

LAS POSITAS COLLEGE

2004-2006 CATALOG



Dedicated to excellence in teaching and learning. Committed to strengthening our community connections.

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www.laspositascollege.edu

3033 Collier Canyon Road | Livermore, CA 94551.7650

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Academic Calendar

Fall 2004 Semester

August 23	Instruction Begins
August 28**	Instruction Begins – Saturday Classes
September 3	Last Day to ADD/DROP with No-Grade-of-Record (NGR) in-person
September 4**	Labor Day Weekend – No Saturday Classes
September 6	Last Day to ADD/DROP (NGR) via Class-Web
September 6*	Labor Day Holiday – No Instruction
September 7	CENSUS DAY
September 24	Last Day to Apply for Credit/No Credit
October 29	Last Day to Apply for Graduation
November 1	60% Point for Financial Aid
November 11	Last Day to Withdraw from classes with a “W”
November 12*	Veteran’s Day Holiday – No Instruction
November 24*,25*,26*,27*	Thanksgiving Recess – No Instruction
December 15	Last Day of Classes
December 11**	Last Day of Saturday Classes
December 18**	Final Examination – Saturday Classes
December 12/16-12/22	Final Examination Period and Filing of Grades

Spring 2005 Semester

January 18	Instruction Begins
January 22**	Instruction Begins – Saturday Classes
February 4	Last Day to ADD/DROP with No-Grade-of-Record (NGR) in-person
February 6	Last Day to ADD/DROP via Class-Web
February 7	CENSUS
February 18*, 21*	President’s Holiday
February 19**	President’s Holiday- No Saturday Classes
February 25	Last Day to Apply for Credit/No Credit
March 25	Last Day to Apply for Graduation
March 21 – 26	Spring Break—No Instruction
April 7	60% Point for Financial Aid
April 15	Last Day to Withdraw from classes with a “W”
May 14**	Last Day of Saturday Classes
May 20	Last Day of Classes
May 21**	Final Examination – Saturday Classes
May 23-27	Final Examination Period and Filing of Grades
May 28	Commencement

* Holiday/All Employees

**Saturday Only Classes

Note: The deadlines listed above refer to regular, full-term classes only. Alternate courses have varying deadlines posted in the lobby of the Admissions and Records Office, Building 700. You will also find deadlines on “CLASS-Web” or ask your instructor.

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ACADEMIC SERVICES	925.373.5804
ADMISSIONS AND RECORDS	925.373.5815
BOOKSTORE	925.373.5812
BUSINESS OFFICE	925.373.4931
COMMUNITY EDUCATION	925.373.5867
COUNSELING CENTER	925.373.5822
DISABLED STUDENTS AND SERVICES (DSPS)	925.373.5888
EXTENDED OPPORTUNITY PROGRAM (EOPS)	925.373.5889
FAX	925.443.0742
FINANCIAL AID	925.373.5816
GENERAL INFORMATION	925.373.5800
LEARNING RESOURCES CENTER (LIBRARY)	925.373.4950
PRESIDENT	925.373.5802
STUDENT SERVICES	925.373.5806
TTY	925.373.4908
W W W . L A S P O S I T A S C O L L E G E . E D U	

Message from the President



Welcome to Las Positas College!

Over the next few years, Las Positas College will be celebrating an important milestone: its thirtieth anniversary! Since 1975 we have been providing quality, affordable education to Tri-Valley residents.

A lot has happened in thirty years. Livermore, Dublin, and Pleasanton have changed from semi-rural towns into busy cities. The College has grown along with the Tri-Valley, developing from a small extension center into a comprehensive college that serves over 8,500 students each semester.

With thirty years behind us, the College is now preparing for your future: for your needs, your expectations, and your goals. We have conducted a series of assessments and studies to determine how to best meet the needs of our students and our community. These studies take into account the tremendous growth the area has seen, as well as the economic and employment projections for the future. We have used this information to create a strong and dynamic plan for the expansion.

We now are offering more and more on-line and evening classes. We have created new programs such as Computer Networking Technology, Engineering, and Viticulture and Winery Technology. We are developing plans for a new Gymnasium, an expanded Science Technology Center, and a new Center for the Arts. We offer on-line registration and academic counseling for your convenience.

Please take some time to review this Catalog and see the many ways the College is preparing for the needs of its community for the next thirty years. We hope to see you soon!

A handwritten signature in cursive script that reads "Karen Halliday". The signature is written in black ink on a white background.

Karen E. Halliday, President

Chabot-Las Positas College District



DISTRICT LEADERSHIP

From left, standing: Trustee Alison Lewis, Trustee Gary R. Craig, Trustee Gary A. Schwaegerle, Trustee Donald L. Gelles, Trustee Barbara F. Mertes
 From left, seated: Chancellor Susan A. Cota, Trustee Isobel Dvorsky, Trustee Arnulfo Cedillo.

The Chabot-Las Positas Board of Trustees governs the Chabot-Las Positas Community College District and is responsible for all policy decisions. The Board meets once a month at either Las Positas College or Chabot College; the meetings are open to the public.

BOARD OF TRUSTEES

Name/Position	Area Represented	Year Elected
Arnulfo Cedillo, Ed.D.	Area 3 - Union City	1987, 1991, 1996, 2000
Gary R. Craig	Area 6 - San Lorenzo	1985, 1989, 1993, 1998
Isobel F. Dvorsky	Area 2 - San Leandro	1985, 1989, 1993, 1998
Donald L. "Dobie" Gelles (President)	Area 4 - Castro Valley	1998
Alison S. Lewis, Ph.D.	Area 1 - Hayward	1991, 1996, 2000
Barbara F. Mertes, Ph.D. (Secretary)	Area 7 - Livermore	2000
Gary A. Schwaegerle	Area 5 - Pleasanton	2000
Jeff Newell	Chabot College Student Trustee	2003
William Beckett	Las Positas College Student Trustee	2003

TRUSTEES EMERITI

E.J. "Jay" Chinn*	1961-1985	Lawrence R. Jarvis*	1975-1987	William A. Tenney	1961-1967
Elva Cooper	1987-1996	James S. Martin	1969-1975	L. Arthur Van Etten*	1961-1985
Fred M. Duman	1967-1991	Edward E. Martins	1961-1967	Margaret R. Wiedman	1977-1989
Ann H. Duncan	1971-1984	Fredrick T. Sullivan	1961-1971	Lynn Carstensen	1996-2000
Dorothy S. Hudgins	1967-1987	Linda M. Tangren	1989-1998	Barry L. Schrader	1987-2000

