "Pass" in CIS 120 or equivalent.

2 hours lecture, 3 hours laboratory

First of four courses providing classroom and laboratory experience in current and emerging networking technologies, and to prepare for certification as a Cisco Certified Network Associate (CCNA). Introduces the architecture, structure, functions, components, and models of the Internet and other computer networks. Uses the OSI and TCP layered models to examine the nature and roles of protocols and services at the application, network, data link, and physical layers. The principles and structure of IP addressing and fundamentals of Ethernet concepts, media, and operations are introduced. Labs use a "virtual Internet environment" consisting of servers, routers, and switches to allow students to analyze real data within a controlled network environment. Packet Tracer (PT) simulation software activities help students analyze protocol and network operation along with practicing network design and configuration. At the end of the course, students build simple LAN topologies by applying basic principles of cabling; perform basic configurations of network devices including routers and switches; and implement IP addressing schemes.

CSU

202 CISCO NETWORKING**3 UNITS****ACADEMY II**

Prerequisite: "C" grade or higher or "Pass" in CIS 201 or equivalent or completion of CCNA1 at another Cisco Networking Academy.

Corequisite: None

Recommended Preparation: "C" grade or higher or "Pass" in CIS 120 or equivalent.

2 hours lecture, 3 hours laboratory

Second of four courses providing classroom and laboratory experience in current and emerging networking technology, and to prepare for certification as a Cisco Certified Network Associate (CCNA). Covers the architecture, components and operation of routers, and explains the principles of routing and routed protocols. Students will analyze, configure, verify and troubleshoot the primary routing protocols RIPv1, RIPv2, OSPF and EIGRP. By the end of the course, students will be able to recognize and correct common routing issues and problems.

CSU

203 CISCO NETWORKING**3 UNITS****ACADEMY III**

Prerequisite: "C" grade or higher or "Pass" in CIS 201 or equivalent or successful completion of CCNA1 at another Cisco Networking Academy.

Corequisite: None

Recommended Preparation: "C" grade or higher or "Pass" in CIS 202 or equivalent or successful completion of CCNA2 at another Cisco Networking Academy.

2 hours lecture, 3 hours laboratory

Third of four courses providing classroom and laboratory experience in current and emerging networking technology, and to prepare for certification as a Cisco Certified Network Associate (CCNA). Covers the architecture, components, and operation of switches and wireless routers. Explains the principles of LAN switching topologies, switching protocols, wireless topologies, and wireless security. Students will analyze, configure, verify, and troubleshoot switches; switching protocols such as VLANs, VTP, STP and VLAN tagging; and wireless routers. By the end of the course, students will be able to recognize and correct common switching issues and problems.

CSU

204 CISCO NETWORKING**3 UNITS****ACADEMY IV**

Prerequisite: "C" grade or higher or "Pass" in CIS 201, 202 and 203 or equivalent or successful completion of CCNA1, 2 and 3 at another Cisco Networking Academy.

Corequisite: None

Recommended Preparation: None

2 hours lecture, 3 hours laboratory

Fourth of four courses providing classroom and laboratory experience in current and emerging networking technology, and to prepare for certification as a Cisco Certified Network Associate (CCNA). The primary focus is on accessing wide area networks (WAN). The goal is to develop an understanding of various WAN technologies to connect small to medium-sized business networks. Topics include: WAN converged applications; Quality of Service (QoS); WAN connectivity using Point-to-Point Protocol (PPP), Frame Relay protocol, and Broadband Links (Cable, DSL, VPN); WAN security concepts including types of threats, how to analyze network vulnerabilities, general methods for mitigating common security threats, and types of security appliances and applications; principles of traffic control and access control lists (ACLs); configuring Network Address Translation (NAT) and Dynamic Host Control Protocol (DHCP); IPv6 addressing concepts; and using Cisco Router and Security Device Manager (SDM) Graphical User Interface

to configure router security and implement IP addressing services. Students will learn how to detect, troubleshoot and correct common Enterprise network implementation issues.

CSU

205 CISCO NETWORKING ACADEMY V 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in CIS 204 or equivalent or successful completion of the current version of CCNA1, 2, 3 and 4 at another Cisco Networking Academy or possess a current CCNA certification.

Corequisite: None

Recommended Preparation: None

2 hours lecture, 3 hours laboratory

This course, combined with CIS 206 Cisco Networking Academy VI, covers topics necessary to successfully complete the Cisco Certified Networking Professional ROUTE certification. Skills necessary for implementing, monitoring, and maintaining routing services in an enterprise network will be enhanced. Students will learn how to plan, configure, and verify the implementation of complex enterprise LAN and WAN routing solutions using a range of IPv4 routing protocols. Topics include: EIGRP (Enhanced Interior Gateway Routing Protocol), Multi-area OSPF (Open Shortest Path First) routing protocols, and Interior Gateway Protocol (IGP) redistribution and Path Control. This lab-intensive course provides hands-on experience by performing case studies using Cisco networking devices.

CSU

206 CISCO NETWORKING ACADEMY VI 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in CIS 205 or equivalent

Corequisite: None

Recommended Preparation: None

2 hours lecture, 3 hours laboratory

This course, combined with CIS 205 Cisco Networking Academy V, covers topics necessary to successfully complete the Cisco Certified Networking Professional ROUTE certification. Skills necessary for implementing, monitoring, and maintaining routing services in an enterprise network will be enhanced. Students will learn how to plan, configure, and verify the implementation of complex enterprise LAN and WAN routing solutions using a range of routing protocols in IPv4 and IPv6 environments. Continues using the CCNP ROUTE certification content learned in CIS 205 and introduces new topics: BGP (Border Gateway Protocol); secure routing solutions to support branch offices and mobile workers; introduction to IPv6; IPv6 addressing and routing; OSPFv3; IPv6 tunneling; and IPv4 to IPv6 translation. This lab-intensive course provides hands-on experience by performing case studies using Cisco networking devices.

207 CISCO NETWORKING ACADEMY VII 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in CIS 204 or equivalent or successful completion of the current version of CCNA1, 2, 3 and 4 at another Cisco Networking Academy or possess a current CCNA certification.

Corequisite: None

Recommended Preparation: None

2 hours lecture, 3 hours laboratory

Cisco Networking Academy VII-Switch is the sixth level of Cisco Networking Academy courses and one of four courses for the Cisco Certified Networking Professional designation. Students will learn how to implement, monitor, secure, and maintain network switching solutions in converged enterprise campus networks. Covers the secure integration of VLANs (Virtual Local Area Networks), WLANs (Wireless Local

Area Networks), voice, and video into campus networks. Topics include: Multilayer Switching, VLANs, VTP (VLAN Trunking Protocol), STP (Spanning Tree Protocol), Switch security techniques, SPAN (Switched Port Analyzer), LCAP (EtherChannel, Link Aggregation Control Protocol), Inter-VLAN Routing, HSRP (Hot Standby Router Protocol), VRRP (Virtual Redundant Router Protocol), GLBP (Gateway Load Balancing Protocol), WLANs, QoS (Quality of Service), and IP Multicasting. This lab-intensive course provides hands-on learning and practice to reinforce configuration skills using Cisco networking devices.

208 CISCO NETWORKING ACADEMY VIII 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in CIS 205, 206 and 207 or equivalent or successful completion of the current Cisco Networking Academy CCNP ROUTE and SWITCH courses at another Cisco Networking Academy or possess current CCNP ROUTE and SWITCH certifications.

Corequisite: None

Recommended Preparation: None

2 hours lecture, 3 hours laboratory

Cisco Networking Academy VIII-TSHOOT is the seventh level of Cisco Networking Academy courses and one of four courses for the Cisco Certified Networking Professional designation. Students will learn how to monitor and maintain complex enterprise routed and switched IP networks. Skills learned are based on systematic and industry recognized approaches to plan and execute regular network maintenance including support and troubleshooting network problems using technology-based processes and best practices. Troubleshooting topics include: processes for complex enterprise networks; tools and applications; campus switched solutions; routing solutions; addressing services; network performance issues; converged networks; network security implementations; and complex enterprise networks. This lab-intensive course provides hands-on learning and practice to reinforce troubleshooting skills using Cisco networking devices.

209 CISCO NETWORKING ACADEMY IX 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in CIS 204 or equivalent or successful completion of the current version of CCNA1, 2, 3 and 4 at another Cisco Networking Academy or possess a current CCNA certification.

Corequisite: None

Recommended Preparation: None

2 hours lecture, 3 hours laboratory

Designed for students seeking career-oriented, entry-level security specialist skills. Provides the technical knowledge and skill experience needed to prepare for entry-level security specialist careers. The CCNA Security curriculum blends classroom hands-on experience using Cisco routers and switches and an online e-learning solution to develop an in-depth understanding of network security principles and security tools such as: protocol sniffers/analyzers, TCP/IP and common desktop utilities, Cisco IOS Software, Cisco VPN client, and web-based resources. Preparation for the Implementing Cisco IOS Network Security (IINS) certification exam (640-553), leading to the CCNA Security certification.

211 WEB MARKUP LANGUAGES 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: Basic computer skills (ability to use Internet, word process documents, manage electronic files).

2 hours lecture, 3 hours laboratory

Hands-on training in web publishing using a markup language such as HTML, XHTML or XML and a stylesheet language such as CSS

(Cascading Style Sheets) or XSL (eXtensible Stylesheet Language). Students will create a simple website and upload it to a web server. Techniques for creating web presentations compliant with current World Wide Web Consortium (W3C) standards and viewable by most web browsers will be stressed. Topics include formatting text, organizing a website, integrating images, linking to external files, linking to email and FTP sites, principles of good web design, lists, tables, frames, imagemaps, forms, stylesheets, and the cascade mechanism.

CSU

212 INTRODUCTION TO WEB DEVELOPMENT 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: Basic computer skills (ability to use the Internet, word process documents, manage electronic files).

2 hours lecture, 3 hours laboratory

Introductory web development course using web authoring software. Emphasis is on production, design and usability. Students will apply skills and concepts to plan, develop and upload a small website.

CSU

213 ADVANCED WEB DEVELOPMENT 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in CIS 212 or equivalent.

Corequisite: None

Recommended Preparation: "C" grade or higher or "Pass" in CIS 140 or 110 or equivalent or database development experience

2 hours lecture, 3 hours laboratory

Students will use a web authoring tool to create database-integrated websites. Production topics include forms, CSS, introductory PHP scripting, introductory MySQL, database integration, and searching. Design focus is on usability and accessibility. Current topics in web development will be discussed.

CSU

215 JAVASCRIPT PROGRAMMING 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in CIS 211 or equivalent or two years verifiable XHTML and CSS coding experience.

Corequisite: None

Recommended Preparation: "C" grade or higher or "Pass" in CS 119 or equivalent or programming experience.

2 hours lecture, 3 hours laboratory

Introductory course in JavaScript programming which focuses on creating interactive web pages. The foundation is set with JavaScript basics such as the Document Object Model, variables, data types, syntax, control structures, and functions. JavaScript will be integrated with HTML and CSS to perform real-world tasks including form validation, image rollovers, pull-down menus, pop-up windows, and form calculations. Current uses of JavaScript (e.g., AJAX) will be introduced.

CSU

216 ACTIVE SERVER PAGES 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in CIS 211 or equivalent or HTML programming experience or CS 119 or equivalent or previous programming experience.

Corequisite: None

Recommended Preparation: None

2 hours lecture, 3 hours laboratory

This web programming course introduces students to the use of ASP.Net in the creation of dynamic web pages with an emphasis on developing modern feature rich, data-driven and interactive web content. Topics include web application development with database content and website security.

CSU

219 PHP/MYSQL DYNAMIC WEB-BASED APPLICATIONS 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in CIS 211 or equivalent
Corequisite: None

Recommended Preparation: "C" grade or higher or "Pass" in CIS 140 or 110 or equivalent or database development experience, CS 119 or equivalent or programming experience

2 hours lecture, 3 hours laboratory

Provides the knowledge and skills necessary to use the PHP scripting language to develop dynamic web-based applications. Topics include the fundamentals of scripting, using PHP with HTML forms, creating functions, and integrating with the MySQL database.

CSU

240 ADVANCED DATABASES 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in CIS 140 or equivalent
Corequisite: None

Recommended Preparation: None

2 hours lecture, 3 hours laboratory

Continuation of the study of database software. Students will create, update and retrieve information using applications based on the database programming language or Structured Query Language (SQL) and will learn how to create efficient, customized applications.

CSU

242 DATABASE DESIGN 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in CIS 140 or 240 or equivalent
Corequisite: None

Recommended Preparation: None

2 hours lecture, 3 hours laboratory

Design and implement a Structured Query Language (SQL) Server database. Create and maintain database objects and implement database integrity. Use Transact-SQL to query a SQL Server database and manage and manipulate data stored in that database. Manage a SQL Server database by setting appropriate security settings. Perform maintenance and optimization of a SQL Server database.

CSU

261 CONVERGENT/UNIFIED TECHNOLOGIES AND DEGREE CAPSTONE 3 UNITS

Prerequisite: Completion of 30+ units with a "C" grade or higher or "Pass" from the following courses: CIS 120, 121, 125, 140, 161, 162, 190, 191, 201, 202, 203, 204, 209, 262, 263, 290, 291, 293, 294, CS 119, CS 119L or equivalent
Corequisite: None

Recommended Preparation: None

2 hours lecture, 3 hours laboratory

This unique course comprises two parts: 1) presents advanced topics in converging and unified information and communications technologies; and 2) involves a comprehensive review of all previous networking and communications topics covered in previous computer, networking, security, and telecommunications courses. In addition to learning about advanced information and communications technologies, students will be prepared to take and pass the CompTIA (Computer Technology Industry Association) CTP+ (Convergence Technologies Professional+) certification exam. The capstone part of the class allows students to verify skills and knowledge obtained in previous computer, networking, security, and telecommunications classes. Students will design, build, test, operate and maintain end-to-end converging and unified information and communication networks during the capstone's "hands-on" labs.

CSU

262 WIRELESS NETWORKING 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in CIS 120, 121 and 125 or 201 or equivalent or possess a current CCNA certification or two years verifiable network administration experience.
Corequisite: None

Recommended Preparation: "C" grade or higher or "Pass" in CIS 190, 202 or equivalent

2 hours lecture, 3 hours laboratory

Covers WLAN (Wireless Local Area Network) topics including basic wireless principles, wireless technology concepts, wireless networking devices, 802.11 antenna technology, and WLAN Security. Introduces 802.11 WLAN communication technologies available today. Along with learning wireless technology terms, concepts and principles, students will get hands-on experience configuring a variety of WLAN networking devices and topologies. The CWNA certification is the foundation level enterprise Wi-Fi certification for the Certified Wireless Network Professional (CWNP) program, and is required for the Certified Wireless Security Professional (CWSP) and Certified Wireless Networking Expert (CWNE) certifications.

CSU

263 FUNDAMENTALS OF NETWORK SECURITY 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in CIS 125 and 190 or 191 or equivalent.
Corequisite: None

Recommended Preparation: None

2 hours lecture, 3 hours laboratory

Entry-level course in network security that addresses the various aspects of designing and implementing a secure network. Designed for students interested in understanding the field of network security and how it relates to other areas of Information Technology (IT). Covers materials included in the CompTIA (Computing Technology Industry Association) Security+ exam.

CSU

267 DIRECTED WORK EXPERIENCE IN CIS 1-4 UNITS

Prerequisite: 12 units in CIS/CS courses related to field in which work experience is sought and current resume highlighting computer science or information system experience and course-related study.
Corequisite: None

Recommended Preparation: None

5 hours paid or 4 hours unpaid work experience per week per unit

Work experience at a designated industry site in a computer and information science occupation category for students seeking job experience in computer science or information systems. *May be taken for a maximum of 12 units.*

CSU

290 WINDOWS SERVER-ACTIVE DIRECTORY 2 UNITS

Prerequisite: "C" grade or higher or "Pass" in CIS 190 or equivalent or current Microsoft Certified Technology Specialist (MCTS) 70-680 certification.
Corequisite: None

Recommended Preparation: None

1 hour lecture, 3 hours laboratory

Comprehensive hands-on introduction to multi-user, multi-tasking server operating systems and networked operating systems. Topics include: active directory (AD) installation and configuration, server/domain promotion, group policy implementation and management, trusts, server security configuration, user and group management, server roles (domain naming system (DNS), certificate authority service (CAS), lightweight directory service (LDS), rights management service (RMS), federated service (FS) and read-only domain controller (RODC), troubleshooting and disaster recovery. Course maps to the Microsoft Certified Technology Specialist exam for server active directory.

CSU

291 LINUX SYSTEM ADMINISTRATION 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in CIS 191 or equivalent.
Corequisite: None

Recommended Preparation: None

2 hours lecture, 3 hours laboratory

Comprehensive hands-on application and instruction in multi-user, multi-tasking operating systems and networked operating systems. Topics include: operating system installation and configuration, storage configuration and management, server security configuration, user and group management, configuration and management of various server roles (such as LDAP, DNS, DHCP, Print, Mail, Samba, Apache), troubleshooting and disaster recovery. Course maps to the Linux Professional Institute (LPI) Certification Level 2 exam.

CSU

293 WINDOWS SERVER-NETWORK INFRASTRUCTURE 2 UNITS

Prerequisite: "C" grade or higher or "Pass" in CIS 190 or equivalent or current Microsoft Certified Technology Specialist (MCTS) 70-680 certification
Corequisite: None

Recommended Preparation: None

1 hour lecture, 3 hours laboratory

Comprehensive hands-on introduction to a multi-user, multi-tasking operating system and networked operating system. Topics include: the configuration, maintenance and monitoring of Windows server network access, network addressing, name resolution, file and print services. Course maps to the Microsoft Certified Technology Specialist exam for server network infrastructure.

CSU

294 WINDOWS SERVER-APPLICATIONS INFRASTRUCTURE 2 UNITS

Prerequisite: "C" grade or higher or "Pass" in CIS 190 or equivalent or current Microsoft Certified Technology Specialist (MCTS) 70-680 certification
Corequisite: None

Recommended Preparation: None

1 hour lecture, 3 hours laboratory

Comprehensive hands-on introduction to a multi-user, multi-tasking server operating system and networked operating system. Topics include: the deployment of Windows servers, activation schema, virtualization, storage configuration, remote desktop services, web services, and SharePoint foundation options configuration. Course maps to the Microsoft Certified Technology Specialist exam for server applications infrastructure.

CSU

298 SELECTED TOPICS IN COMPUTER AND INFORMATION SCIENCE 1-4 UNITS

Prerequisite: Varies with topic

Corequisite: Varies with topic

Recommended Preparation: Varies with topic

1-12 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format. **Pass/No Pass only. Non-degree applicable.**

299 SELECTED TOPICS IN COMPUTER AND INFORMATION SCIENCE 1-4 UNITS

Prerequisite: Varies with topic

Corequisite: Varies with topic

Recommended Preparation: Varies with topic

1-12 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format.

CSU

COMPUTER SCIENCE

119 PROGRAM DESIGN AND DEVELOPMENT 3 UNITS

Prerequisite: None
Corequisite: CS 119L
Recommended Preparation: "C" grade or higher or "Pass" in CIS 110 or equivalent, intermediate algebra.

3 hours lecture
Introductory course in program design and development using Java or other object-oriented programming language to serve as a foundation for more advanced programming, computer science or networking courses. Emphasizes the development of problem-solving skills while introducing students to computer science through the use of a modern object-oriented programming language. Devotes attention to the development of effective software engineering practices emphasizing such principles as design decomposition, encapsulation, procedural abstraction, testing and software reuse. Students will learn and apply standard programming constructs, problem-solving strategies, the concept of an algorithm, fundamental data structures, the machine representation of data, introductory graphics and networking. *Requires concurrent enrollment in CS 119L.*

CSU, UC

119L PROGRAM DESIGN AND DEVELOPMENT LAB 1 UNIT

Prerequisite: None
Corequisite: CS 119
Recommended Preparation: "C" grade or higher or "Pass" in CIS 110 or equivalent, intermediate algebra.

3 hours laboratory
Laboratory tutorials, drills and programming problems designed to help students master the concepts and programming projects presented/assigned in CS 119. *Requires concurrent enrollment in CS 119. Pass/No Pass only.*

CSU, UC

180 INTRODUCTION TO VISUAL BASIC PROGRAMMING 4 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: "C" grade or higher or "Pass" in CS 119 and MATH 103 or 110 or equivalent

3 hours lecture, 3 hours laboratory
Introduction to computer programming using Visual Basic with an emphasis on practical applications of programming for today's technology. Students with no previous programming experience in Visual Basic will learn how to: plan and create well-structured programs; write programs using sequence, selection and repetition structures; and create and manipulate sequential access files, structs, classes, pointers and arrays. Laboratory instruction includes program development and execution.

CSU, UC

181 INTRODUCTION TO C++ PROGRAMMING 4 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: "C" grade or higher or "Pass" in CS 119 or equivalent, intermediate algebra.

3 hours lecture, 3 hours laboratory
Introduction to computer programming using C++. Students with no previous programming experience in C++ will learn how to plan and create well-structured programs, write programs using sequence, selection and repetition structures, and create and manipulate sequential access files, structs, classes, pointers and arrays.

CSU, UC

182 INTRODUCTION TO JAVA PROGRAMMING 4 UNITS

Prerequisite: "C" grade or higher or "Pass" in MATH 110 or equivalent.
Corequisite: None
Recommended Preparation: "C" grade or higher or "Pass" in CS 119 or equivalent or experience programming in C++ or Java.

3 hours lecture, 3 hours laboratory
Introductory course in the basics of the Java programming language focusing on object oriented methodology. Topics include classes, methods, parameters, arrays, modularity, abstraction, exception handling, and stream and file I/O. In addition to writing and using new classes, students will utilize the AWT and/or Swing libraries of classes. Basic inheritance and mobile application programming are introduced.

CSU, UC

199 SPECIAL STUDIES OR PROJECTS IN COMPUTER SCIENCE 1-3 UNITS

Prerequisite: Consent of instructor
3-9 hours
Individual study, research or projects under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. *May be taken for a maximum of 9 units.*

280 INTERMEDIATE VISUAL BASIC PROGRAMMING 4 UNITS

Prerequisite: "C" grade or higher or "Pass" in CS 180 or equivalent
Corequisite: None

Recommended Preparation: None
3 hours lecture, 3 hours laboratory
Continuation of CS 180. Provides the programmer with professional training with an emphasis on documentation, structured programming, and programming to professional standards using Visual Basic.

CSU, UC

281 INTERMEDIATE C++ PROGRAMMING AND FUNDAMENTAL DATA STRUCTURES 4 UNITS

Prerequisite: "C" grade or higher or "Pass" in CS 181 or equivalent.
Corequisite: None
Recommended Preparation: None

3 hours lecture, 3 hours laboratory
Continuation of CS 181. Provides the programmer with professional training in memory management, documentation, structured programming, and programming to professional standards using C++. Explores some of the more advanced concepts of preprocessing, low-level data objects, recursion, and dynamic data structures including linked lists, stacks, queues and trees. Laboratory instruction includes program development and execution.

CSU, UC

282 INTERMEDIATE JAVA PROGRAMMING AND FUNDAMENTAL DATA STRUCTURES 4 UNITS

Prerequisite: "C" grade or higher or "Pass" in CS 182, MATH 175 or equivalent.
Corequisite: None
Recommended Preparation: None

3 hours lecture, 3 hours laboratory
Continuation of CS 182. Implement and analyze a variety of data structures and the algorithms used with those data structures, and create abstract data types and learn how and when to utilize them. Fundamental data structures include multidimensional arrays, linked lists, stacks, queues, heaps, trees, and hash tables; learn when to use which of the available dynamic memory data structures. Tools for analyzing and predicting run time and memory usage are introduced, as is Big-O notation. A variety of sort algorithms are reviewed and analyzed for

best, worst, and average case performance, and are compared with tree traversal algorithms. Develop increased sophistication in object-oriented basics such as inheritance, encapsulation, design of abstract data types and polymorphism, and will gain experience by working on larger programs and managing large, multi-programmer projects. Laboratory instruction includes program development and execution. Mobile and database applications will be introduced.

CSU, UC

289 COMPUTER ORGANIZATION AND SYSTEMS PROGRAMMING 4 UNITS

Prerequisite: "C" grade or higher or "Pass" in CS 282 or equivalent.
Corequisite: None

Recommended Preparation: None
3 hours lecture, 3 hours laboratory
Introduction to the organization of modern digital computers, beginning with the standard von Neumann model and then moving forward to more recent architectural concepts. A specific architecture/machine will be utilized to study computer architecture at the assembly language and C interface level. Differences in the internal structure and organization of a computer lead to significant differences in performance and functionality; this course addresses some of the various options involved in designing a computer system, and the range of design considerations and trade-offs involved in the design process. Focuses on understanding the components of a computer and their inter-relationships. Programming assignments using C and assembly language will be used to reinforce these concepts including data representation, flow control, addressing techniques, subroutine linkage, macros, interrupts, and traps.

CSU, UC

298 SELECTED TOPICS IN COMPUTER SCIENCE 1-4 UNITS

Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-12 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format. **Pass/No Pass only. Non-degree applicable.**

299 SELECTED TOPICS IN COMPUTER SCIENCE 1-4 UNITS

Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-12 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format.

CSU

COUNSELING

Formerly Personal Development-Counseling

101 INTRODUCTION TO COLLEGE .5 UNIT (formerly PDC 101)

Prerequisite: None
Corequisite: None
Recommended Preparation: None
.5 hour lecture

An introductory course designed to assist students with a successful transition to college. An overview of student responsibilities, college expectations, and success strategies will be discussed. Students will learn about the college, its facilities, services, academic regulations,

and degree and transfer programs. Students will receive guidance in education planning. **Pass/No Pass only. Non-degree applicable.**

110 CAREER DECISION MAKING 1 UNIT
(formerly PDC 110)

Prerequisite: None
Corequisite: None
Recommended Preparation: None
1 hour lecture

Utilization of a group seminar structure to explore and research various career and major options. Lecture, group discussion, experiential activities, and vocational assessment tools will be utilized to assist students in identifying their individual interests, values, and personality styles. Students will conduct educational and career research to relate their vocational assessment results to setting academic and career goals, and will learn how to write a resume and prepare for a job interview. **Pass/No Pass only.**
CSU

120 COLLEGE AND CAREER SUCCESS 3 UNITS
(formerly PDC/COUN 124)

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture

This course teaches success strategies to enhance academic and lifelong learning. Explore personality, interests and values to increase self-understanding and select an appropriate major and career. Learn about careers of the future. Identify your learning style and apply psychological principles of learning and memory to academic study strategies. Apply life management techniques such as time and money management to accomplish personal goals. Examine adult stages of development and develop a plan for wellness and living a long and healthy life. Learn strategies for motivation and stress management. Practice creative and critical thinking techniques. *Not open to students with credit in COUN/PDC 124.*
CSU, CSU GE, UC

130 STUDY SKILLS AND TIME MANAGEMENT 1 UNIT
(formerly PDC 130)

Prerequisite: None
Corequisite: None
Recommended Preparation: None
1 hour lecture

Designed to prepare students to adjust to the academic community by learning to plan and study effectively within given time limitations. Strategies include: time management, goal setting, textbook mastery, library research skills, note-taking, exam preparation, stress reduction, and educational planning. **Pass/No Pass only.**
CSU

140 LIFE SKILLS AND PERSONAL ADJUSTMENT 3 UNITS
(formerly PDC 140)

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture

Study of the cognitive, behavioral, humanistic, and existential theories as they relate to the understanding of the self and the dynamics of healthy adjustment. Students will learn life skills that are conducive to achieving a satisfying and healthy relationship with oneself and others. Using many of the skills suggested by the above theories, students will learn and apply personal achievement techniques, basic principles of healthy functioning, and effective coping strategies that facilitate the

process of change and adaptation. Utilizing the major theories in the field of psychology and psychotherapy, the development of a healthy and strong identity and an empowered sense of self will be explored. The process of integrating thoughts and emotions into the development of identity will be emphasized.
CSU, CSU GE

199 SPECIAL STUDIES OR PROJECTS IN COUNSELING 1-3 UNITS

Prerequisite: Consent of instructor
3-9 hours
Individual study, research or projects under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. *May be taken for a maximum of 9 units.*

298 SELECTED TOPICS IN COUNSELING 1-3 UNITS

Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours
Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format. **Pass/No Pass only. Non-degree applicable.**

299 SELECTED TOPICS IN COUNSELING 1-3 UNITS

Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours
Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format.
CSU

ECONOMICS

110 ECONOMIC ISSUES AND POLICIES 3 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
A one-semester course that provides general elementary knowledge of basic economic concepts and serves as an introduction to more advanced economics courses. Surveys current economic subjects including consumer economics, inflation, recession, competition, monopoly, world trade and competing economic systems. *Not open to students with credit in ECON 120 or 121.*
AA/AS GE, CSU, CSU GE, IGETC, UC credit limit

120 PRINCIPLES OF MACROECONOMICS 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in MATH 103 or 110 or equivalent (MATH 110 is recommended for Business majors).
Corequisite: None
Recommended Preparation: None
3 hours lecture
Introductory course focusing on aggregate economic analysis. Topics include: market systems; economic cycles including recession, unemployment and inflation; national income accounts; macroeconomic equilibrium; money and financial institutions; monetary and fiscal policy; and international trade and finance. Includes some use of graphs and elementary algebra.
AA/AS GE, CSU, CSU GE, IGETC, UC

121 PRINCIPLES OF MICROECONOMICS 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in MATH 103 or 110 or equivalent (MATH 110 is recommended for Business majors).
Corequisite: None
Recommended Preparation: None
3 hours lecture
Principles of economic analysis and decision-making from the viewpoint of the individual consumer, worker, and firm. Focuses on the price system allocation of resources and income, supply and demand analysis, the structure of American industry, and applications to current economic policy and problems. Includes some use of graphs and elementary algebra.
AA/AS GE, CSU, CSU GE, IGETC, UC

124 PRINCIPLES OF ECONOMICS COMPUTER LAB .5 UNIT

Prerequisite: None
Corequisite: ECON 120 or 121
Recommended Preparation: None
1.5 hours laboratory
Complements ECON 120 and 121 by providing computer-based tutorials to introduce the principles of economic analysis, economic institutions, and issues of public policy. *May be taken for a maximum of 1 unit.* **Pass/No Pass only.**

199 SPECIAL STUDIES OR PROJECTS IN ECONOMICS 1-3 UNITS

Prerequisite: Consent of instructor
3-9 hours
Individual study, research or projects under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. *May be taken for a maximum of 9 units.*

298 SELECTED TOPICS IN ECONOMICS 1-3 UNITS

Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours
Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format. **Pass/No Pass only. Non-degree applicable.**

299 SELECTED TOPICS IN ECONOMICS 1-3 UNITS

Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours
Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format.
CSU

EDUCATION

199 SPECIAL STUDIES OR PROJECTS IN EDUCATION 1-3 UNITS

Prerequisite: Consent of instructor
3-9 hours
Individual study, research or projects under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. *May be taken for a maximum of 9 units.*

200 TEACHING AS A PROFESSION 3 UNITS

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 3 hours lecture
 Designed for students considering teaching as a profession and for classroom paraprofessionals working in the public school system. Career exploration, foundations of education, critical issues, and an introduction to literacy acquisition are addressed. Standards for the teaching profession and conditions for effective learning are discussed. Guided observation of public school classrooms in a variety of subject areas is required. *Limitation on enrollment: must meet health and safety requirements for public school field experience placement.*
 CSU, UC

214 DEVELOPING AN ONLINE COURSE 3 UNITS

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 3 hours lecture
 In this introduction to successful online course design and instruction, participants will experience components of an online course from both student and teacher perspectives. Participants will learn to use technologies to support online instruction and will develop sample content and online course components within course management systems such as Blackboard or WebCT. Appropriate pedagogy will be emphasized. *It is recommended that students have basic computer skills (word processing, PowerPoint, email, web browsing).*
 CSU

298 SELECTED TOPICS IN EDUCATION 1-3 UNITS

Prerequisite: Varies with topic
 Corequisite: Varies with topic
 Recommended Preparation: Varies with topic
 1-9 hours
 Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format. **Pass/No Pass only. Non-degree applicable.**

299 SELECTED TOPICS IN EDUCATION 1-3 UNITS

Prerequisite: Varies with topic
 Corequisite: Varies with topic
 Recommended Preparation: Varies with topic
 1-9 hours
 Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format.
 CSU

ELECTRONICS TECHNOLOGY

110 INTRODUCTION TO BASIC ELECTRONICS 4 UNITS

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 3 hours lecture, 3 hours laboratory
 Exploratory course of study in the laws of physics as they relate to electricity and electronics. Topics include: the history of electrical science, atomic structure, basic electrical laws, DC and AC circuits, semiconductors, integrated circuits, amplifiers, wave forms, electrical test equipment, circuit construction, and electrical safety. Background in basic algebra and use of scientific calculators is highly desirable.
 AA/AS GE, CSU, CSU GE

199 SPECIAL STUDIES OR PROJECTS IN ELECTRONICS TECHNOLOGY 1-3 UNITS

Prerequisite: Consent of instructor
 3-9 hours
 Individual study, research or projects under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. *May be taken for a maximum of 9 units.*

298 SELECTED TOPICS IN ELECTRONICS TECHNOLOGY 1-4 UNITS

Prerequisite: Varies with topic
 Corequisite: Varies with topic
 Recommended Preparation: Varies with topic
 1-12 hours
 Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format. **Pass/No Pass only. Non-degree applicable.**

299 SELECTED TOPICS IN ELECTRONICS TECHNOLOGY 1-4 UNITS

Prerequisite: Varies with topic
 Corequisite: Varies with topic
 Recommended Preparation: Varies with topic
 1-12 hours
 Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format.
 CSU

ENGINEERING

100 INTRODUCTION TO ENGINEERING AND DESIGN 3 UNITS

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 3 hours lecture
 Introduction to engineering as a way of perceiving the world. Overview of design and analytical techniques, problem solving and strategic thinking, disciplines, history, and ethics. Fundamentals of engineering graphics as a universal language and application to the visualization, representation, and documentation of designed artifacts. Focuses on the design process and on spatial reasoning and visualization.
 AA/AS GE, CSU, UC

119 BASIC ENGINEERING CAD 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in CADD 115 or ENGR 100 or equivalent.
 Corequisite: None
 Recommended Preparation: Working knowledge of basic computer operations and file administration.
 2 hours lecture, 4 hours laboratory
 CAD (Computer-Aided Drafting) fundamentals for engineers. Basic drawing techniques and commands in AutoCAD. Includes geometric construction, multiview and singleview projections, section views, dimensions, and text. *Not open to students with credit in CADD 120, 120ABCD.*
 CSU, UC, UC credit limit

120 ENGINEERING COMPUTER APPLICATIONS 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in MATH 180 or equivalent or concurrent enrollment.
 Corequisite: None
 Recommended Preparation: None
 2 hours lecture, 3 hours laboratory
 Use of computerized mathematical analysis, computer programming, and computer graphics as tools for solving engineering problems.
 CSU, UC

125 3D SOLID MODELING 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in CADD 115 or ENGR 100 or equivalent.
 Corequisite: None
 Recommended preparation: Working knowledge of basic computer operations and file administration.
 2 hours lecture, 4 hours laboratory
 Advanced graphic communication using solid modeling techniques and software (e.g., SolidWorks). Techniques include feature based part construction using extrudes, cuts and revolves; advanced surface shaping using lofts and sweeps; and assembly construction and constraining in an engineering design environment. Students will continue to develop 2D drafting skills including proper organization and layout of component drawing views, dimensioning and tolerancing, sectioning and detailing, detail descriptive geometry, and manufacturing processes. *Also listed as CADD 125. Not open to students with credit in CADD 125.*
 CSU, UC, UC credit limit

129 ENGINEERING SOLID MODELING 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in CADD 115 or ENGR 100 or equivalent
 Corequisite: None
 Recommended Preparation: None
 2 hours lecture, 4 hours laboratory
 Advanced 3D computer-aided mechanical design and drafting. This parametric modeling course provides skills and knowledge of appropriate software (Pro/Engineer) and feature based part construction using extrudes, cuts, revolves, lofts and sweeps. Students will enhance their skills in model assembly and assembly drawings including proper organization and layout of component drawing views, dimensioning and tolerancing, sectioning and detailing. *Also listed as CADD 129. Not open to students with credit in CADD 129.*
 CSU

170 MECHATRONICS: INTRODUCTION TO MICROCONTROLLERS 2 UNITS

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 1 hour lecture, 3 hours laboratory
 Mechatronics is the combination of mechanical, electronic and computer engineering to create automatic "intelligent" devices. Microcontrollers offer an easy and flexible way to do this. Introduces the use of microcontrollers to operate motors, lights and other electromechanical devices in response to input from mechanical, optical and electrical sensors. Students will learn about microcontrollers through a series of projects of increasing sophistication, culminating in a final project of their own design.
 CSU

171 MECHATRONICS: INTRODUCTION TO ROBOTICS 2 UNITS

Prerequisite: "C" grade or higher or "Pass" in ENGR 170 or equivalent.
 Corequisite: None
 Recommended Preparation: None
 1 hour lecture, 3 hours laboratory
 Introduces fundamental concepts in robotics in order to develop autonomous robots that interact with their surroundings. Students will build a basic robot, then use it as a test platform to experiment with these ideas. The objective is to develop robust behavior that achieves a desired goal while promoting robot survival in an uncertain environment.
 CSU

172 MECHATRONICS: INTERMEDIATE MICROCONTROLLERS 2 UNITS

Prerequisite: "C" grade or higher or "Pass" in ENGR 170 or equivalent.

Corequisite: None

Recommended Preparation: None

1 hour lecture, 3 hours laboratory

Development of custom microcontroller circuits including manufacture of printed circuits with a focus on minimizing cost. Detailed control of the microcontroller including memory-mapped I/O (Input/Output) direct access to registers, and fine control of timing. Control of 120 VAC circuits.
CSU

173 MECHATRONICS: INTERMEDIATE ROBOTICS 2 UNITS

Prerequisite: "C" grade or higher or "Pass" in ENGR 171 or equivalent.

Corequisite: None

Recommended Preparation: None

1 hour lecture, 3 hours laboratory

Examines various forms of robot locomotion (e.g., walking, DC motors, stepper motions), alternate sources of energy (e.g., solar cells), and alternate theories of robotics such as BEAM (Biology, Electronics, Aesthetics Mechanics) robotics and industrial robotics.
CSU

175 MECHATRONICS: INTRODUCTION TO MICROCONTROLLERS AND ROBOTICS 2 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

1 hour lecture, 3 hours laboratory

Mechatronics is the combination of mechanical, electronic, and computer engineering to create automatic "intelligent" devices. Microcontrollers offer an easy and flexible way to do this. Introduces the use of microcontrollers to operate motors, lights, and other electromechanical devices in response to sensors. Students will learn about microcontrollers through a series of projects of increasing sophistication. Covers fundamental concepts in robotics to let students develop autonomous robots that interact with their surroundings. Students will build a basic robot, then use it as a test platform to experiment with these ideas. *Not open to students with credit in ENGR 171.*
CSU

176 MECHATRONICS: INTERMEDIATE MICROCONTROLLERS AND ROBOTICS 2 UNITS

Prerequisite: "C" grade or higher or "Pass" in ENGR 175 or 170 and 171 or equivalent

Corequisite: None

Recommended Preparation: None

1 hour lecture, 3 hours laboratory

Continuation and extension of ENGR 175. Detailed control of microcontrollers including memory-mapped I/O (Input/Output), direct access to registers, and fine control of timing. Development of custom microcontroller circuits including manufacture of printed circuits with a focus on minimizing cost. Control of DC motors, stepper motors, and 120 VAC motors. Mechanics of walking, alternate sources of energy (e.g., solar and chemical cells) for robots, and alternate theories of robotics such as BEAM (Biology, Electronics, Aesthetics Mechanics) robotics and industrial robotics. *Not open to students with credit in ENGR 173.*
CSU

199 SPECIAL STUDIES OR PROJECTS IN ENGINEERING 1-3 UNITS

Prerequisite: Consent of instructor

3-9 hours

Individual study, research or projects under instructor guidance. Written reports and

periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. *May be taken for a maximum of 9 units.*

200 ENGINEERING MECHANICS—STATICS 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in PHYC 190 or equivalent.

Corequisite: MATH 280.

Recommended Preparation: None

3 hours lecture

Engineering applications of the principles of: static equilibrium of force systems acting on particles and rigid bodies; structural analysis of trusses, frames, and machines; forces in beams; dry friction; centroids and moments of inertia.
CSU, UC

210 ELECTRIC CIRCUITS 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in MATH 280, PHYC 200 or equivalent.

Corequisite: None

Recommended Preparation: None

3 hours lecture

Theory course dealing with the concepts of circuit analysis by reduction methods, source transformation, loop and nodal analysis, alternating current circuits, impedance, power and phasor diagrams.
CSU, UC

218 PLANE SURVEYING 4 UNITS

Prerequisite: "C" grade or higher or "Pass" in MATH 170 or equivalent or concurrent enrollment.

Corequisite: None

Recommended Preparation: None

2 hours lecture, 6 hours laboratory

Use, care and adjustment of surveying instruments. Fundamental surveying methods, traverse measurements, and area computations. Introduction to horizontal and vertical curves, stadia, and construction layout. Introduction to topographic mapping. Earth work computations. *Also listed as SURV 218.*
CSU, UC

220 ENGINEERING MECHANICS—DYNAMICS 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in ENGR 200 or equivalent.

Corequisite: None

Recommended Preparation: None

3 hours lecture

Motion of particles, particle systems and rigid bodies, and the effects thereon of applied forces and moments. Newtonian laws of motion, work and energy; linear and angular momentum. Application to engineering problems.
CSU, UC

260 ENGINEERING MATERIALS 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in PHYC 190 or equivalent

Corequisite: CHEM 141 or previous enrollment

Recommended Preparation: None

3 hours lecture

Atomic and molecular structure of materials used in engineering. Analysis of the relationships between structure of materials and their mechanical, thermal, electrical, corrosion and radiation properties, together with examples of specific application to engineering problems.
CSU, UC

270 DIGITAL DESIGN 4 UNITS

Prerequisite: "C" grade or higher or "Pass" in MATH 175 or 176 or equivalent

Corequisite: None

Recommended Preparation: None

3 hours lecture, 3 hours laboratory

Modeling, analysis, simulation, design and construction of combinational and sequential digital logic systems and networks.
CSU, UC

298 SELECTED TOPICS IN ENGINEERING 1-4 UNITS

Prerequisite: Varies with topic

Corequisite: Varies with topic

Recommended Preparation: Varies with topic

1-12 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format. **Pass/No Pass only. Non-degree applicable.**

299 SELECTED TOPICS IN ENGINEERING 1-4 UNITS

Prerequisite: Varies with topic

Corequisite: Varies with topic

Recommended Preparation: Varies with topic

1-12 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format.
CSU

ENGLISH**049A BASIC SPELLING AND PHONICS 1 UNIT**

Prerequisite: None

Corequisite: None

Recommended Preparation: None

1 hour lecture

Learn to hear and use the sounds of the English phonetic system to improve reading and spelling skills. Focuses on those parts of the English sound system that are consistent and regular. Learn common spelling rules. **Pass/No Pass only. Non-degree applicable.**

049B INTERMEDIATE SPELLING AND PHONICS 1 UNIT

Prerequisite: None

Corequisite: None

Recommended Preparation: None

1 hour lecture

This second spelling and phonics course continues the study of the English spelling system by focusing on the way words look. Learn common spelling rules as well as exceptions to the rules. Introduction to common spelling demons. Learn strategies for committing words to memory. **Pass/No Pass only. Non-degree applicable.**

090 BASIC ENGLISH SKILLS 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: Placement based on assessment.

3 hours lecture, 1 hour laboratory

Instruction in basic English skills through lecture, small group, and individualized instruction while promoting knowledge of spelling, vocabulary and grammar. Students will demonstrate their knowledge by writing sentences and short paragraphs. **Pass/No Pass only. Non-degree applicable.**

090R READING SKILLS DEVELOPMENT 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: Placement based on assessment; recommend concurrent enrollment in ENGL 090.

3 hours lecture, 1 hour laboratory

Developmental course for improving basic reading skills. Focuses on building vocabulary, improving comprehension of short reading selections, increasing reading speed, and basic study skills. **Pass/No Pass only. Non-degree applicable.**

098 ENGLISH FUNDAMENTALS 4 UNITS

Prerequisite: Grade of "Pass" in ENGL 090, 090R or equivalent or assessment.

Corequisite: None

Recommended Preparation: None

4 hours lecture

A course in basic English skills. Grammar, punctuation and standard written English usage will be studied. Introduction to the writing process; learn basic sentence patterns to compose paragraphs and one multi-paragraph essay. *It is recommended that students also enroll in ENGL 098R. Non-degree applicable.*

098R READING FUNDAMENTALS 3 UNITS

Prerequisite: Grade of "Pass" in ENGL 090, 090R or equivalent or assessment.

Corequisite: None

Recommended Preparation: Strongly recommend concurrent enrollment in ENGL 098.

3 hours lecture, 1 hour laboratory

Introduction to effective reading skills and strategies. Focuses on expanding vocabulary, improving reading comprehension, and increasing reading speed. Learn basic strategies for critical thinking. **Non-degree applicable.**

099 ACCELERATED PREPARATION FOR COLLEGE COMPOSITION AND READING**6 UNITS**

Prerequisite: Grade of "Pass" in ENGL 090, 090R or equivalent or assessment

Corequisite: None

Recommended Preparation: None

6 hours lecture

This course is designed to prepare students at an accelerated pace for college-level academic reading, writing and reasoning. Students will practice the writing process by composing sentences, paragraphs, and essays with an emphasis on effective expression of ideas. Readings will be studied for form and content in order to enhance critical thinking skills. By the end of the course, students will be able to engage in research and write an academic essay by using and acknowledging multiple sources. **Non-degree applicable.**

109 COMPOSITION FOR COLLEGE 4 UNITS

Prerequisite: "C" grade or higher or "Pass" in ENGL 098 or ESL 106 or equivalent or assessment

Corequisite: None

Recommended Preparation: None

4 hours lecture

Prepares students for entry into ENGL 120 (English 1A, traditional freshman composition for transfer). Students will practice the writing process by composing sentences, paragraphs and essays with an emphasis on correct and effective expression through the study of appropriate language; grammar, punctuation, and usage; and structural writing skills. Readings will be studied to stimulate clarity of thought and written expression. Students will practice the reading process by previewing, annotating, and analyzing readings and completing in-class writings based upon them. By the end of the course, students will be able to write a basic, largely error-free researched essay by using and acknowledging at least three sources. *Not open to students with credit in ENGL 110. Non-degree applicable.*

110 COLLEGE COMPOSITION 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in ENGL 098 or ESL 106 or equivalent or assessment.

Corequisite: None

Recommended Preparation: None

3 hours lecture, 1 hour laboratory

Prepares students for entry into ENGL 120 (English 1A, traditional freshman composition for transfer). Students will practice the writing process by composing sentences, paragraphs and essays with an emphasis on correct and

effective expression through the study of appropriate language skills. Readings will be studied to stimulate clarity of thought and written expression. By the end of the course, students will be able to write a basic position paper by using and acknowledging at least one source.

110R PRINCIPLES OF COLLEGE**READING****3 UNITS**

Prerequisite: "C" grade or higher or "Pass" in ENGL 098R or equivalent or assessment.

Corequisite: None

Recommended Preparation: Concurrent enrollment in ENGL 110.

3 hours lecture, 1 hour laboratory

Provides effective reading skills and strategies necessary for reading college level material. Focuses on developing vocabulary geared toward college textbooks and learning strategies for efficient reading comprehension and retention. Students will learn college level inferential and critical reading skills.

CSU

120 COLLEGE COMPOSITION AND READING**3 UNITS**

Prerequisite: "C" grade or higher or "Pass" in ENGL 099 or 109 or 110 or ESL 119 or equivalent or assessment.

Corequisite: None

Recommended Preparation: None

3 hours lecture, 1 hour laboratory

Traditional freshman composition course. Students will study the elements and principles of composition through the practice of writing narrative and expository essays and a research paper. Utilizing word processing in the computer lab, revision is stressed as a means of achieving effective skills in writing. Assigned readings stimulate critical thinking and effective writing. Emphasis is on using outside sources and documenting them according to MLA format.

AA/AS GE, CSU, CSU GE, IGETC, UC

122 INTRODUCTION TO LITERATURE**3 UNITS**

Prerequisite: "C" grade or higher or "Pass" in ENGL 120 or equivalent.

Corequisite: None

Recommended Preparation: None

3 hours lecture

Introduces literature through the reading, analysis and discussion of various genres such as myths, folktales, essays, short stories, poems, plays and novels. Literature encompasses different time periods and a variety of male and female authors from around the world. Students will use the literature to write critical and appreciative essays.

AA/AS GE, CSU, CSU GE, IGETC, UC

124 ADVANCED COMPOSITION: CRITICAL REASONING AND WRITING**3 UNITS**

Prerequisite: "C" grade or higher or "Pass" in ENGL 120 or equivalent.

Corequisite: None

Recommended Preparation: None

3 hours lecture, 1 hour laboratory

Develop critical thinking, reading and writing skills beyond the level achieved in ENGL 120. Focuses on the development of logical reasoning and analytical and argumentative writing skills.

CSU, CSU GE, IGETC, UC

126 CREATIVE WRITING**3 UNITS**

Prerequisite: "C" grade or higher or "Pass" in ENGL 109 or 110 or equivalent or assessment into ENGL 120.

Corequisite: None

Recommended Preparation: None

3 hours lecture

This course affords students the opportunity to write short prose, poetry, and drama in

a positive atmosphere. Explore, study and analyze techniques in the works of professional writers and in the works of students. Ample opportunity will be directed toward publication of students' work.

CSU, UC

135-138 NEWSPAPER PRODUCTION 4 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

3 hours lecture, 3 hours laboratory

Provides practice in producing tabloids and newsletters, particularly the campus newspaper. Instruction in the basic principles of journalism including how to gather, evaluate and write basic types of news stories and implement them in the campus newspaper. Additional hours per week outside of class are required.

CSU

151 PRINCIPLES OF ENGLISH TUTORING**1 UNIT**

Prerequisite: "C" grade or higher or "Pass" in ENGL 120 or equivalent

Corequisite: None

Recommended Preparation: None

1 hour lecture

Covers theory of learner-centered, process-oriented English tutoring in order to promote tutee self-responsibility; improve tutee retention; and emphasize reading, writing and learning processes during tutoring. Addresses the roles and goals of a tutor; the procedures for tutoring, such as the Tutoring Cycle; the tools of tutoring, such as Socratic questioning and "Tutor Talk"; and applicable principles of learning theory and brain-based learning. Addresses how to deal with issues that ultimately arise in the tutoring experience, bridging cultural gaps, managing group tutorials, and tutoring learning skills. Provides a basic knowledge of academic resources and facilities available. Covers the essentials of tutoring writing, grammar and punctuation skills for English. **Pass/No Pass only. Non-degree applicable.**

199 SPECIAL STUDIES OR PROJECTS IN ENGLISH**1-3 UNITS**

Prerequisite: Consent of instructor

3-9 hours

Individual study, research or projects under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. *May be taken for a maximum of 9 units.*

201 INTRODUCTION TO IMAGES OF WOMEN IN LITERATURE**3 UNITS**

Prerequisite: None

Corequisite: None

Recommended Preparation: "C" grade or higher or "Pass" in ENGL 120 or equivalent.

3 hours lecture

Examines women and their roles in society as portrayed in various forms of literature, past and present. Students may read poetry, short stories, novels, plays, and view films which will provide them with a broad base for understanding the changing role of women throughout history. Works by significant male and female authors will be used, reflecting a broad spectrum of political, cultural and historical views. Authors sampled may include Jane Austen, George Eliot, Virginia Woolf, William Shakespeare, Amy Tan, Alice Walker, Sandra Cisneros, Norman Mailer, Thomas Hardy, Ernest Hemingway, Sylvia Plath and others.

AA/AS GE, CSU, CSU GE, IGETC, UC

202 INTRODUCTION TO FILM**AS LITERATURE****3 UNITS**

Prerequisite: None

Corequisite: None

Recommended Preparation: "C" grade or higher or "Pass" in ENGL 120 or equivalent.

3 hours lecture

Survey course to study film as a 20th century/21st century form of literature. Students will view a variety of films spanning the 100 years of film history, from the silent era to the present, to develop an understanding of the different types of films, the film-making process, and the historical, political and sociological context of cinema. Key figures in film history such as Buster Keaton, John Ford, Orson Welles, Alfred Hitchcock, Spike Lee, Woody Allen, Akira Kurosawa and others will be studied.

*AA/AS GE, CSU, CSU GE, IGETC, UC***207 ROMANTIC FICTION****3 UNITS**

Prerequisite: None

Corequisite: None

Recommended Preparation: None

3 hours lecture

Literature survey course that focuses on the reading and analysis of romance novels. Beginning with the female gothic, the course covers the development of the popular romance novel. Includes the classic novels of Radcliffe, Burney, Bronte and Austen as well as more modern American and English romance novelists. Oral and written discussion of readings and their relevance to current trends will be emphasized. Analytical or original creative writings will be included.

*AA/AS GE, CSU, CSU GE, IGETC, UC***214 MASTERPIECES OF DRAMA****3 UNITS**

Prerequisite: None

Corequisite: None

Recommended Preparation: "C" grade or higher or "Pass" in ENGL 120 or equivalent.

3 hours lecture

Survey of masterpieces in drama beginning with works from ancient Greece and concluding with plays from the 20th century. Although other types of drama may be discussed, the primary texts will be comedies and tragedies. Representative playwrights include Sophocles, William Shakespeare, Moliere, Henrik Ibsen, Susan Glaspell, Eugene O'Neill, Arthur Miller, Samuel Beckett, Lorraine Hansberry, August Wilson and others. Texts will be read, analyzed, discussed, and written about in essay format.

*AA/AS GE, CSU, CSU GE, IGETC, UC***217 FANTASY AND SCIENCE FICTION****3 UNITS**

Prerequisite: None

Corequisite: None

Recommended Preparation: "C" grade or higher or "Pass" in ENGL 120 or equivalent.

3 hours lecture

Survey reading course of fantasy and science fiction, a unique literary genre with an unparalleled and still growing popularity. Reading selections cover a diverse spectrum of fantasy and science fiction. Oral and written discussion of such readings and their relevance to current trends will be emphasized. Analytical or original creative writings will be included.

*AA/AS GE, CSU, CSU GE, IGETC, UC***221 BRITISH LITERATURE I****3 UNITS**

Prerequisite: "C" grade or higher or "Pass" in ENGL 120 or equivalent.

Corequisite: None

Recommended Preparation: "C" grade or higher or "Pass" in ENGL 122 or equivalent.

3 hours lecture

Survey of British literature from the Old English Period to the Romantic Period. Students will read and interpret literature from historical, social and philosophical viewpoints. Authors

sampled may include Geoffrey Chaucer, William Langland, Edmund Spenser, William Shakespeare, Ben Jonson, John Milton, Lady Mary Wroth, Aphra Behn, and Jonathan Swift.

*AA/AS GE, CSU, CSU GE, IGETC, UC***222 BRITISH LITERATURE II****3 UNITS**

Prerequisite: "C" grade or higher or "Pass" in ENGL 120 or equivalent.

Corequisite: None

Recommended Preparation: "C" grade or higher or "Pass" in ENGL 122 or equivalent.

3 hours lecture

Survey of British literature from the Romantic Period to the present. Students will read and interpret literature against a background of the historical, social and philosophical developments of the time. Authors sampled may include William Blake, Mary Wollstonecraft, William Wordsworth, Samuel Coleridge, Lord Byron, Percy Shelley, John Keats, Elizabeth Browning, Lord Tennyson, Robert Browning, Emily Bronte, Matthew Arnold, Christina Rossetti, Oscar Wilde, Jane Austen, Thomas Hardy, William Yeats, Virginia Woolf, James Joyce, Doris Lessing and Derek Walcott.

*AA/AS GE, CSU, CSU GE, IGETC, UC***231 AMERICAN LITERATURE I****3 UNITS**

Prerequisite: "C" grade or higher or "Pass" in ENGL 120 or equivalent.

Corequisite: None

Recommended Preparation: "C" grade or higher or "Pass" in ENGL 122 or equivalent.

3 hours lecture

Study of American literature which explores literary works and their political, religious, economic and aesthetic context from pre-colonial America until 1860. Reading selections may consist of poetry, short stories, novels and nonfiction prose, including essays and autobiographies. Authors studied include various anonymous Native Americans, Pedro de Casteñeda, William Bradford, Anne Bradstreet, Benjamin Franklin, Thomas Jefferson, Judith Sargent Murray, Washington Irving, Catherine Sedgwick, James Fenimore Cooper, Henry David Thoreau, Walt Whitman and many others. Selections from the major writers will be read, analyzed, discussed and written about in essay format.

*AA/AS GE, CSU, CSU GE, IGETC, UC***232 AMERICAN LITERATURE II****3 UNITS**

Prerequisite: "C" grade or higher or "Pass" in ENGL 120 or equivalent.

Corequisite: None

Recommended Preparation: "C" grade or higher or "Pass" in ENGL 122 or equivalent.

3 hours lecture

Study of American literature which explores literary works and their political, religious, economic and aesthetic context from 1860 to the present. Reading selections may consist of poetry, short stories, novels, plays and nonfiction prose, including essays. Authors studied include Abraham Lincoln, Frederick Douglass, Mark Twain, Edgar Allan Poe, Walt Whitman, Emily Dickinson, Eugene O'Neill, Gertrude Stein, Langston Hughes, Ernest Hemingway, John Steinbeck, Toni Morrison and others. Selections from the major writers will be read, analyzed, discussed and written about in essay format.

*AA/AS GE, CSU, CSU GE, IGETC, UC***270 WORLD LITERATURE I****3 UNITS**

Prerequisite: None

Corequisite: None

Recommended Preparation: "C" grade or higher or "Pass" in ENGL 120 or equivalent.

3 hours lecture

Survey of major works from various continents and cultures prior to 1500 A.D. Focuses on the

historical, social, philosophical, and cultural aspects of literature and the roles of women and men. Minority perspectives will be included. Reading selections include works from the ancient Mediterranean world, South and East Asia, Europe, Middle East, Africa, and the early Americas.

*AA/AS GE, CSU, CSU GE, IGETC, UC***271 WORLD LITERATURE II****3 UNITS**

Prerequisite: None

Corequisite: None

Recommended Preparation: "C" grade or higher or "Pass" in ENGL 120 or equivalent.

3 hours lecture

Survey of major works from various continents and cultures from 1500 A.D. to the present. Focuses on the historical, social, philosophical, and cultural aspects of literature and the roles of women and men. Minority perspectives will be included. Reading selections include works from Asia, the Middle East, Africa, Europe, the Americas, Australia and New Zealand.

*AA/AS GE, CSU, CSU GE, IGETC, UC***275 LITERARY PERIOD****3 UNITS**

Prerequisite: None

Corequisite: None

Recommended Preparation: "C" grade or higher or "Pass" in ENGL 120 or equivalent.

3 hours lecture

In-depth study of a literary period. Reading selections cover a body of literature drawn from one literary period (e.g., The Beat Generation, Contemporary World Poetry, Naturalism, or Postmodern Fiction) and at least one secondary work focusing on the literature. Oral and written discussion of such readings and their relevance to the period will be emphasized. May be retaken as the subject matter changes as indicated in the subtitle (e.g., The Beat Generation, Contemporary World Poetry, Naturalism, or Postmodern Fiction).

*AA/AS GE, CSU***276 MAJOR AUTHOR****3 UNITS**

Prerequisite: None

Corequisite: None

Recommended Preparation: "C" grade or higher or "Pass" in ENGL 120 or equivalent.

3 hours lecture

In-depth study of a major author. Reading selections cover a breadth of literature drawn from one major author (e.g., Sylvia Plath, James Joyce, Tennessee Williams or Fyodor Dostoyevsky) and at least one secondary work focusing on the literature. Oral and written discussion of such readings and their relevance to the period will be emphasized. May be retaken as the subject matter changes as indicated in the subtitle (e.g., Short Stories of Flannery O'Connor or Poetry of Emily Dickinson).

*AA/AS GE, CSU***277 LITERARY THEME****3 UNITS**

Prerequisite: None

Corequisite: None

Recommended Preparation: "C" grade or higher or "Pass" in ENGL 120 or equivalent.

3 hours lecture

In-depth study of a theme in literature. Reading selections will cover a breadth of literature representative of a major theme (e.g., Images of War, Isolation/Exile, Coming of Age, or Diversity) and at least one secondary work focusing on the literature. Oral and written discussion of such readings and their relevance to the period will be emphasized. May be retaken as the subject matter changes as indicated in the subtitle (e.g., Images of War, Isolation/Exile, Coming of Age, or Diversity).

AA/AS GE, CSU

298 SELECTED TOPICS IN ENGLISH**1-4 UNITS**

Prerequisite: Varies with topic
 Corequisite: Varies with topic
 Recommended Preparation: Varies with topic
 1-12 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format. **Pass/No Pass only. Non-degree applicable.**

299 SELECTED TOPICS IN ENGLISH**1-4 UNITS**

Prerequisite: Varies with topic
 Corequisite: Varies with topic
 Recommended Preparation: Varies with topic
 1-12 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format.

CSU

ENGLISH AS A SECOND LANGUAGE

English as a Second Language classes are designed to improve English reading, writing, grammar, listening and speaking skills. Learning English will help students attain employment or pursue degree and certificate programs that use the English language for instruction. ESL 103 and 106 transfer as elective credit to CSU/UC. The ESL program of study is divided into four levels. Students should see a counselor to select additional courses in other areas for which their language skills will be acceptable.

Level I: Basic college ESL focuses on reading short passages, writing sentences, connecting them into basic paragraphs, and having discussions using the present, past and future verb tenses.

ESL 096	English as a Second Language I	5
ESL 097	Listening and Speaking I	3
ESL 098	ESL Reading and Vocabulary Development I	3
ESL 099A	ESL for the Workplace I	3

Level II: Low-intermediate college ESL focuses on reading short academic passages, writing complete paragraphs, discussing topics and giving short presentations using the simple, progressive, and present and past perfect verb tenses.

ESL099AorB	ESL for the Workplace I or II	3
ESL 100	English as a Second Language II	5
ESL 101	Listening and Speaking II	3
ESL 102	ESL Reading and Vocabulary Development II	3

Level III: High-intermediate college ESL focuses on reading more complex academic passages, connecting paragraphs into short essays, note-taking and study skills, and orally presenting academic work using all verb tenses.

ESL 099B	ESL for the Workplace II	3
ESL 103	English as a Second Language III	5
ESL 104	Listening and Speaking III	3
ESL 105	ESL Reading and Vocabulary Development III	3

Level IV: Advanced college ESL focuses on reading college level texts, writing more complex essays, increasing note-taking and study skills, and presenting oral reports using all verb tenses.

ESL 106* English as a Second Language IV 5

*Students will receive an ESL Certificate of Completion upon completion of ESL 106 with a "C" grade or higher or "Pass."

010 AMERICAN CULTURE I**3 UNITS**

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 3 hours lecture

First course in American culture for students to practice applied reading, writing, listening and speaking skills gained in the first two levels of the ESL program. Various aspects of American culture such as lifestyles, institutions, values and issues will be studied. **Pass/No Pass only. Non-degree applicable.**

020 AMERICAN CULTURE II**3 UNITS**

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 3 hours lecture

Second course in American culture for students to practice applied reading, writing, listening and speaking skills gained in the third and fourth levels of the ESL program. Various aspects of American culture such as lifestyles, attitudes, government, customs and traditions will be studied. **Pass/No Pass only. Non-degree applicable.**

025 ESL WORKPLACE SKILLS LAB**1 UNIT**

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 3 hours laboratory

ESL instruction in preparation for a vocational program. Students will work independently to complete computer modules in a vocational area in order to increase knowledge of vocabulary and subject matter. Provides complementary instruction in language and academic skills necessary to succeed in a vocational program. Vocational areas offered will be listed in the class schedule. **Pass/No Pass only. Non-degree applicable.**

080 INTRODUCTION TO ESL—LITERACY**6 UNITS**

Prerequisite: None
 Corequisite: None
 Recommended Preparation: Placement based on assessment.
 6 hours lecture

Bridging course for students who assess below the ESL I (096) level. Students will learn basic written English communication skills as well as problem-solving and intercultural skills necessary for success in the academic setting of the first level of ESL classes. **Pass/No Pass only. Non-degree applicable.**

081 INTRODUCTION TO ESL—COMMUNICATION SKILLS**6 UNITS**

Prerequisite: None
 Corequisite: None
 Recommended Preparation: Advisory placement in ESL 080 or equivalent based on assessment.
 6 hours lecture

Bridging course for students who assess below the ESL I (096) level. Students will learn basic listening and speaking skills appropriate in an academic setting. Concurrent enrollment in ESL 080 is strongly advised. **Pass/No Pass only. Non-degree applicable.**

090 AMERICAN ENGLISH PRONUNCIATION I**3 UNITS**

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 3 hours lecture

Beginning course to assist non-native American English learners develop oral and aural language skills through the improvement of understanding spoken English and articulation of the language. Lessons will facilitate non-native speakers' learning of English through beginning level repetition and oral discrimination exercises; stress, rhythm and intonation exercises; and other types of oral production activities including poster talks, situational role-plays, short planned or impromptu speeches, and informal debates. Beginning level listening tasks include aural discrimination exercises, evaluating short student speeches, dictations, note-taking, and comprehension tests. **Pass/No Pass only. Non-degree applicable.**

096 ENGLISH AS A SECOND LANGUAGE I**5 UNITS**

Prerequisite: Grade of "Pass" in ESL 080, 081 or equivalent or assessment.
 Corequisite: None
 Recommended Preparation: None
 5 hours lecture, 1 hour laboratory

First core course in the study of English reading, writing and grammar for students whose first language is other than English. Includes basic reading, paragraph organization and format, grammar, and sentence structure. Software is utilized to reinforce reading, writing and grammar skills introduced in class. **Pass/No Pass only. Non-degree applicable.**

097 LISTENING AND SPEAKING I**3 UNITS**

Prerequisite: Grade of "Pass" in ESL 080, 081 or equivalent or assessment into ESL 096.
 Corequisite: None
 Recommended Preparation: None
 3 hours lecture

First course in the study of English listening and speaking skills for students whose first language is other than English. Designed to improve listening comprehension and increase fluency and accuracy in spoken English. Students will practice basic vocabulary and grammar to include the past, present and future simple tense, and the present progressive in aural and oral activities. **Pass/No Pass only. Non-degree applicable.**

098 ESL READING AND VOCABULARY DEVELOPMENT I**3 UNITS**

Prerequisite: None
 Corequisite: None
 Recommended Preparation: Placement based on assessment.
 3 hours lecture

Beginning course designed to extend ESL students' vocabulary and reading ability. Emphasis is on improving reading skills and strategies as well as techniques and exercises for developing vocabulary. Concurrent enrollment in ESL 096 is recommended. **Pass/No Pass only. Non-degree applicable.**

099A ESL FOR THE WORKPLACE I**3 UNITS**

Prerequisite: Placement based on assessment.
 Corequisite: None
 Recommended Preparation: None
 3 hours lecture, 1 hour laboratory

First course in the study of English for the workplace for students whose first language is other than English. Supplements language skills taught in ESL 096 and focuses on using English in business situations. Learn simple business vocabulary, basic writing and oral communication skills, and word processing skills. **Pass/No Pass only. Non-degree applicable.**

099B ESL FOR THE WORKPLACE II 3 UNITS

Prerequisite: Grade of "Pass" in ESL 099A or equivalent or assessment.
 Corequisite: None
 Recommended Preparation: None
 3 hours lecture, 1 hour laboratory
 Second course in the study of English for the workplace for students whose first language is other than English. Supplements language skills taught in ESL 100 and develops and adds to business English skills taught in ESL 099A. Learn business vocabulary, intermediate writing and oral communication skills, and computer skills. **Pass/No Pass only. Non-degree applicable.**

100 ENGLISH AS A SECOND LANGUAGE II 5 UNITS

Prerequisite: Grade of "Pass" in ESL 096 or equivalent or assessment.
 Corequisite: None
 Recommended Preparation: None
 5 hours lecture, 1 hour laboratory
 Second core course in the study of English reading, writing and grammar for students whose first language is other than English. Further develops and adds to the basic skills taught in ESL 096. Includes intermediate reading, paragraph writing, grammar and sentence structure. Software is utilized to reinforce reading, writing and grammar skills introduced in class.

101 LISTENING AND SPEAKING II 3 UNITS

Prerequisite: None
 Corequisite: None
 Recommended Preparation: Grade of "Pass" in ESL 097 or equivalent or assessment.
 3 hours lecture
 Second course in the study of English listening and speaking skills for students whose first language is other than English. Further develops and adds to skills learned in ESL 097. Includes intermediate listening comprehension practice as well as discussion and presentation skills in spoken English. Students will practice skills learned in ESL 100 and will learn and effectively use and pronounce new vocabulary.

102 ESL READING AND VOCABULARY DEVELOPMENT II 3 UNITS

Prerequisite: None
 Corequisite: None
 Recommended Preparation: Grade of "Pass" in ESL 098 or equivalent or assessment.
 3 hours lecture
 Intermediate level course designed to extend the range of ESL students' vocabulary and reading ability. Focuses on improving reading skills and strategies as well as understanding, developing and use of academic vocabulary. Students will gain both a passive and active command of word form and word choice for the intermediate level, and learn a variety of words and how to use them. Concurrent enrollment in ESL 100 is recommended.

103 ENGLISH AS A SECOND LANGUAGE III 5 UNITS

Prerequisite: "C" grade or higher or "Pass" in ESL 100 or equivalent or assessment.
 Corequisite: None
 Recommended Preparation: None
 5 hours lecture, 1 hour laboratory
 Third core course in the study of English reading, writing and grammar for students whose first language is other than English. Further develops and adds to skills taught in ESL 100. Includes high-intermediate reading, paragraph and short essay writing, grammar and sentence structure. Software is utilized to reinforce reading, writing and grammar skills introduced in class.

CSU, UC credit limit

104 LISTENING AND SPEAKING III 3 UNITS

Prerequisite: None
 Corequisite: None
 Recommended Preparation: "C" grade or higher or "Pass" in ESL 101 or equivalent or assessment.
 3 hours lecture
 Third course in the study of English listening and speaking skills for students whose first language is other than English. Further develops and adds to skills learned in ESL 101. Includes high-intermediate listening comprehension practice as well as discussion and presentation skills in spoken English. Students will practice skills learned in ESL 103 and will learn and effectively use and pronounce new vocabulary.