ADMINISTRATION

DISTRICT

Susan A. Cota, Ed.D., Chancellor
 Roy V. Stutzman, Vice Chancellor of Business Services
 Joel L. Kinnamon, Vice Chancellor of Educational Services and Planning

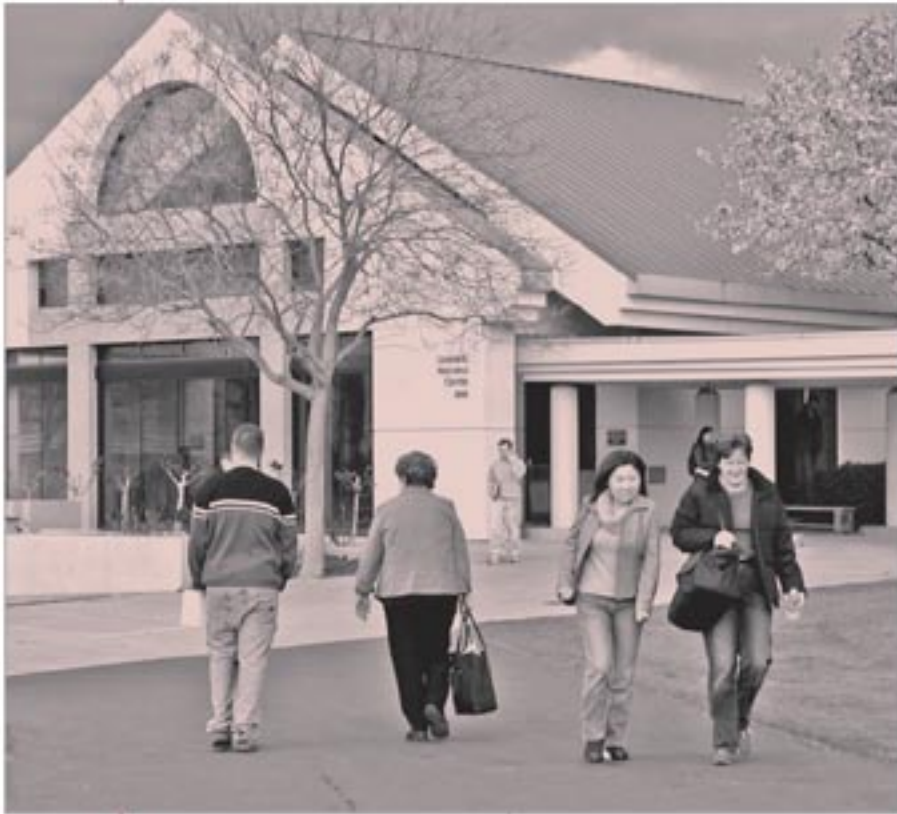
LAS POSITAS COLLEGE

Karen E. Halliday, President
 Donald R. Milanese, Vice President of Academic Services
 Pamela T. Luster, Vice President of Student Services
 Robert S. Kratochvil, Vice President of Business Services
 Neal M. Ely, Ph.D., Dean of Academic Services
 Ralph E. Kindred, J.D., Dean of Technology
 Philip Manwell, Ed.D., Interim Dean of Academic Services
 Birgitte Ryslinge, Interim Dean of Academic Services, Vocational Education and Economic Development
 Vacant, Dean of Student Services
 Sylvia R. Rodriguez, Assistant Dean, Admissions and Records and Registrar
 Ann (Amber) M. Machamer, Ph.D., Director of Research and Planning
 Richard D. Butler, Director of Safety and Security

CHABOT COLLEGE

Robert E. Carlson, Ed.D., President

General Information



About the College

Chabot-Las Positas Community College District

The Chabot-Las Positas Community College District has provided quality education to residents of the Bay Area for over thirty years. The voters approved the formation of a “junior college district” on January 10, 1961 and the first board of trustees was elected on April 18, 1961.

Las Positas College is one of two separately accredited colleges in the Chabot-Las Positas Community College District. Las Positas College principally serves citizens from the communities of Dublin, Livermore, and Pleasanton, and several unincorporated areas including Sunol and north Livermore.

In addition to the traditional and vocational curriculum offered at the Colleges, the District conducts an active outreach program in contract education to help business, industrial and public organizations develop training programs tailored to meet their needs.

Governance Structure

The California Community Colleges operate under the governance of the State Chancellor, the State Board of Governors appointed by the Governor, and local districts with their own locally elected governing boards. The State Chancellor’s Office and Board of Governors oversee the distribution of funds apportioned by the State Legislature for use by the Community Colleges and “lobby” the State Legislature on behalf of the Community Colleges. California’s Community Colleges are organized into 72 community college districts. Each college within a district has a president or superintendent, and each district has its own elected Board of Trustees who apportion funds and governs the colleges within its district.

Las Positas College

Las Positas College is located on 147 acres in Livermore, in the midst of one of California’s fastest growing regions for business and scientific industry.

Las Positas College currently enrolls approximately 8,500 day and evening students. The College offers a two-year curriculum for students seeking career preparation, transfer to a four-year college or university, or personal enrichment. The College provides: university-prep classes, retraining classes for those in need of employment or career advancement, a first-time educational opportunity for many adults, enrichment classes for those seeking a broader perspective, and vocational training for those entering the technical and para-professional workforce.

Students who come to the College can choose any of 25 Occupational Associate Degrees, 17 Transfer Associate

Degrees, and 34 Certificate Programs. In addition, the College offers community education courses geared toward personal development and cultural enrichment.

Academic rigor is maintained in a friendly, personal atmosphere. Las Positas College faculty and staff are distinguished by their energy, creativity, and commitment to making a difference in the lives of the students they serve.

Las Positas College is fully-committed to supporting all Tri-Valley residents in their quest for education and advancement.

History of LPC

Las Positas College began as an extension center of Chabot College in 1963, offering 24 classes and enrolling 810 students at Livermore High School and two other sites. By 1965, the program had expanded and moved to Granada High School in Livermore, it subsequently grew to include Amador and Dublin High Schools as well. The District purchased the Livermore site that same year, intending to develop a comprehensive community college. On March 31, 1975, “Valley Campus” opened as the Livermore Education Center of Chabot College.

Las Positas College has since developed into a fully accredited comprehensive institution. In 1988, the College was designated by the Board of Governors to be an independent college. Las Positas College received full accreditation on January 7, 1991 from the Accrediting Commission for Community and Junior Colleges.