105 ESL READING AND VOCABULARY DEVELOPMENT III 3 UNITS

Prerequisite: None
 Corequisite: None
 Recommended Preparation: "C" grade or higher or "Pass" in ESL 102 or equivalent or assessment.
 3 hours lecture
 Third course designed to extend ESL students' academic vocabulary and ability to read college-level texts at the advanced level. Focuses on improving reading skills and strategies as well as understanding and use of academic vocabulary. Students will learn a variety of words and how to use them. Concurrent enrollment in ESL 103 is recommended.

106 ENGLISH AS A SECOND LANGUAGE IV 5 UNITS

Prerequisite: "C" grade or higher or "Pass" in ESL 103 or equivalent or assessment.
 Corequisite: None
 Recommended Preparation: None
 5 hours lecture, 1 hour laboratory
 Fourth core course in the study of English reading, writing and grammar for students whose first language is other than English. Further develops and adds to skills taught in ESL 103. Includes advanced reading, paragraph and essay writing, grammar and sentence structure. Software is utilized to reinforce reading, writing and grammar skills introduced in class.

CSU, UC credit limit

106R ESL READING AND VOCABULARY DEVELOPMENT IV 3 UNITS

Prerequisite: None
 Corequisite: None
 Recommended Preparation: "C" grade or higher or "Pass" in ESL 105 or equivalent or placement in ESL 106 based on assessment.
 3 hours lecture
 Advanced course in reading and vocabulary development for ESL students enrolled in college courses who require intensive and extensive reading skills and critical thinking. Focuses on the development of a greater understanding and appreciation of written works, including a widened perspective of texts through the analysis of the techniques and purposes of specific writers and genres. Students will read authentic academic materials and other course-selected readings in order to practice and master various reading strategies and vocabulary skill building employed by independent college readers. In addition to developing reading comprehension and increasing academic vocabulary, students will improve their ability to communicate the information and concepts in course reading materials orally and in writing. Concurrent enrollment in ESL 106 is recommended. **Pass/No Pass only. Non-degree applicable.**

107 ORAL COMMUNICATION SKILLS 2 UNITS

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 2 hours lecture
 Intensive, short-term intermediate level course in the study of English. Focuses on developing accuracy and fluency in oral communication skills. Activities are designed to integrate listening, speaking, and pronunciation practice. Students will be required to complete a variety of listening and speaking tasks and exercises in small groups and independently. Content will focus on high-interest professional and academic themes as well as current events. **Pass/No Pass only. Non-degree applicable.**

109 AMERICAN ENGLISH PRONUNCIATION II 3 UNITS

Prerequisite: None
 Corequisite: None
 Recommended Preparation: Grade of "Pass" in ESL 090 or equivalent or assessment.
 3 hours lecture
 Intermediate level course to assist non-native American English learners develop oral and aural language skills through the improvement of understanding spoken English and articulation of the language. Intermediate level lessons include repetition and oral discrimination exercises; stress, rhythm and intonation exercises; and other types of oral production activities including poster talks, situational role-plays, short planned or impromptu speeches, and informal debates. Intermediate level listening tasks include aural discrimination exercises, evaluating short student speeches, dictations, note-taking, and comprehension tests. Students are expected to reduce their accent when speaking American English in addition to a number of problems with grammatical accuracy. Improvement scores are based on student and teacher analyses and assessments. **Pass/No Pass only. Non-degree applicable.**

119 ENGLISH AS A SECOND LANGUAGE V 5 UNITS

Prerequisite: "C" grade or higher or "Pass" in ESL 106 or equivalent or assessment.
 Corequisite: None
 Recommended Preparation: None
 5 hours lecture, 1 hour laboratory
 Fifth core course in the study of English reading, writing and grammar to prepare ESL students for entry into English 120. Students will practice the writing process by composing essays with effective and accurate expression and will develop academic literacy by employing advanced techniques of essay and research writing with an emphasis on critical thinking, argumentation or other rhetorical strategies, synthesis of research materials, and academic citation. Includes effective strategies for reducing errors in grammar, punctuation and usage, and developing self-editing skills. Software/Internet-based modules are designed to reinforce and develop the reading, writing, grammar and research skills introduced in class.

CSU, UC credit limit

199 SPECIAL STUDIES OR PROJECTS IN ENGLISH AS A SECOND LANGUAGE 1-3 UNITS

Prerequisite: Consent of instructor
 3-9 hours
 Individual study, research or projects under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. *May be taken for a maximum of 9 units.*

298 SELECTED TOPICS IN ENGLISH AS A SECOND LANGUAGE 1-6 UNITS

Prerequisite: Varies with topic
 Corequisite: Varies with topic
 Recommended Preparation: Varies with topic
 1-18 hours
 Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format. **Pass/No Pass only. Non-degree applicable.**

299 SELECTED TOPICS IN ENGLISH AS A SECOND LANGUAGE 1-6 UNITS

Prerequisite: Varies with topic
 Corequisite: Varies with topic
 Recommended Preparation: Varies with topic
 1-18 hours
 Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format.
 CSU

ENVIRONMENTAL HEALTH AND SAFETY MANAGEMENT

100 INTRODUCTION TO ENVIRONMENTAL AND OCCUPATIONAL SAFETY AND HEALTH (OSH) TECHNOLOGY 4 UNITS

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 4 hours lecture
 General overview of the Environmental Health and Safety Management (EHSM) field with an emphasis on hazardous materials, hazardous waste management, and their effect upon the environment and worker health and safety. Topics include the history of pollution and workplace hazards leading to current legislation, and current best practices of handling hazardous substances to minimize the harmful impact on society and the environment.
 CSU

110 POLLUTION PREVENTION 3 UNITS

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 3 hours lecture
 Study of various raw materials and chemicals used in industry and the changes that occur as they move through the industrial process. Topics include: applicable regulations; the material balance concept of inventory; the importance of waste minimization/pollution prevention; stormwater management; and residential waste generation, reduction and prevention. Students will develop a waste source reduction plan.
 CSU

130 ENVIRONMENTAL/OCCUPATIONAL HEALTH EFFECTS OF HAZARDOUS MATERIALS 3 UNITS

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 3 hours lecture
 Study of the acute and chronic health effects produced by exposure to chemical, physical and biological agents with an emphasis on hazardous materials commonly associated with industrial operations, waste disposal, and remediation sites. Topics include routes of entry, toxic effects, risk evaluation, permissible exposure limits, medical surveillance, control methods for reducing exposure, and using

Material Safety Data Sheets (MSDS) to develop strategies to reduce worker exposure.
 CSU

135 GENERAL INDUSTRY SAFETY STANDARDS 3 UNITS

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 3 hours lecture
 Overview of the elements which are incorporated in a comprehensive general industrial safety program (Cal/OSHA). Emphasizes methods used to reduce accidents/injuries through the application of workplace health protection and safety fundamentals. Topics include protocols, safety audits, data collection and analysis techniques, interpretation of safety data, safety inspections, development and implementation of safety programs, worker education, and essential Personal Protective Equipment (PPE).
 CSU

145 CONSTRUCTION SAFETY STANDARDS 3 UNITS

Prerequisite: None
 Corequisite: None
 Recommended Preparation: "C" grade or higher or "Pass" in EHSM 100 or equivalent.
 3 hours lecture
 Introduction to California and Federal (Cal/OSHA and Fed/OSHA) construction safety standards and regulations. Integrated study of hazard recognition and abatement principles related to the construction worksite. Topics include: compliance issues and challenges facing safety professionals including mishap and case study analysis; California and Federal construction safety standards; worksite inspection; interfacing with compliance officials; vertical and horizontal standards; and common construction industry compliance issues.
 CSU

150 HAZARDOUS WASTE MANAGEMENT APPLICATIONS 4 UNITS

Prerequisite: "C" grade or higher or "Pass" in EHSM 100 or equivalent or concurrent enrollment.
 Corequisite: None
 Recommended Preparation: None
 4 hours lecture
 Overview of hazardous waste regulations with an emphasis on generator compliance, site investigation, remediation, permitting, enforcement, and liability. Explains the hazardous waste regulatory framework and the types of environmental resources available; develops research skills in the hazardous waste area; and provides hands-on application of the regulations at the technician level. Topics include proper methods of preparing a hazardous waste manifest, labeling of storage containers, sampling and analysis, preparing a Phase I Environmental Audit, and selecting environmental consultants.
 CSU

199 SPECIAL STUDIES OR PROJECTS IN ENVIRONMENTAL HEALTH AND SAFETY MANAGEMENT 1-3 UNITS

Prerequisite: Consent of instructor
 3-9 hours
 Individual study, research or projects under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. *May be taken for a maximum of 9 units.*

200 HAZARDOUS MATERIALS MANAGEMENT (HMM) APPLICATIONS 4 UNITS

Prerequisite: "C" grade or higher or "Pass" in EHSM 100 or equivalent or concurrent enrollment.
 Corequisite: None
 Recommended Preparation: None
 4 hours lecture
 Requirements and applications of federal, state and local hazardous materials laws and regulations. Emphasizes program compliance with OSHA (Occupational Health and Safety Administration) Hazard Communication Plan, EPA (Environmental Protection Agency) Community Right-To-Know, Department of Transportation, Proposition 65, and Emergency Response Plan. Includes the legal framework of hazardous materials laws and requirements and step-by-step program development: written plan, obtaining/interpreting MSDS (Material Safety Data Sheets), labeling, emergency responders site map, shipping, handling, and training. Students will develop plans related to hazardous materials management through hands-on program development: DEH/HMD (Department of Environmental Health/Hazardous Materials Division) Hazardous Material Business Plan, OSHA Hazardous Communication Plan, components of CalARP (California Accidental Release Prevention) and RMP (Risk Management Plan), and planning and reporting functions.
 CSU

201 INTRODUCTION TO INDUSTRIAL HYGIENE AND OCCUPATIONAL HEALTH 4 UNITS

Prerequisite: None
 Corequisite: None
 Recommended Preparation: "C" grade or higher or "Pass" in EHSM 100 or equivalent or concurrent enrollment.
 3 hours lecture, 3 hours laboratory
 Anticipation, recognition, reevaluation and control of biological, chemical and physical hazards in the workplace. Introduction to the development of industrial hygiene and occupational health and safety as a professional discipline. Provides an understanding of basic physiological processes and the effects caused by occupational exposure to hazards. Survey of various occupational health and safety programs and government regulations. Industrial hygiene monitoring and sampling techniques for airborne contaminants, noise, heat, radiation and illumination.
 CSU

205 SAFETY AND RISK MANAGEMENT ADMINISTRATION 4 UNITS

Prerequisite: "C" grade or higher or "Pass" in EHSM 100 or equivalent or concurrent enrollment.
 Corequisite: None
 Recommended Preparation: None
 4 hours lecture
 Study of how accidents and incidents occur in the occupational health and safety environment. Instruction in the establishment and maintenance of safety programs and comprehensive analysis of occupational health programs with an emphasis on safety program management. Topics include: planning approaches to safety and health management used by international, national and local regulatory agencies, insurance companies, and professional societies; risk management; worker compensation; and employee accommodations in the workplace. Students will develop plans related to safety and risk management.
 CSU

210 INDUSTRIAL WASTEWATER AND STORMWATER MANAGEMENT 4 UNITS

Prerequisite: "C" grade or higher or "Pass" in EHSM 100 or equivalent or concurrent enrollment.
Corequisite: None
Recommended Preparation: None
4 hours lecture

Overview of water/wastewater regulations with an emphasis on federal, state and local regulatory standards. Integrated study of the principles of wastewater and stormwater management including hydrology, water distribution, wastewater collection, stormwater management and overall safe drinking water issues.

CSU

215 AIR QUALITY MANAGEMENT 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in EHSM 100 or equivalent or concurrent enrollment.
Corequisite: None
Recommended Preparation: None
3 hours lecture

Overview of air quality regulations with an emphasis on federal, state and local requirements. Integrated study of the principles of air permits and permit compliance including source testing, emission reduction, inspections, monitoring, stationary and mobile sources, air toxics, new equipment shakedown, and overall global air quality issues.

CSU

230 SAFETY AND EMERGENCY RESPONSE 4 UNITS

Prerequisite: "C" grade or higher or "Pass" in EHSM 100 or equivalent or concurrent enrollment.
Corequisite: None
Recommended Preparation: "C" grade or higher or "Pass" in EHSM 130 or equivalent.
3 hours lecture, 3 hours laboratory

Instruction in safety and emergency response to chemical and physical exposures in industrial and field settings. Topics include: hazard analysis; contingency planning; housekeeping and safety practices including proper use and selection of PPE (Personal Protective Equipment); site control and evaluation; handling drums and containers; field sampling and monitoring; proper use of instruments; incident response planning; emergency response including field exercises in the use of PAPR (Powered Air Purifying Respirator) and SCBA (Self Contained Breathing Apparatus); and an overview of the ICS (Incident Command System). Satisfies requirements for generalized employee training under OSHA (Occupational Health and Safety Administration) [29 CFR 1910.120] and Title 8, California Code of Regulations [5192 (e) (3) (A)].

CSU

240 COOPERATIVE WORK EXPERIENCE 1-4 UNITS

Prerequisite: "C" grade or higher or "Pass" in EHSM 100 or equivalent.
Corequisite: None
Recommended Preparation: None
75 hours paid or 60 hours unpaid work experience per unit

Practical application of principles and procedures learned in the classroom to various phases of Environmental Health and Safety Management (EHSM). Work experience will be paid or volunteer positions at local industries or governmental agencies that regulate environmental industries. Placement assistance will be provided, but students are required to select and secure a placement site. Minimum of one unit of work experience is required to complete the EHSM certificate/degree. *May be taken for a maximum of 8 units.*

CSU

298 SELECTED TOPICS IN ENVIRONMENTAL HEALTH AND SAFETY MANAGEMENT 1-4 UNITS

Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-12 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format. **Pass/No Pass only. Non-degree applicable.**

299 SELECTED TOPICS IN ENVIRONMENTAL HEALTH AND SAFETY MANAGEMENT 1-4 UNITS

Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-12 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format.

CSU

EXERCISE SCIENCE

Courses which meet the activity requirement for graduation have an asterisk (*). Intercollegiate sports do not meet the activity requirement. Exercise Science **activity** and **intercollegiate sports** classes which are indicated by a number **ONLY** (ES 001) may be taken **FOUR** times. With the exception of dance courses, an activity class indicated by a number **AND** a letter (ES 014A) may be repeated **ONCE**, provided that the **TOTAL** enrollment in that type of activity (e.g., body building) not exceed **FOUR**. Students must progress from beginning through intermediate and advanced levels. A physical examination is recommended for all classes if the student has medical problems or is over the age of 30.

001* ADAPTED PHYSICAL EXERCISE 1 UNIT

Prerequisite: None
Corequisite: None
Recommended Preparation: None
1 hour lecture, 1 hour laboratory
Assessment of physical performance status and postural evaluation. Individually prescribed exercise programs for the physically handicapped. Recreational games and individual sports adapted to students' capabilities.

CSU, UC credit limit

009* AEROBIC DANCE EXERCISE 1 UNIT

Prerequisite: None
Corequisite: None
Recommended Preparation: None
1 hour lecture, 1 hour laboratory
Aerobic dance exercise with an emphasis on conditioning the musculoskeletal system, improving the cardiovascular system, increasing the efficiency of the respiratory system, and increasing flexibility. Principles of physical fitness, conditioning and other relevant health-related topics will be covered.

CSU, UC credit limit

010* CARDIOVASCULAR FITNESS AND NUTRITION .5-1 UNIT

Prerequisite: None
Corequisite: None
Recommended Preparation: None
1.5 - 3 hours laboratory
Fitness Center course designed to teach the benefits of cardiovascular exercise, heart-healthy nutrition guidelines, and provide opportunities for students to analyze their eating habits. Format is open entry/exit, computer log-in. Attendance requirements are 24 hours for .5

unit or 48 hours for 1.0 unit. Includes workouts and consultation with an instructor, as well as written and computer assignments. Students will be assessed in the areas of fitness and diet. *Due to health and safety considerations, only one fitness center class (ES 010, 011, 012) may be taken per semester. Pass/No Pass only.*
CSU, UC credit limit

011* CIRCUIT TRAINING .5-1 UNIT

Prerequisite: None
Corequisite: None
Recommended Preparation: None
1.5 - 3 hours laboratory
Fitness Center course designed to develop and encourage positive attitudes and habits with regard to exercise. Format is open entry/exit, computer log-in. Attendance requirements are 24 hours for .5 unit or 48 hours for 1.0 unit. Each student will be assessed in the areas of body composition, cardiovascular efficiency, muscular strength and endurance, and flexibility. An individual fitness profile will then be established. From this profile, an individual fitness prescription will be developed. Fitness activity will primarily utilize exercise equipment organized into a super circuit. *Due to health and safety considerations, only one fitness center class (ES 010, 011, 012) may be taken per semester. Pass/No Pass only.*

CSU, UC credit limit

012* INDIVIDUALIZED SPORTS CONDITIONING .5-1 UNIT

Prerequisite: None
Corequisite: None
Recommended Preparation: None
1.5 - 3 hours laboratory
Fitness Center course providing advanced exercisers the opportunity to increase their fitness levels with an emphasis on strength training and muscle flexibility. Format is open entry/exit, computer log-in. Attendance requirements are 24 hours for .5 unit or 48 hours for 1.0 unit. Each student will set desired fitness outcomes in consultation with an instructor. An individualized fitness program will then be prescribed utilizing the student's personal fitness goals. *Due to health and safety considerations, only one fitness center class (ES 010, 011, 012) may be taken per semester. Pass/No Pass only.*

CSU, UC credit limit

013* FLEXIBILITY FITNESS 1.5 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
1 hour lecture, 2 hours laboratory
Flexibility program which provides students with knowledge of their optimal range of motion. Emphasizes participation that suits the needs of all age and ability levels including dancers, athletes, seniors and fitness enthusiasts.

CSU, UC credit limit

014* BEGINNING BODY BUILDING 1.5 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
1 hour lecture, 2 hours laboratory
Instruction and practice in conditioning, running and resistance exercises with an emphasis on total fitness of the individual.

CSU, UC credit limit

<p>014B* INTERMEDIATE BODY BUILDING 1.5 UNITS</p> <p>Prerequisite: None Corequisite: None Recommended Preparation: "C" grade or higher or "Pass" in ES 014A or equivalent. 1 hour lecture, 2 hours laboratory Instruction and practice in weight lifting and weight training with an emphasis on techniques of lifting. Individual program adaptation is stressed. <i>CSU, UC credit limit</i></p>	<p>019C* ADVANCED PHYSICAL FITNESS 1.5 UNITS</p> <p>Prerequisite: None Corequisite: None Recommended Preparation: "C" grade or higher or "Pass" in ES 019B or equivalent. 1 hour lecture, 2 hours laboratory Advanced skills and techniques of physical fitness with an emphasis on new concepts and techniques. <i>CSU, CSU GE, UC credit limit</i></p>	<p>076B* INTERMEDIATE TENNIS 1 UNIT</p> <p>Prerequisite: None Corequisite: None Recommended Preparation: "C" grade or higher or "Pass" in ES 076A or equivalent. 1 hour lecture, 1 hour laboratory Continuation of ES 076A with an emphasis on individual stroke analysis, playing strategy and match play, singles and doubles. <i>CSU, UC credit limit</i></p>
<p>014C* ADVANCED BODY BUILDING 1.5 UNITS</p> <p>Prerequisite: None Corequisite: None Recommended Preparation: "C" grade or higher or "Pass" in ES 014B or equivalent. 1 hour lecture, 2 hours laboratory Advanced skills and techniques of body building. <i>CSU, UC credit limit</i></p>	<p>020* ADAPTED WEIGHT TRAINING 1-1.5 UNITS</p> <p>Prerequisite: None Corequisite: None Recommended Preparation: None 1 hour lecture, 1 hour laboratory, 1 unit 1 hour lecture, 2 hours laboratory, 1.5 units Weight training class for students who are either temporarily or permanently physically unable to participate in the regular physical education program. Emphasis is on an individual program based on each student's limitations and needs. Exercises for general strengthening, body maintenance, relaxation, joint mobility, cardiovascular training, coordination, balance, and personal health care planning may be included. Pass/No Pass only. <i>CSU, UC credit limit</i></p>	<p>076C* ADVANCED TENNIS 1 UNIT</p> <p>Prerequisite: None Corequisite: None Recommended Preparation: "C" grade or higher or "Pass" in ES 076B or equivalent. 1 hour lecture, 1 hour laboratory Continuation of ES 076B with an emphasis on advanced techniques, strategy and match play for singles, doubles and mixed doubles. <i>CSU, UC credit limit</i></p>
<p>015* STRENGTH AND STRETCH 1.5 UNITS</p> <p>Prerequisite: None Corequisite: None Recommended Preparation: None 1 hour lecture, 2 hours laboratory Exercise class providing a progression toward increased flexibility while adding the element of weight training. Includes injury rehabilitation with a guest trainer. Addresses strengthening specific problem areas of muscle weakness. Students will tone areas not strengthened with dancing or other exercise activities and will focus on each specific area of the body to increase their knowledge of injury prevention. The fundamental principles of physical fitness and its impact on lifelong health and wellness will be studied. Emphasizes participation that suits the needs of all age and ability levels including dancers, athletes, seniors and fitness enthusiasts. <i>CSU, UC credit limit</i></p>	<p>035* ADAPTED SWIMMING FOR THE PHYSICALLY LIMITED 1 UNIT</p> <p>Prerequisite: None Corequisite: None Recommended Preparation: None 1 hour lecture, 1 hour laboratory Instruction and practice in basic swimming skills structured to fit each student's individual needs. <i>May be taken for a maximum of 3 units.</i> Pass/No Pass only. <i>CSU, UC credit limit</i></p>	<p>080A* MODERN DANCE I 1.5 UNITS</p> <p>Prerequisite: None Corequisite: None Recommended Preparation: None 1 hour lecture, 2 hours laboratory Dance as an artistic expression. Covers beginning modern dance technique using an eclectic approach; movement fundamentals including torso, legs and other parts of the body; floor exercises, fall and recovery sequences, locomotion progressing from basic to variations; and short dance sequences using pure movement. Includes the history of modern dance and its place in the world of dance as well as beginning vocabulary of modern dance. <i>CSU, UC</i></p>
<p>018* CARDIO STRETCH 1.5 UNITS</p> <p>Prerequisite: None Corequisite: None Recommended Preparation: None 1 hour lecture, 2 hours laboratory Exercise class including injury rehabilitation with a guest trainer. Students will tone areas not strengthened with dancing or other exercise activities and will focus on each specific area of the body to increase their knowledge of total fitness. The fundamental principles of physical fitness and its impact on lifelong health and wellness will be studied. Emphasizes participation that suits the needs of all age and ability levels including dancers, athletes, seniors and fitness enthusiasts. <i>CSU, UC credit limit</i></p>	<p>060A* BEGINNING BADMINTON 1 UNIT</p> <p>Prerequisite: None Corequisite: None Recommended Preparation: None 1 hour lecture, 1 hour laboratory Presentation of the official singles and doubles games including the six basic strokes, footwork, strategy and etiquette. <i>CSU, UC credit limit</i></p>	<p>080B* MODERN DANCE II 1.5 UNITS</p> <p>Prerequisite: None Corequisite: None Recommended Preparation: "C" grade or higher or "Pass" in ES 080A or equivalent. 1 hour lecture, 2 hours laboratory Continuation of ES 080A. Covers modern dance technique using an eclectic approach; center exercises of the torso using various movement qualities such as stretches, contractions and releases; movements of the feet, legs and combinations; floor exercises; fall and recoveries; locomotor movement patterns; and dances using various themes. Reviews the history of modern dance and the leading exponents of modern dance in the United States. <i>CSU, UC</i></p>
<p>019A* BEGINNING PHYSICAL FITNESS 1.5 UNITS</p> <p>Prerequisite: None Corequisite: None Recommended Preparation: None 1 hour lecture, 2 hours laboratory Instruction in physical conditioning, nutrition and weight control. <i>CSU, CSU GE, UC credit limit</i></p>	<p>060B* INTERMEDIATE BADMINTON 1 UNIT</p> <p>Prerequisite: None Corequisite: None Recommended Preparation: "C" grade or higher or "Pass" in ES 060A or equivalent. 1 hour lecture, 1 hour laboratory Continuation of ES 060A with an emphasis on playing strategy and match play in singles and doubles. <i>CSU, UC credit limit</i></p>	<p>080C* MODERN DANCE III 1.5 UNITS</p> <p>Prerequisite: None Corequisite: None Recommended Preparation: "C" grade or higher or "Pass" in ES 080B or equivalent. 1 hour lecture, 2 hours laboratory Dance as an art form. Covers more advanced dance skills using the torso in combination with stretches, swings, contractions and releases; longer combinations at center involving the feet and legs; floor and recovery sequences combined with floor work and balances; movement patterns based on spatial design and rhythms; and dances based on different ideas and set to music. Includes the work of leading modern dance companies, choreographers and dancers, locally and nationally. <i>CSU, UC</i></p>
<p>019B* INTERMEDIATE PHYSICAL FITNESS 1.5 UNITS</p> <p>Prerequisite: None Corequisite: None Recommended Preparation: "C" grade or higher or "Pass" in ES 019A or equivalent. 1 hour lecture, 2 hours laboratory Further emphasis on individual physical conditioning, nutrition and weight control. <i>CSU, CSU GE, UC credit limit</i></p>	<p>060C* ADVANCED BADMINTON 1 UNIT</p> <p>Prerequisite: None Corequisite: None Recommended Preparation: "C" grade or higher or "Pass" in ES 060B or equivalent. 1 hour lecture, 1 hour laboratory Advanced playing techniques, strategy, knowledge and attitudes for students who wish to excel in badminton and increase aerobic capacity. <i>CSU, UC credit limit</i></p>	<p>080D* MODERN DANCE IV 1.5 UNITS</p> <p>Prerequisite: None Corequisite: None Recommended Preparation: "C" grade or higher or "Pass" in ES 080C or equivalent. 1 hour lecture, 2 hours laboratory Dance as an art form. Covers advanced dance skills using the theories of Doris Humphrey, Jose</p>
<p>076A* BEGINNING TENNIS 1 UNIT</p> <p>Prerequisite: None Corequisite: None Recommended Preparation: None 1 hour lecture, 1 hour laboratory Presentation of the official singles and doubles games including basic strokes, rules, strategy and etiquette. <i>CSU, UC credit limit</i></p>		

Limon, Martha Graham and others well-known in the modern dance field. Dance technique uses an eclectic approach and choreographed dances are based on set themes using different forms of accompaniment. Includes the work of leading modern dance companies and their choreographers.
CSU, UC

084A* JAZZ DANCE I 1.5 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
1 hour lecture, 2 hours laboratory
Introduces and develops movement principles and skills necessary to prepare the body as an instrument of expression in the jazz dance style with both historical and current dance trends. Emphasizes enjoyment of dance as a form of exercise. Instruction is at the beginning level.
CSU, UC

084B* JAZZ DANCE II 1.5 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: "C" grade or higher or "Pass" in ES 084A or equivalent.
1 hour lecture, 2 hours laboratory
Introduces and develops movement principles and skills necessary to prepare the body as an instrument of expression in the jazz dance style with both historical and current dance trends. Emphasizes enjoyment of dance as a form of exercise. Instruction is at the intermediate level.
CSU, UC

084C* JAZZ DANCE III 1.5 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: "C" grade or higher or "Pass" in ES 084B or equivalent.
1 hour lecture, 2 hours laboratory
Introduces and develops movement principles and skills necessary to prepare the body as an instrument of expression in the jazz dance style with both historical and current dance trends. Emphasizes enjoyment of dance as a form of exercise. Instruction is at the intermediate/advanced level.
CSU, UC

084D* JAZZ DANCE IV 1.5 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: "C" grade or higher or "Pass" in ES 084C or equivalent.
1 hour lecture, 2 hours laboratory
Introduces and develops movement principles and skills necessary to prepare the body as an instrument of expression in the jazz dance style with both historical and current dance trends. Emphasizes enjoyment of dance as a form of exercise. Instruction is at the advanced level.
CSU, UC

088A* BALLET I 1.5 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
1 hour lecture, 2 hours laboratory
Introduces and develops movement principles and skills necessary for the study of classical ballet. Includes ballet terminology, use of "turnout" position of feet and legs, alignment of spine, and placement of weight at the barre, in center floor and traveling patterns. Emphasizes enjoyment of dance as a form of exercise. Instruction is at the beginning level.
CSU, UC

088B* BALLET II 1.5 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: "C" grade or higher or "Pass" in ES 088A or equivalent.
1 hour lecture, 2 hours laboratory
Introduces and develops movement principles and skills necessary for the study of classical ballet. Includes ballet terminology, use of "turnout" position of feet and legs, alignment of spine, and placement of weight at the barre, in center floor and traveling patterns. Emphasizes enjoyment of dance as a form of exercise. Instruction is at the intermediate level.
CSU, UC

088C* BALLET III 1.5 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: "C" grade or higher or "Pass" in ES 088B or equivalent.
1 hour lecture, 2 hours laboratory
Introduces and develops movement principles and skills necessary for the study of classical ballet. Includes ballet terminology, use of "turnout" position of feet and legs, alignment of spine, and placement of weight at the barre, in center floor and traveling patterns. Emphasizes enjoyment of dance as a form of exercise. Instruction is at the intermediate/advanced level.
CSU, UC

088D* BALLET IV 1.5 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: "C" grade or higher or "Pass" in ES 088C or equivalent.
1 hour lecture, 2 hours laboratory
Introduces and develops movement principles and skills necessary for the study of classical ballet. Includes ballet terminology, use of "turnout" position of feet and legs, alignment of spine, and placement of weight at the barre, in center floor and traveling patterns. Emphasizes enjoyment of dance as a form of exercise. Instruction is at the advanced level.
CSU, UC

125A* BEGINNING GOLF 1 UNIT

Prerequisite: None
Corequisite: None
Recommended Preparation: None
1 hour lecture, 1 hour laboratory
Instruction and practice in basic golf skills to include course conduct, rules and self-evaluation of skills. Practice is limited to development of swing, stance and grip.
CSU, UC credit limit

125B* INTERMEDIATE GOLF 1 UNIT

Prerequisite: None
Corequisite: None
Recommended Preparation: "C" grade or higher or "Pass" in ES 125A or equivalent.
1 hour lecture, 1 hour laboratory
Instruction and practice in golf including skills required to play a small executive course. Students must furnish their own equipment.
CSU, UC credit limit

125C* ADVANCED GOLF 1 UNIT

Prerequisite: None
Corequisite: None
Recommended Preparation: "C" grade or higher or "Pass" in ES 125B or equivalent.
1 hour lecture, 1 hour laboratory
Continuation of ES 125B with an emphasis on advanced techniques, strategies and tournament play. Students must furnish their own equipment.
CSU, UC credit limit

150* ADAPTED SPORTS EDUCATION 1 UNIT

Prerequisite: None
Corequisite: None
Recommended Preparation: None
1 hour lecture, 1 hour laboratory
This course is for physically challenged individuals in various sports and physical activities including track and field, basketball, football, weight training and golf. Includes the fundamental principles of physical fitness and its impact on lifelong health and wellness.
CSU, UC credit limit

155A* BEGINNING BASKETBALL 1 UNIT

Prerequisite: None
Corequisite: None
Recommended Preparation: None
1 hour lecture, 1 hour laboratory
Instruction and practice in the basic skills of basketball with an emphasis on individual skill development and team play. Includes the fundamental principles of physical fitness and its impact on lifelong health and wellness.
CSU, UC credit limit

155B* INTERMEDIATE BASKETBALL 1 UNIT

Prerequisite: None
Corequisite: None
Recommended Preparation: "C" grade or higher or "Pass" in ES 155A or equivalent.
1 hour lecture, 1 hour laboratory
Continuation of ES 155A with an emphasis on intermediate level individual skill development, team play, defensive/offensive tactics and team strategies. Includes the fundamental principles of physical fitness and its impact on lifelong health and wellness.
CSU, UC credit limit

155C* ADVANCED BASKETBALL 1 UNIT

Prerequisite: None
Corequisite: None
Recommended Preparation: "C" grade or higher or "Pass" in ES 155B or equivalent.
1 hour lecture, 1 hour laboratory
Continuation of ES 155B with an emphasis on advanced level individual skill development, team play, defensive/offensive tactics and team strategies. Includes the fundamental principles of physical fitness and its impact on lifelong health and wellness.
CSU, UC credit limit

170A* BEGINNING SOCCER 1 UNIT

Prerequisite: None
Corequisite: None
Recommended Preparation: None
1 hour lecture, 1 hour laboratory
Basic skills and strategy of soccer with an emphasis on team play and individual skills.
CSU, UC credit limit

170B* INTERMEDIATE SOCCER 1 UNIT

Prerequisite: None
Corequisite: None
Recommended Preparation: "C" grade or higher or "Pass" in ES 170A or equivalent.
1 hour lecture, 1 hour laboratory
Intermediate soccer skills and team play with an emphasis on techniques, team strategy, language, and lore of the game of soccer.
CSU, UC credit limit

170C* ADVANCED SOCCER 1 UNIT

Prerequisite: None
Corequisite: None
Recommended Preparation: "C" grade or higher or "Pass" in ES 170B or equivalent.
1 hour lecture, 1 hour laboratory
Advanced individual soccer skills and team play. Emphasizes techniques and team strategy.
CSU, UC credit limit

171A* BEGINNING SOFTBALL 1 UNIT
Prerequisite: None
Corequisite: None
Recommended Preparation: None
1 hour lecture, 1 hour laboratory
Introduces the basic fundamentals of the game of softball. For individuals of all ages and fitness levels. Emphasizes lifelong health and vigor through exercise and activities. Promotes enjoyment of the game of softball, physical activity, safety, and injury prevention. Includes individual position skill, and offense and defense strategies.
CSU, UC credit limit

171B* INTERMEDIATE SOFTBALL 1 UNIT
Prerequisite: None
Corequisite: None
Recommended Preparation: "C" grade or higher or "Pass" in ES 171A or equivalent.
1 hour lecture, 1 hour laboratory
Instruction in the fundamentals of the game of softball at the intermediate level. For individuals of all ages and fitness levels. Emphasizes lifelong health and vigor through exercise and activities. Promotes enjoyment of the game of softball, physical activity, safety, and injury prevention. Includes individual position skill, and offense and defense strategies.
CSU, UC credit limit

171C* ADVANCED SOFTBALL 1 UNIT
Prerequisite: None
Corequisite: None
Recommended Preparation: "C" grade or higher or "Pass" in ES 171B or equivalent.
1 hour lecture, 1 hour laboratory
Instruction in the game of softball at the advanced level. For individuals of all ages and fitness levels. Emphasizes lifelong health and vigor through exercise and activities. Promotes enjoyment of the game of softball, physical activity, safety, and injury prevention. Includes individual position skill, and offense and defense strategies.
CSU, UC credit limit

175A* BEGINNING VOLLEYBALL 1 UNIT
Prerequisite: None
Corequisite: None
Recommended Preparation: None
1 hour lecture, 1 hour laboratory
Competency development in the team sport of volleyball with an emphasis on individual techniques and team strategy.
CSU, UC credit limit

175B* INTERMEDIATE VOLLEYBALL 1 UNIT
Prerequisite: None
Corequisite: None
Recommended Preparation: "C" grade or higher or "Pass" in ES 175A or equivalent.
1 hour lecture, 1 hour laboratory
Continuation of ES 175A with an emphasis on intermediate level play and strategy and four-person teams.
CSU, UC credit limit

175C* ADVANCED VOLLEYBALL 1 UNIT
Prerequisite: None
Corequisite: None
Recommended Preparation: "C" grade or higher or "Pass" in ES 175B or equivalent.
1 hour lecture, 1 hour laboratory
Continuation of ES 175B with an emphasis on advanced play and strategy and four-person teams.
CSU, UC credit limit

180* SELF DEFENSE FOR WOMEN 1 UNIT
Prerequisite: None
Corequisite: None
Recommended Preparation: None
1 hour lecture, 1 hour laboratory
Basic principles of practical personal protection for women with an emphasis on awareness and

prevention of situations that may leave a person vulnerable to crime, especially rape. Physical, mental and verbal responses will be taught and practiced so that students may develop the confidence to stand up and defend themselves, if needed. Students will learn the fundamental principles of physical fitness and its impact on lifelong health and wellness.
CSU, UC credit limit

181A* KARATE I 1.5 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
1 hour lecture, 2 hours laboratory
Introduction and practice in the basic skills and philosophy of Shotokan Karate. Introduces the basic stances, blocks, and kicks.
CSU, UC credit limit

181B* KARATE II 1.5 UNITS
Prerequisite: "C" grade or higher or "Pass" in ES 181A or equivalent or possession of equivalent proficiency (8th kyu ranking in Shotokan Karate from ASKA, JKA, AJKA).
Corequisite: None
Recommended Preparation: None
1 hour lecture, 2 hours laboratory
Introduction and practice in the intermediate skills and philosophy of Shotokan Karate. Introduces intermediate level blocks, strikes, punches and kicks, which will be taught individually and then linked and practiced in two and three movement combinations. Covers timing and distancing for three-step sparring without a count and the proper performance and timing of kata Heian Nidan.
CSU, UC credit limit

181C* KARATE III 1.5 UNITS
Prerequisite: "C" grade or higher or "Pass" in ES 181B or equivalent or possession of equivalent proficiency (7th kyu ranking in Shotokan Karate from ASKA, JKA, AJKA).
Corequisite: None
Recommended Preparation: None
1 hour lecture, 2 hours laboratory
Introduction and practice in the high intermediate skills and philosophy of Shotokan Karate. Intermediate II level strikes and blocks, three-move combinations, one step sparring—attacking and defending against face, stomach and front kick—and kata Heian Sandan will be introduced.
CSU, UC credit limit

181D* KARATE IV 1.5 UNITS
Prerequisite: "C" grade or higher or "Pass" in ES 181C or equivalent or possession of equivalent proficiency (6th kyu ranking in Shotokan Karate from ASKA, JKA, AJKA).
Corequisite: None
Recommended Preparation: None
1 hour lecture, 2 hours laboratory
Introduction and practice in the advanced skills and philosophy of Shotokan Karate. Advanced level blocks and strikes, four-move combinations, one-step sparring without a count for five techniques, and kata Heian Yondan will be introduced.
CSU, UC credit limit

199 SPECIAL STUDIES OR PROJECTS IN EXERCISE SCIENCE 1-3 UNITS
Prerequisite: Consent of instructor
3-9 hours
Individual study, research or projects under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. *May be taken for a maximum of 9 units.*

200* CONDITIONING AND INJURY PREVENTION FOR ATHLETICS 1.5 UNITS
Prerequisite: None
Corequisite: None
Recommended Preparation: None
1 hour lecture, 2 hours laboratory
Physical conditioning and mastery of the basic fundamentals of movement and skills necessary to reduce the risk of injury associated with athletic activity. Conditioning activities, running games and resistance exercises will be emphasized.
CSU, UC credit limit

206 INTERCOLLEGIATE BASKETBALL 2 UNITS
Prerequisite: Tryout
Corequisite: None
Recommended Preparation: None
5 hours lecture, 5 hours laboratory
Intercollegiate competition in the sport of basketball. Instruction in specific skills, performance techniques and strategies, as well as daily practice, development of physical fitness, team travel and competition against other collegiate institutions. Open to all students who wish to compete at the intercollegiate level. Athletic insurance fee is required.
CSU, UC credit limit

207 ADVANCED TECHNIQUES AND STRATEGIES OF INTERCOLLEGIATE BASKETBALL 1 UNIT
Prerequisite: None
Corequisite: None
Recommended Preparation: None
1 hour lecture, 1 hour laboratory
Instruction and practice in advanced techniques and strategies of basketball. By incorporating game experience, students will formulate an understanding of the different styles of play. Also serves as the off-season preparation course for the intercollegiate team.
CSU, UC credit limit

209 INTERCOLLEGIATE CROSS-COUNTRY 2 UNITS
Prerequisite: Tryout
Corequisite: None
Recommended Preparation: None
5 hours lecture, 5 hours laboratory
Open to students with advanced cross-country skills who wish to compete at the intercollegiate level. Athletic insurance fee is required.
CSU, UC credit limit

213 INTERCOLLEGIATE GOLF 2 UNITS
Prerequisite: Tryout
Corequisite: None
Recommended Preparation: None
5 hours lecture, 5 hours laboratory
Instruction in team play and strategy. Competition in practice and league play. Athletic insurance fee is required.
CSU, UC credit limit

218 INTERCOLLEGIATE SOCCER 2 UNITS
Prerequisite: Tryout
Corequisite: None
Recommended Preparation: None
5 hours lecture, 5 hours laboratory
Open to students with advanced soccer skills who wish to compete at the intercollegiate level. Athletic insurance fee is required.
CSU, UC credit limit

219 ADVANCED TECHNIQUES AND STRATEGIES OF INTERCOLLEGIATE SOCCER 1 UNIT
Prerequisite: None
Corequisite: None
Recommended Preparation: None
1 hour lecture, 1 hour laboratory
Designed for students with advanced soccer skills. Instruction and practice in the advanced

techniques and strategies of soccer. By incorporating game experience, students will formulate an understanding of the different styles of play. Also serves as the off-season preparation course for the intercollegiate team.
CSU, UC credit limit

224 INTERCOLLEGIATE TENNIS 2 UNITS

Prerequisite: Tryout
Corequisite: None
Recommended Preparation: None
5 hours lecture, 5 hours laboratory
Intercollegiate competition in the sport of tennis. Instruction in specific skills, performance techniques and strategies, as well as daily practice, development of physical fitness, team travel and competition against other collegiate institutions. Open to all students who wish to compete at the intercollegiate level. Athletic insurance fee is required.
CSU, UC credit limit

225 ADVANCED TECHNIQUES AND STRATEGIES OF INTERCOLLEGIATE TENNIS 1 UNIT

Prerequisite: None
Corequisite: None
Recommended Preparation: None
1 hour lecture, 1 hour laboratory
Designed for advanced tennis players who are proficient in the fundamental skills and have knowledge of the basic rules of the game. Instruction is geared toward advanced techniques, strategies and team play. Also serves as the off-season preparation course for the intercollegiate team.
CSU, UC credit limit

227 INTERCOLLEGIATE TRACK 2 UNITS

Prerequisite: Tryout
Corequisite: None
Recommended Preparation: None
5 hours lecture, 5 hours laboratory
Open to students with advanced track skills who wish to compete at the intercollegiate level. Athletic insurance fee is required.
CSU, UC credit limit

230 INTERCOLLEGIATE VOLLEYBALL 2 UNITS

Prerequisite: Tryout
Corequisite: None
Recommended Preparation: None
5 hours lecture, 5 hours laboratory
Intercollegiate competition in the sport of volleyball. Instruction in specific skills, performance techniques and strategies, as well as daily practice, development of physical fitness, team travel and competition against other collegiate institutions. Open to all students who wish to compete at the intercollegiate level. Athletic insurance fee is required.
CSU, UC credit limit

231 ADVANCED TECHNIQUES AND STRATEGIES OF INTERCOLLEGIATE VOLLEYBALL 1 UNIT

Prerequisite: None
Corequisite: None
Recommended Preparation: None
1 hour lecture, 1 hour laboratory
Designed for advanced volleyball players who are proficient in the fundamental skills and have knowledge of the basic rules of the game. Instruction is geared toward advanced techniques, strategies and team play. Also serves as the off-season preparation course for the intercollegiate team.
CSU, UC credit limit

250 INTRODUCTION TO KINESIOLOGY 3 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Introduction to the interdisciplinary approach to the study of human movement. An overview of the concepts within and importance of the sub-disciplines in kinesiology will be discussed, along with career opportunities in the areas of teaching, coaching, allied health, dietetic, and fitness professions.
CSU, UC

253 PHYSICAL EDUCATION IN ELEMENTARY SCHOOLS 3 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
2.5 hours lecture, 1.5 hours laboratory
The statewide program in physical education for elementary schools forms the basis for this course. Includes the study of child development, personality development, analysis and practice of fundamental skills, selection of activities, organizational materials, and evaluation of teaching ability.
CSU

254 PRINCIPLES OF PERSONAL TRAINING 3 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture
Identification and study of the techniques, responsibilities and skills necessary to perform the duties of a personal trainer. Emphasizes current knowledge of health principles that pertain to fitness and wellness. Provides the necessary information to pass the Personal Trainer Certification Exams for national certifying organizations (ACE, NSCA, etc.). Hands-on lab training in the use of fitness equipment.
CSU

254L FIELD EXPERIENCE FOR PERSONAL TRAINERS 1 UNIT

Prerequisite: "C" grade or higher or "Pass" in ES 254 or equivalent.
Corequisite: None
Recommended Preparation: None
4 hours unpaid work experience per week
Volunteer work experience in the field of personal training in selected fitness facilities. Students will work under the direct supervision of a certified Exercise Science instructor or commercially certified personal trainer.
CSU

255 CARE AND PREVENTION OF ATHLETIC INJURIES 3 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture, 1 hour laboratory
Designed to (1) provide a background for individuals interested in an athletic training career, (2) develop an understanding of athletic injuries in terms of prevention, recognition, evaluation, treatment, first aid and emergency care for coaches and/or teachers in athletic settings, and (3) provide athletes with an understanding of how to manage their own injuries and methods of prevention.
CSU, UC credit limit

270 COOPERATIVE GAMES 1 UNIT

Prerequisite: None
Corequisite: None
Recommended Preparation: None
1 hour lecture
Instruction in planning and implementing cooperative games for physical education/activities involving pre-school and elementary school-aged children in a variety of settings. The philosophy behind the need for cooperative games will be explored, as well as the importance of incorporating movement into daily life.
CSU, UC credit limit

271 FITNESS WALKING WITH CHILDREN 1 UNIT

Prerequisite: None
Corequisite: None
Recommended Preparation: None
1 hour lecture
Instruction in planning and implementing a walking program for children in a variety of settings. Lifelong fitness activities and walking as a form of appropriate and challenging exercise will be emphasized.
CSU

272 ISSUES IN CHILDHOOD OBESITY 1 UNIT

Prerequisite: None
Corequisite: None
Recommended Preparation: None
1 hour lecture
Survey of current knowledge relating to the cause and prevention of childhood obesity. Content will include suggested physical activity planning and nutrition guidelines, as well as historically relevant trends in regards to childhood obesity, diet and physical activity.
CSU

273 FIELD EXPERIENCE IN SCHOOL-BASED RECREATIONAL LEADERSHIP 1 UNIT

Prerequisite: None
Corequisite: None
Recommended Preparation: None
5 hours paid or 4 hours unpaid work experience per week
Under supervision at approved field placement sites, students will participate in all outdoor recreational activities: develop and supervise fitness and recreational experiences, conduct group activities, handle routines, and respond to individual and group needs of school-aged children in a school-based, day care or school day environment.
CSU

298 SELECTED TOPICS IN EXERCISE SCIENCE 1-3 UNITS

Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours
Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format. **Pass/No Pass only. Non-degree applicable.**

299 SELECTED TOPICS IN EXERCISE SCIENCE 1-3 UNITS

Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours
Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format.
CSU

FRENCH

120 FRENCH I 5 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
5 hours lecture

Introduction to the French language and the cultures of its speakers. Facilitates the practical application of the language in everyday oral and written communication at the beginning level. The focus is on basic communication skills; the class will be conducted in French as much as possible. Students will learn structures that will enable them to function in French in everyday contexts while becoming familiar with the French speaking world.

AA/AS GE, CSU, CSU GE, IGETC, UC

121 FRENCH II 5 UNITS

Prerequisite: "C" grade or higher or "Pass" in FREN 120 or two years of high school French or equivalent.
Corequisite: None
Recommended Preparation: None
5 hours lecture

Continuation of FREN 120. This course will continue to develop oral and written skills based on practical everyday needs.

AA/AS GE, CSU, CSU GE, IGETC, UC

199 SPECIAL STUDIES OR PROJECTS IN FRENCH 1-3 UNITS

Prerequisite: Consent of instructor
3-9 hours

Individual study, research or projects under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. *May be taken for a maximum of 9 units.*

220 FRENCH III 5 UNITS

Prerequisite: "C" grade or higher or "Pass" in FREN 121 or three years of high school French or equivalent.
Corequisite: None
Recommended Preparation: None
5 hours lecture

Continuation of FREN 121. This course will continue to develop oral, listening, reading and writing skills in order to improve proficiency in French.

AA/AS GE, CSU, CSU GE, IGETC, UC

221 FRENCH IV 5 UNITS

Prerequisite: "C" grade or higher or "Pass" in FREN 220 or four years of high school French or equivalent.
Corequisite: None
Recommended Preparation: None
5 hours lecture

Continuation of FREN 220. This course will continue to develop oral, listening, reading and writing skills in order to improve proficiency in French.

AA/AS GE, CSU, CSU GE, IGETC, UC

250 CONVERSATIONAL FRENCH I 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in FREN 121 or three years of high school French or equivalent.
Corequisite: None
Recommended Preparation: None
3 hours lecture

Develops oral, reading, writing and listening skills with an emphasis on oral proficiency.

AA/AS GE, CSU, CSU GE, IGETC, UC

251 CONVERSATIONAL FRENCH II 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in FREN 250 or four years of high school French or equivalent.

Corequisite: None
Recommended Preparation: None
3 hours lecture

Continues to develop oral, reading, writing and listening skills with an emphasis on oral proficiency.

AA/AS GE, CSU, CSU GE, IGETC, UC

298 SELECTED TOPICS IN FRENCH 1-5 UNITS

Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-15 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format. **Pass/No Pass only. Non-degree applicable.**

299 SELECTED TOPICS IN FRENCH 1-5 UNITS

Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-15 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format.

CSU

GEOGRAPHY

106 WORLD REGIONAL GEOGRAPHY 3 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture

World regional geography studies the overarching principles of human geography as applied to the major geographic regions of the world including Africa, the Middle East, South and East Asia, Australia, Europe and the Americas. Regional analysis will include: language, religion and ethnicity; population, land use and settlement patterns; economic, social and political systems; urban and environmental relationships; and the effects of technology and globalization in a rapidly changing world.

AA/AS GE, CSU, CSU GE, IGETC, UC

120 ELEMENTS OF PHYSICAL GEOGRAPHY 3 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture

Physical geography is the study of the patterns and processes that underlie the fundamental nature and dynamics of the physical world. Topics will be investigated from a systems perspective, with particular attention to the spatial relationships among the atmosphere, hydrosphere, lithosphere and biosphere. Global, regional and local environmental concerns will be discussed as relevant to course topics.

AA/AS GE, CSU, CSU GE, IGETC, UC

121 PHYSICAL GEOGRAPHY LABORATORY 1 UNIT

Prerequisite: "C" grade or higher or "Pass" in GEOG 120 or equivalent or concurrent enrollment.
Corequisite: None
Recommended Preparation: None
3 hours laboratory

Augments the physical geography lecture course through practical applications of materials covered in GEOG 120. Laboratory exercises include practical applications of the following: map analysis and interpretation; Earth-Sun relations; weather and climate; basic rock and mineral identification; plate tectonics; erosional and depositional environments; landform identification and genesis; soil and vegetation distributions. Special attention given to the unique local setting of San Diego County. Field experience incorporated into laboratory exercises on a regular basis.

AA/AS GE, CSU, CSU GE, IGETC, UC

122 REGIONAL FIELD STUDIES IN PHYSICAL GEOGRAPHY 1 UNIT

Prerequisite: None
Corequisite: None
Recommended Preparation: "C" grade or higher or "Pass" in GEOG 120 or equivalent or concurrent enrollment.

1 hour lecture, 1 hour laboratory
Provides focused experience in geographical field studies of a selected region in western North America. Emphasizes observation and interpretation of physical geography phenomena through direct experience in a field setting. Requires a multi-day field trip as well as on-campus meetings prior to and immediately following the field trip. Students must supply their own camping gear including food, cooking gear, stove, eating utensils, sleeping bag and tent. *May be taken with different content for a maximum of 4 units.*

CSU

130 HUMAN AND CULTURAL GEOGRAPHY 3 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture

Introduction to the study of the dynamics and complex relationships between the Earth's people and the ever-changing world in which they live. Special attention given to the historical role of the human-environment relationship, as well as the influences of language, religion, and other cultural factors in shaping the world's many cultures. Topics investigated on a global, regional and local scale include: origin and diffusion of the world's major languages and religions; population and settlement patterns; political and economic systems; methods of livelihood; the role of technology in our rapidly changing world. Emphasis is on human-environment relations and understanding and appreciation of our diverse multicultural world. Local field trips link course materials to real-world phenomena.

AA/AS GE, CSU, CSU GE, IGETC, UC

132 CULTURAL ETHNOBOTANY 3 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture

Cultural ethnobotany is the study of the relationship between indigenous cultures and the plants of their ancestral homeland. This course will focus on the ethnobotany of the Kumeyaay/Diegueño people of southern California and northern Baja California, with particular attention to how plants were used to sustain, heal, and protect the Kumeyaay Nation. Both traditional and scientific methods

will be used to classify plants and identify their historical and modern uses, and local field trips will provide opportunities for working directly with plant materials in their natural habitats.

AA/AS GE, CSU, UC

199 SPECIAL STUDIES OR PROJECTS IN GEOGRAPHY 1-3 UNITS

Prerequisite: Consent of instructor
3-9 hours

Individual study, research or projects under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. *May be taken for a maximum of 9 units.*

298 SELECTED TOPICS IN GEOGRAPHY 1-3 UNITS

Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format. **Pass/No Pass only. Non-degree applicable.**

299 SELECTED TOPICS IN GEOGRAPHY 1-3 UNITS

Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format.

CSU

GEOLOGY

104 EARTH SCIENCE 3 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture

This physical science course studies the patterns and processes that define Earth's major physical systems, the basic energy and material flows by which these systems operate, and the comparative place of our planet within the larger solar system. Topics will be investigated at global, regional and local scales and will provide a general synthesis of the disciplines of astronomy, geology, physical geography, meteorology and oceanography. Environmental disturbance and climate change will be addressed within the context of the topics described above.

AA/AS GE, CSU, CSU GE, IGETC, UC

110 PLANET EARTH 3 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture

Introductory physical science course investigating the composition of the earth and the geologic processes by which it formed. Emphasis is placed on the unifying theory of plate tectonics and the associated activities of volcanism, earthquakes, and mountain building. Topics include crystals, minerals and rocks, their distribution within the planet, and the evolution of the earth across deep time. The sculpturing of the surface of the planet by wind, waves, streams, glaciers and landslides will also be considered.

AA/AS GE, CSU, CSU GE, IGETC, UC

111 PLANET EARTH LABORATORY 1 UNIT

Prerequisite: "C" grade or higher or "Pass" in GEOL 110 or equivalent or concurrent enrollment.

Corequisite: None

Recommended Preparation: None

3 hours laboratory

Physical science laboratory course to accompany and augment GEOL 110. Includes laboratory and field investigations of the Earth, emphasizing hands-on experience with minerals, rocks and landforms, as well as topographic and geologic maps.

AA/AS GE, CSU, CSU GE, IGETC, UC

199 SPECIAL STUDIES OR PROJECTS IN GEOLOGY 1-3 UNITS

Prerequisite: Consent of instructor
3-9 hours

Individual study, research or projects under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. *May be taken for a maximum of 9 units.*

298 SELECTED TOPICS IN GEOLOGY 1-3 UNITS

Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format. **Pass/No Pass only. Non-degree applicable.**

299 SELECTED TOPICS IN GEOLOGY 1-3 UNITS

Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format.

CSU

GRAPHIC DESIGN

105 FUNDAMENTALS OF DIGITAL MEDIA 3 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: Basic computer skills.
2 hours lecture, 3 hours laboratory

This course explores the digital software used for graphic design, multimedia, and web design, specifically the use of vector (Adobe Illustrator) and raster images (Adobe Photoshop). Using the design process, students will create projects that require the use and comprehension of various file formats and color modes used in print and web design. Input devices such as digital cameras and scanners will be used to enhance projects. The elements of art and principles of design will be introduced as students develop aesthetic compositional skills.

CSU, UC

110 GRAPHIC DESIGN PRINCIPLES 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in GD 105 or equivalent or two years verifiable industry experience.
Corequisite: None
Recommended Preparation: "C" grade or higher or "Pass" in ART 124 or equivalent.
2 hours lecture, 3 hours laboratory

Explores the fundamental concepts of graphic design and visual communication. Basic

concepts, principles and elements of design are reinforced through creative problem solving. Text and visual elements such as photos and illustrations are integrated to create appropriate and aesthetic solutions to print graphics problems. Students will investigate career options and begin portfolio development.

CSU

125 TYPOGRAPHY 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in GD 105 or equivalent.
Corequisite: None
Recommended Preparation: "C" grade or higher or "Pass" in GD 110 or equivalent.

2 hours lecture, 3 hours laboratory
Explores the fundamental nature of typography as a reflection of society. Characters are examined as art forms and as carriers of language and ideas. Technical aspects of typography will be considered including function and production. Students will design letter forms using both traditional and digital processes with an emphasis on developing a professional portfolio.

CSU

126 PHOTOSHOP DIGITAL IMAGING 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in GD 105 or equivalent.
Corequisite: None
Recommended Preparation: None

2 hours lecture, 3 hours laboratory
Explores capturing, digitizing and editing images. Students will learn to use scanners and digital cameras to capture or digitize images and Adobe Photoshop to edit, manipulate, retouch, enhance and composite digital images. Explores digital workflows, color management, monitor calibration, and output methods used to achieve the best possible output from digital files. Emphasis is on meeting aesthetic and technical requirements of the commercial arts industry.

CSU

129 PAGE LAYOUT 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in GD 110 or equivalent.
Corequisite: None
Recommended Preparation: "C" grade or higher or "Pass" in GD 125 or equivalent.

2 hours lecture, 3 hours laboratory
Explores the aesthetic and functional organization of text, charts, graphs, line art, illustrations and photos in multiple page documents. Use of traditional and digital processes to develop creative thumbnails, roughs and comprehensive layouts. Emphasis on preparing text and images for electronic pre-press and for selecting printing options. Students will develop work for a professional portfolio.

CSU

130 PROFESSIONAL BUSINESS PRACTICES 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in GD 129 or CIS 212 or equivalent. Student must have substantial body of completed design or web projects prior to enrollment in this class.
Corequisite: None

Recommended Preparation: None
2 hours lecture, 3 hours laboratory
Examines professional business practices used in the graphic design industry including design studios, agencies and self-employment. Students will learn how to create a resume, market a portfolio, acquire clients, set fees, and refine their design capabilities using text and images while learning how to perform as business professionals.

CSU

199 SPECIAL STUDIES OR PROJECTS IN GRAPHIC DESIGN 1-3 UNITS

Prerequisite: Consent of instructor
3-9 hours

Individual study, research or projects under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. *May be taken for a maximum of 9 units.*

210 PROFESSIONAL DIGITAL PHOTOGRAPHY I 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in GD 126 or equivalent.

Corequisite: None

Recommended Preparation: None

2 hours lecture, 3 hours laboratory

Practical course intended for anyone interested in traditional photographic methods as they apply to digital photography. Students will learn to properly light, compose, expose, adjust, manipulate and print digital photographs. Explores advanced camera settings and file editing with Adobe Photoshop. Assignments will emphasize skills needed to produce high quality images for print and web display.

CSU

211 PROFESSIONAL DIGITAL PHOTOGRAPHY II 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in GD 210 or equivalent.

Corequisite: None

Recommended Preparation: None

2 hours lecture, 3 hours laboratory

Focuses on advanced photographic and digital imaging techniques, expanding on knowledge and skills acquired in GD 126 and 210. Covers various applications of commercial photography including portraiture, tabletop, still life and photo-illustration. Unlike most fine art oriented photography classes, this course will present aesthetic and technical aspects of photography as they pertain to graphic communication and commercial art.

CSU

217 WEB GRAPHICS 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: "C" grade or higher or "Pass" in CIS 212 or equivalent or basic computer and Internet skills and ability to create and upload a simple website, GD 126 or equivalent or ability to use Adobe Photoshop to create digital images.

2 hours lecture, 3 hours laboratory

Focuses on the creation of attractive, usable web interfaces and graphic elements. Students will use Photoshop to design and develop common web design elements as they explore information design, screen design and navigation design.

CSU, UC

222 FLASH WEB ANIMATION 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: "C" grade or higher or "Pass" in CIS 212 or equivalent or basic computer and Internet skills and ability to create and upload a simple website.

2 hours lecture, 3 hours laboratory

Covers design, development and implementation of web-based animation using Macromedia Flash. Students will create common web animation projects such as advertisements and web interfaces.

CSU

223 ADVANCED FLASH WEB ANIMATION 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in GD 222 or equivalent.

Corequisite: None

Recommended Preparation: "C" grade or higher or "Pass" in CIS 212 or equivalent or ability to create and upload a simple website.

2 hours lecture, 3 hours laboratory

Develop interactive, rich media Flash web applications. Includes principles of interaction and content design, ActionScript programming, and techniques to effectively incorporate animation, sound and graphics.

CSU

225 DIGITAL ILLUSTRATION 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in GD 105 or equivalent.

Corequisite: None

Recommended Preparation: "C" grade or higher or "Pass" in ART 124, GD 110 or equivalent.

2 hours lecture, 3 hours laboratory

Uses vector and raster image software to create digital illustrations. Applies design principles and computer technology to create exciting and aesthetic graphic images. Students will produce artwork based on contemporary illustration styles. Applicable for fine art, graphic design, and interactive design.

CSU, UC

230 GRAPHIC DESIGN WORK EXPERIENCE 1-4 UNITS

Prerequisite: 12 units in GD courses related to field in which work experience is sought and current resume highlighting graphic design experience and course-related study

Corequisite: None

Recommended Preparation: None

5 hours paid or 4 hours unpaid work experience per week per unit

Work experience at a designated industry site in a graphic design occupational category for students seeking job experience in graphic design. *May be taken for a maximum of 12 units.*

CSU

298 SELECTED TOPICS IN GRAPHIC DESIGN 1-4 UNITS

Prerequisite: Varies with topic

Corequisite: Varies with topic

Recommended Preparation: Varies with topic

1-12 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format. **Pass/No Pass only. Non-degree applicable.**

299 SELECTED TOPICS IN GRAPHIC DESIGN 1-4 UNITS

Prerequisite: Varies with topic

Corequisite: Varies with topic

Recommended Preparation: Varies with topic

1-12 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format.

CSU

HEALTH EDUCATION**105 HEALTH EDUCATION FOR TEACHERS 1 UNIT**

Prerequisite: None

Corequisite: None

Recommended Preparation: None

1 hour lecture

Designed for multiple or single subject teacher candidates. Provides introductory knowledge of broad health-related issues relevant to K-12 curriculum. Topics include primary and secondary school health education curriculum design, basic legal issues of health education in California, discussion of community resources, behavior modification techniques, stress management, benefits of regular exercise, nutrition and eating disorders, disease prevention, childhood obesity, sexually transmitted diseases, contraception, substance abuse including alcohol and tobacco, safety in the home and school, and violence including gang and domestic violence. Meets the state of California health education requirement for the K-12 teaching credential.

CSU

120 PERSONAL HEALTH AND LIFESTYLES 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

3 hours lecture

Identification and study of the major health problems in today's society. Emphasizes individual responsibility for personal health and the promotion of informed, positive health behaviors. Content areas include nutrition and weight control, substance abuse, environmental hazards, diseases, and safety.

AA/AS GE, CSU, CSU GE, UC, UC credit limit

122 ENVIRONMENTAL AND COMMUNITY HEALTH 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

3 hours lecture

Introduction to the environmental, biological and socio-cultural determinants of health quality. Areas of emphasis include: environmental health, health and community behavior, infectious disease, chronic disease, methods of public health investigation, health promotion, implementation and regulation. Within these topic areas, examination of the matrix of physiological, socio-cultural and psychological determinants of health will be addressed including: health impacts of chemical and physical agents in domestic and work surroundings; water treatment and quality, environmental pollution and occupational health and safety; substance abuse, stress management and mental illness; infectious diseases; growing health trends in the American population such as obesity, diabetes mellitus and Alzheimer's; investigation of health agencies involved, governmental health policies, and their roles in shaping community health.

AA/AS GE, CSU, CSU GE, UC, UC credit limit

155 REALITIES OF NUTRITION 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

3 hours lecture

Introduction to the basic principles of nutrition and its relationship to good health. Evaluation of current nutritional information (and misinformation) with an emphasis on critical thinking to determine optimal dietary choices. Study of the major dietary goals and guidelines. Examination of weight maintenance techniques,

eating disorders, food labeling, food safety, and special needs at various stages in the life cycle.
CSU, CSU GE, UC

158 NUTRITION FOR FITNESS AND SPORTS 3 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture

Investigates the effects of nutrition and various dietary regimens on athletic performance, physical fitness and general health. Compares the physiological effects of optimal nutrition vs. inadequate nutrition for the general population as well as athletes. Cultural, sociological and psychological influences will be examined. Discussion of "fads" and dietary supplements is included.

CSU, CSU GE

199 SPECIAL STUDIES OR PROJECTS IN HEALTH EDUCATION 1-3 UNITS

Prerequisite: Consent of instructor
3-9 hours

Individual study, research or projects under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. *May be taken for a maximum of 9 units.*

201 INTRODUCTION TO PUBLIC HEALTH 3 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture

Introduction to the discipline of public health. Areas of emphasis include the definition of "public health," the history and accomplishments of public health officials and agencies, an overview of various public health professions and institutions, and an in-depth examination of the core public health disciplines. These include epidemiology of infectious and chronic disease, environmental health, health promotion, global health (including health disparities and cultural competence), and health policy and management (including disaster preparedness).

AA/AS GE, CSU, CSU GE, UC

202 HEALTH PROFESSIONS AND ORGANIZATIONS 3 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture

A review of health organizations and agencies that operate locally, regionally, nationally and internationally. Information regarding potential careers in medicine, allied health, and public health is included.

CSU

203 SUBSTANCE ABUSE AND PUBLIC HEALTH 3 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture

Overview of the epidemiology and toxicology of substance abuse and its relevance to public health. Introduces the concept of substance abuse and dependence, the definition of licit and illicit drugs, and the pharmacologic, neurologic and physiologic effects of selected substances on the human brain. Political, social and economic factors involved in the supply and demand for drugs will be discussed. Epidemiologic data on the prevalence, incidence, and trends of smoking, alcohol, prescription and other drug dependencies in

the U.S. will be covered, as well as risk factors associated with the use and abuse of these substances. Current options for recovery and a survey of local resources will be reviewed.

AA/AS GE, CSU, CSU GE, UC

251* HEALTHY LIFESTYLES: THEORY AND APPLICATION 3 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
2 hours lecture, 3 hours laboratory

A combination of physical activity and lecture providing regular exercise to develop physical fitness and information about basic, sound nutrition as it pertains to weight control. Guidelines that promote lifetime exercise and a healthy lifestyle will be emphasized.

AA/AS GE, CSU, CSU GE

255 SCIENCE OF NUTRITION 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in BIO 130, 131 and CHEM 115 or 120 or equivalent.
Corequisite: None
Recommended Preparation: None
3 hours lecture

Establishes the relationship between foods and science through the study and integration of chemistry, biology and nutrition science. The metabolism and functions and sources of nutrients will be covered in detail to correlate the role they have in promotion of health and disease prevention. The challenges that occur during the human life cycle and how nutrient needs change will be studied. Includes evaluation from a scientific perspective of current concepts, controversies, and dietary recommendations. Nutritional issues as they relate to weight maintenance, eating disorders, food labeling, food safety and special needs at various stages in the life cycle will be thoroughly examined.

CSU, CSU GE, UC

298 SELECTED TOPICS IN HEALTH EDUCATION 1-3 UNITS

Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format. **Pass/No Pass only. Non-degree applicable.**

299 SELECTED TOPICS IN HEALTH EDUCATION 1-3 UNITS

Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format.

CSU

*Meets the activity requirement for graduation.

HISTORY

100 EARLY WORLD HISTORY 3 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture

Examination of ancient to early-modern civilizations and the interconnections between diverse world societies to 1500. Included are Mesopotamia, Egypt, China, India, the classical West, early Islamic civilization, civilizations of

Africa, and civilizations of the Americas and Oceania.

AA/AS GE, CSU, CSU GE, IGETC, UC credit limit

101 MODERN WORLD HISTORY 3 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture

Examination of the civilizations, societies and global interrelationships of the peoples of Africa, the Americas, Asia, Europe, and Oceania since 1500.

AA/AS GE, CSU, CSU GE, IGETC, UC credit limit

105 EARLY WESTERN CIVILIZATION 3 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture

Survey of Mediterranean and European cultures, thought and institutions from ancient times to 1650. Includes Greece, Rome, Medieval Europe, the Renaissance, and the Reformation.

AA/AS GE, CSU, CSU GE, IGETC, UC

106 MODERN WESTERN CIVILIZATION 3 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture

Survey of European cultures, thought and institutions from 1650 to the present. Includes Absolutism, Scientific Revolution, the Enlightenment, age of the French Revolution, nineteenth-century ideologies, imperialism, the world wars, the Cold War, and contemporary Europe.

AA/AS GE, CSU, CSU GE, IGETC, UC

108* EARLY AMERICAN HISTORY 3 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture

Survey of the early political, social and cultural development of the entire geographic area that is now the United States, with an emphasis on the origins of basic American institutions and ideals.

AA/AS GE, CSU, CSU GE, IGETC, UC credit limit

109* MODERN AMERICAN HISTORY 3 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture

Survey of the political, social and cultural development of the modern United States with an emphasis on the economic, social and technological changes and the rise of the United States as a world power.

AA/AS GE, CSU, CSU GE, IGETC, UC credit limit

118* U.S. HISTORY: CHICANO/CHICANA PERSPECTIVES I 3 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture

Historical survey of the Chicano people in the United States in which attention is given to social, political and economic background. Particular emphasis on the development of the Spanish-speaking peoples' economic, social and political experience in the United States, especially in the Southwest from the Indo-Hispanic period to the Mexican-American War.

AA/AS GE, CSU, CSU GE, IGETC, UC credit limit

119* U.S. HISTORY: CHICANO/CHICANA PERSPECTIVES II**3 UNITS**

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 3 hours lecture

Historical survey of the Chicano people in the United States in which attention is given to social, political and economic background. Particular emphasis on the development of the Spanish-speaking peoples' economic, social and political experience in the United States, especially in the Southwest from the Mexican-American War to the present.

AA/AS GE, CSU, CSU GE, IGETC, UC credit limit

122* WOMEN IN EARLY AMERICAN HISTORY**3 UNITS**

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 3 hours lecture

Survey of the social, political, cultural, economic and intellectual development of women in America from pre-contact to 1877 in the entire geographic area that is now the United States. Women's experiences are placed in the context of the origins of American institutions and ideals.

AA/AS GE, CSU, CSU GE, IGETC, UC

123* WOMEN IN MODERN AMERICAN HISTORY**3 UNITS**

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 3 hours lecture

Survey of the social, political, cultural, economic and intellectual development of women in America from 1877 to the present in the entire area that is now the United States. Women's experiences are examined in the context of evolving American institutions.