To address the rapid growth of the student population, the College through statewide bonds and careful planning has within the past seven years built a Learning Resource Center and a Science Technology Building. Construction for its first Physical Education/Health complex will begin late Spring 2004.

Future Expansion – Measure B

On March 2, 2004, voters approved the Chabot-Las Positas Community College District Capital Improvement Bond—Measure B. The bond will enable the College to develop new facilities and programs that will meet the future needs of the students and the community it serves.

By 2010, Las Positas College is predicted to have 14,000 students. In preparation for this anticipated growth, the College initiated an intensive review and planning process to carefully assess its programs, services, and facilities. The resulting 2003-2010 Educational Master Plan sets the foundation for future planning and development. The plan calls for the addition of a Child Development Center, a Center for the Arts, a Multi-Disciplinary building, a Science and Technology Laboratory, playing fields for Physical Education, a Student Services building, and many classroom renovations.

Mission of the California Community Colleges

By law, the California Community Colleges shall admit any person who is a high school graduate or equivalent thereof, or who is eighteen years of age or older, and who can profit from the instruction offered

Primary missions of the colleges are to offer academic and vocational education at the lower division level for both younger and older students, including those persons returning to school. Another primary mission is to advance California's economic growth and global competitiveness through education, training, and services that contribute to continuous work force improvement. Essential and important functions of the colleges include: remedial instruction for those in need of it and in conjunction with the school districts, instruction in English as a Second Language, adult noncredit instruction, and support services which help students succeed at the postsecondary level. Community Services is designated as an authorized function. To the extent funding is provided the colleges may conduct institutional research concerning student learning and retention as is needed to facilitate their educational missions.

The Board of Governors shall provide leadership and direction in the continuing development of the California Community Colleges as an integral and effective element in the structure of public higher education in the state.

Mission of Las Positas College

Mission Statement

The Mission of Las Positas College is to foster growth and success, both in its students and in its community. The College strives to fulfill this Mission by offering high-quality, comprehensive educational programs and services. It augments and strengthens its Mission by partnering with local businesses and organizations to promote the welfare of its students and the economic and social health of its service area.

Las Positas College:

- ▶ Enables students to transfer to baccalaureate-granting institutions;
- ▶ Prepares students for career entry and advancement;
- ▶ Provides basic skills and English as a Second Language instruction;
- ▶ Delivers quality, substantive student support services; and
- ▶ Fosters student success through committed, exceptional faculty and staff.

Las Positas College provides a strong instructional foundation for its students and aims to cultivate in them:

- ▶ The ability to think critically;
- ▶ An understanding and respect for difference and diversity;
- ▶ The ability to make humane, informed, and ethical decisions;
- ▶ The willingness to adapt to change in the workplace; and;
- ▶ The desire to participate in society as responsible citizens.

Values Statement

Las Positas College thrives as a teaching and learning community committed to integrity and excellence. To nourish this environment and the communities served, we:

- ▶ Promote and celebrate lifelong learning;
- ▶ Anticipate and meet the needs of the ever-changing workplace;
- ▶ Demonstrate social and environmental responsibility;
- ▶ Promote tolerance and mutual respect in a diverse community;
- ▶ Foster a climate of discovery and creativity; and
- ▶ Hold firm to the belief that each of us makes an astonishing difference.

Guiding Principles

Las Positas College is committed to excellence in everything it does. Therefore, we pledge to provide:

- ▶ Instruction and student support that are excellent, consistent and improved continually;
- ▶ Processes within the College which operate smoothly and purposefully;
- ▶ Meetings that are meaningful and effective and get things done;
- ▶ Facilities and equipment that are state-of-the-art, well-maintained and used effectively;
- ▶ An environment that is esthetically pleasing for learning and working;
- ▶ A climate that promotes a positive learning and working environment for students, staff, faculty and community members;
- ▶ A tireless dedication to systemic self-review processes with prompt implementation of improvement;
- ▶ A partnership that anticipates and responds to the ever-changing needs of the communities that we serve; and
- ▶ A culture that sincerely acknowledges recognizes and appreciates a commitment to excellence.

Las Positas College Philosophy

We, the faculty, staff, and administrators of Las Positas College, support the basic democratic tenets that all individuals be afforded opportunity to reach their highest human potential as responsible members of society and that all individuals be given an equal opportunity to prepare themselves to assume the privileges and responsibilities of self-governance in a world of diverse philosophical values and political practices.

We believe that the qualities of an educated person include knowledge, competency, mental and physical well being, concern for the environment, and respect for the dignity of diverse peoples and cultures.

We offer students the opportunity to participate actively in the educational process, to make significant choices, and to achieve increasing self-direction in an atmosphere in which the freedom to create and to explore ideas is encouraged and supported.

We also encourage and support creativity and innovation among faculty, staff and administrators whose values reflect those of the community and whose presence and leadership serve as models for students.

We support an environment that provides educational programs, learning resources and student services to a culturally rich and diverse student population. We are sensitive to students with varying needs, interests, physical abilities and learning differences or difficulties.

Statement of the Objectives of the General Education Program

General education programs are accepted as a significant part of the program of studies in American colleges and universities. The term general education refers to a program of studies that introduces the student to areas of study that mature the mind, enrich family, and widen social and ethnic relationships. They develop skills and aptitudes that can aid the student in furthering personal and social usefulness, and in living in the environment as thinking and contributing citizens.

It is a program, furthermore, that activates the imagination, deepens the perspective of life, and gives life direction and purpose. The general education program is eminently well-suited to a democracy where every person is eligible to enjoy the cultural riches of the world and to become a useful citizen in dealing with local, national and world economic, and cultural, social and political problems.

Accreditation

Las Positas College is a public, two-year community college accredited by the Accrediting Commission for Community and Junior Colleges of the Western Association of Schools and Colleges, (3402 Mendocino Avenue, Santa Rosa, CA 95304, 707.569.9177), an institutional accrediting body recognized by the Commission on Recognition of Postsecondary Accreditation and the U.S. Department of Education. The University of California, California State University, and private universities and colleges accept appropriate courses for transfer.

The College is approved for the training of veterans and for the education of foreign students.

Statement of Compliance

Las Positas College maintains an atmosphere that is welcoming to all students and conducive to their academic and personal success. The College provides an environment free of all forms of harassment, in which all students and employees are treated with dignity and respect.

Las Positas College does not discriminate on the basis of race, color, national origin, gender, physical ability, religious belief or age in any of its policies, procedures or practices.