AA/AS GE, CSU, CSU GE, IGETC, UC

124 HISTORY OF CALIFORNIA**3 UNITS**

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 3 hours lecture

Survey of political, social and economic development of the State of California from pre-contact Native Americans, Spanish explorations and Mexican California to the present. Unit of study in California state and local government is included.

AA/AS GE, CSU, CSU GE, IGETC, UC

130* U.S. HISTORY AND CULTURES: NATIVE AMERICAN PERSPECTIVES I**3 UNITS**

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 3 hours lecture

Historical survey of the indigenous people throughout the North American continent from the earliest recorded knowledge to 1850. Attention is given to Indian perspectives of native and non-native cultures. The influence of American Indians on the federal constitution and the political philosophies of early Americans will be studied. Indian political organization and its parallels and differences in early American political organizations and philosophies are studied. Particular attention is given to legislation and its impact on Indian culture and society.

AA/AS GE, CSU, CSU GE, IGETC, UC credit limit

131* U.S. HISTORY AND CULTURES: NATIVE AMERICAN PERSPECTIVES II**3 UNITS**

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 3 hours lecture

Historical survey of the indigenous peoples of the North American continent from the period of 1850 to the present. Attention is given to contemporary, historical, political, and socio-economic issues affecting the American Indian nationwide, statewide and locally. Indian perspectives of native and nonnative cultures will be included. The federal and state constitutions are studied with special emphasis given to the effects on and influence of the Indian culture and society. Particular attention is given to political philosophies and the impact of legislation on Indian culture and society.

AA/AS GE, CSU, CSU GE, IGETC, UC credit limit

132 KUMEYAAY HISTORY I:**3 UNITS**

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 3 hours lecture

Historical survey of the Kumeyaay Nation from prehistoric times to 1900. Attention is given to Kumeyaay perspectives of Kumeyaay and non-Kumeyaay cultures. Kumeyaay oral history will be incorporated with discussions of the Creation Story, bird songs, ceremonies, religion and peon games. Overview of tribal sovereignty and Kumeyaay independence, laws pertaining to Native Americans in the United States, and early assimilation policies of the United States and Mexico.

AA/AS GE, CSU, CSU GE, IGETC, UC

133 KUMEYAAY HISTORY II:**3 UNITS**

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 3 hours lecture

Historical survey of the Kumeyaay Nation from 1900 to the present. Attention is given to Kumeyaay perspectives of Kumeyaay and non-Kumeyaay cultures. Specific segments include: The Mission Indian Federation, The Indian Relocation Act, The Termination Era and PL 280, Indian Activism, Indian Self-Determination, and the Indian Gaming Regulatory Act and contemporary Tribal Governments. The modern history of the Kumeyaay Nation including participation in the Mission Indian Federation, impact of Public Law 280, and the growth leading to the creation of current Indian Gaming in San Diego County will be examined. Overview of contemporary tribal sovereignty and Kumeyaay independence, laws pertaining to Native Americans in the United States, and the termination policies of the United States.

AA/AS GE, CSU, CSU GE, IGETC, UC

180* U.S. HISTORY: BLACK PERSPECTIVES I**3 UNITS**

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 3 hours lecture

United States history with an emphasis on social, economic, political and cultural experiences of Black people. Traces the development of African-American history from African origins through the period of Reconstruction.

AA/AS GE, CSU, CSU GE, IGETC, UC credit limit

181* U.S. HISTORY: BLACK PERSPECTIVES II**3 UNITS**

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 3 hours lecture

Examination of significant aspects of United States history from the aftermath of the Civil War to the present. Emphasis is on the socio-economic, political and cultural experience of African-Americans in the United States from Reconstruction to the present.

AA/AS GE, CSU, CSU GE, IGETC, UC credit limit

199 SPECIAL STUDIES OR PROJECTS IN HISTORY**1-3 UNITS**

Prerequisite: Consent of instructor
 3-9 hours

Individual study, research or projects under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. *May be taken for a maximum of 9 units.*

275 HISTORICAL PERIOD**3 UNITS****276 GEOGRAPHICAL AREA****3 UNITS****277 HISTORICAL THEME****3 UNITS**

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 3 hours lecture

In-depth study of a historical period (275), geographical area (276), or historical theme (277). Reading, discussion, lecture and instructional media focuses on the forces contributing to the creation of the material studied and on the place of that material in relation to other disciplines in the humanities.

CSU, CSU GE, IGETC, UC

298 SELECTED TOPICS IN HISTORY**1-3 UNITS**

Prerequisite: Varies with topic
 Corequisite: Varies with topic
 Recommended Preparation: Varies with topic
 1-9 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format. **Pass/No Pass only. Non-degree applicable.**

299 SELECTED TOPICS IN HISTORY**1-3 UNITS**

Prerequisite: Varies with topic
 Corequisite: Varies with topic
 Recommended Preparation: Varies with topic
 1-9 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format.

CSU

*Meets part of the American Institutions requirement. See "CSU General Education Breadth" under Degree Requirements & Transfer Information for complete requirements and different options, or visit www.assist.org.

HUMANITIES

110 PRINCIPLES OF THE HUMANITIES 3 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture

In this interdisciplinary humanities course, students will learn how to examine, compare, analyze, evaluate, interpret and discuss creative works within their cultural contexts. Examples for study will be selected from the world's great works of literature, drama, painting, sculpture, architecture, music, etc.

AA/AS GE, CSU, CSU GE, IGETC, UC

115 ARTS AND CULTURE IN LOCAL CONTEXT—SAN DIEGO 3 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture

This course offers an interdisciplinary survey of San Diego's history, art and culture. Focusing on San Diego's cosmopolitan cultural offerings, students will study characteristic elements of art media (such as architecture, sculpture, music, literature, theater), their creators, significant cultural sites, and our position in the broader context of world culture. Guest lectures by local artists and trips to various cultural sites (Balboa Park, Old Globe Theatre, San Diego Museum of Art, Copley Symphony Hall, Gaslamp District) will be integrated into the course to bring students into direct contact with the arts. Field trips and tours of local cultural sites are a required component of this class.

AA/AS GE, CSU, CSU GE, IGETC, UC

120 EUROPEAN HUMANITIES 3 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture

An integrated approach to European cultural values as expressed in representative masterpieces of literature, philosophy, drama, music, visual art and architecture.

AA/AS GE, CSU, CSU GE, IGETC, UC

140 AMERICAN HUMANITIES 3 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture

Integrated study of American forms of art and thought including popular forms such as film, jazz and popular music. Various periods in American history will be examined from a cultural viewpoint, and selections will be chosen which are most representative of the forms of consciousness during those periods.

AA/AS GE, CSU, CSU GE, IGETC, UC

155 MYTHOLOGY 3 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture

Exploration of myths, legends, folklore and fairy tales as a means of understanding the way different people throughout the world have viewed themselves, their heroes, gods, supernatural beings, and the world they live in. Focuses on the symbolic meaning of the stories covered and the light they shed on our common human nature.

AA/AS GE, CSU, CSU GE, IGETC, UC

199 SPECIAL STUDIES OR PROJECTS IN HUMANITIES 1-3 UNITS

Prerequisite: Consent of instructor
3-9 hours

Individual study, research or projects under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. *May be taken for a maximum of 9 units.*

298 SELECTED TOPICS IN HUMANITIES 1-3 UNITS

Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format. **Pass/No Pass only. Non-degree applicable.**

299 SELECTED TOPICS IN HUMANITIES 1-3 UNITS

Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format.

CSU

INTERDISCIPLINARY STUDIES

198 SUPERVISED TUTORING 0 UNIT

Prerequisite: None
Corequisite: None
Recommended Preparation: None
TBA hours

Uses a variety of educational tools to assist students with various learning needs. Can be used to strengthen prerequisite skills prior to enrolling in a specific course or to receive supplemental assistance while concurrently enrolled in another course. *May be taken with different content. No fee/no credit course.*

199 SPECIAL STUDIES OR PROJECTS IN INTERDISCIPLINARY STUDIES 1-3 UNITS

Prerequisite: Consent of instructor
3-9 hours

Individual study, research or projects under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. *May be taken for a maximum of 9 units.*

298 SELECTED TOPICS IN INTERDISCIPLINARY STUDIES 1-3 UNITS

Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format. **Pass/No Pass only. Non-degree applicable.**

299 SELECTED TOPICS IN INTERDISCIPLINARY STUDIES 1-3 UNITS

Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format.

ITALIAN

120 ITALIAN I 5 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
5 hours lecture

Introduction to the Italian language and culture for students with little or no knowledge of Italian. This course facilitates the practical application of the language in everyday oral and written communication at the beginning level. Since the focus will be on basic communication skills, the class will be conducted in Italian as much as possible. Students will learn structures that will enable them to function in Italian in everyday contexts while becoming familiar with the Italian speaking world.

AA/AS GE, CSU, CSU GE, IGETC, UC

121 ITALIAN II 5 UNITS

Prerequisite: "C" grade or higher or "Pass" in ITAL 120 or two years of high school Italian or equivalent.
Corequisite: None
Recommended Preparation: None
5 hours lecture

Continuation of Italian 120. This course will continue to develop oral and written skills based on practical everyday needs.

AA/AS GE, CSU, CSU GE, IGETC, UC

199 SPECIAL STUDIES OR PROJECTS IN ITALIAN 1-3 UNITS

Prerequisite: Consent of instructor
3-9 hours

Individual study, research or projects under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. *May be taken for a maximum of 9 units.*

220 ITALIAN III 5 UNITS

Prerequisite: "C" grade or higher or "Pass" in ITAL 121 or three years of high school Italian or equivalent.
Corequisite: None
Recommended Preparation: None
5 hours lecture

Continuation of Italian 121. This course will continue to develop oral, listening, reading and writing skills in order to acquire proficiency in Italian.

AA/AS GE, CSU, CSU GE, IGETC, UC

298 SELECTED TOPICS IN ITALIAN 1-5 UNITS

Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-15 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format. **Pass/No Pass only. Non-degree applicable.**

299 SELECTED TOPICS IN ITALIAN 1-5 UNITS

Prerequisite: Varies with topic
 Corequisite: Varies with topic
 Recommended Preparation: Varies with topic
 1-15 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format.

CSU

LIBRARY INFORMATION RESOURCES

110 RESEARCH METHODS IN AN ONLINE WORLD**1 UNIT**

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 1 hour lecture

Designed for those who would like to become effective online researchers. Learn how to select and effectively use appropriate research tools such as search engines, online directories, meta-search engines, subscription databases and online catalogs. Develop search strategies and focus on expressing research questions in relevant search terms. Learn how to evaluate information for quality, authority, accuracy, and other criteria. Ethical issues about information will be introduced. *Familiarity with basic microcomputer operation is strongly recommended.*

CSU

199 SPECIAL STUDIES OR PROJECTS IN LIBRARY INFORMATION RESOURCES**1-3 UNITS**

Prerequisite: Consent of instructor
 3-9 hours

Individual study, research or projects under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. *May be taken for a maximum of 9 units.*

298 SELECTED TOPICS IN LIBRARY INFORMATION RESOURCES**1-3 UNITS**

Prerequisite: Varies with topic
 Corequisite: Varies with topic
 Recommended Preparation: Varies with topic
 1-9 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format. **Pass/No Pass only. Non-degree applicable.**

299 SELECTED TOPICS IN LIBRARY INFORMATION RESOURCES**1-3 UNITS**

Prerequisite: Varies with topic
 Corequisite: Varies with topic
 Recommended Preparation: Varies with topic
 1-9 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format.

CSU

MATHEMATICS

080 BASIC MATHEMATICS**2 UNITS**

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 2 hours lecture, 1 hour laboratory

Fundamentals of arithmetic including addition, subtraction, multiplication and division with emphasis on mental arithmetic involving whole numbers up to 12. Operations with fractions, decimals and percents are stressed. Area and volume formula for fundamental shapes will be discussed. **Pass/No Pass only. Non-degree applicable.**

088 PRE-ALGEBRA**4 UNITS**

Prerequisite: None
 Corequisite: None
 Recommended Preparation: Grade of "Pass" in MATH 080 or equivalent
 4 hours lecture, 1 hour laboratory

Operations with signed numbers are emphasized. The derivation and use of selected measurement concepts and the development of pre-algebra ideas such as variable and equations are included. Measurement, area and volume formulas for fundamental shapes are stressed. These topics are explored in the context of problem solving and appropriate calculator use. **Pass/No Pass only. Non-degree applicable.**

090 ELEMENTARY ALGEBRA**5 UNITS**

Prerequisite: None
 Corequisite: None
 Recommended Preparation: Grade of "Pass" in MATH 088 or equivalent.
 5 hours lecture, 1 hour laboratory

Mathematical reasoning, problem solving, and real-world applications using numerical, algebraic and graphical models. Topics include problem-solving techniques, algebraic expressions, polynomials, linear and quadratic equations, linear inequalities, linear and nonlinear graphs, systems of linear equations in two variables, integer exponents, proportions, and radicals. Selection and application of appropriate graphing utility and/or computer program to interpret, model and analyze a collection of data or application problems. Computational techniques developed in pre-algebra are prerequisite skills for this course. Recommended for students with little or no recent knowledge of algebra. **Pass/No Pass only. Non-degree applicable.**

096 PREPARATION FOR ELEMENTARY STATISTICS**6 UNITS**

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 5 hours lecture, 3 hours laboratory

An accelerated one-semester course to transfer-level Elementary Statistics (Math 160) covering core concepts from arithmetic, pre-algebra, elementary and intermediate algebra, and descriptive statistics that are needed to understand the basics of college-level statistics. Concepts are taught through the context of descriptive data analysis. The core arithmetic and algebra skills needed to understand the concepts, formulas, and graphs used in transfer-level statistics are investigated in a "just-in-time" approach rather than the standard sequence found in the traditional algebra path. This course is NOT intended for math, science, computer science, business, or engineering majors. **Pass/No Pass only. Non-degree applicable.**

097 PLANE GEOMETRY**3 UNITS**

Prerequisite: Grade of "Pass" in MATH 090 or equivalent.

Corequisite: None
 Recommended Preparation: None
 3 hours lecture

Introduces essential vocabulary, properties and characteristics of geometric objects and geometric constructions. The concepts of plane geometry are developed inductively and then deductively. Computer-facilitated instruction offers a dynamic presentation of geometric concepts. **Pass/No Pass only. Non-degree applicable.**

103 INTERMEDIATE ALGEBRA**3 UNITS**

Prerequisite: Grade of "Pass" in MATH 090 or equivalent.

Corequisite: None
 Recommended Preparation: None
 3 hours lecture, 1 hour laboratory

Graphic, numeric, analytic and applied problems on topics including linear, quadratic, exponential and logarithmic functions, exponents and radicals. Selection and application of appropriate graphing utility and/or computer program to interpret, model and analyze data, graphs and/or application problems. Additional topics include systems of equations, algebraic fractions, radicals, equations involving inequalities and absolute value, and complex numbers. *Maximum of 5 units can be earned for taking MATH 103 and 110.*

AA/AS GE

110 INTERMEDIATE ALGEBRA FOR BUSINESS, MATHEMATICS, SCIENCE AND ENGINEERING**5 UNITS**

Prerequisite: Grade of "Pass" in MATH 090 or equivalent.

Corequisite: None
 Recommended Preparation: None
 5 hours lecture, 1 hour laboratory

Application of graphic, numeric and analytic methods to model, interpret and solve real-world problems involving: linear, quadratic, rational, radical, exponential and logarithmic functions; systems of linear and quadratic equations or inequalities; and absolute value equations or inequalities. Selection and application of appropriate graphing utility and/or computer program to interpret, model and analyze a collection of data and/or application problems. Additional topics include conic sections and an introduction to matrices and determinants. Computational techniques developed in beginning algebra are prerequisite skills for this course. Appropriate for students with knowledge of beginning algebra or who have had at least two years of high school algebra but have not used it for several years. *Maximum of five 5 units can be earned for taking MATH 103 and 110.*

AA/AS GE

120 MATHEMATICS FOR GENERAL EDUCATION**3 UNITS**

Prerequisite: "C" grade or higher or "Pass" in MATH 103 or 110 or equivalent.

Corequisite: None
 Recommended Preparation: None
 3 hours lecture

This course covers topics from logic, set theory, probability, statistics and computer math that provide a very brief introduction to the structure of mathematical theories, the history of mathematics, and applications of mathematics to the real world. Designed for students who do not intend to prepare for a career in science or business.

AA/AS GE, CSU, CSU GE, IGETC, UC credit limit

125 STRUCTURE AND CONCEPTS**OF ELEMENTARY MATHEMATICS I 3 UNITS**

Prerequisite: "C" grade or higher or "Pass" in MATH 103 or 110 and MATH 097 or equivalent.

Corequisite: None

Recommended Preparation: None

3 hours lecture, 1 hour laboratory

In blending the mathematical topics of sets, whole numbers, numeration, number theory, integers, rational and irrational numbers, measurement, relations, functions and logic, the course will investigate the interrelationships of these topics using a problem-solving approach and appropriate use of technology.

AA/AS GE, CSU, CSU GE, IGETC, UC credit limit

126 STRUCTURE AND CONCEPTS**OF ELEMENTARY MATHEMATICS II 3 UNITS**

Prerequisite: "C" grade or higher or "Pass" in MATH 125 or equivalent.

Corequisite: None

Recommended Preparation: None

3 hours lecture, 1 hour laboratory

In blending the mathematical topics of statistics, probability, measurement, coordinate geometry, plane geometry, solid geometry, logic, relations and functions, the course will investigate the interrelationships of these topics using a problem-solving approach and appropriate use of technology.

CSU, CSU GE, IGETC, UC credit limit

128 CHILDREN'S MATHEMATICAL THINKING**1.5 UNITS**

Prerequisite: None

Corequisite: MATH 125.

Recommended Preparation: None

1.5 hours lecture

Children's mathematical thinking and in-depth analyses of children's understanding of operations (addition, subtraction, multiplication, division) and place value. Students will observe individual children solving mathematics problems.

CSU

150 INTRODUCTION TO COMPUTER PROGRAMMING APPLICATIONS IN MATHEMATICS**3 UNITS**

Prerequisite: "C" grade or higher or "Pass" in MATH 110 or equivalent.

Corequisite: None

Recommended Preparation: None

2 hours lecture, 3 hours laboratory

Use of computers to analyze mathematical application problems and solutions from statistics, engineering and the physical sciences. Fundamentals of structured technical programming including language commands and computational algorithms.

AA/AS GE, CSU, UC

160 ELEMENTARY STATISTICS**3 UNITS**

Prerequisite: "C" grade or higher or "Pass" in MATH 103 or 110 or equivalent.

Corequisite: None

Recommended Preparation: None

3 hours lecture, 1 hour laboratory

Study and application of the concepts and procedures of descriptive statistics, probability theory and inferential statistics. In descriptive statistics: organize, summarize and display data including frequency tables and histograms; exploratory data analysis; measures of central tendency, variation and position. In probability theory: fundamental rules and definitions of probability; counting; central limit theorem; probability distributions including the binomial, normal, Student T, chi-square, and F. In inferential statistics: estimation and hypothesis testing for means, proportions and variances; contingency tables; ANOVA models; linear regression and correlation; nonparametric methods. Applications may be included from various fields such as biology, business, economics,

education, engineering, demography and psychology.

AA/AS GE, CSU, CSU GE, IGETC, UC credit limit

170 ANALYTIC TRIGONOMETRY 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in MATH 097, 110 or equivalent.

Corequisite: None

Recommended Preparation: None

3 hours lecture

Theoretical approach to the study of trigonometric functions with an emphasis on circular functions, trigonometric identities, trigonometric equations, graphical methods, vectors and applications, complex numbers and solving triangles with applications.

AA/AS GE, CSU, CSU GE

175 COLLEGE ALGEBRA 4 UNITS

Prerequisite: "C" grade or higher or "Pass" in MATH 110 or equivalent (MATH 103 does not meet the prerequisite).

Corequisite: None

Recommended Preparation: None

4 hours lecture

Graphic, numeric and analytic approaches to the study of precalculus concepts from college algebra. Application of appropriate technology including but not limited to graphing utilities to model, analyze and interpret a collection of data or to solve real-world application problems from a variety of disciplines. Topics include: the real number system; algebraic, exponential and logarithmic functions and their inverses; graphing techniques for polynomial and rational functions; complex numbers; theory of equations; partial fractions; mathematical induction; sequences and series; matrices; and the binomial theorem. *Maximum of 7 units can be earned for successfully completing any combination of MATH 170, 175, 176.*

AA/AS GE, CSU, CSU GE, IGETC, UC credit limit

176 PRECALCULUS: FUNCTIONS AND GRAPHS 6 UNITS

Prerequisite: "C" grade or higher or "Pass" in MATH 097, 110 or equivalent (MATH 103 does not meet the prerequisite).

Corequisite: None

Recommended Preparation: None

6 hours lecture

Graphic, numeric and analytic approaches to the study of precalculus concepts from college algebra and analytic trigonometry. Application of appropriate technology including but not limited to graphing utilities to model, analyze and interpret a collection of data or to solve real-world application problems from a variety of disciplines. Topics include: the real number system; algebraic, exponential and logarithmic functions and their inverses; graphing techniques for polynomial, rational and trigonometric functions; complex numbers; theory of equations; trigonometric functions and their inverses with emphasis on the circular functions; trigonometric equations and identities; vectors; right and oblique triangles; partial fractions; polar coordinates; mathematical induction; sequences and series; matrices; the binomial theorem. *Maximum of 7 units can be earned for successfully completing any combination of MATH 170, 175, 176.*

AA/AS GE, CSU, CSU GE, IGETC, UC credit limit

178 CALCULUS FOR BUSINESS, SOCIAL AND BEHAVIORAL SCIENCES 4 UNITS

Prerequisite: "C" grade or higher or "Pass" in MATH 110 or equivalent (MATH 103 does not meet the prerequisite).

Corequisite: None

Recommended Preparation: None

4 hours lecture

Concepts and applications of algebra and polynomial calculus. Designed for students in business, social sciences and behavioral

sciences. *Not open to students with credit in MATH 180.*

AA/AS GE, CSU, CSU GE, IGETC, UC credit limit

180 ANALYTIC GEOMETRY AND CALCULUS I**5 UNITS**

Prerequisite: "C" grade or higher or "Pass" in MATH 170 and 175 or 176 or equivalent.

Corequisite: None

Recommended Preparation: None

5 hours lecture

Graphic, numeric and analytic approaches to the study of analytic geometry, limits and continuity of functions, and introductory differential and integral calculus. Applications involving analysis of algebraic, exponential, logarithmic, trigonometric and hyperbolic functions from a variety of disciplines including science, business and engineering. First of three courses designed to provide serious science students with a solid introduction to the theory and techniques of analysis.

AA/AS GE, CSU, CSU GE, IGETC, UC credit limit

199 SPECIAL STUDIES OR PROJECTS IN MATHEMATICS**1-3 UNITS**

Prerequisite: Consent of instructor

3-9 hours

Individual study, research or projects under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. *May be taken for a maximum of 9 units.*

245 DISCRETE MATHEMATICS 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in MATH 280 or equivalent.

Corequisite: None

Recommended Preparation: None

3 hours lecture

Introduction to discrete mathematics. Includes basic logic, methods of proof, sequences, elementary number theory, basic set theory, elementary counting techniques, relations, and recurrence relations.

AA/AS GE, CSU, CSU GE, IGETC, UC

280 ANALYTIC GEOMETRY AND CALCULUS II**4 UNITS**

Prerequisite: "C" grade or higher or "Pass" in MATH 180 or equivalent.

Corequisite: None

Recommended Preparation: None

4 hours lecture

Continuation of MATH 180. Includes parametric equations, polar coordinates, hyperbolic functions, techniques of integration, indeterminate forms, infinite series and conics.

AA/AS GE, CSU, CSU GE, IGETC, UC

281 INTERMEDIATE CALCULUS 4 UNITS

Prerequisite: "C" grade or higher or "Pass" in MATH 280 or equivalent.

Corequisite: None

Recommended Preparation: None

4 hours lecture

Sequel to MATH 280. Includes vectors in two and three dimensions, partial differentiation, iterated integration, line and surface integrals, application of Green's and Stokes' theorems, work with cylindrical and spherical coordinates, and an introduction to linear algebra.

AA/AS GE, CSU, CSU GE, IGETC, UC

284 LINEAR ALGEBRA**3 UNITS**

Prerequisite: "C" grade or higher or "Pass" in MATH 280 or equivalent.

Corequisite: None

Recommended Preparation: None

3 hours lecture

Topics include: matrix algebra, Gaussian Elimination, systems of equations, determinants, Euclidean and general vector spaces, linear transformations, orthogonality and inner product spaces, bases of vector spaces, the change of

basis theorem, eigenvalues and eigenvectors, the rank and nullity of matrices and linear transformations. Designed for transfer students planning to major in mathematics, physics, engineering, computer science, operational research, economics or other sciences.

AA/AS GE, CSU, CSU GE, IGETC, UC

285 DIFFERENTIAL EQUATIONS 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in MATH 280 or equivalent.

Corequisite: None

Recommended Preparation: None

3 hours lecture

Includes first order differential equations, initial boundary value problems, the Cauchy-Euler equation, series solutions, Laplace transformations, Fourier Series, and separation of variables for elementary partial differential equations. Applications of these topics will be explored.

CSU, CSU GE, IGETC, UC

298 SELECTED TOPICS IN MATHEMATICS 1-6 UNITS

Prerequisite: Varies with topic

Corequisite: Varies with topic

Recommended Preparation: Varies with topic

1-18 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format. **Pass/No Pass only. Non-degree applicable.**

299 SELECTED TOPICS IN MATHEMATICS 1-6 UNITS

Prerequisite: Varies with topic

Corequisite: Varies with topic

Recommended Preparation: Varies with topic

1-18 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format.

CSU

MUSIC

001 MUSIC FUNDAMENTALS 4 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

4 hours lecture

Basic elements of music. Notation, major and minor keys, intervals, triads and 7th chords with inversions. Musical terms and analysis of chord structures. Keyboard application.

CSU

090-091 PREPARATORY PERFORMANCE STUDIES 1 UNIT

Prerequisite: None

Corequisite: None

Recommended Preparation: None

1 hour lecture

Preparation for audition into MUS 190. Designed to enhance the musical progress of students who are currently receiving the equivalent of fifteen one-half hour lessons per semester of individual vocal or instrumental instruction. **Pass/No Pass only. Non-degree applicable.**

104 INTRODUCTION TO THE MUSIC INDUSTRY 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

3 hours lecture

Survey of the music industry with an emphasis on individual career options, roles and responsibilities. Includes interaction with

industry components and relationships between business personnel and the music artist.

CSU

105 MUSIC THEORY AND PRACTICE I 4 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

4 hours lecture, 2 hours laboratory

Introduction to music theory and ear-training. Study of harmonic concepts of the 18th and 19th centuries. Rhythmic and melodic ear-training. Keyboard application and sight singing.

CSU, UC

106 MUSIC THEORY AND PRACTICE II 4 UNITS

Prerequisite: "C" grade or higher or "Pass" in MUS 105 or equivalent.

Corequisite: None

Recommended Preparation: None

4 hours lecture, 2 hours laboratory

Continuation of MUS 105. Four-part writing, 7th chords, cadences and non-chord tones. Rhythmic and melodic dictation and harmonic ear-training. Sight singing. Analysis of Bach chorales and binary and ternary forms.

CSU, UC

107A AREA STUDIES IN AFRICAN MUSIC 2 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

1 hour lecture, 2 hours laboratory

Study of rudimentary playing technique and the broad cultural context of African music.

CSU, UC

107B AREA STUDIES IN SUNDANESE GAMELAN MUSIC 2 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

1 hour lecture, 2 hours laboratory

Study of rudimentary playing technique and the broad cultural context of Sundanese gamelan music.

CSU, UC

107C AREA STUDIES IN LATIN AMERICAN MUSIC 2 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

1 hour lecture, 2 hours laboratory

Study of rudimentary playing technique and the broad cultural context of Latin American music.

CSU, UC

108-109-208-209 ROCK, POP AND SOUL ENSEMBLE 1 UNIT

Prerequisite: Audition

Corequisite: None

Recommended Preparation: None

2.5 hours lecture, 2.5 hours laboratory

Study and performance of representative popular music compositions from the second half of the 20th century with an emphasis on rock, rhythm and blues, and pop music. Open to instrumentalists and singers.

CSU, UC

110 GREAT MUSIC LISTENING 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

3 hours lecture

Listening and reading survey course to acquaint students with fundamental elements of musical style. Covers repertoire from a variety of cultures and periods with primary emphasis on the Western concert tradition.

AA/AS GE, CSU, CSU GE, IGETC, UC

111 HISTORY OF JAZZ 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

3 hours lecture

Listening and reading survey course covering the history of jazz from its origins to the present. Includes style periods, significant artists, the broad cultural context of jazz, and the development of critical listening skills.

AA/AS GE, CSU, CSU GE, IGETC, UC

114 MUSIC IN THE UNITED STATES 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

3 hours lecture

Music in the United States from pre-Colonial times to the present. Coverage includes the music of Native Americans, the Colonies, the 1800s, distinctive regions and subcultures, jazz, art music, popular music styles, and nonwestern influences.

AA/AS GE, CSU, CSU GE, IGETC, UC

115 HISTORY OF ROCK MUSIC 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

3 hours lecture

Overview of rock and rock-related musical styles from the early 1950s to the present. Coverage includes related social and cultural trends, outstanding artists, the influence of technology on popular music, and relevant trends in the music industry. Basic musical concepts such as pitch, rhythm and form will be introduced and applied to the music under consideration.

AA/AS GE, CSU, CSU GE, IGETC, UC

116 INTRODUCTION TO WORLD MUSIC 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

3 hours lecture

Designed to expand the student's perspective about the nature of music around the world and demonstrate the relationship between music in different cultures. Highlights elements common to all music. May include music of the cultures of India, China, Japan, Indonesia, Africa, Pacific Islands, the Middle East, Europe, and the Americas.

AA/AS GE, CSU, CSU GE, IGETC, UC

117 INTRODUCTION TO MUSIC HISTORY AND LITERATURE 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in MUS 001 or equivalent.

Corequisite: None

Recommended Preparation: None

3 hours lecture

Survey of art music in Western civilization from the ancient period to the present. Musical styles will be studied within the context of concurrent developments in society, politics and other arts.

AA/AS GE, CSU, CSU GE, IGETC, UC

118 INTRODUCTION TO MUSIC 4 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

4 hours lecture

Study of basic music theory including notation, rhythms, and sight-singing. Introduction to basic rhythm instruments and development of keyboard facility and vocal skill. Designed for preschool/elementary education majors and non-music majors.

CSU, UC

**119 COOPERATIVE WORK EXPERIENCE
IN MUSIC EDUCATION 1-4 UNITS**

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 5 hours paid or 4 hours unpaid work experience per week per unit
 Practical application of principles and procedures learned in the classroom to the various phases of music education. Work experience will be paid or unpaid at local middle or high school music programs. Placement assistance will be provided. Two on-campus sessions will be scheduled. *May be taken for a maximum of 12 units.*
 CSU

**120 INTRODUCTION TO MUSIC
TECHNOLOGY 3 UNITS**

Prerequisite: None
 Corequisite: None
 Recommended Preparation: "C" grade or higher or "Pass" in MUS 001 or equivalent.
 2 hours lecture, 3 hours laboratory
 Introduction to the basic concepts and processes for editing digital audio and using the digital synthesizer and personal computer to perform, notate and record music. Students should have basic computer skills, basic piano or keyboard skills, and be able to read music.
 CSU

**121-122-221-222 MUSIC INDUSTRY
SEMINAR 1 UNIT**

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 3 hours laboratory
 In this project-based class, students will develop and create promotional materials for a local musical artist or groups, and will collaborate to produce concerts of popular music. The course content combines work in recording, print, and electronic media as well as concert production.
 CSU

126 CLASS GUITAR I 2 UNITS

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 2 hours lecture
 Beginning course in guitar for non-music majors. Fundamentals of music as related to the guitar including scales, chords, and reading staff notation.
 CSU, UC

127 CLASS GUITAR II 2 UNITS

Prerequisite: "C" grade or higher or "Pass" in MUS 126 or equivalent.
 Corequisite: None
 Recommended Preparation: None
 2 hours lecture
 Guitar for non-music majors. Continuation of MUS 126 with an emphasis on reading staff notation in closed positions, playing scales and chords in major and minor keys, and developing both left and right hand technique.
 CSU, UC

**130A-131A-230A-231A WORLD MUSIC
ENSEMBLE: AFRICAN PERCUSSION 1 UNIT**

Prerequisite: "C" grade or higher or "Pass" in MUS 107A or equivalent.
 Corequisite: None
 Recommended Preparation: None
 2.5 hours lecture, 2.5 hours laboratory
 Study of different African percussion traditions at regular rehearsals and public performances.
 CSU, UC

**130B-131B-230B-231B WORLD MUSIC
ENSEMBLE: SUNDANESE GAMELAN 1 UNIT**

Prerequisite: "C" grade or higher or "Pass" in MUS 107B or equivalent.
 Corequisite: None
 Recommended Preparation: None
 2.5 hours lecture, 2.5 hours laboratory
 Study of Sundanese gamelan compositions at regular rehearsals and public performances.
 CSU, UC

**130C-131C-230C-231C WORLD MUSIC
ENSEMBLE: LATIN AMERICAN MUSIC 1 UNIT**

Prerequisite: "C" grade or higher or "Pass" in MUS 107C or equivalent.
 Corequisite: None
 Recommended Preparation: None
 2.5 hours lecture, 2.5 hours laboratory
 Study of different Latin American music genres at regular rehearsals and public performances.
 CSU, UC

132 CLASS PIANO I 3 UNITS

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 3 hours lecture
 Note reading in treble and bass clefs. Major and minor key signatures. Scales, arpeggios and primary triads in major and minor keys. Transposition, improvisation and harmonization. Development of sight reading ability, two-handed coordination, correct fingering techniques, and proper use of weight and relaxation in production of tone.
 CSU, UC

133 CLASS PIANO II 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in MUS 132 or equivalent.
 Corequisite: None
 Recommended Preparation: None
 3 hours lecture
 Continuation of MUS 132. Scales in minor keys. Scales with hands together. Music literature performed in major and minor keys. Harmonization and sight reading in major and minor keys. Piano pieces in binary form with mixed texture including parallel, contrary and oblique motion.
 CSU, UC

136-137-236-237 CHAMBER SINGERS 1 UNIT

Prerequisite: Audition
 Corequisite: None
 Recommended Preparation: None
 2.5 hours lecture, 2.5 hours laboratory
 Study of standard and contemporary choral literature (classics to jazz) for small choral ensemble. Includes performances on campus and in local schools and communities. Open to all singers in the community and students of the college.
 CSU, UC

152-153-252-253 CONCERT BAND 1 UNIT

Prerequisite: Audition
 Corequisite: None
 Recommended Preparation: None
 2.5 hours lecture, 2.5 hours laboratory
 Study of representative concert band compositions in a wide variety of styles at regular rehearsals and public performances.
 CSU, UC

156-157-256-257 JAZZ ENSEMBLE 1 UNIT

Prerequisite: Audition
 Corequisite: None
 Recommended Preparation: None
 2.5 hours lecture, 2.5 hours laboratory
 Study of representative jazz ensemble compositions in a wide variety of styles at regular rehearsals and public performances.
 CSU, UC

158-159-258-259 CHORUS 1 UNIT

Prerequisite: Audition
 Corequisite: None
 Recommended Preparation: None
 2.5 hours lecture, 2.5 hours laboratory
 Study and performance of standard and contemporary choral literature for choral ensemble. Open to all singers in the community and students of the college.
 CSU, UC

**161 COOPERATIVE WORK EXPERIENCE
IN MUSIC INDUSTRY 1-4 UNITS**

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 5 hours paid or 4 hours unpaid work experience per week per unit
 Practical application of principles and procedures learned in the classroom to the various phases of the music industry. Work experience will be paid or unpaid at local businesses that are part of the music industry such as recording studios, booking agencies, and music equipment manufacturers/retailers. Placement assistance will be provided. Two on-campus sessions will be scheduled. *May be taken for a maximum of 12 units.*
 CSU

170-171-270-271 CLASS VOICE 2 UNITS

Prerequisite: None
 Corequisite: None
 Recommended Preparation: Ability to read music
 2 hours lecture
 Designed to help the student learn to use the voice correctly. Principles of vocal placement, posture, balance, breath control and vocal tone are emphasized through individual performances.
 CSU, UC

**184 DIGITAL AUDIO RECORDING
AND PRODUCTION 3 UNITS**

Prerequisite: None
 Corequisite: None
 Recommended Preparation: "C" grade or higher or "Pass" in MUS 120 or equivalent.
 2 hours lecture, 3 hours laboratory
 In-depth presentation of digital audio recording, editing and processing. Students will learn techniques for in-studio and live recording and will record and edit new musical recordings. Students should have a basic understanding of digital audio vocabulary and basic experience with using a computer to make/record music.
 CSU

**190-191-290-291 PERFORMANCE
STUDIES 1 UNIT**

Prerequisite: Audition
 Corequisite: None
 Recommended Preparation: None
 1 hour lecture
 Primarily for music majors. Designed to enhance the musical progress of students who are currently receiving the equivalent of fifteen one-half hour lessons per semester of individual vocal or instrumental instruction. In-depth study of performances and techniques. Participation in class performances and student recitals is required.
 CSU

**199 SPECIAL STUDIES OR
PROJECTS IN MUSIC 1-3 UNITS**

Prerequisite: Consent of instructor
 3-9 hours
 Individual study, research or projects under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. *May be taken for a maximum of 9 units.*

205 MUSIC THEORY AND PRACTICE III 4 UNITS

Prerequisite: "C" grade or higher or "Pass" in MUS 106 or equivalent.
 Corequisite: None
 Recommended Preparation: None
 4 hours lecture, 2 hours laboratory
 Continuation of MUS 106. Chromatic harmony of the 18th and 19th centuries including secondary dominants, borrowed chords and altered chords. Rhythmic, melodic and harmonic dictation. Sight singing. Analysis of Bach chorales. Form analysis of Sonata-form, Minuet/Scherzo, Rondo, and Theme and Variations.
CSU, UC

206 MUSIC THEORY AND PRACTICE IV 4 UNITS

Prerequisite: "C" grade or higher or "Pass" in MUS 205 or equivalent.
 Corequisite: None
 Recommended Preparation: None
 4 hours lecture, 2 hours laboratory
 Continuation of MUS 205. Harmony of the Post-Romantic and 20th century styles. Expanded tonality. Use of church modes, pentatonic, synthetic and dodecaphonic scales. Parallelism, pandiatonicism, twelve-tone technique, aleatory music and electronic music. Study of the 18th century two-part counterpoint. Ear-training and sight singing.
CSU, UC

226 CLASS GUITAR III 2 UNITS

Prerequisite: "C" grade or higher or "Pass" in MUS 127 or equivalent.
 Corequisite: None
 Recommended Preparation: None
 2 hours lecture
 Guitar for non-music majors. Continuation of MUS 127 with an emphasis on high position reading, introductory chord and scale alterations, and technical development.
CSU, UC

227 CLASS GUITAR IV 2 UNITS

Prerequisite: "C" grade or higher or "Pass" in MUS 226 or equivalent.
 Corequisite: None
 Recommended Preparation: None
 2 hours lecture
 Guitar for non-music majors. Continuation of MUS 226 with an emphasis on playing solos and accompaniments in various styles and idioms.
CSU, UC

232 CLASS PIANO III 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in MUS 133 or equivalent.
 Corequisite: None
 Recommended Preparation: None
 3 hours lecture
 Continuation of MUS 133. Multiple octave performance of major and minor scales. Authentic and plagal cadences. Reading of four-part chorales. Ensemble playing and accompaniment. Intermediate piano pieces in ternary form.
CSU, UC

233 CLASS PIANO IV 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in MUS 232 or equivalent.
 Corequisite: None
 Recommended Preparation: None
 3 hours lecture
 Continuation of MUS 232. Keyboard harmony and deceptive cadence. Reading an open score. Ensemble playing and accompaniment. Piano literature from the 18th through the 20th centuries.
CSU, UC

298 SELECTED TOPICS IN MUSIC 1-4 UNITS

Prerequisite: Varies with topic
 Corequisite: Varies with topic
 Recommended Preparation: Varies with topic
 1-12 hours
 Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format. **Pass/No Pass only. Non-degree applicable.**

299 SELECTED TOPICS IN MUSIC 1-4 UNITS

Prerequisite: Varies with topic
 Corequisite: Varies with topic
 Recommended Preparation: Varies with topic
 1-12 hours
 Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format.
CSU

NATIVE AMERICAN LANGUAGES

120 KUMEYAAY I 5 UNITS

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 5 hours lecture
 Introduction to the Kumeyaay language and the culture of its speakers. Facilitates the practical application of the language in everyday oral and written communication at the beginning novice level. Since the focus is on basic communication skills, the class will be conducted in Kumeyaay as much as possible. While becoming familiar with the Kumeyaay speaking world, students will learn structures that will enable them to function in Kumeyaay in everyday contexts.
AA/AS GE, CSU, CSU GE, IGETC, UC

121 KUMEYAAY II 5 UNITS

Prerequisite: "C" grade or higher or "Pass" in NAKY 120 or equivalent.
 Corequisite: None
 Recommended Preparation: None
 5 hours lecture
 Continuation of NAKY 120. Students will continue to develop oral and written skills based on practical everyday needs.
AA/AS GE, CSU, CSU GE, IGETC, UC

199 SPECIAL STUDIES OR PROJECTS IN NATIVE AMERICAN LANGUAGES 1-3 UNITS

Prerequisite: Consent of instructor
 3-9 hours
 Individual study, research or projects under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. *May be taken for a maximum of 9 units.*

220 KUMEYAAY III 5 UNITS

Prerequisite: "C" grade or higher or "Pass" in NAKY 121 or equivalent.
 Corequisite: None
 Recommended Preparation: None
 5 hours lecture
 Continuation of NAKY 121. Students will develop increasingly advanced oral, listening, reading and writing skills in the Kumeyaay language.
AA/AS GE, CSU, CSU GE, IGETC, UC

221 KUMEYAAY IV 5 UNITS

Prerequisite: "C" grade or higher or "Pass" in NAKY 220 or equivalent.
 Corequisite: None
 Recommended Preparation: None
 5 hours lecture
 Continuation of NAKY 220. Students will develop advanced oral, listening, reading and writing skills and proficiency in Kumeyaay.
AA/AS GE, CSU, CSU GE, IGETC, UC

298 SELECTED TOPICS IN NATIVE AMERICAN LANGUAGES 1-5 UNITS

Prerequisite: Varies with topic
 Corequisite: Varies with topic
 Recommended Preparation: Varies with topic
 1-15 hours
 Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format. **Pass/No Pass only. Non-degree applicable.**

299 SELECTED TOPICS IN NATIVE AMERICAN LANGUAGES 1-5 UNITS

Prerequisite: Varies with topic
 Corequisite: Varies with topic
 Recommended Preparation: Varies with topic
 1-15 hours
 Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format.
CSU

OCEANOGRAPHY

112 INTRODUCTION TO OCEANOGRAPHY 3 UNITS

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 3 hours lecture
 Physical science course which examines major aspects of the marine environment. Topics include the origin of the oceans, plate tectonics, seafloor features, seawater properties, ocean climate, currents, waves, tides, coastal landforms, marine ecology, pollution, and resources. The history and development of oceanography and the present and future importance of the oceans are also discussed.
AA/AS GE, CSU, CSU GE, IGETC, UC

113 OCEANOGRAPHY LABORATORY 1 UNIT

Prerequisite: "C" grade or higher or "Pass" in OCEA 112 or equivalent or concurrent enrollment.
 Corequisite: None
 Recommended Preparation: None
 3 hours laboratory
 Hands-on oceanographic laboratory experience to accompany and augment OCEA 112. Includes laboratory and field investigations of the marine environment emphasizing the geological, chemical, physical and biological aspects of the ocean.
AA/AS GE, CSU, CSU GE, IGETC, UC

199 SPECIAL STUDIES OR PROJECTS IN OCEANOGRAPHY 1-3 UNITS

Prerequisite: Consent of instructor
 3-9 hours
 Individual study, research or projects under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. *May be taken for a maximum of 9 units.*

**298 SELECTED TOPICS
IN OCEANOGRAPHY****1-3 UNITS**

Prerequisite: Varies with topic
 Corequisite: Varies with topic
 Recommended Preparation: Varies with topic
 1-9 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format. **Pass/No Pass only. Non-degree applicable.**

**299 SELECTED TOPICS
IN OCEANOGRAPHY****1-3 UNITS**

Prerequisite: Varies with topic
 Corequisite: Varies with topic
 Recommended Preparation: Varies with topic
 1-9 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format.

CSU

**ORNAMENTAL
HORTICULTURE****102 XERISCAPE: WATER CONSERVATION
IN THE LANDSCAPE****2 UNITS**

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 2 hours lecture

Water management principles and practices as they apply to the landscape. Topics include plant selection, landscape design principles for water conservation, irrigation system selection and management, soil preparation and management, and current topics and issues of California and United States water conservation efforts.

CSU

114 FLORAL DESIGN I**3 UNITS**

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 2 hours lecture, 3 hours laboratory

Theory and practice of basic geometric floral design, identification of flowers and foliage, and practical skills necessary for employment in the floral industry. Fresh, silk and dried flowers will be used.

CSU

116 FLORAL DESIGN II**3 UNITS**

Prerequisite: "C" grade or higher or "Pass" in OH 114 or equivalent.
 Corequisite: None
 Recommended Preparation: None
 2 hours lecture, 3 hours laboratory

Theory and practice of parallel, vegetative, new wave and contemporary line designs for parties, holidays and special occasions, primarily using fresh flowers. Includes silks, dried flowers, foliage and unique props for creating floral designs.

CSU

117 WEDDING DESIGN I**3 UNITS**

Prerequisite: "C" grade or higher or "Pass" in OH 114 or equivalent.
 Corequisite: None
 Recommended Preparation: None
 2 hours lecture, 3 hours laboratory

Theory and practice of numerous styles of wedding bouquets and corsages including church and reception floral designs. Emphasis is on the skills, mechanics and speed necessary in the floral industry.

CSU

**118 SPECIAL OCCASION
FLORAL DESIGN****3 UNITS**

Prerequisite: "C" grade or higher or "Pass" in OH 114 or equivalent or one year high school floral design or trade experience.
 Corequisite: None

Recommended Preparation: None
 2 hours lecture, 3 hours laboratory
 Learn to create unique floral arrangements used for parties, weddings, funerals and gala events. Arrangements will focus on the use of unusual and exotic flowers, containers and special mechanical props.

CSU

119 WEDDING DESIGN II**3 UNITS**

Prerequisite: "C" grade or higher or "Pass" in OH 117 or equivalent.
 Corequisite: None

Recommended Preparation: None
 2 hours lecture, 3 hours laboratory
 Theory and practice of designs used for weddings including bouquets for brides and attendants, corsages, church decorations, and reception decorations primarily using fresh flowers.

CSU

**120 FUNDAMENTALS OF
ORNAMENTAL HORTICULTURE****3 UNITS**

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 2 hours lecture, 3 hours laboratory

Study of plant structure and function. Topics include basic principles of soil science and fertilizer requirements, and the growth of plants in regard to the environmental factors of water, light and temperature. The lab provides an overview of various skills needed in all fields of ornamental horticulture including pruning, basic equipment operation, fertilizer application, and general nursery skills.

CSU

121 PLANT PROPAGATION**3 UNITS**

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 2 hours lecture, 3 hours laboratory

Principles of plant propagation from seed, cutting, budding, grafting, layering, division and tissue culture. Greenhouses, cold frames, mist chambers and other propagating structures will be discussed along with stock selection, use of rooting hormones, proper sanitation procedures, and protection of young seedlings from disease. Lab exercises include propagation of plant material by various methods as well as working with various structures, tools and equipment common to plant propagation.

CSU

130 PLANT PEST CONTROL**3 UNITS**

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 2 hours lecture, 3 hours laboratory

Identification and control of insects, mites, spiders, snails, weeds and diseases that affect ornamental plants. Emphasis is on morphological and phylogenetic relationships, habits, habitats and important characteristics affecting the health of ornamental plants. Control methods will stress integrated pest management.

CSU

140 SOILS**3 UNITS**

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 2 hours lecture, 3 hours laboratory

Study of soil formation, characteristics, and classification with an emphasis on the management of various soil types with regard to

pH, salinity, texture, organic matter control and other variables. The lab will include investigation of soil conditions, problems and management solutions common to soils in Southern California.
 CSU, UC

**170 PLANT MATERIALS: TREES
AND SHRUBS****3 UNITS**

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 3 hours lecture

Identification, cultural requirements, and landscape uses of ornamental trees and shrubs common to the California landscape.

CSU, UC

171 LANDSCAPE DRAFTING**1 UNIT**

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 .5 hour lecture, 1.5 hours laboratory

Introduction to basic drafting practices used in landscape design. Includes topography drawings, concept plans, construction drawings, and construction and installation details. Upon completion, students should be able to complete a set of working drawings for a residential landscape.

CSU, UC

**172 INTRODUCTION TO
LANDSCAPE DESIGN****3 UNITS**

Prerequisite: None
 Corequisite: None
 Recommended Preparation: "C" grade or higher or "Pass" in OH 171 or equivalent.
 2 hours lecture, 3 hours laboratory

Principles of landscape design for residential projects with an emphasis on residential landscape design and the creation of usable, pleasant outdoor spaces. Focuses on size and placement of plants, walks, patios and other structures in the residential landscape. The lab emphasizes practice in the design and drafting of actual landscape projects.

CSU, UC

**173 INTERMEDIATE
LANDSCAPE DESIGN****3 UNITS**

Prerequisite: "C" grade or higher or "Pass" in OH 172 or equivalent.
 Corequisite: None
 Recommended Preparation: None
 2 hours lecture, 3 hours laboratory

Landscape design course covering advanced site analysis, use relationships, outside furniture and structures, color presentations, and client/designer relationships as they relate to estate, greenbelt and advanced planting designs.

CSU, UC

**174 TURF AND GROUND
COVER MANAGEMENT****3 UNITS**

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 2 hours lecture, 3 hours laboratory

Building, care and maintenance of turf grasses and ground covers in parks and landscaping. Includes soil preparation, planting, fertilizing, maintenance of common and special turf grasses and ground covers, and particular pest and disease problems and their control.

CSU

**175 ADVANCED LANDSCAPE
DESIGN****3 UNITS**

Prerequisite: "C" grade or higher or "Pass" in OH 173 or equivalent.
 Corequisite: None
 Recommended Preparation: None
 2 hours lecture, 3 hours laboratory

Advanced development, design and presentation of residential landscape projects incorporating slope analysis, codes and

ordinances, client or institutional requirements, detail sheets, sections and cost estimates. Client presentation of concept, lighting and planting plans will utilize sketches, demonstration boards and digital presentation techniques.

CSU

**180 PLANT MATERIALS:
ANNUALS AND PERENNIALS 3 UNITS**

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture

Identification, cultural requirements, and landscape value of common annuals and perennials used as bedding plants, annual color, and in the commercial floral industry.

CSU

**199 SPECIAL STUDIES OR PROJECTS
IN ORNAMENTAL HORTICULTURE 1-3 UNITS**

Prerequisite: Consent of instructor
3-9 hours

Individual study, research or projects under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. *May be taken for a maximum of 9 units.*

**200 INTRODUCTION TO COMPUTER-AIDED
LANDSCAPE DESIGN 3 UNITS**

Prerequisite: None
Corequisite: None
Recommended Preparation: None
2 hours lecture, 3 hours laboratory

Introduction to computer-aided landscape design using AutoCAD software. Creation of site plans, landscape plans, sprinkler plans, contour maps and landscape estimates. Elevation and perspective drawings are also created. *Also listed as CADD 200. Not open to students with credit in CADD 200.*

CSU

**201 ADVANCED COMPUTER-AIDED
LANDSCAPE DESIGN 3 UNITS**

Prerequisite: "C" grade or higher or "Pass" in "CADD/OH 200 or equivalent.
Corequisite: None
Recommended Preparation: None
2 hours lecture, 3 hours laboratory

Use of computer-aided landscape design software for the application of graphics, symbols, patterns, layouts, text and scales for the development of design drawings, concept plans, construction documents, and cost estimates for residential landscape projects. *Also listed as CADD 201. Not open to students with credit in CADD 201.*

CSU

**220 LANDSCAPE CONSTRUCTION:
CONCRETE AND MASONRY 3 UNITS**

Prerequisite: None
Corequisite: None
Recommended Preparation: None
2 hour lecture, 3 hours laboratory

Study of landscape construction methods and materials. Topics include: landscape contract law; concrete flat work including stamped concrete; brick, block and stone masonry; and proper design and construction of retaining and free standing walls. Grading and installation of plant material will also be covered.

CSU

**221 LANDSCAPE CONSTRUCTION:
IRRIGATION AND CARPENTRY 3 UNITS**

Prerequisite: None
Corequisite: None
Recommended Preparation: None
2 hours lecture, 3 hours laboratory

Study of landscape construction methods and materials. Topics include irrigation and drainage

plan reading, materials and components, installation, and construction. Installation and troubleshooting of control valves and control clocks will be covered. Includes basic materials and methods for construction of decks, overhead structures, wooden fences and gates. Covers code and design requirements for irrigation, drainage and landscape structures.

CSU

**222 JAPANESE GARDEN CONSTRUCTION
AND MAINTENANCE 1 UNIT**

Prerequisite: None
Corequisite: None
Recommended Preparation: None
.5 hour lecture, 1.5 hours laboratory

Introduction to Japanese garden concepts and techniques. Includes the professional practices required for construction and sustainable maintenance. Concepts and techniques of Japanese gardens will cover Sakuteiki, the oldest garden design book written in the 11th century. Koi pond and waterfall construction, Zen stone garden (dry landscape garden), bamboo fences, water-basin, traditional pruning, and other basic construction and maintenance techniques will be covered.

225 LANDSCAPE CONTRACTING 3 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture

Study of the practices in applying standard techniques in landscape construction and estimating for landscape trades. Reviews the rules, regulations and licensing laws governing landscape contractors set forth by the State of California. Includes an exploration of the field of landscape contracting and business practices associated with the landscape industry.

CSU

**235 PRINCIPLES OF LANDSCAPE
IRRIGATION 4 UNITS**

Prerequisite: None
Corequisite: None
Recommended Preparation: None
4 hours lecture

Principles of hydraulics as applied to landscape irrigation systems, including static and dynamic pressures, pipe flows and velocities, pipe sizing, water hammer, pump selection and use. Introduction to system components including valves, backflow prevention devices, controllers and pumps and pipe.

CSU

238 IRRIGATION SYSTEM DESIGN 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in OH 235 or equivalent or concurrent enrollment.
Corequisite: None

Recommended Preparation: None
2 hours lecture, 3 hours laboratory

Introduction to basic design and technical skills required to produce professional irrigation system designs. Building on the knowledge acquired in OH 235, students will design complete spray and low-volume systems, calculate hydraulic parameters and schedules, prepare details and specifications, practice presentation skills, analyze working designs, learn head spacing and pipeline layout, and specify equipment using manufacturers' catalogs. A design studio environment is used (including team building and mentoring exercises) to prepare students for entry-level employment in the irrigation design field.

CSU

**240 GREENHOUSE PLANT
PRODUCTION 3 UNITS**

Prerequisite: None
Corequisite: None
Recommended Preparation: None
2 hours lecture, 3 hours laboratory

Study of greenhouse plant production with an emphasis on the scheduling of greenhouse crops common to Southern California. Topics include equipment, structures, environmental control, estimation of crop production requirements, and production and sales of common greenhouse crops.

CSU

**250 LANDSCAPE WATER
MANAGEMENT 2 UNITS**

Prerequisite: None
Corequisite: None
Recommended Preparation: None
1 hour lecture, 3 hours laboratory

Water management principles and practices for urban landscapes including water audit methods and certification, irrigation scheduling, water budgets, water use monitoring, and laws and regulations pertaining to urban landscape irrigation and runoff.

CSU

**255 SUSTAINABLE URBAN LANDSCAPE
PRINCIPLES AND PRACTICES 2 UNITS**

Prerequisite: None
Corequisite: None
Recommended Preparation: "C" grade or higher or "Pass" in OH 120 or equivalent.
2 hours lecture

Principles and practices of sustainable landscape design, construction and maintenance. Students will study ways in which urban landscapes in Southern California can become more sustainable by incorporating water conservation, storm water runoff, landscapes for fire prone areas, material reuse, recycling and repurchase, along with other principles of sustainability. Includes the use of technology, materials and methods that enhance the urban landscape with minimal input of labor and materials while reducing negative environmental impacts.

CSU

260 ARBORICULTURE 3 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
2 hours lecture, 3 hours laboratory

Intensive course in the preservation and care of woody plants from seedling to removal. Theory of tree growth, form, fertilization, irrigation, pruning and integrated pest management. Practical application of safety equipment, rope and saddle, climbing spurs, cabling, bracing, pruning and removal of trees.

CSU

**261 TREE SURGERY AND SPECIALIZED
PRUNING TECHNIQUES 1 UNIT**

Prerequisite: None
Corequisite: None
Recommended Preparation: None
1 hour lecture, .5 hour laboratory

Explores the concepts and procedures of specific pruning techniques for various ornamental and fruit trees to influence flowers, fruit and growth. Response to pruning is predictable and can be a management tool. Cabling, bracing, cavity repair, injury from failure treatments, crown cleaning versus crown thinning, and topping alternatives like crown reduction and restoration. Includes practical application of pruning theories and principles.

CSU

262 ARBORICULTURE: PALMS AND RELATED PLANTS**1 UNIT**

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 1 hour lecture, .5 hour laboratory
 Study of the physiology of palms and other monocots, identification traits, and appropriate uses of common species. Requirements for proper growing conditions and pruning will be examined to improve cultural management and assist with the diagnosis and treatment of common biotic and abiotic disorders.

CSU

263 URBAN FORESTRY**1 UNIT**

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 1 hour lecture, .5 hour laboratory
 Introduction to the theory and practice of conducting detailed tree inventories, management of public trees, tree evaluation for hazard assessment and risk reduction programs, legal aspects of trees, and appraisal of value methods for trees. Includes site evaluation, benefits of tree volunteer organizations, priority action plans, and emergency response plans.

CSU

265 GOLF COURSE AND SPORTS TURF MANAGEMENT**3 UNITS**

Prerequisite: "C" grade or higher or "Pass" in OH 174 or equivalent or concurrent enrollment.
 Corequisite: None
 Recommended Preparation: None
 2 hours lecture, 3 hours laboratory
 Advanced study in the specialization of golf course and athletic field management. Includes specialized turf management techniques, specialized equipment, budget development, scheduling requirements, and administrative considerations.

CSU

275 DIAGNOSING HORTICULTURAL PROBLEMS**1.5 UNITS**

Prerequisite: None
 Corequisite: None
 Recommended Preparation: "C" grade or higher or "Pass" in OH 120, 130 or equivalent.
 1 hour lecture, 1.5 hours laboratory
 Explores methods for positive identification and understanding of symptoms for accurate diagnosis of plant problems in the landscape and nursery. Biotic and abiotic causal agents including cultural influences, nutrient deficiencies and toxicities, pest and disease problems, soil salinity, aeration, drainage and irrigation problems will be discussed. Control and correction of disorders will be determined through an understanding of the organism or function involved.

CSU

276 HORTICULTURAL EQUIPMENT REPAIR AND MAINTENANCE**3 UNITS**

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 2 hours lecture, 3 hours laboratory
 General maintenance and specific repair procedures for common horticultural equipment including troubleshooting, tune-up, and proper preventive maintenance programs for small and medium two- and four-cycle engines. The lab includes work on mowers, trenchers, trimmers, tractors, spray rigs and other equipment.

CSU

278 BUSINESS MANAGEMENT FOR ORNAMENTAL HORTICULTURE**3 UNITS**

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 3 hours lecture
 Principles and practices for the small business owner in the landscape, nursery, floral design, arboriculture or irrigation industries. Focuses on the aspects of business management that are unique to the green industry. Topics will include marketing, bidding, taxes and regulations, personnel and customer relations.

CSU

283 CROSS CONNECTION CONTROL SHUTDOWN TEST PROCEDURES**1 UNIT**

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 1 hour lecture
 This course is designed to train students in the legal and practical aspects of performing a cross connection shutdown test for sites using recycled water. Helps prepare students for certification for work with recycled water on landscape sites.

CSU

290 COOPERATIVE WORK EXPERIENCE EDUCATION**1-4 UNITS**

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 5 hours paid or 4 hours unpaid work experience per week per unit
 Practical application of principles and procedures learned in the classroom to the various phases of horticulture. Work experience will be paid or unpaid at local nurseries and landscape-related companies. Placement assistance will be provided. Two on-campus sessions will be scheduled. *May be taken for a maximum of 12 units.*

CSU

298 SELECTED TOPICS IN ORNAMENTAL HORTICULTURE**1-4 UNITS**

Prerequisite: Varies with topic
 Corequisite: Varies with topic
 Recommended Preparation: Varies with topic
 1-12 hours
 Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format. **Pass/No Pass only. Non-degree applicable.**

299 SELECTED TOPICS IN ORNAMENTAL HORTICULTURE**1-4 UNITS**

Prerequisite: Varies with topic
 Corequisite: Varies with topic
 Recommended Preparation: Varies with topic
 1-12 hours
 Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format.

CSU

PARALEGAL STUDIES**100 INTRODUCTION TO PARALEGAL STUDIES****3 UNITS**

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 3 hours lecture
 This course provides a historical perspective of the law and the profession of paralegal. The main focus is the role of the paralegal in the law office including client contact, ethical responsibilities, investigative fact finding, law office management, and legal restrictions. Students will be introduced to legal research and writing, substantive and procedural law, the court systems, and legal terminology.

CSU

110 CIVIL LITIGATION PRACTICE AND PROCEDURES**3 UNITS**

Prerequisite: "C" grade or higher or "Pass" in PARA 100 or equivalent.
 Corequisite: None
 Recommended Preparation: None
 3 hours lecture
 The initial phase of an action, the issues of jurisdiction, the complaint and the discovery process will be examined. Court procedures, "Fast Track" and alternatives to litigation such as arbitration and mediation will be discussed. The basic elements of a tort claim will be reviewed as well as the Federal and State Rules of Evidence. Emphasis is placed on the paralegal's role and ethical and professional responsibilities in discovery procedures and trial practice.

CSU

120 ADMINISTRATIVE LAW**3 UNITS**

Prerequisite: "C" grade or higher or "Pass" in PARA 100 or equivalent.
 Corequisite: None
 Recommended Preparation: None
 3 hours lecture
 Statutory law, case law, and administrative rules will be utilized to develop an understanding of the role and authority of administrative agencies. Particular attention will be paid to social security and worker's compensation claims.

CSU

125 BUSINESS ORGANIZATIONS**1 UNIT**

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 1 hour lecture
 Fundamentals of the formation of business entities such as sole proprietorships, partnerships, limited liability companies and corporations are included. Emphasis will be on formation, maintenance, taxation, termination of business entities, and the ethical constraints on paralegals.

CSU

130 LEGAL RESEARCH AND WRITING**3 UNITS**

Prerequisite: "C" grade or higher or "Pass" in PARA 100 or equivalent.
 Corequisite: None
 Recommended Preparation: "C" grade or higher or "Pass" in ENGL 110 or equivalent.
 3 hours lecture
 Includes in-depth legal research, writing research reports and subject matter reports on legal issues, case briefings and citations utilizing the uniform system of citation ("Blue Book") and other citators.

CSU

132 COMPUTER ASSISTED LEGAL RESEARCH (CALR) 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in PARA 100 or equivalent.
Corequisite: None
Recommended Preparation: None
3 hours lecture

The study of computer software programs designed specifically for use in law offices and legal environments, including but not limited to specific applications such as calendaring, and time and billing programs. The course focuses on legal research using electronic sources.

CSU

135 BANKRUPTCY LAW 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in PARA 100 or equivalent.
Corequisite: None
Recommended Preparation: None
3 hours lecture

The United States Federal Bankruptcy Code (as amended) will be the foundation of this examination of bankruptcy law and practice. Students will be exposed to the jurisdictional and filing requirements for bankruptcy cases under Chapters 7, 11 and 13 of the Bankruptcy Code, and will learn pertinent rules of federal procedure associated with bankruptcy case filings. The focus will be on "consumer" Chapters 7 and 13.

CSU

140 CRIMINAL LAW AND PROCEDURES 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in PARA 100 or equivalent.
Corequisite: None
Recommended Preparation: None
3 hours lecture

The California Criminal Code and Rules of Criminal Procedure will be the foundation of this examination of the pre-trial and post-trial procedures in a criminal case. Students will be exposed to the criminal justice system from the elements of offenses through post-conviction remedies. The drafting of motions and other documents associated with criminal matters will be included.

CSU

145 ESTATE PLANNING 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in PARA 100 or equivalent.
Corequisite: None
Recommended Preparation: None
3 hours lecture

Overview of the subject of planning an owner's estate including a review of the customary means of accomplishing estate planning objectives including wills, trusts, taxation, asset protection, and gift-giving programs.

CSU

150 FAMILY LAW 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in PARA 100 or equivalent.
Corequisite: None
Recommended Preparation: None
3 hours lecture

Domestic relations matters such as marriage, divorce, dissolution, child custody and support, visitation and adoptions are included. The law regulating such matters and the drafting of appropriate documents will be emphasized.

CSU

160 PERSONAL INJURY 1 UNIT

Prerequisite: "C" grade or higher or "Pass" in PARA 100 or equivalent.
Corequisite: None
Recommended Preparation: None
1 hour lecture

Study of the essentials of tort actions with an emphasis on personal injury and other forms of negligence. Special attention will be given to

the elements of a cause of action in negligence. Theories of recovery, defenses, case handling, witness interviewing, working with insurance carriers, and evidence requirements under current California law will be reviewed. Students will review the particular ethical constraints on personal injury paralegals.

CSU

170 WORKERS' COMPENSATION 1 UNIT

Prerequisite: "C" grade or higher or "Pass" in PARA 100 or equivalent.
Corequisite: None
Recommended Preparation: None
1 hour lecture

Overview of California's Workers' Compensation statutes, including the concept of no-fault insurance and the administration of contested compensation claims for death, disability, and vocational rehabilitation. Students will compute awards based upon current benefit formulae.

CSU

199 SPECIAL STUDIES OR PROJECTS IN PARALEGAL STUDIES 1-3 UNITS

Prerequisite: Consent of instructor
3-9 hours

Individual study, research or projects under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. *May be taken for a maximum of 9 units.*

250 INTERNSHIP 1-4 UNITS

Prerequisite: "C" grade or higher or "Pass" in PARA 100 or equivalent.
Corequisite: None
Recommended Preparation: None
5 hours paid or 4 hours unpaid work experience per week per unit

Practical work experience in a cooperating law office or corporate legal department. *May be taken for a maximum of 9 units.*

CSU

298 SELECTED TOPICS IN PARALEGAL STUDIES 1-4 UNITS

Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-12 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format. **Pass/No Pass only. Non-degree applicable.**

299 SELECTED TOPICS IN PARALEGAL STUDIES 1-4 UNITS

Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-12 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format.

CSU

PERSONAL DEVELOPMENT—COUNSELING

See Counseling

PERSONAL DEVELOPMENT—SPECIAL SERVICES

080 EDUCATIONAL ASSESSMENT AND PRESCRIPTIVE PLANNING .5 UNIT

Prerequisite: None
Corequisite: None
Recommended Preparation: None
.5 hour lecture

Designed to assess, identify and interpret learning strengths and weaknesses to determine eligibility for learning disability services according to the guidelines established by the California Community Colleges Chancellor's Office. An orientation to the Learning Disabilities Program will be provided as well as prescriptive planning. A pre- and post-conference will be held with a Disabled Students Programs and Services (DSPS) Specialist. **Pass/No Pass only. Non-degree applicable.**

081 SELF-ADVOCACY FOR STUDENTS WITH DISABILITIES 1 UNIT

Prerequisite: None
Corequisite: None
Recommended Preparation: None
1 hour lecture

Designed for students who want to learn more about self advocacy. Involves prescriptive instruction emphasizing personal empowerment, support systems, understanding one's strengths, and legal and ethical issues including awareness of disabilities. *May be taken for a maximum of 4 units. Pass/No Pass only. Non-degree applicable.*

085 ADAPTED COMPUTER BASICS 1 UNIT

Prerequisite: None
Corequisite: None
Recommended Preparation: "C" grade or higher or "Pass" in ENGL 098R or equivalent.
.5 hour lecture, 1.5 hours laboratory

Individualized course of study for students with verifiable disabilities. Designed to acquaint students with basic assistive technology and techniques that may improve their ability to succeed in mainstream college-level courses and vocational programs. *May be taken for a maximum of 4 units. Pass/No Pass only. Non-degree applicable.*

087 ADAPTED COMPUTER STUDIES 1 UNIT

Prerequisite: None
Corequisite: None
Recommended Preparation: None
1 hour lecture, 1 hour laboratory

Individualized course of study for students with verifiable disabilities. Provides in-depth, individualized instruction in assistive technology and techniques to maximize independent use of assistive and mainstream computer hardware/software to improve students' ability to succeed in mainstream college-level courses and vocational programs. *May be taken for a maximum of 4 units. Pass/No Pass only. Non-degree applicable.*

090ABCD LEARNING STRATEGIES PRACTICUM 1 UNIT

Prerequisite: None
Corequisite: None
Recommended Preparation: None
1 hour lecture

This course is designed for students with specialized learning needs. Emphasis is on the development and implementation of specific learning strategies in a developmental learning environment utilizing specialized software programs to assist students' academic performance. **Pass/No Pass only. Non-degree applicable.**

096 COGNITIVE COMMUNICATION SKILLS AND STRATEGIES 1 UNIT

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 1 hour lecture

Students with cognitive communication deficits will receive specialized instruction in attention, concentration, thought organization, memory strategies, social pragmatics skills, organization and time management skills, and maximizing related communication skills. Emphasizes the development of skills and functional compensatory strategies to enhance disabled students' opportunities for academic success. *May be taken for a maximum of 4 units.* **Pass/No Pass only. Non-degree applicable.**

199 SPECIAL STUDIES OR PROJECTS IN PERSONAL DEVELOPMENT-SPECIAL SERVICES 1-3 UNITS

Prerequisite: Consent of instructor
 3-9 hours

Individual study, research or projects under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. *May be taken for a maximum of 9 units.*

298 SELECTED TOPICS IN PERSONAL DEVELOPMENT-SPECIAL SERVICES 1-3 UNITS

Prerequisite: Varies with topic
 Corequisite: Varies with topic
 Recommended Preparation: Varies with topic
 1-9 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format. **Pass/No Pass only. Non-degree applicable.**

299 SELECTED TOPICS IN PERSONAL DEVELOPMENT-SPECIAL SERVICES 1-3 UNITS

Prerequisite: Varies with topic
 Corequisite: Varies with topic
 Recommended Preparation: Varies with topic
 1-9 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format.