Las Positas College is in full compliance with:

- ▶ Title VI of the Civil Rights Act (1964)
 - pertaining to race, color and national origin;
- ▶ Title VII of the Civil Rights Act (1964)
 - pertaining to religion and gender;
- ▶ Title IX of the Educational Amendments (1972)
 - pertaining to gender;
- ▶ Sections 503 and 504 of the Rehabilitation Act (1973)
 - pertaining to disability;
- ▶ Age Discrimination in Employment Act (1974)
 - pertaining to age; and
- ▶ Americans with Disabilities Act (1990)
 - pertaining to disability.

Limited English skills are not a barrier to programs and services of the College.

No person shall be subjected to sexual overtures or conduct—verbal, visual or physical—which is intimidating, hostile, offensive or unwelcome. Such conduct by employees or students is unacceptable and will not be tolerated by the College.

To inquire about the application of Non-discrimination policies contact:

Sylvia Rodriguez
 Assistant Dean of Admissions and Records
 925.373.4942

About the College

To inquire about the application of Sexual Harassment policies contact:

Amber Machamer
Director of Research and Planning
925.373.5827

To inquire about the application of Disability Issues and Student Concerns and Grievances contact:

Pamela Luster
Vice President of Student Services
925.373.5805

Inquiries may also be addressed to the United States Department of Education, Office of Civil Rights, Old Federal Building, 50 United Nations Plaza, Room 239, San Francisco, CA 94102, or call 415.437.7700.

Changes in Rules and Policies

Although every effort has been made to assure the accuracy of the information in this Catalog, students and others who use this Catalog should note that laws, rules, and policies change from time to time and that these changes may alter the information contained in this publication. Changes may come in the form of statutes enacted by the Legislature, rules and policies adopted by the Board of Trustees of the Chabot-Las Positas College District, or by the Chancellor or designee of the institution.



Internet Access

Las Positas College may be accessed through the Internet at www.laspositascollege.edu

The website includes:

- AA and AS Requirements
- Academic Calendar
- Athletics and Intramural Sports
- Bookstore
- Campus Map and Photos
- Campus Office Hours
- Career Opportunities
- Chabot College
- CLASS-Web/On-line Registration
- Counseling
- Course Descriptions
- Distance Education
- Entrance Requirements
- Event Calendar
- Fees
- Financial Aid
- How and When to Register
- High School/ROP Articulation
- Information About College Activities
- Instructional Home Pages
- International Students Information
- Learning Resources
- On-line Application for Admission
- Request a Transcript
- Schedule of Classes
- Students with Special Needs
- Transfer Information
- Unofficial Academic Record (Summer 1994 to present)

Admission, Matriculation & Registration

Admission

Eligibility for Admission

Any person who is a high school graduate or equivalent thereof, or who is eighteen years of age or older and who can profit from the instruction offered, is eligible to apply for admission to Las Positas College.

Ability to Profit from Instruction

Under the provisions of the California State Education Code and Governing Board Policy of this District, a student's ability to profit from the instruction offered shall be determined by evidence of the individual's:

- ▶ Ability to meet the demands of college instruction at Las Positas College;
- ▶ Ability to master, and proceed beyond, the minimum basic skill levels required for success in college education;
- ▶ Ability to show substantial progress in cognitive and affective learning in college courses; and
- ▶ Ability to show progress toward independent learning.

By this rule, the College shall determine whether a person is or is not capable of profiting from college instruction. The determination of ability to profit is a matter of composite professional judgment based upon available evidence. Additional information may be obtained from the Office of the Dean of Student Services, Building 700.

Admission Procedures Application

An applicant may apply for admission to the College by one of the following methods:

- ▶ Completing an application online at www.laspositascollege.edu;
- ▶ Submitting a completed application at the Office of Admissions and Records, Building 700;
- ▶ Mailing a completed application to Las Positas College, Office of Admissions and Records, 3033 Collier Canyon Road, Livermore, California 94551.

It is only necessary to submit one application per academic year. An academic year is summer through spring.

Official transcripts of previous academic work at other institutions are required to assist students in reaching their educational objectives at Las Positas College. Transcripts are also required for students who are candidates for special admissions programs and/or services such as financial aid and scholarships, veteran's benefits, athletics, concurrent enrollment, and international student education.

Admission with Advanced Standing

Credits earned at other accredited colleges or universities may be applied towards an AA or AS degree from Las Positas College upon receipt of official transcripts. Accreditation must have been listed in the Accredited Institutions of Higher Education manual. Credit may also be allowed for college-level United States Air Force Institute courses and for formal courses taken at military service schools if such credit is recommended in the American Council on Education Guide.

Concurrent Enrollment Educational Opportunities for High School Students

Las Positas College provides the opportunity for high school students to enroll in college-level courses. Students who desire to participate in concurrent enrollment must be recommended by their high school principal and have written parental permission. There are course restrictions for high school students. Information on the Concurrent Enrollment Policy is available at the student's high school, and the Office of Admission and Records, Building 700, or the Counseling Center, Building 700.

The latest program information and deadlines for application and recommendation materials are available online at www.laspositascollege.edu, at the local high schools, and at Office of Admissions and Records, Building 700, or the Counseling Center, Building 700. Students must complete the required enrollment materials each semester.

International Student Admission

Las Positas College is authorized under Federal Law to enroll non-immigrant alien students. International students (F-1 Visa) seeking admission to Las Positas College must first obtain an international student application packet from the Office of Admissions and Records, Building 700. The completed documents may then be mailed or faxed to the International Student Office. The application packet contains documents which upon completion:

- ▶ Provide evidence of having completed the equivalent of a United States high school education;
- ▶ Demonstrate the ability to read and write English at the 12th grade level (TOEFL test may be required). International students will be required to enroll in the English as a Second Language (ESL) program if the TOEFL and the College assessment results indicate limited English proficiency;
- ▶ Show means of adequate financial support and medical care;
- ▶ Provide evidence, (by means of a physical examination) certifying freedom from active tuberculosis;
- ▶ Demonstrate support from a local sponsor.

The number of international students admitted is contingent upon the College's ability to provide services as required.

Admission, Matriculation and Registration

International students will be accepted for admission to Las Positas College at both the fall and spring semester of each academic year. Contact the International Student Program at 925.373.4940 for more information. For information on international student fees, refer to Catalog page 18, "Fees and Refunds," or consult the current Class Schedule.