PHILOSOPHY

110 A GENERAL INTRODUCTION TO PHILOSOPHY 3 UNITS

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 3 hours lecture

In this basic orientation, students will explore, compare, analyze, evaluate and discuss a variety of principle questions addressed in philosophy, such as: What is the purpose of my existence? Can I know anything with certainty? Do I really have a free will? Can we prove that God exists? Why should I be moral? Whose self-interest counts?, etc. Issues covered will encompass relevant philosophical perspectives from Western and other major world cultures, and include contributions of women and minority cultures to the realm of philosophy.

AA/AS GE, CSU, CSU GE, IGETC, UC

115 HISTORY OF PHILOSOPHY I: ANCIENT AND MEDIEVAL 3 UNITS

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 3 hours lecture

Survey of ancient philosophy with emphasis on the development of philosophy from the Pre-Socratics through Aristotle, Hellenistic, Roman and medieval thinkers.

AA/AS GE, CSU, CSU GE, IGETC, UC

117 HISTORY OF PHILOSOPHY II: MODERN AND CONTEMPORARY 3 UNITS

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 3 hours lecture

Survey of philosophy from the Renaissance to the 20th century including the development of modern scientific processes as well as empiricism, rationalism, idealism, etc.

AA/AS GE, CSU, CSU GE, IGETC, UC

125 CRITICAL THINKING 3 UNITS

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 3 hours lecture

Introduction to critical thinking with an emphasis on analyzing and constructing both inductive and deductive arguments. Critical reasoning will be applied to a variety of situations such as making sound decisions, evaluating claims and assertions, avoiding fallacious reasoning, etc.

AA/AS GE, CSU, CSU GE, UC

130 LOGIC 3 UNITS

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 3 hours lecture

Study of correct thinking comprising both deductive and inductive inference and principles of scientific method. Application of fundamental principles of logic to practical problems.

AA/AS GE, CSU, CSU GE, UC

140 PROBLEMS IN ETHICS 3 UNITS

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 3 hours lecture

Study of values as they affect the individual and society. Conduct as expressed by ethical standards and natural law, problems and theories of beauty and value.

AA/AS GE, CSU, CSU GE, IGETC, UC

160 AMERICAN PHILOSOPHY 3 UNITS

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 3 hours lecture

Study of the main traditions of American philosophical thought with an emphasis on the philosophers, their works, and systems of philosophy peculiar to the United States. Includes American philosophy from the earliest time to the present.

AA/AS GE, CSU, CSU GE, IGETC, UC

170 PHILOSOPHY OF RELIGION: A CROSS-CULTURAL INTRODUCTION 3 UNITS

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 3 hours lecture

In this introductory course, students will explore cross-cultural perspectives on topics such as the nature and grounds of religious belief, the relation between religion and ethics, the nature and existence of God/ultimate reality, the problem of evil, the validity of religious

experience, and religious pluralism versus religious exclusivism. The examination of issues will take into account the diversity of religious thought evident in the world today.

AA/AS GE, CSU, CSU GE, IGETC, UC

199 SPECIAL STUDIES OR PROJECTS IN PHILOSOPHY 1-3 UNITS

Prerequisite: Consent of instructor
 3-9 hours

Individual study, research or projects under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. *May be taken for a maximum of 9 units.*

298 SELECTED TOPICS IN PHILOSOPHY 1-3 UNITS

Prerequisite: Varies with topic
 Corequisite: Varies with topic
 Recommended Preparation: Varies with topic
 1-9 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format. **Pass/No Pass only. Non-degree applicable.**

299 SELECTED TOPICS IN PHILOSOPHY 1-3 UNITS

Prerequisite: Varies with topic
 Corequisite: Varies with topic
 Recommended Preparation: Varies with topic
 1-9 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format.

CSU

PHYSICAL SCIENCE

110 INTRODUCTION TO THE PHYSICAL SCIENCES 3 UNITS

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 3 hours lecture

This course provides a broad approach to the physical sciences designed primarily for students not majoring in science. Main concepts of astronomy, physics, chemistry and earth sciences will be developed and discussed. Emphasis is on understanding certain fundamental principles and their relationships and not on mathematical problem solving. The applicability of some of these concepts to contemporary problems (e.g., nuclear energy, environmental problems) will be covered. Within this context, the methods and limitations of science will be demonstrated and the implications of science for society in the past, present and future will be discussed.

CSU, CSU GE, IGETC, UC credit limit

111 INTRODUCTION TO PHYSICAL SCIENCES LABORATORY 1 UNIT

Prerequisite: "C" grade or higher or "Pass" in PSC 110 or equivalent or concurrent enrollment.
 Corequisite: None
 Recommended Preparation: None
 3 hours laboratory

Laboratory exercises concerning physics, chemistry, geology and astronomy. Emphasis is on discovery, measurement and observation.

CSU, CSU GE, IGETC, UC

**199 SPECIAL STUDIES OR PROJECTS
IN PHYSICAL SCIENCE 1-3 UNITS**

Prerequisite: Consent of instructor
3-9 hours

Individual study, research or projects under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. *May be taken for a maximum of 9 units.*

**298 SELECTED TOPICS IN
PHYSICAL SCIENCE 1-3 UNITS**

Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format. **Pass/No Pass only. Non-degree applicable.**

**299 SELECTED TOPICS IN
PHYSICAL SCIENCE 1-3 UNITS**

Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format.

CSU

PHYSICS

110 INTRODUCTORY PHYSICS 4 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture, 3 hours laboratory

Simple treatment of basic physics principles and phenomena with an emphasis on relating them to events and processes of everyday living. Study of the description and cause of various kinds of motion, conservation laws, hot and cold bodies with heat exchange, sound in music and hearing, light and color perception, electricity and some of its practical uses, observation of atomic particles from radiation sources, and other subjects. There is no math prerequisite; the main emphasis is on understanding the concepts rather than doing many mathematical manipulations.

AA/AS GE, CSU, CSU GE, IGETC, UC credit limit

120 GENERAL PHYSICS 4 UNITS

Prerequisite: "C" grade or higher or "Pass" in MATH 170 or equivalent.
Corequisite: None
Recommended Preparation: None
3 hours lecture, 3 hours laboratory

Problem solving as well as a philosophical approach to physical phenomena such as force, linear and rotational motion and energy, simple harmonic motion and wave behavior, heat and thermodynamics. Laboratory experience is an integral part of this course. *Not appropriate for students whose majors require PHYC 190.*

AA/AS GE, CSU, CSU GE, IGETC, UC credit limit

121 GENERAL PHYSICS 4 UNITS

Prerequisite: "C" grade or higher or "Pass" in PHYC 120 or equivalent.
Corequisite: None
Recommended Preparation: None
3 hours lecture, 3 hours laboratory

Continuation of general physics involving the study of electricity, magnetism, light and optical

instruments, quantum behavior, atomic and nuclear physics, and radioactivity.

AA/AS GE, CSU, CSU GE, IGETC, UC credit limit

130 FUNDAMENTALS OF PHYSICS 4 UNITS

Prerequisite: "C" grade or higher or "Pass" or concurrent enrollment in MATH 178 or 180 or equivalent.

Corequisite: None
Recommended Preparation: None
3 hours lecture, 3 hours laboratory
Calculus-based problem solving as well as a philosophical approach to physical phenomena such as force, linear and rotational motion and energy, simple harmonic motion and wave behavior, heat and thermodynamics. Laboratory experience is an integral part of this course.

AA/AS GE, CSU, CSU GE, IGETC, UC credit limit

131 FUNDAMENTALS OF PHYSICS 4 UNITS

Prerequisite: "C" grade or higher or "Pass" in PHYC 130 or equivalent.

Corequisite: None
Recommended Preparation: None
3 hours lecture, 3 hours laboratory
Calculus-based problem solving as well as a philosophical approach to physical phenomena such as electricity, magnetism, optics and modern physics. Laboratory experience is an integral part of this course.

AA/AS GE, CSU, CSU GE, IGETC, UC credit limit

190 MECHANICS AND HEAT 5 UNITS

Prerequisite: "C" grade or higher or "Pass" in MATH 180 or equivalent or concurrent enrollment.

Corequisite: None
Recommended Preparation: None
4 hours lecture, 3 hours laboratory
Deals with linear and rotational kinematics and dynamics, equilibrium, work, energy, momentum, gravitation, simple harmonic motion, thermal properties of matter and thermodynamics.

AA/AS GE, CSU, CSU GE, IGETC, UC credit limit

**199 SPECIAL STUDIES OR
PROJECTS IN PHYSICS 1-3 UNITS**

Prerequisite: Consent of instructor
3-9 hours

Individual study, research or projects under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. *May be taken for a maximum of 9 units.*

200 ELECTRICITY AND MAGNETISM 5 UNITS

Prerequisite: "C" grade or higher or "Pass" in PHYC 190 or equivalent and credit for or concurrent enrollment in MATH 280 or equivalent.

Corequisite: None
Recommended Preparation: None
4 hours lecture, 3 hours laboratory
Deals with the electric and magnetic behavior of matter. The primary emphasis is on Maxwell's Equations and their applications.

AA/AS GE, CSU, CSU GE, IGETC, UC credit limit

**210 WAVE MOTION AND
MODERN PHYSICS 5 UNITS**

Prerequisite: "C" grade or higher or "Pass" in PHYC 190 or equivalent and credit for or concurrent enrollment in MATH 281 or equivalent.

Corequisite: None
Recommended Preparation: None
4 hours lecture, 3 hours laboratory
Deals with hydrostatics, hydrodynamics, wave behavior, geometric and physical optics, relativity, light as a particle, matter as a wave, the hydrogen atom and the Schrodinger Equation, electrical conductivity of solids, lasers and nuclear physics.

AA/AS GE, CSU, CSU GE, IGETC, UC credit limit

**298 SELECTED TOPICS
IN PHYSICS 1-5 UNITS**

Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-15 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format. **Pass/No Pass only. Non-degree applicable.**

**299 SELECTED TOPICS
IN PHYSICS 1-5 UNITS**

Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-15 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format.

CSU

POLITICAL SCIENCE

**120 INTRODUCTION TO POLITICS
AND POLITICAL ANALYSIS 3 UNITS**

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture

The primary aim of this course is to assist the student/citizen in the development of a set of skills which can be helpful in analyzing political situations in the world today. In order to accomplish this objective, students will be introduced to the basic approaches, perspectives, techniques and models of the political scientist. Accordingly, this course covers some universal aspects of political stability and change, ideologies, conflicts, institutions, political economy and issues.

AA/AS GE, CSU, CSU GE, IGETC, UC

**121* INTRODUCTION TO U.S.
GOVERNMENT AND POLITICS 3 UNITS**

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture

Analysis of the evolution of the structures and functions of the U.S. and California political systems from the time of the nation's founding to the current day in what is now the United States. Emphasis is on the continuity and uniqueness of the American political experience and how that experience has derived from other political cultures. This will be examined in the context of the larger cultural, economic, and sociological forces shaping the U.S. political system. Attention will be given to significant events affecting the evolution of the U.S. political system since its founding. The development and evolution of the U.S. Constitution and policy making role of traditional political institutions such as the presidency, the Congress, and the judiciary will be explored. The impact of other political forces such as mass movements, the media, the bureaucracy, interest groups, and ethnic and social groups will be examined. Topics will be illustrated through reference to actual political events occurring as the course progresses.

AA/AS GE, CSU, CSU GE, IGETC, UC

124 INTRODUCTION TO COMPARATIVE GOVERNMENT AND POLITICS 3 UNITS

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 3 hours lecture

Analysis of the political systems of selected developed, transitional and developing countries of the world in order to understand the importance of political development, political institutions, political culture, political actors, political processes, and political change for the dynamics of today's global society.
 AA/AS GE, CSU, CSU GE, IGETC, UC

130 INTRODUCTION TO INTERNATIONAL RELATIONS 3 UNITS

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 3 hours lecture

Survey of the field of international relations. Students will be introduced to the major theories of international relations and will learn to apply them to contemporary problems in world politics. Issues examined include global peace and security, international political economy, international law and organization, sustainable development, and human rights.
 AA/AS GE, CSU, CSU GE, IGETC, UC

140* INTRODUCTION TO CALIFORNIA GOVERNMENTS AND POLITICS 3 UNITS

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 3 hours lecture

Examination of the structure and functions of California state and local governments and politics. Attention will be given to the evolution of the principal features, organization, and operation of state and local governments within the framework of U.S. federalism from the time of the nation's founding. Emphasis is on the role of significant events, major ethnic groups, and major social groups in the development of the political structures and processes of California state and local governments and contemporary political issues.
 AA/AS GE, CSU, CSU GE

199 SPECIAL STUDIES OR PROJECTS IN POLITICAL SCIENCE 1-3 UNITS

Prerequisite: Consent of instructor
 3-9 hours

Individual study, research or projects under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. *May be taken for a maximum of 9 units.*

298 SELECTED TOPICS IN POLITICAL SCIENCE 1-3 UNITS

Prerequisite: Varies with topic
 Corequisite: Varies with topic
 Recommended Preparation: Varies with topic
 1-9 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format. **Pass/No Pass only. Non-degree applicable.**

299 SELECTED TOPICS IN POLITICAL SCIENCE 1-3 UNITS

Prerequisite: Varies with topic
 Corequisite: Varies with topic
 Recommended Preparation: Varies with topic
 1-9 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and

faculty. Offered in a lecture and/or laboratory format.

CSU

*Meets part of the American Institutions requirement. See CSU General Education Breadth under Degree Requirements & Transfer Information for complete requirements and different options, or visit www.assist.org.

PSYCHOLOGY**120 INTRODUCTORY PSYCHOLOGY 3 UNITS**

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 3 hours lecture

Introduction to the facts and theories which seek to explain and understand human thought and behavior including such topics as personality, psychotherapy, learning, memory, interpersonal relationships, adjustment and biological influences.
 AA/AS GE, CSU, CSU GE, IGETC, UC

125 CROSS-CULTURAL PSYCHOLOGY 3 UNITS

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 3 hours lecture

Introduction to theories and research findings regarding cultural influences on human behavior and cognitive processes (lifespan development, abnormal behavior and mental health, drug use, self-concept, emotion, gender schemas and gender roles, social behavior, perception, learning, intelligence and memory). By providing students with a non-judgmental understanding of how culture influences human behavior, they will be more equipped to interact in a world where there is increasing contact among different cultures.
 AA/AS GE, CSU, CSU GE, IGETC, UC

134 HUMAN SEXUALITY 3 UNITS

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 3 hours lecture

Review of the biological, psychological and social aspects of human sexuality including sexuality throughout the lifespan, individual and cultural variations, homosexuality, communication and relationships, sex therapy, sex roles, morality, contraception, and sexually transmitted diseases (STDs).
 AA/AS GE, CSU, CSU GE, IGETC, UC

138 SOCIAL PSYCHOLOGY 3 UNITS

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 3 hours lecture

Examination of the individual's perception of and reaction to other people and social influences. Topics such as attitude formation, prejudice and discrimination, helping behavior, aggression, conformity, obedience, cooperation and conflict reduction, and group behavior are explored.
 AA/AS GE, CSU, CSU GE, IGETC, UC

140 PHYSIOLOGICAL PSYCHOLOGY 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in PSY 120 or equivalent.
 Corequisite: None
 Recommended Preparation: None
 3 hours lecture

Examination of the relationships between bodily processes and aspects of behavior. Review of fundamental research methods and major research findings in physiological psychology.

Application of experimental methods in psychology, physiology and related disciplines to the understanding of perceptual processes, the control of movement, sleep and waking, reproductive behaviors, ingestive behaviors, emotion, learning, language and mental disorders are explored.
 AA/AS GE, CSU, CSU GE, IGETC, UC

165 DEVELOPMENTAL PSYCHOLOGY 3 UNITS

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 3 hours lecture

Overview of psychological research and theory involving the lifespan approach to human behavior and cognition. Explores the biological, emotional, social and cognitive development from infancy through childhood, adolescence and adulthood. Topics include influences of drugs and disease on prenatal development, child-rearing methods, temperaments and personality, childhood disorders, development of language and thinking, gender roles, friendship, family and relationships, parenting and aging.
 AA/AS GE, CSU, CSU GE, IGETC, UC

170 ABNORMAL PSYCHOLOGY 3 UNITS

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 3 hours lecture

Overview of psychological research and theory involving the causes and treatment of abnormal behavior. The major disorders include anxiety disorders (such as phobias, panic attacks, obsessive-compulsive), mood disorders (such as depression and bipolar), schizophrenic disorders, and personality disorders. Also includes child/adolescence disorders (such as ADHD and eating disorders), substance abuse, mental retardation, sexual disorders, and the effects of stress on the body.
 AA/AS GE, CSU, CSU GE, IGETC, UC

199 SPECIAL STUDIES OR PROJECTS IN PSYCHOLOGY 1-3 UNITS

Prerequisite: Consent of instructor
 3-9 hours

Individual study, research or projects under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. *May be taken for a maximum of 9 units.*

205 RESEARCH METHODS FOR PSYCHOLOGY 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in PSY 120, 215 or equivalent
 Corequisite: None
 Recommended Preparation: None
 3 hours lecture

Introduction to scientific methodology in psychology. Emphasis is placed on descriptive, experimental, and applied research. Students will learn the American Psychological Association writing style for empirical report writing. This course is intended for psychology majors and behavioral science students interested in the processes of research.
 CSU, UC

215 STATISTICS FOR THE BEHAVIORAL SCIENCES 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in MATH 103 or 110 or equivalent.
 Corequisite: None
 Recommended Preparation: None
 2 hours lecture, 3 hours laboratory

Methods and experience in defining and solving quantitative problems in the behavioral sciences. Emphasis is on the design of experiments and the application of a variety of

parametric and nonparametric techniques to the analysis of data.

AA/AS GE, CSU, CSU GE, IGETC, UC credit limit

220 LEARNING 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in PSY 120 or equivalent.

Corequisite: None

Recommended Preparation: None

3 hours lecture

Examination of the basic principles and research in animal and human learning.

AA/AS GE, CSU, CSU GE, IGETC, UC

298 SELECTED TOPICS IN PSYCHOLOGY 1-3 UNITS

Prerequisite: Varies with topic

Corequisite: Varies with topic

Recommended Preparation: Varies with topic

1-9 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format. **Pass/No Pass only. Non-degree applicable.**

299 SELECTED TOPICS IN PSYCHOLOGY 1-3 UNITS

Prerequisite: Varies with topic

Corequisite: Varies with topic

Recommended Preparation: Varies with topic

1-9 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format.

CSU

REAL ESTATE

125 ESCROW PROCEDURES I 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

3 hours lecture

Methods and techniques of escrow procedures for real estate transactions and legal and ethical responsibilities. Topics include types of escrows, document preparation, terminology, phraseology, title and escrow procedures, adjustment of taxes, rents and charges.

CSU

126 ESCROW PROCEDURES II 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

3 hours lecture

Study of exchanges, loans, escrow sales of trust, deeds and notes, consummation of land contracts and leasehold escrows.

CSU

127 ESCROW PROCEDURES III 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

3 hours lecture

Escrows relating to condominiums, shopping centers, subdivided land, bulk sales, liquor licenses and other miscellaneous escrow transactions. Actual case problems are presented for evaluation and discussion including compliance with conditions, agency relationships, wrongful delivery, conditional deposits, liability and assignments.

CSU

190 REAL ESTATE PRINCIPLES 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

3 hours lecture

Fundamental real estate course covering the basic laws and principles of California real estate. Provides understanding, background and terminology necessary for advanced study in specialized courses. Of assistance to those preparing for the real estate license examinations.

CSU

191 REAL ESTATE PRACTICE 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

3 hours lecture

Day-to-day operation in real estate roles and brokerage including listing, prospecting, advertising, financing, sales techniques, escrow and ethics.

CSU

192 REAL ESTATE FINANCE 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

3 hours lecture

Analysis of real estate financing including lending policies and problems in financing transactions in residential, apartment, commercial and special purpose properties. Methods of financing properties are emphasized.

CSU

193 REAL ESTATE LEGAL ASPECTS 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

3 hours lecture

Study of the law governing real property, its sale, lease or other conveyance. Instruments utilized in conveyance or lease of such property will be examined and drafted.

CSU

194 REAL ESTATE APPRAISAL 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

3 hours lecture

Introductory course covering the purposes of appraisals, the appraisal process, and the different approaches, methods and techniques used to determine the value of various types of property. Emphasis is on residential and single-unit property.

CSU

197 REAL ESTATE ECONOMICS 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

3 hours lecture

Study of economic factors which determine the market and location of real property investments.

CSU

199 SPECIAL STUDIES OR PROJECTS IN REAL ESTATE 1-3 UNITS

Prerequisite: Consent of instructor

3-9 hours

Individual study, research or projects under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. *May be taken for a maximum of 9 units.*

201 REAL ESTATE PROPERTY MANAGEMENT 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

3 hours lecture

Study of property management and problem areas associated with operating income-producing property.

CSU

204 REAL ESTATE OFFICE ADMINISTRATION 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

3 hours lecture

Study of administration, supervision and management of a real estate brokerage office.

CSU

250 REAL ESTATE INTERNSHIP 1-4 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

75 hours paid or 60 hours unpaid work experience per unit

Practical work experience in the real estate industry. *May be taken for a maximum of 12 units.*

CSU

292 MORTGAGE LOAN BROKERING AND LENDING 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

3 hours lecture

Study of the practices and procedures involved in advanced real estate finance including secondary money market sources, federal loan qualification requirements, and special problems in current residential and commercial real estate financing.

CSU

294 ADVANCED REAL ESTATE APPRAISAL 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

3 hours lecture

Study of the practices and procedures involved in advanced real estate appraising including the analysis of income and commercial properties.

CSU

298 SELECTED TOPICS IN REAL ESTATE 1-4 UNITS

Prerequisite: Varies with topic

Corequisite: Varies with topic

Recommended Preparation: Varies with topic

1-12 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format. **Pass/No Pass only. Non-degree applicable.**

299 SELECTED TOPICS IN REAL ESTATE 1-4 UNITS

Prerequisite: Varies with topic

Corequisite: Varies with topic

Recommended Preparation: Varies with topic

1-12 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format.

CSU

RELIGIOUS STUDIES

120 WORLD RELIGIONS 3 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture

Introduction to the teachings, major figures, attitudes and practices of world religions.

AA/AS GE, CSU, CSU GE, IGETC, UC

130 SCRIPTURES OF WORLD RELIGIONS 3 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture

Study of religions based on scriptures selected from Eastern and Western religions.

AA/AS GE, CSU, CSU GE, IGETC, UC

199 SPECIAL STUDIES OR PROJECTS IN RELIGIOUS STUDIES 1-3 UNITS

Prerequisite: Consent of instructor
3-9 hours

Individual study, research or projects under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. *May be taken for a maximum of 9 units.*

210 INTRODUCTION TO THE HEBREW SCRIPTURES 3 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture

Introductory survey of the contents, themes, literary genres, canons, historical background, and modern critical methods for analysis and interpretation of the Hebrew scriptures.

AA/AS GE, CSU, CSU GE, IGETC, UC

215 INTRODUCTION TO THE NEW TESTAMENT 3 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture

Introduction to the history and culture of the New Testament period, the methods of critical analysis of Biblical materials, and the content of the New Testament.

AA/AS GE, CSU, CSU GE, IGETC, UC

298 SELECTED TOPICS IN RELIGIOUS STUDIES 1-3 UNITS

Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format. **Pass/No Pass only. Non-degree applicable.**

299 SELECTED TOPICS IN RELIGIOUS STUDIES 1-3 UNITS

Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format.

CSU

SOCIAL WORK

110 SOCIAL WORK FIELDS OF SERVICE 3 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture

A generalist perspective that introduces students to the profession of social work and the major fields of practice. Explores the relevance of social work to current social issues. Students will identify and understand the implications of social work practice with diverse populations. This includes, but may not be limited to, the impact of cultural diversity, racism, sexism, disabilities, ageism, homophobia and other forms of discrimination, and the need for and provision of basic human services. Strategies for fulfilling the professional responsibility of the social worker to create an equitable society will be identified and developed.

CSU

120 INTRODUCTION TO SOCIAL WORK 3 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture

Students will use a social problems approach to describe how poverty, child abuse, substance abuse, health and mental health issues, sexism, racism, other forms of discrimination, crime and other social issues affect people. Provides a framework for analyzing policy issues and for making informed civic decisions on social issues. Students are asked to volunteer at a social service/community service agency to observe and report on how social workers attempt to assess and address social problems.

CSU

199 SPECIAL STUDIES OR PROJECTS IN SOCIAL WORK 1-3 UNITS

Prerequisite: Consent of instructor
3-9 hours

Individual study, research or projects under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. *May be taken for a maximum of 9 units.*

298 SELECTED TOPICS IN SOCIAL WORK 1-3 UNITS

Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format. **Pass/No Pass only. Non-degree applicable.**

299 SELECTED TOPICS IN SOCIAL WORK 1-3 UNITS

Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format.

CSU

SOCIOLOGY

120 INTRODUCTORY SOCIOLOGY 3 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture

Study of the nature of social life, the dynamics of human interaction, symbolic foundation of behavior, social organization and control, social change, and the tools of sociological investigation.

AA/AS GE, CSU, CSU GE, IGETC, UC

125 MARRIAGE, FAMILY AND ALTERNATIVE LIFESTYLES 3 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture

Survey of American courtship, marriage and family behavior with primary emphasis on understanding factors conducive to successful marital and family relationships. Some consideration is given to historical background, minority family types and cross-cultural comparisons.

AA/AS GE, CSU, CSU GE, IGETC, UC

130 CONTEMPORARY SOCIAL PROBLEMS 3 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture

Identification and analysis of contemporary American social problems. Criteria are established whereby students can better judge the effectiveness of various plans for social betterment.

AA/AS GE, CSU, CSU GE, IGETC, UC

199 SPECIAL STUDIES OR PROJECTS IN SOCIOLOGY 1-3 UNITS

Prerequisite: Consent of instructor
3-9 hours

Individual study, research or projects under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. *May be taken for a maximum of 9 units.*

298 SELECTED TOPICS IN SOCIOLOGY 1-3 UNITS

Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format. **Pass/No Pass only. Non-degree applicable.**

299 SELECTED TOPICS IN SOCIOLOGY 1-3 UNITS

Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-9 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format.

CSU

SPANISH

120 SPANISH I 5 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
5 hours lecture

Introduction to the Spanish language and the cultures of its speakers. Designed for students with very little or no knowledge of Spanish. Facilitates the practical application of the language in everyday oral and written communication at the beginning level. Since the focus will be on basic communication skills, the class will be conducted in Spanish as much as possible. Students will learn structures that will enable them to function in Spanish in everyday contexts while becoming familiar with the Spanish speaking world.

AA/AS GE, CSU, CSU GE, IGETC, UC

120A SPANISH I 2.5 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
2.5 hours lecture

Equivalent to the first half of SPAN 120. Allows more time for students who have not studied the Spanish language. Introduction to the Spanish language and the cultures of its speakers. Facilitates the practical application of the language in everyday oral and written communication at the introductory beginning novice level. Since the focus will be on basic communication skills, the class will be conducted in Spanish as much as possible. While becoming familiar with the Spanish speaking world, students will be introduced to structures that will enable them to begin to function in Spanish in everyday contexts. *Must be taken with SPAN 120B in order to meet the General Education requirement. If taken in conjunction with SPAN 120, the cumulative number of units which may be earned is 5 units.*

AA/AS GE, CSU, CSU GE, UC credit limit

120B SPANISH I 2.5 UNITS

Prerequisite: "C" grade or higher or "Pass" in SPAN 120A or equivalent.
Corequisite: None
Recommended Preparation: None
2.5 hours lecture

Equivalent to the second half of SPAN 120; continuation of SPAN 120A. Continues to introduce the Spanish language and the cultures of its speakers. Continues to facilitate the practical application of the language in everyday oral and written communication at the beginning novice level. Since the focus will be on basic communication skills, the class will be conducted in Spanish as much as possible. While becoming familiar with the Spanish speaking world, students will continue to acquire structures that will enable them to function in Spanish in everyday situations. *Must be taken with SPAN 120A in order to meet the General Education requirement. If taken in conjunction with SPAN 120, the cumulative number of units which may be earned is 5 units.*

AA/AS GE, CSU, CSU GE, UC credit limit

121 SPANISH II 5 UNITS

Prerequisite: "C" grade or higher or "Pass" in SPAN 120 or two years of high school Spanish or equivalent.
Corequisite: None
Recommended Preparation: None
5 hours lecture

Continuation of SPAN 120. Continues to develop oral and written skills based on practical everyday needs.

AA/AS GE, CSU, CSU GE, IGETC, UC

135 SPANISH FOR PROFESSIONAL PERSONNEL I 3 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture

Practical essentials of conversing in Spanish for persons engaged in some professional fields such as health or business. **Pass/No Pass only.**
CSU

141 SPANISH AND LATIN AMERICAN CULTURES 3 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture

Survey of the major characteristics of Spanish, Latin American and Chicano cultures as reflected in literature, the arts, philosophy and folklore.

AA/AS GE, CSU, CSU GE, IGETC, UC

145 HISPANIC CIVILIZATIONS 3 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None
3 hours lecture

General overview of the cultures of Spain and Latin America while directly providing an opportunity to explore the cultural richness of the Hispanic world through a particular country. May be offered as an on-site tour of a specific Hispanic country.

AA/AS GE, CSU, CSU GE, UC

199 SPECIAL STUDIES OR PROJECTS IN SPANISH 1-3 UNITS

Prerequisite: Consent of instructor
3-9 hours

Individual study, research or projects under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. *May be taken for a maximum of 9 units.*

220 SPANISH III 5 UNITS

Prerequisite: "C" grade or higher or "Pass" in SPAN 121 or three years of high school Spanish or equivalent.
Corequisite: None
Recommended Preparation: None
5 hours lecture

Continuation of SPAN 121. Continues to develop oral, listening, reading and writing skills in order to acquire proficiency in Spanish.

AA/AS GE, CSU, CSU GE, IGETC, UC

221 SPANISH IV 5 UNITS

Prerequisite: "C" grade or higher or "Pass" in SPAN 220 or four years of high school Spanish or equivalent.
Corequisite: None
Recommended Preparation: None
5 hours lecture

Continuation of SPAN 220. Continues to develop oral, listening, reading and writing skills in order to improve proficiency in Spanish.

AA/AS GE, CSU, CSU GE, IGETC, UC

250 CONVERSATIONAL SPANISH I 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in SPAN 121 or three years of high school Spanish or equivalent.
Corequisite: None
Recommended Preparation: None
3 hours lecture

Develop oral, reading, writing and listening skills with an emphasis on oral proficiency.

AA/AS GE, CSU, CSU GE, UC

251 CONVERSATIONAL SPANISH II 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in SPAN 250 or four years of high school Spanish or equivalent.

Corequisite: None
Recommended Preparation: None
3 hours lecture

Continues to develop oral, reading, writing and listening skills with an emphasis on oral proficiency.

AA/AS GE, CSU, CSU GE, UC

298 SELECTED TOPICS IN SPANISH 1-5 UNITS

Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-15 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format. **Pass/No Pass only. Non-degree applicable.**

299 SELECTED TOPICS IN SPANISH 1-5 UNITS

Prerequisite: Varies with topic
Corequisite: Varies with topic
Recommended Preparation: Varies with topic
1-15 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format.

CSU

SURVEYING

199 SPECIAL STUDIES OR PROJECTS IN SURVEYING 1-3 UNITS

Prerequisite: Consent of instructor
3-9 hours

Individual study, research or projects under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. *May be taken for a maximum of 9 units.*

218 PLANE SURVEYING 4 UNITS

Prerequisite: "C" grade or higher or "Pass" in MATH 170 or equivalent or concurrent enrollment.

Corequisite: None
Recommended Preparation: None
2 hours lecture, 6 hours laboratory
Use, care and adjustment of surveying instruments. Fundamental surveying methods, traverse measurements and area computations. Introduction to horizontal and vertical curves, stadia, construction layout. Introduction to topographic mapping. Earth work computations. *Also listed as ENGR 218.*

CSU, UC

220 BOUNDARY CONTROL AND LEGAL PRINCIPLES 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in SURV/ENGR 218 or equivalent.

Corequisite: None
Recommended Preparation: None
3 hours lecture

Legal and professional aspects of surveying such as U.S. public land surveys, property surveys, title search, report laws affecting a surveyor, resurveys or surveys based on the deed or record, and the new divisions of land.

CSU

240 ADVANCED SURVEYING 4 UNITS

Prerequisite: "C" grade or higher or "Pass" in SURV/ENGR 218 or equivalent.

Corequisite: None

Recommended Preparation: None

3 hours lecture, 3 hours laboratory

Topographic, hydrographic and geodetic surveying. Precise equipment and control surveying, city and land surveys. Astronomical observations. State plane coordinates system. Route location and layout, transition, horizontal and vertical curves. Introduction to electronic and photogrammetric methods. U.S. Public Land Surveys and legal descriptions, and an introduction to Global Positioning Systems (G.P.S.).

CSU, UC

298 SELECTED TOPICS IN SURVEYING 1-4 UNITS

Prerequisite: Varies with topic

Corequisite: Varies with topic

Recommended Preparation: Varies with topic

1-12 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format. **Pass/No Pass only. Non-degree applicable.**

299 SELECTED TOPICS IN SURVEYING 1-4 UNITS

Prerequisite: Varies with topic

Corequisite: Varies with topic

Recommended Preparation: Varies with topic

1-12 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format.

CSU

THEATRE ARTS

110 INTRODUCTION TO THE THEATRE 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

3 hours lecture

Provides students with the analytic tools of theatre and a working knowledge of all areas included in the process of producing a play. Through lectures, attendance at selected performances, and in-class projects, students will be introduced to the theatre arts as a reflection of the synthesis of the arts and a definition of the humanities in Western Civilization. Recommended for students interested in theatre who want to have a better understanding of how this art form continues to help shape society.

AA/AS GE, CSU, CSU GE, IGETC, UC

120 HISTORY OF THE THEATRE I 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

3 hours lecture

Survey of theatre from Classical Greece through 18th century France and England. The social, political, philosophical and religious impact of theatre and drama will be studied in depth. Exemplary plays from great theatrical periods will be analyzed and critiqued.

AA/AS GE, CSU, CSU GE, IGETC, UC

121 HISTORY OF THE THEATRE II 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

3 hours lecture

Survey of theatre from 19th century Germany through 20th century Europe and America. The social, political, philosophical and religious impact of theatre and drama will be studied in depth. Exemplary plays from great theatrical periods will be analyzed and critiqued.

AA/AS GE, CSU, CSU GE, IGETC, UC

199 SPECIAL STUDIES OR PROJECTS IN THEATRE ARTS 1-3 UNITS

Prerequisite: Consent of instructor

3-9 hours

Individual study, research or projects under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. *May be taken for a maximum of 9 units.*

298 SELECTED TOPICS IN THEATRE ARTS 1-3 UNITS

Prerequisite: Varies with topic

Corequisite: Varies with topic

Recommended Preparation: Varies with topic

1-9 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format. **Pass/No Pass only. Non-degree applicable.**

299 SELECTED TOPICS IN THEATRE ARTS 1-3 UNITS

Prerequisite: Varies with topic

Corequisite: Varies with topic

Recommended Preparation: Varies with topic

1-9 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format.