SEVIS – New electronic reporting system

SEVIS is a government database program, implemented on January 31, 2003, by the Bureau of Citizenship and Immigration Services (BCIS), formerly the Immigration and Naturalization Service (INS). The SEVIS program is a means by which the Bureau of Homeland Security can track certain non-immigrants such as F-1 or M-1 students based on the data provided by colleges and universities. Las Positas College is a BCIS certified institution and as such must provide data on F-1 or M-1 students and report any subsequent changes in status each semester to ensure the students full compliance with BCIS and College regulations.

Residency Requirements for Admission

In determining tuition/enrollment fees, students fall under the following two categories:

I. Residents

Those who have legally resided in California for at least one year and a day prior to the first day of a new semester or session. State law requires that students give evidence of physical presence in California for one year and their intent to make California their home state for other than a temporary period. Non-citizens who meet residency requirements must provide documentation from the Bureau of Citizenship and Immigration Services (BCIS).

II. Non-residents (out-of-state and international students)

Those who do not meet the California residency requirements as previously outlined. Refer to Catalog, page 18, "Fees and Refunds."

A California Nonresident Tuition Exemption may be granted to certain non-resident students who meet the exemption requirements set forth in Assembly Bill 540. Contact the Office of Admissions and Records at 925.373.5814 for further information. All questions concerning residence status should be referred to the Office of Admissions and Records.

Transcripts from Other Colleges

Students enrolled at Las Positas College who desire academic credit for courses taken at other accredited colleges/universities, must submit official transcripts of that work to the Office of Admissions and Records, Building 700. It is the student's responsibility to initiate a request to each institution asking that an official transcript of his/her work be sent directly to the Office of Admissions and Records, Las Positas College.

To be credited by Las Positas College, the course work must meet the following criteria:

- ▶ The course(s) must have been taken at an accredited college/university;
- ▶ The course(s) must be lower division;
- ▶ The course(s) must have been completed with a grade of "D" or higher. All transferred grades (including "F"s) will be used in the calculation of units attempted, units completed, and the grade point average;
- ▶ The content of the course(s) must be determined to be equivalent to the current Las Positas College course standards. The initial evaluation of course credit is done by the Records Evaluator under the supervision of the Assistant Dean of Admissions and Records, Registrar. The final responsibility for determining course equivalency is the discipline faculty.

Advanced Placement Program - College Entrance Examination Board (C.E.E.B.)

Las Positas College grants credit for successful completion of the Advanced Placement Program of the College Entrance Examination Board (C.E.E.B.). Credit will not be posted on the student's permanent record until 12 units have been completed at Las Positas College with a grade point average of 2.0 or better. For further information regarding Advanced Placement policies and procedure, see Catalog page 38-39.

Concurrent Enrollment with University of California, Berkeley

Students who have completed 20 units with a 2.4 Grade Point Average in transferable course work may be eligible to cross-register with University of California, Berkeley while completing course work at Las Positas College. Students must be a full-time student (12 units) between the two campuses and may enroll in one lower division course (numbered 1-99 at UC, Berkeley). For further information contact the Career/Transfer/Employment Center, Building 900.

Cross Registration with California State University, Hayward

Students who have completed 20 units may be eligible to cross-register with California State University, Hayward while completing course work at Las Positas College. Las Positas College students who elect to "cross-register" may enroll in courses at the four year institutions which are either: (1) upper division or (2) not offered at any time by Las Positas College. For further information, contact the Assistant Dean of Admissions and Records, Building 700.

CSU Hayward's Transfer Admission Guarantee

Transfer Admission Guarantee (TAG) is designed to assist students with baccalaureate degree objectives who plan to begin their college education at a community college before entering the University. TAG agreements must be completed no later than one year prior to intended entry into Cal State Hayward. Once a TAG agreement is completed, students are ready to apply and be admitted to CSU Hayward for a pre-selected term of entry. Benefits of the program are: early advising to ensure completion of general education and lower division major requirements, and waiver of the \$55 CSU application fee, a photo ID card permitting access to the university library and other facilities. For more information see a counselor, Building 700 or the Transfer Center, Building 900.

Readmission from Dismissed Status.

Students on dismissed status from Las Positas College must submit a "Petition for Readmission from Dismissed Status" form. In order to enroll in classes, the Dean of Student Services and Assistant Dean of Admissions and Records or designee must approve readmission. Petition forms are available at the Counseling Center, Building 700.

Matriculation

Matriculation Process

Matriculation is a partnership between the student and the Chabot-Las Positas Community College District for the purpose of aiding students in obtaining their educational goals. This partnership identifies the responsibilities of both the College and the student and describes how to reach those goals through the established programs, policies, and requirements currently in place.

The Chabot-Las Positas Community College District agrees to provide "A Plan of Success" to each student which includes: an admissions process; an orientation to the College's instructional programs, support services, and procedures; an assessment of basic educational skills and career goals; counseling/advising for course selection and for developing an individual educational plan; quality instruction; continuous follow-up on progress with referral to support services when needed; and institutional research and evaluation that monitors the effectiveness of all services provided.

The student agrees to express a broad educational intent upon admission and to declare a specific objective within a reasonable period of enrollment; attend classes and complete assigned work; confer with counselors/advisors to discuss choices; seek support services as needed to assist in completing course work; and maintain progress toward an educational goal according to standards set by the Chabot-Las Positas Community College District.

Exemptions

Students who enroll in credit courses at the Chabot-Las Positas Community College District may be exempted from the matriculation components as listed below:

- I. Orientation
 - A. Non-matriculated students;
 - B. Students who have earned a previous college degree;
 - C. Students enrolling in only one performance course (i.e., acting, drawing) or activity course (i.e., physical education);
 - D. Returning students who have attended a Las Positas College orientation session within the last two years.
- II. Assessment
 - A. Non-matriculated students are exempt with the exception of those students who plan to register in an English, mathematics, and/or chemistry course.
 - B. Matriculated students exempt from the assessment requirements include:
 1. Students who have earned a previous college degree;

2. Students currently enrolled at a four-year college or university who are not enrolling in English or mathematics courses;
3. Students enrolling in only one performance course (i.e., acting, drawing) or activity course (i.e., physical education);
4. Returning students who have completed the Chabot or Las Positas College assessment process within the last two years.

NOTE: English, mathematics, and chemistry assessment testing requirements will be waived for students who have:

- ▶ Completed an assessment process at another institution (within the past two years) and have assessment results/scores available for review;
- ▶ Completed previous college work in mathematics, English, and/or reading and have provided transcripts or grade reports;
- ▶ Been individually assessed and tested through Disabled Students Programs and Services.

III. Counseling/Program Advisement

- A. Non-matriculated students;
- B. Students who have earned a previous college degree;
- C. Students enrolling in only one performance course (i.e., acting, drawing) or activity course (i.e., physical education);
- D. Students who have completed a Student Education Plan.

Any student who believes he/she is eligible for exemption from any of the Matriculation components may obtain an Exemption Form from the Counseling Center, Building 700. Students who are exempt from one or more of the Matriculation components are encouraged to participate in this process to enhance their success while enrolled at the College. Please Note: Exemptions are not a substitute/waiver for meeting course prerequisites. Students must present a transcript to the Counseling Center, Building 700, indicating prerequisites have been met through prior course completion.

Any student who believes he/she has been discriminated against in the Matriculation process (assessment, orientation, counseling advisement) may file a grievance with the Dean of Counseling, Building 700.

Registration

Registration Methods

Students may register for classes using the following methods:

- ▶ Via the Internet using CLASS-Web at www.laspositascollege.edu; or
- ▶ In person at the Office of Admissions and Records, Building 700.

For detailed information on registration procedures refer to the current Class Schedule.

Registration Information New Students

Students who have never attended the Chabot-Las Positas Community College District will need to complete the following steps for registration:

- I. Complete and submit an "Application for Admission" to the Office of Admissions and Records;
- II. Complete the assessment process and obtain an orientation schedule;
- III. Attend an orientation session. Counseling services will be provided at each orientation session to assist students with program planning;
- IV. Register for classes on or after the scheduled appointment date. Registration for new students is based on the date of application. Allow two business days for application processing.

Returning Students

Students who have not attended the Chabot-Las Positas Community College District during the past academic year will need to complete the following steps for registration.

- I. Complete and submit a new "Application for Admission" to the Office of Admissions and Records.
- II. Returning students on probation or dismissed status must obtain counselor advisement and approval before proceeding with registration.
- III. Returning students in exempt status (see exemptions, page 13) may not be required to obtain counselor approval prior to registration. Note: Exempt status does not exempt students from prerequisite requirements.
- IV. Returning students will not receive an individual registration appointment date. Registration date is based on the date of application.

Continuing Students

Students who have attended the Chabot-Las Positas Community College District during at least one of the two most recent Fall/Spring semesters are considered continuing students. Registration appointment notices will automatically be mailed to all continuing students prior to the registration period.

Continuing students at Las Positas College will be assigned a registration priority number. The registration priority number is based on the following two factors:

- I. The total number of units completed at the Chabot-Las Positas Community College District followed by a random digit.
- II. The student's priority within the following groups:
 - Group 1** Those who have completed a Student Education Plan (SEP) (see page 13 for information on SEP), orientation, and the assessment components of the matriculation process;
 - Group 2** Those who have completed or are exempt from the matriculation process (assessment, orientation, counseling);
 - Group 3** Those who have completed 2 of the 3 matriculation components (assessment, orientation, counseling);
 - Group 4** Continuing students who do not fall under the previous three categories.

Payment Methods

Students have the option of paying fees by (1) credit card at the time of online registration; (2) mail; (3) bringing payment in person to the Office of Admissions and Records, Building 700. Students who may be eligible for financial aid and/or an enrollment fee waiver should contact the Financial Aid Office, Building 1500, prior to registration.

Student Identification Card

All students are required to carry a valid photo identification card with current validation sticker. This card is essential for use of library, computer lab, bookstore and other campus services. Cards may be obtained at the Office of Admissions and Records, Building 700, and should be carried at all times. The first card is free. A replacement fee will be charged for lost or stolen cards.

Class Schedule

Prior to the beginning of each semester, a Class Schedule is published indicating courses to be offered—the time, the instructor, and the room assignment. Important instructions and information regarding admissions and registration are included in this publication. The Class Schedule is posted on the Las Positas College website and is available for purchase at the College Bookstore, Building 1300.

Admissions Electronic Mail (e-mail)

Students and prospective students can contact Admissions to receive answers electronically from Admissions representatives at: admissions@laspositascollege.edu

Registration Policies

Open Enrollment

It is the policy of the District that every class offered should be fully open to enrollment and participation by any person who meets the academic prerequisites of the class and who is otherwise eligible for admission to Las Positas College.

Enrollment Limits

Students are cautioned that some classes and programs may prove to be so popular or so limited by physical facilities and/or availability of qualified instructors that all students who apply cannot be accommodated.

Prerequisites

Many courses offered by the College require the completion of prerequisite courses. Students are advised to consult the course descriptions found in this Catalog for the identification of prerequisites for a course. Courses with prerequisites are also designated in the current Class Schedule.

Definitions

- ▶ **Prerequisite** means a condition of enrollment, which a student is required to meet in order to demonstrate current readiness for enrollment in a course or educational program.
- ▶ **Corequisite** means a condition of enrollment consisting of a course, which a student is required to take simultaneously in order to enroll in another course.
- ▶ **Strongly Recommended** means a condition of enrollment, which a student is advised, but not required, to meet before, or in conjunction with, enrollment in a course or educational program.

Prerequisites may be challenged for the following reasons:

- ▶ The prerequisite has not been made reasonably available;
- ▶ The prerequisite was established in violation of regulation or in violation of the District-approved processes (student documentation required);
- ▶ The prerequisite is discriminatory or applied in a discriminatory manner (student documentation required); or
- ▶ The prerequisite was met based on the student's knowledge or ability to succeed in the course without the prerequisite (student documentation required).

Prerequisite Challenge Forms are available in the Counseling Center, Building 700.

Admission, Matriculation and Registration

Request for Course Substitution or Waiver of Program Requirement

Students who have had substantial prior experience related to the content of a college-level course, and who can present adequate evidence of their competence, may petition to have enrollment in that class waived without college credit for purposes of satisfying a program requirement. Courses considered for substitution must have been taken at an accredited institution. Petitions for course substitution or waiver of program requirements are available from the Counseling Center, Building 700. Approval of the request by the Dean of Student Services is required prior to completing registration. Approval shall be based on the following criteria:

- I. Adequate evidence of competence as supported by transcripts, statements of employers, military or technical school certificates, etc.;
- II. Statement from an instructor that the course reflects the appropriate subject matter and fulfills the necessary program requirements, and signature of the Division Dean to validate the course. Students shall be advised that courses waived receive neither unit nor grade credit and that other courses may be needed to satisfy the total number of units required to complete the program of study.