CSU

WATER/WASTEWATER TECHNOLOGY

101 FUNDAMENTALS OF WATER/WASTEWATER TECHNOLOGY 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

3 hours lecture

This course provides a broad overview of the water and wastewater fields and issues confronting the industry. Students will learn how source waters are obtained, treated, and distributed and how wastewater is collected, transported, and disposed of in the area. Contemporary issues facing the water and wastewater industry will be explored.

CSU

102 CALCULATIONS IN WATER/WASTEWATER TECHNOLOGY 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: Grade of "Pass" in MATH 090 or equivalent.

3 hours lecture

Study of the mathematical principles in solving problems related to treatment systems including hydraulic volumes, dimensional analysis, primary and secondary sewage treatment,

calculations and chemical dose rates as it relates to water/wastewater technology.

CSU

103 INTRODUCTION TO WATER RESOURCES MANAGEMENT 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

3 hours lecture

With the ever-increasing demand for a safe and reliable supply of potable water, combined with decreasing supplies and over commitments of our existing water resources, we are facing a serious water crisis in the western United States. This course explores the history and development of California water resources, legal and financial issues, water portfolio diversification, the role of groundwater recharge and management, wastewater reclamation and reuse, desalination, and energy conservation.

CSU

104 APPLIED HYDRAULICS 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: "C" grade or higher or "Pass" in WWTR 102 or equivalent.

3 hours lecture

Study of the hydraulics necessary in the operation of water and maintenance plants and systems. The types of pumps used in water/wastewater service, their operational characteristics and maintenance, and the problems common to their use will be explored.

CSU

105 PRINCIPLES AND PRACTICES OF WATER CONSERVATION 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

3 hours lecture

This course provides theoretical and practical training in applied water use efficiency and a foundation in the need for and major components of comprehensive water conservation programs. Topics include residential, commercial, and landscape customers; water uses; budgets; demand management; water audits; Best Management Practices; rate structures; and program design and management.

CSU

106 INTRODUCTION TO ELECTRICAL AND INSTRUMENTATION PROCESSES 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

3 hours lecture

Introductory course in basic electron theory and electrical principles. Electrical safety precautions, component identification, schematic interpretation, motors, transformers, relays and test equipment will be studied. Includes automated process control devices and an overview of current technologies.

CSU

110 LABORATORY ANALYSIS FOR WATER/WASTEWATER 3 UNITS

Prerequisite: None

Corequisite: None

Recommended Preparation: None

3 hours lecture

Examines basic fundamentals of laboratory analysis with an emphasis on applied chemical and microbiological procedures for water and wastewater plant operators. Includes procedures and techniques used in physical, chemical, bacteriological and biological examination of water/wastewater.

CSU

**112 BASIC PLANT OPERATIONS:
WATER TREATMENT 3 UNITS**

Prerequisite: None
Corequisite: None
Recommended Preparation: "C" grade or higher or "Pass" in WWTR 102 or equivalent.

3 hours lecture
Study of the sources of water and the public health aspects of water supply; chemical, physical and bacteriological standards of water quality; types of water treatment plants; and water treatment procedures, operation, maintenance, storage and distribution.

CSU

**114 BASIC PLANT OPERATIONS:
WASTEWATER TREATMENT 3 UNITS**

Prerequisite: None
Corequisite: None
Recommended Preparation: None

3 hours lecture
Introduction to wastewater collection systems and essential safety procedures necessary to their operation, including preliminary and primary treatment processes and maintenance of a wastewater treatment plant.

CSU

**115 WASTEWATER RECLAMATION
AND REUSE 3 UNITS**

Prerequisite: None
Corequisite: None
Recommended Preparation: None

3 hours lecture
This course covers the fundamentals of wastewater reclamation and reuse. Topics include the history of wastewater treatment and reclamation; total resource recovery including bio-solids/biogas harvesting; planning, design, and construction of reclamation plants; and reclaimed wastewater distribution. Problems regarding regulations, marketing, and public perception of using reclaimed wastewater will be discussed, along with public safety issues.

CSU

**117 ADVANCED PLANT OPERATIONS:
WATER TREATMENT 3 UNITS**

Prerequisite: "C" grade or higher or "Pass" in WWTR 112 or equivalent.
Corequisite: None
Recommended Preparation: None

3 hours lecture
Study of water quality control and treatment. Aspects of public health as it relates to the water supply will be highlighted. Sources of contamination and methods of control will be emphasized as well as maintenance of water treatment facilities, safety, cost, and environmental factors.

CSU

**120 ADVANCED PLANT OPERATIONS:
WASTEWATER TREATMENT 3 UNITS**

Prerequisite: "C" grade or higher or "Pass" in WWTR 114 or equivalent.
Corequisite: None
Recommended Preparation: None

3 hours lecture
Examination of wastewater collection systems, treatment process units, equipment and facilities operation and maintenance, application of laboratory results to process control, and essential safety procedures necessary for operation and maintenance of wastewater facilities.

CSU

**130 WATER DISTRIBUTION
SYSTEMS 3 UNITS**

Prerequisite: None
Corequisite: None
Recommended Preparation: "C" grade or higher or "Pass" in WWTR 102 or equivalent.

3 hours lecture
Study of the operation and maintenance of a waterworks distribution system. Part of a series required for eligibility to take state certification examinations; supports certification examinations for grade levels D1 and D2.

CSU

**132 WASTEWATER COLLECTION
SYSTEMS 3 UNITS**

Prerequisite: None
Corequisite: None
Recommended Preparation: None

3 hours lecture
Study of the components of wastewater collection systems. Overview of design installation, operation, monitoring, maintenance and repair of sewer pipelines, pump stations and related facilities.

CSU

134 MECHANICAL MAINTENANCE 3 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None

3 hours lecture
Overview of the basic principles of mechanical equipment design, installation, operation, maintenance, repair, overhaul and replacement. Emphasis on understanding the value of preventative maintenance techniques such as equipment monitoring, lubrication analysis, machine alignment and scheduled overhaul.

CSU

**199 SPECIAL STUDIES OR PROJECTS
IN WATER/WASTEWATER
TECHNOLOGY 1-3 UNITS**

Prerequisite: Consent of instructor

3-9 hours
Individual study, research or projects under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. *May be taken for a maximum of 9 units.*

**265 WATER DISTRIBUTION
SYSTEMS II 3 UNITS**

Prerequisite: "C" grade or higher or "Pass" in WWTR 130 or equivalent.
Corequisite: None
Recommended Preparation: None

3 hours lecture
Second of an integrated sequence of courses covering water distribution systems. Students will gain a more comprehensive understanding of the operation and maintenance of a waterworks distribution system including advanced calculations, management, safety, and emergency response issues. Contemporary issues facing the water and wastewater industry will be explored in depth. Part of a series required for eligibility to take state certification examinations; supports certification examinations for grade levels D3, D4 and D5.

CSU

**267 WASTEWATER COLLECTION
SYSTEMS II 3 UNITS**

Prerequisite: "C" grade or higher or "Pass" in WWTR 132 or equivalent.
Corequisite: None
Recommended Preparation: None

3 hours lecture
Provides an in-depth understanding of the components of wastewater collection systems. Includes the design, operation, monitoring, maintenance and repair of pump stations;

equipment maintenance; safety/survival systems; and administration and organization principles.

CSU

270 PUBLIC WORKS SUPERVISION 3 UNITS

Prerequisite: "C" grade or higher or "Pass" in WWTR 101 or equivalent.
Corequisite: None
Recommended Preparation: None

3 hours lecture
Introduction to the principles and practices of modern supervision and management with an emphasis on contemporary issues facing supervisors and managers in the water utilities industry.

CSU

280 BACKFLOW TESTER TRAINING 2 UNITS

Prerequisite: None
Corequisite: None
Recommended Preparation: None

1.5 hours lecture, 1.5 hours laboratory
Preparation for the American Water Works Association (AWWA) and the American Backflow Prevention Association (ABPA) certification for Backflow Prevention Assembly Tester Certification. Includes backflow device installation and testing procedures required for the certification testing.

CSU

**282 CROSS CONNECTION
CONTROL SPECIALIST 3 UNITS**

Prerequisite: None
Corequisite: None
Recommended Preparation: None

3 hours lecture
Study of the administrative and technical procedures required for a cross connection program, including system inspections, hazard evaluation, identification of cross connection problems and backflow prevention devices, shut-down tests, and reclaimed water systems.

CSU

**284 CROSS CONNECTION CONTROL
SPECIALIST-RECYCLED
WATER 3 UNITS**

Prerequisite: None
Corequisite: None
Recommended Preparation: None

3 hours lecture
Study of the administrative and technical procedures concerning the production, use and distribution of recycled water including backflow protection, legal, administrative and permitting issues, the treatment process, health and safety aspects, and the cross connection control (shut down) test as conducted in San Diego County. Various aspects of cross connection control recycled water shut down testing will be demonstrated.

CSU

**290 COOPERATIVE WORK
EXPERIENCE 1-4 UNITS**

Prerequisite: None
Corequisite: None
Recommended Preparation: None

5 hours paid or 4 hours unpaid work experience per week per unit
Practical application of principles and procedures learned in the classroom to the various phases of water and wastewater treatment, distribution or collection. Work experience will be paid or unpaid at appropriate curriculum-related work sites. Two on-campus sessions will be scheduled. *May be taken for a maximum of 12 units.*

**298 SELECTED TOPICS IN WATER/
WASTEWATER TECHNOLOGY 1-4 UNITS**

Prerequisite: Varies with topic
 Corequisite: Varies with topic
 Recommended Preparation: Varies with topic
 1-12 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format. **Pass/No Pass only. Non-degree applicable.**

**299 SELECTED TOPICS IN WATER/
WASTEWATER TECHNOLOGY 1-4 UNITS**

Prerequisite: Varies with topic
 Corequisite: Varies with topic
 Recommended Preparation: Varies with topic
 1-12 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format.

CSU

WORK EXPERIENCE

**110 GENERAL COOPERATIVE WORK
EXPERIENCE EDUCATION 1-3 UNITS**

Prerequisite: None
 Corequisite: None
 Recommended Preparation: None
 75 hours paid or 60 hours unpaid work experience per unit

Supervised work experience to assist students in acquiring desirable work habits, attitudes and career awareness. Jobs may or may not be directly related to students' educational goals. *May be taken for a maximum of 6 units.*

**199 SPECIAL STUDIES OR PROJECTS
IN WORK EXPERIENCE 1-3 UNITS**

Prerequisite: Varies with topic
 Corequisite: Varies with topic
 Recommended Preparation: Varies with topic
 3-9 hours

Individual study, research or projects under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and the Office of Instruction. *May be taken for a maximum of 9 units.*

**298 SELECTED TOPICS IN
WORK EXPERIENCE 1-3 UNITS**

Prerequisite: Varies with topic
 Corequisite: Varies with topic
 Recommended Preparation: Varies with topic
 1-9 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format. **Pass/No Pass only. Non-degree applicable.**

**299 SELECTED TOPICS IN
WORK EXPERIENCE 1-3 UNITS**

Prerequisite: Varies with topic
 Corequisite: Varies with topic
 Recommended Preparation: Varies with topic
 1-9 hours

Selected topics not covered by regular catalog offerings. Content and unit credit to be determined by the Office of Instruction and faculty. Offered in a lecture and/or laboratory format.

Noncredit Courses

NONCREDIT COURSES

The California Education code identifies adult noncredit programs as an essential and important function of the community colleges and establishes the following nine categories for state-supported noncredit courses: Parenting, Elementary and Secondary Basic Skills, English as a Second Language, Citizenship for Immigrants, Substantial Disabilities, Short Term Vocational, Older Adults, Home Economics, and Health and Safety.

The Continuing Education noncredit program fulfills the mandate that California community colleges provide noncredit courses designed to meet the special needs and capabilities of those students who do not desire or need to obtain unit credit. Noncredit courses provide remedial, developmental, occupational and other general educational opportunities critical for survival in today's society. Noncredit education is an integral part of the district and college mission (GCCCD Board Policy 1200) providing life-long learning opportunities.

The classes and/or programs vary in length, are open to the public and are offered throughout the district. All noncredit classes are state approved. (Cal. Code Regs., tit.5, §§ 55002(c)(1), 55150, and 58050 (a)(1).)

ELEMENTARY & SECONDARY BASIC SKILLS

CEBS 0002 ACADEMIC & FINANCIAL AID PLANNING 0 UNITS

8 hours

To increase the retention of income eligible federal/state financial aid recipients and assist students in meeting educational and career planning goals.

CEBS 0027 MATH BASICS SERIES 0 UNITS

9 hours

These short courses teach students novel ways to learn, retain, and use math. Topics vary but may include basic elements of arithmetic, geometry, or algebra.

ENGLISH AS A SECOND LANGUAGE

CESL 0008 SPELLING FOR NON-NATIVE ENGLISH SPEAKERS 0 UNITS

50 hours

Emphasis on studying and learning strategies why words are spelled the way they are in the English language.

CESL 0046 ESL: COLLEGE READINESS 0 UNITS

50 hours

This first course in English as a second language (ESL) will help students prepare to enter the college ESL program. Students will learn Basic English grammar and writing skills as well as an introduction to the college campus with a review of college expectations and services.

CESL 0063 ESL: HEALTHCARE WORKPLACE COMMUNICATION II 0 UNITS

30 hours

This multi-level Vocational English-as-a-Second Language (VESL) course is designed for intermediate to advanced language level student whose first language is other than English. The course focuses on expanding and developing the skills learned in English at Work: Healthcare Workplace Culture I. Student will improve fluency, accuracy, and SCANS competencies in order to communicate more effectively in the workplace. Listening, speaking, reading, writing skills for the workplace are integrated within controlled grammar and sentence structures. The course includes English vocabulary development related to equipment, supplies, common tasks, and safety procedures in the health industry.

NCEL 1010 ENGLISH AS A SECOND LANGUAGE 0 UNITS

50 hours

This is a beginning course in Basic English emphasizing oral communication. The course focuses on the development of listening and speaking skills needed to succeed in the classroom, outside the classroom, and at work. Also includes expanded development of reading and writing skills, and an introduction to basic grammar within context of life and employability skills.

NCEL 1053 ESL: MULTI-LEVEL 0 UNITS

50 hours

This course develops and adds to the basic skills taught in Beginning, Intermediate and Advanced ESL.

NCEL 1057 ESL: INTERMEDIATE 0 UNITS

50 hours

The second core course on English reading, writing and grammar is designed for students whose first language is not English. This course further develops and adds to the basic skills taught in Beginning ESL.

NCEL 1058 ESL: ADVANCED 0 UNITS

50 hours

The third core course on English reading, writing and grammar is designed for students whose first language is not English. This course further develops and adds to the basic skills taught in NCEL 1057 English as a Second Language - Intermediate. **Credit/No Credit only. Non-associate degree applicable.**

NCEL 1083 ENGLISH AT WORK: HEALTHCARE WORKPLACE CULTURE II 0 UNITS

30 hours

This multi-level Vocational English-as-a-Second Language (VESL) course is designed for intermediate to advanced language level student whose first language is other than English. The course focuses on expanding and developing the skills learned in English at Work: Healthcare Workplace Culture I. Student will improve fluency, accuracy, and SCANS competencies in order to communicate more effectively in the workplace. Listening, speaking, reading, writing skills for the workplace are integrated within controlled grammar and sentence structures. The course includes English vocabulary development related to equipment, supplies, common tasks, and safety procedures in the health industry.

HEALTH AND SAFETY

CEHS 0008 CPR 0 UNITS

4 hours

This course teaches individuals to recognize and respond to emergencies, adult/child/infant CPR, obstructed airway, blood borne pathogens, and the universal precautions with hands on practice with mannequins. Course includes a completion card valid for two years.

CEHS 0009 ADULT/PEDIATRIC CPR RENEWAL 0 UNITS

5 hours

This is a renewal course for individuals who possess a current CPR card; or a card not expired more than 30 days. Course will review adult/child/infant CPR, obstructed airway, blood borne pathogens and universal precautions. Course includes a completion card valid for two years.

CEHS 0010 FIRST AID COURSE 0 UNITS

4 hours

This course teaches individuals to identify and help control life threatening situations. The course will cover injury and illness assessment, signs and symptoms, and treatment for the following: allergic reaction, amputations, bleeding, cuts, burns, cold and heat emergencies, diabetes, drowning, fractures, head injuries, heart attack, poisoning, shock, seizures, stings, bites, stroke, ticks, and more. Course includes a completion card valid for two years.

CEHS 0016 BASIC LIFE SUPPORT: CARDIOPULMONARY 0 UNITS

6 hours

This BLS (Basic Life Support) course teaches individuals to recognize and respond to emergencies and will cover adult, child, infant CPR, and obstructed airway. Class will review blood borne pathogens, the universal precautions, and primary and scene assessment with practice on mannequins. After successful completion of a written exam, student will receive BLS card valid for two years.

CEHS 0028 CPR / AED 0 UNITS

4 hours

Course will provide students with the basic skills and knowledge needed to recognize a victim in need of the Automated External Defibrillation (AED) device. Students will also learn how to properly use the AED device. After successful completion of a written exam, student will receive an Adult CPR/Heartsaver AED card valid for two years.

HOME ECONOMICS

CEHE 0040 FAMILY, FINANCE AND MONEY MANAGEMENT 0 UNITS

4 hours

Course prepares students to understand the values, needs, wants, goals, and resources that enable them to make wise decisions that contribute to a family's stability and improve the quality of life. Financial resource management, including consumer rights and responsibilities will also be discussed.

CEHE 0045 INS AND OUTS OF SERVICING A VEHICLE 0 UNITS
8 hours

This introductory course is designed to prepare student to successfully identify the need for preventive maintenance and service. Topics will also cover engine service, drive line, function, electrical system diagnosis and repair, as well as general safety practice defined for wheels, tires, brakes and suspension service. There will also be an outline of California Department of Motor Vehicle (DMV) requirements and expectations. This is an introductory course with a laboratory for all automotive enthusiasts.

SHORT-TERM VOCATIONAL EDUCATION

CEV 0020 BILINGUAL BASIC COMPUTER SKILLS 0 UNITS
10 hours

This introductory class, presented in English, is an introductory computer course in which students learn basic keyboarding and personal computer (PC) functions, Windows operating system, word processing, how to navigate the World Wide Web and create an email account via the World Wide Web.

CEV 0024 OSHA 24-HOUR HAZWOPER TRAINING 0 UNITS
24 hours

Section 126 of the Superfund Amendment and Re-Authorization Act requires the Department of Labor (DOL) to promulgate regulations for the protection of the safety and health of any employee engaged in hazardous waste operations. This 24-hour Hazardous Waste Operator and Emergency Response (HAZWOPER) course is designed to provide the required training for workers in the public or private sector, from large or small businesses, who work with hazardous waste but are not part of an emergency response team.

CEV0025 INCIDENT COMMAND SYSTEM 0 UNITS
8 hours

Incident Command System (ICS 100/200) is intended for personnel assigned to an incident or event who have a minimum requirement for the understanding of ICS

CEV 0030 OSHA 8-HOUR HAZWOPER 0 UNITS
8 hours

This course is designed for students to maintain their 40-Hour or 24-Hour Certificate required for employees in the public or private sector, large or small businesses, who work with hazardous materials and/or waste in any phase from management operations to on-site clean up. This course satisfies the requirement for generalized employee training under OSHA (1910.120) and State of California Code of Regulation Title 8, section 5192.

CEV 0033 MANAGEMENT DYNAMICS 0 UNITS
3 hours

This 4-part course provides in-depth training for aspiring or current managers and supervisors who want to increase the performance of their employees. The challenges of the performance review process are highlighted in addition to essential skills and tools needed to develop, write, deliver

and follow up on performance evaluations. Participants learn how to find the most qualified candidate who will also fit in with the employer's culture and team dynamics. They will also explore an effective hiring process and common mistakes to avoid. Critical tools and information about retaining good employees will be covered in addition to learning termination guidelines in California which is often a complex and difficult process.

CEV 0048 BASIC PLANT MAINTENANCE 0 UNITS
16 hours

This course will cover entry-level plant maintenance, and operations. Course is applicable to maintenance personnel, operators, HAZMAT repair teams and managers at chemical processing manufacturing, electronics, and water treatment facilities.

CEV 0050 CONFINED SPACE ENTRY 0 UNITS
8 hours

This course reviews the California Title 8 California Code of Regulations (CCR), General Industry Safety Orders (GISO), Sections 5156, 5157, 5158 regulations governing confined space entry and how to properly employ the Confined Space Permit Program. The course includes terminology, testing, monitoring, permitting requirements, written program components, entry permits and safety regarding confined spaces and is a must for any employee who may encounter confined spaces during their normal course of employment.

CEV 0052 DEPARTMENT OF TRANSPORTATION: HAZARDOUS MATERIALS REGULATIONS 0 UNITS
8 hours

This course covers the Department of Transportation (DOT) Hazardous Materials Regulations (HMR) governing the transportation of hazardous substances. This course fulfills the DOT 49 CFR Hazardous Materials Transportation awareness training required by DOT and includes: using a hazardous materials table, preparing shipping papers, marking, labeling and placard requirements, security awareness and site policies, handling emergencies and notification and identification and communication of hazards of transportation.

CEV 0056 READY, SET, WORK 0 UNITS
10 hours

A job preparedness program for individuals entering today's competitive employment market. Topics include employee readiness, applications, interviews, dress codes, communication skills, childcare, budgeting, nutrition, stress and time management, self esteem and career ladders.

CEV 0064 HOW TO GET STARTED IN RADIO/TV VOICEOVERS 0 UNITS
6 hours

This introductory course provides students with basic voice-over techniques for radio and television commercials and narrations. Information included: how to make contacts with directors and producers, and how to "market" voice-over skills.

CEV 0066 COMMISSIONED NOTARY PUBLIC CLASS 0 UNITS
8 hours

This course is designed to prepare students to successfully pass the California State Notary Exam. New and commissioned notaries will gain the necessary education and skills to pass the state exam. The class includes how to notarize documents, detect fraud, and how to be successful in a new career.

CEV 0068 BASIC HAZARDOUS MATERIALS BUSINESS PLAN 0 UNITS
8 hours

Chapter 6.95, Health and Safety Code, Division 20 requires companies that handle hazardous materials in certain quantities to prepare a Hazardous Materials Business Plan that provides information on how a business uses stores, and/or handles hazardous materials and hazardous wastes on its work site.

CEV 0070 AIR QUALITY MANAGEMENT 0 UNITS
8 hours

This course focuses on air compliance at the local business level and covers basic air compliance issues associated with the San Diego Air Pollution Control District's rules and regulations.

CEV 0072 BLOODBORNE PATHOGENS 0 UNITS
8 hours

This course helps students understand bloodborne pathogens in the workplace and provides common modes of their transmission, methods of prevention, and other pertinent information for those who have the potential to be exposed to blood or other potentially infectious material. Industry needs, standards and requirements will also be covered.

CEV 0076 PESTICIDE SAFETY & APPLICATION 0 UNITS
8 hours

This course is intended for personnel who hold a State of California Qualified Pesticide Application License. The emphasis is on Integrated Pest Management (IPM) and new pest problems in San Diego County.

CEV 0080 CUSTOMER APPRECIATION 0 UNITS
3 hours

This course is designed to help students develop key skills and attitudes necessary to effectively meet the needs of customers. Students will examine four important areas of customer service: the differences between bad, average, and outstanding customer service; identification of internal and external customers; understanding the role that customer expectations play in a service environment; and the value of customer retention.

CEV 0090 CAREER EXPLORATION 0 UNITS
5 hours

Personality and interest-based assessment is used to help students gain career insight and set educational goals. Learn to matriculate from this noncredit course to a credit program.

CEV 0092 HOW TO PUT YOUR BUSINESS ON THE INTERNET 0 UNITS
3 hours

Learn ways to establish and market your business on the World Wide Web-today.

CEV 0094 KNOW YOUR CONFLICT MANAGEMENT STYLE 0 UNITS

3 hours

This course defines different personalities and will teach students to delegate and deal with difficult employees.

CEV 0098 A GUIDE TO SUCCESSFUL SUPERVISION 0 UNITS

3 hours

This 5-part course provides in-depth training for current or aspiring managers and supervisors who want to increase their ability to successfully lead their teams and to effectively address many of the challenges related to supervising employees. Participants learn the importance of personality style strategies, practice conflict management techniques, acquire concepts of change management and explore the powerful benefits diversity provides. In addition, participants will be trained in critical steps to take when harassment or violations occur, and how supervisors can protect their organizations from legal liability, financial loss and a damaged reputation.

CEV 0099 INTRODUCTION TO THE INTERNET, PART I 0 UNITS

3 hours

This class will introduce the student to the Internet via hands-on use of the World Wide Web. Various Internet browsers will be used to gain practical experiences accessing the Internet to enhance their entry-level work skills and/or provide upgrading/refining existing skills. Current trends of technology will also be covered.

CEV 0100 INTRODUCTION TO THE INTERNET, PART II 0 UNITS

3 hours

This is a continuation of Introduction to Internet, Part I, designed to teach the students how to use search engines and more advanced methods of searching the Web. The course is designed to enhance work skills and provide upgrading and refining of existing skills for personal and professional use.

CEV 0102 INTRODUCTION TO COMPUTERS, PART I 0 UNITS

3 hours

This is a basic computer course for those desiring beginning computer knowledge and skills. The students will have hands-on experience with a computer and popular application software. The course is designed to provide students with skills necessary for success in the computerized workplace.

CEV 0104 INTRODUCTION TO COMPUTERS, PART II 0 UNITS

3 hours

This class is a continuation of Introduction to Personal Computers, Part I. This class provides an overview of the various types of software available for PC's. This course is designed to provide students with skills necessary for success in the computerized.

CEV 0106 INTRODUCTION TO WINDOWS, PART I 0 UNITS

3 hours

Course introduces students to the Windows Operating System and is designed to provide students with basic skills necessary for personal or professional success.

CEV 0108 INTRODUCTION TO WINDOWS, PART II 0 UNITS

3 hours

This hands-on class is a continuation of Part I using more advanced features in the Windows Operating System. This course is designed to provide students with basic skills necessary for personal or professional success in today's demanding computer workplace.

CEV 0110 INTRODUCTION TO WORD PROCESSING, PART I 0 UNITS

6 hours

An entry level class which introduces students to word processing. Students will learn to produce letters, memos, reports, and other documents as for personal or professional use necessary for the workplace.

CEV 0112 INTRODUCTION TO WORD PROCESSING, PART II 0 UNITS

6 hours

This class is a continuation of Introduction to Word Processing Part I, using the more advanced features of word processing such as Word Art, columns and tables. Course will give students a solid background in features and capabilities of modern applications for home use or for the workplace.

CEV 0114 INTRODUCTION TO SPREADSHEETS 0 UNITS

6 hours

Course will introduce students to Excel; a spreadsheet program. Class is beneficial for individuals using computer programs to file, organize, retrieve and report data.

CEV 0116 INTRODUCTION TO POWERPOINT 0 UNITS

6 hours

This class will introduce the student to Microsoft PowerPoint. Students will learn to create, edit and organize slides; design and format a presentation; add multimedia and special effects; integrate other Office applications; and publish a presentation to the web. This course is designed to provide students with skills necessary for success in the computerized workplace.

CEV 0126 SUCCESSFUL SMALL BUSINESS MANAGEMENT 0 UNITS

3 hours

Learn how to start, operate market, finance and grow a business. This course will also help you assess self-employment and review the nuts and bolts of starting and maintaining a business.

CEV 0127 THE ART OF INFLUENCE AND NEGOTIATION 0 UNITS

3 hours

Learn to effectively influence others to create a win-win situation and build better business relationships.

CEV 0128 CONDUCTING MORE EFFECTIVE MEETINGS 0 UNITS

3 hours

This course is designed to help students develop the skills necessary to conduct meetings with worthwhile results. Students will examine tools and techniques to plan, conduct, and evaluate meetings, and will review methods to ensure effective follow-up. Students will explore techniques for managing and keeping meeting participants interested. Students will have an opportunity to observe various meeting tools and techniques.

CEV 0130 DELEGATING FOR RESULTS 0 UNITS

3 hours

This course is designed to help students develop key skills and attitudes necessary to effectively perform as a supervisor. Students will examine four important concepts related to delegation: three methods of delegation, a six step delegation model, and environmental supports for delegation. Students will be introduced to the Cycle of Accountability and explore the role that accountability plays in effective delegation.

CEV 0131 DELIVERING POWERFUL PRESENTATIONS 0 UNITS

6 hours

This 2-part course provides keys to successful preparation for and delivery of dynamic presentations. Participants learn the importance of being "audience centric" and receive proven formats that help them respond to the needs of their audience. They also have the opportunity to learn, observe and practice the skills needed to conduct presentations with confidence and explore the factors that make a presenter successful.

CEV 0132 MOTIVATION AND RECOGNITION SYSTEMS 0 UNITS

3 hours

This course is designed to help students develop key skills and attitudes necessary to effectively perform as a supervisor. Students will examine four important concepts related to motivation and recognition: terms related to motivation, theories of motivation, signs of low morale and factors contributing to high morale. Students will explore various forms of and appropriate use of recognition.

CEV 0134 COACHING FOR IMPROVED PERFORMANCE 0 UNITS

3 hours

Course will provide a step-by-step approach to coaching. Learn to bring out the best in your staff in a consistent and productive way.

CEV 0136 EFFECTIVE BUSINESS WRITING 0 UNITS

6 hours

This course is designed to help students develop skills necessary for creating well-constructed business documents. Students will examine three important characteristics of effective business writing: analyzing the needs of the reader, editing the document to achieve maximum impact, and practical ways of applying the 4C's (completeness, conciseness, consideration, and clarity).

CEV 0137 EFFECTIVE ELECTRONIC COMMUNICATION 0 UNITS

3 hours

This course is designed to help students save time by using electronic communication more effectively. Students will learn how to use the tools associated with most email systems and see how various contact management software programs can enhance their current email set-up. Current standards for email etiquette are reviewed as well as components of a well-written email message.

NCVE 1001 FOOD HANDLER TRAINING COURSE 0 UNITS

3 hours

This course is designed for individuals who are, or will be, working in a food or service industry job which requires food handler certification.

NCVE 1003 OSHA 40 HOUR – HAZWOPER 0 UNITS
40 hours

This class is designed to provide students with written and hands-on instruction in hazardous waste operations and emergency response (HAZWOPER) as it relates to chemical and physical exposures in industrial and field settings. This course satisfies the requirement for generalized employee training under OSHA (1910.120) and State of California Code of Regulation Title 8, section 5192.

NCVE 1116 BUSINESS ETHICS & VALUES 0 UNITS
3 hours

This course is designed to help students recognize behaviors associated with ethical work practices. Students will discuss current events regarding organizations that model ethical and unethical behavior and will examine the role personal values play in defining ethical behavior and making ethical decisions. Guidelines designed to aid in ethical decision making will be presented.

NCVE 1117 TIME AND STRESS MANAGEMENT 0 UNITS
3 hours

This course is designed to help student develop key skills necessary to effectively manage time and stress. Student will be introduced to various times management tips and explore the role that time management has on stress levels. Three central themes related to stress management will be presented including common causes of stress, the impact of stress on physical health, and techniques for reducing stress. Goal setting will be examined as a technique for time management and a method of stress reduction.

NCVE 1118 MASTERING COMMUNICATION 0 UNITS
3 hours

This course is designed to help students communicate more effectively at work and in their personal lives. Students will examine verbal and nonverbal communication, and look at the role effective listening plays in the communication process. Organizational barriers to effective communication will be discussed and techniques for breaking through those barriers will be provided.

NCVE 1119 TEAM BUILDING 0 UNITS
3 hours

This course is designed to help students develop key skills and behaviors necessary to become productive team members. Students will discuss stages of team development and characteristics of effective teams. Students will examine three common challenges of team building: communication breakdown, working with and recognizing the roles that various team members assume, and utilizing team synergy.

NCVE 1120 THE RIGHT ATTITUDE 0 UNITS
3 hours

This course is designed to help students explore the impact attitude has on customer service, organizational image, team effectiveness, and personal productivity. Students will examine verbal and non-verbal methods of communicating attitude and will discuss techniques for adjusting a negative attitude.

NCVE 1121 DEALING WITH DIFFICULT PEOPLE 0 UNITS
3 hours

This course is designed to help students develop the skills necessary to work more effectively with co-workers and customers who exhibit a variety of work style behaviors. Students will identify their personal work style and will learn strategies and techniques for modifying their style to resolve conflict situations. Common sources of workplace conflict are explored and five conflict handling styles are identified along with the appropriate time to use each style.

NCVE 1123 MANAGING CHANGES 0 UNITS
3 hours

This course is designed to help students develop key skills and attitudes necessary to manage workplace changes. Students will examine three important characteristics of change: styles of change, reactions to change, and the stages of change. Reasons for resistance to change will be examined and methods for overcoming resistance will be identified.

NCVE 1124 DECISION MAKING & PROBLEM SOLVING 0 UNITS
3 hours

This course is designed to help students examine the relationship between decision making and problem solving. Students will be introduced to a variety of models of decision making, discuss blocks to problem solving, and examine the role creativity takes in the problem solving process.

SUBSTANTIAL DISABILITIES

CED 0003 AQUATIC PHYSICAL FITNESS SPECIAL POPULATIONS 0 UNITS
50 hours

This is a physical fitness course for special populations. Students will be assessed for their physical performance in a pool. Instructor will work individually to develop a prescribed program appropriate to their special challenge.

CED 0004 SWIMMING FOR SPECIAL POPULATIONS 0 UNITS
50 hours

Instruction and practice in basic swimming skills. Instruction will be structured to fit each student's individual needs.

CED 0005 PHYSICAL EXERCISE FOR SPECIAL POPULATIONS 0 UNITS
50 hours

This is a physical fitness course for special populations. This course includes instruction and practice in skills and techniques of physical fitness which is appropriate to each student's special challenges.

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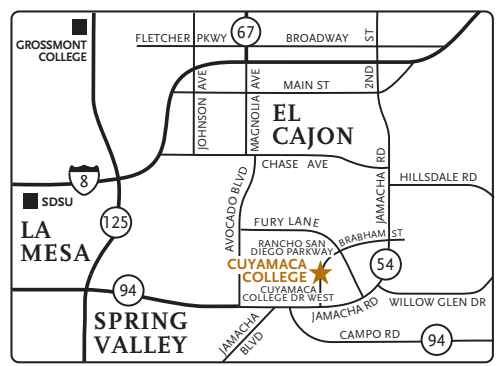
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- Adjunct Faculty Offices - B, E and F Bldgs
- Administration - F Bldg
- Admissions & Records - A Bldg
- Assessment Center - A Bldg
- Automotive Technology - K Bldg
- Bookstore - Student Center
- CalWORKS S.T.E.P.S. - A Bldg
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- Career/Placement Center - A Bldg
- Cashier - A Bldg
- Center for Innovation - L Bldg
- Child Development Center - R Bldg
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- Computer Labs (Student use) - E Bldg

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- DSPS - A Bldg
- DSPS Learning Lab - C Bldg
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- High School & Community Relations - Student Center
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- Ornamental Horticulture - M Bldg
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- STEM Achievement Center - H Bldg
- Student Affairs - Student Center
- Student Center - I Bldg
- Switchboard - F Bldg
- Transfer Center - A Bldg
- UP! - A Bldg
- Veterans Services - A Bldg
- Writing Center - B Bldg
- Word Processing (Faculty Support Services) - F Bldg





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