Classification of Students Based on Unit Load

The following classifications have been established based on unit load:

Full-time student	Registered for 12 or more units
Three-quarter time student	Registered for 9.0 to 11.5 units
Half-time student	Registered for 6.0 to 8.5 units

Limitation on Unit Load

Eighteen (18) units per semester are considered to be a maximum load for a student. In order to take more than the maximum, approval must be obtained from a counselor.

Auditing

Auditing is permitted only for the following specific classes: Senior Community Choir, Community Choir, and Chamber Music Ensemble. The fee to audit is \$15 per unit.

Course Conflict/Course Overlap

Students may not enroll in two classes that meet during any part of the same hour.

Adding Classes

For the first week of instruction only, the Office of Admissions and Records, Building 700, will continue to register students into "open" classes without instructor add cards. Beginning

with the second week of the semester, courses may be added only with the permission of instructors. If space is available, the instructor will issue an ADD CARD containing an individual add authorization number. A student's add priority number is the total number of units completed at the Chabot-Las Positas Community College District followed by a random digit. Students with the highest priority number will receive an add authorization first. Refer to the current Class Schedule for add deadlines and procedures.

Withdrawing from Classes

Students are responsible for officially withdrawing from classes by the deadline date listed in the current Class Schedule. There is no automatic withdrawal process. Failure to follow the proper withdrawal procedures may result in a grade of "F". Students may drop a course by CLASS-Web, or in person at the Office of Admissions and Records, Building 700.

Requests to withdraw from a class that are received by the "NGR" (No-Grade-of-Record) deadline will not appear on a student's academic transcript. If a student withdraws from a course after the "NGR" deadline but on or before the "W" (withdrawal) deadline, a "W" will appear on their transcript. A "W" notation will not affect the student's grade point average; however, excessive "W" notations may affect (1) progress status, (2) status as a full-time student, (3) eligibility for financial aid and other benefits, or (4) athletic eligibility. Refer to the Class Schedule for important deadline dates.

Extenuating Circumstance Withdrawal

Class withdrawal after the twelfth week of instruction is permitted only on the grounds of verified extenuating circumstances (accident, illness, or other matters beyond the control of the student). A "W" will be granted only if the petition is approved and the class instructor verifies that the student is maintaining a passing grade of "D" or better (grade "CR" in CR/NC courses). Those students whose request for withdrawal is denied may choose to continue current class enrollment. Extenuating Circumstance Petition forms are available at the Office of Admissions and Records, Building 700.

Military Withdrawal

If a student is called to active military duty after the No-Grade-of-Record (NGR) period, he/she is entitled to military withdrawal (MW). Servicemen and women should provide copies of their military orders to the Assistant Dean of Admissions and Records, Building 700.

Withdrawing from the College

Students who intend to withdraw from the College must initiate withdrawal procedures for each class in which they are enrolled. Students are held accountable for clearing all obligations with the College including fees, library books, equipment, and lockers. The deadline for withdrawal from classes with a guaranteed symbol "W" is Friday of the twelfth instructional week. Refer to the Class Schedule for deadlines.

Instructors' Withdrawal Option

The instructor may drop students who miss the first meeting of a course. In addition, an instructor may initiate a drop if the student is absent for a total of four (4) consecutive or six (6) cumulative instructional hours and/or two (2) consecutive weeks of instruction.

Repeating a Course

The College recognizes that the most recent completion of a course should most accurately reflect a student's academic progress. Therefore, students may repeat for credit those courses taken for which grades of D, F, or NC were received. The most recent grade (A, B, C, D, F, C/NC) received must be calculated into the GPA regardless of whether this grade is lower or higher than the original grade.

NOTE: Except as provided in the Catalog for specific courses or in cases of extenuating circumstances, a student, by state law, is limited to ONE ATTEMPT to repeat a course for the purpose of raising a substandard grade (D, F, or NC).

Certain courses designated by the Office of Academic Services may be repeated up to a maximum of three times. Students should consult the College Catalog.

When a student has repeated a course and earned a passing grade of A, B, C, D, or CR, he/she may petition the Assistant Dean of Admissions and Records to count, for grade point calculation only, the most recently earned grade. The "Petition For Use Of Most Recent Grade in a Repeated Class" is available at the office of Admissions and Records, building 700. Physical Education activity courses may not be repeated for a higher grade.

Students are advised that both the original and subsequent grade will remain on their transcript and that in transferring to another institution, they may be held responsible for all units attempted.



Course Repetition: Special Circumstances

Students may not repeat a course in which they received a passing grade of A, B, or C. However, under specific conditions, the Dean of Student Services or designee may permit the repetition of courses for which a grade of "C" or better has been received. These conditions are:

- ▶ When the student's previous grade is, at least in part, the result of extenuating circumstances. Extenuating circumstances are verified cases of accident, illness or other circumstances beyond the control of the student;
- ▶ When a student should repeat a course because there has been a significant lapse of time since the student previously took the course;
- ▶ When it is necessary to meet a legally mandated training requirement as a condition of continued paid or volunteer employment.

California Education Code (Title V, Section 55763) states that grades awarded for courses repeated under these specific conditions shall not be counted in calculating a student's grade point average.

College Transcripts

Students who desire transcripts of their academic record must submit a written request to the Office of Admissions and Records, Building 700, indicating the student's name used while attending, SSN or W identification number, and the number of transcripts requested and name and address of the designated recipient. Transcripts are provided only in response to a written request from the student. Official transcripts will be mailed directly to the designated recipient.

Copies of transcripts received from other colleges and universities cannot be forwarded to a third party. Students desiring such transcripts must request them directly from the issuing institution.

For information on transcript fees, refer to Catalog page 18, "Fees and Refunds."

Fees and Refunds

Fees

Fees are subject to change.

Consult the current Class Schedule.

California Residents - Enrollment Fee

California residents, except those exempt by law, will be charged an enrollment fee of \$18 per unit for classes at Las Positas College. Updates to fee information will be made available at www.laspositascollege.edu or by contacting the Office of Admissions and Records, Building 700, at 925.373.5815.

Nonresident Tuition

Nonresidents of California are required to pay a tuition fee of \$152.00 per unit in addition to the enrollment fee and other college fees. A California Nonresident Tuition Exemption may be granted to certain non-resident students who meet the exemption requirements set forth in Assembly Bill 540. Contact the Office of Admissions and Records at 925.373.5814 for further information.

International Student Tuition

The tuition fee for international students, non-immigrant aliens or students on other types of visas is \$155.00 per unit in addition to the enrollment fee and other College fees. International students (F-1 Visa) are required to enroll and maintain a minimum of 12 units per semester.

Payment of Fees

Enrollment each term is conditional upon full payment of fees/tuition. If fees are not paid, classes will be dropped according to the "non-payment" deadline dates listed in the Class Schedule and College website.

Failure to Pay

College financial obligations may result in the withholding of grades, transcripts, diplomas or registration privileges from any student who has been provided with written notice that he or she has failed to pay a proper financial obligation due to the College. Any item withheld shall be released when the student pays the financial obligation.

Mailing Fee

An optional fee of \$3.00 will be assessed each semester to cover the cost of various mailings that students receive throughout the term (registration mailer, grade report, etc.).

Health Services Fee

Las Positas College provides health services for students through a Student Health Center. In accordance with state community college regulations, all enrolled students will be

charged a Health Service Fee of \$12.00* per semester. The only exceptions for this fee are as follows:

- ▶ Students who receive a Board of Governors Waiver (enrollment fee waiver through Financial Aid);
- ▶ Students taking classes held only on Saturday or at an off-campus site;
- ▶ Students who rely only on prayer for healing in accordance with teachings of a bona fide religious sect, denomination, or organization may see exemption from the fee and services. To apply for a waiver, students must provide a statement of such reliance from an official of the sect, denomination, or organization.

Information on exemptions is available in the Office of Vice President of Student Services, Building 700.

** At the time of publication, the College is considering a Health Service Fee of \$13 per semester.*

Associated Students Activities Fee

An optional fee of \$5.00 will be charged each semester. Students paying this fee receive an activity sticker, which may provide a discount on student activities. College clubs, scholarships, the Student Center, and other student-related services are supported in part by this fee.

Student Representation Fee

A fee of \$1.00 will be assessed of all students each semester. This fee is used for any purpose related to representing students views with governmental bodies.

Parking

Parking at Las Positas College is by permit only. Parking regulations are enforced from the first day of class. A daily permit can be purchased from dispensers located in the parking lots. A full-term permit may be purchased at the College Bookstore (or other designated location).

The fees are as follows:

- ▶ Car - \$30.00;
- ▶ Motorcycle - \$15.00;
- ▶ Daily permits - \$2.00.

Parking fees for summer are different. Refer to the schedule of classes.

Note: A reduced term parking fee of \$20.00 is available for students who receive a Board of Governors Waiver (enrollment fee waiver through Financial Aid).

Print Fee Card

Use of a College computer lab requires the purchase of a Print Fee Card obtained from the Las Positas College Bookstore or vending machines. Discounted print cards can be purchased in the Bookstore.

Refunds

Enrollment Fee Refund

Students who officially withdraw from classes during the NGR (No-Grade of Record) period (see Class Schedule for deadlines) shall be entitled to a full refund less a \$10 processing fee. Students must initiate a request for refund of enrollment fees for classes cancelled by the College. For cancelled classes, the \$10 processing fee is not charged. The refund policy complies with, and is based on, California law and the Education Code.

A refund will not be issued to students who withdraw from classes after the NGR deadline.

Non-Resident Tuition Refunds

Refund of tuition by reason of program reductions or withdrawal from the College will be made in accordance with the schedule indicated below.

- ▶ Withdrawal prior to the first day of instruction in a regular semester, term or session: 90% Refund
- ▶ Withdrawal during the first two weeks of instruction for a regular semester, term or session: 75% Refund
- ▶ Withdrawal after second week of instruction for a regular semester, term or session: No Refund

For further information concerning tuition charges and refunds, consult the current Class Schedule.

Tax Information

HOPE Scholarship and Lifetime Learning Credits

Students will receive from the Chabot-Las Positas Community College District a 1098T form noting all fees billed and scholarships awarded. The U.S. Department of Education's Office of Post Secondary Education oversees the HOPE Scholarship and Lifetime Learning tax credits. The "Taxpayer Relief Act of 1997" allows eligible taxpayers to claim a tax credit against their federal income tax for qualified education and related expenses.

Information about this tax program is available through www.irs.gov, Publication 970 or www.ed.gov. Interested parties with questions are directed to contact the IRS Office at 1.800.829.1040.



Financial Aid

Financial Aid

Financial aid is a means of assisting students in receiving a college education that would otherwise be unable to afford this opportunity. Selection of students to receive financial aid is strictly based on an analysis of family financial need, and is made without regard to age, sex, race, religion, national origin, or physical ability.

The Financial Aid Office, Building 1500, 925.373.5816, e-mail: financialaid@laspositascollege.edu, administers financial aid in accordance with federal and state regulations and policies. A full range of financial aid programs is offered including registration fee waivers, federal Pell Grants and Supplemental Educational Opportunity Grants (SEOG), state Cal Grants B and C, federal Stafford subsidized and unsubsidized student loans, federal WorkStudy job positions, an on-campus scholarship program and referrals to outside scholarship resources.

Eligibility

To be eligible for most sources of financial aid, a student must be a U.S. citizen, permanent resident, or other eligible non-citizen; be enrolled in at least six units; maintain satisfactory academic progress; register with Selective Service if required; demonstrate need; be working toward a declared approved major; have a high school diploma or GED or pass an independently administered examination approved by the Department of Education; and must not be in default on any student loan nor owe a refund on any grant.

How to Apply

To apply for all federal and state sources of financial aid, students should complete the Free Application for Federal Student Aid (FAFSA), available in the Financial Aid Office, Building 1500, beginning January of each year for the following school year. Las Positas College Title IV code is 030357. A new FAFSA must be completed each year. Students should apply as early as possible, preferably during the spring term of the previous school year. Processing time from application to payment will require a minimum of several weeks.

Students may apply using the paper FAFSA, or may apply directly online via FAFSA ON THE WEB, www.fafsa.ed.gov.

When applying online, a signature sheet must be printed and mailed to the address indicated, or an official PIN number may be requested to use as electronic signature at www.pin.ed.gov. An application will not be processed until the federal government receives the signature sheet or you have applied using a PIN.

The federal government will e-mail or mail the student a 'Student Aid Report,' which indicates the application results. Once the College receives the student's FAFSA

results electronically, students who qualify for a Pell Grant will be mailed a Missing Documentation letter, explaining what the student must do to complete their financial aid file in order to qualify for aid. Once a student has completed their file, they will be mailed an 'Award Letter' which indicates the amount of aid offered and expected disbursement dates. Students who have not received notification from the Financial Aid Office are encouraged to follow up to determine the status of their aid application and an explanation of the results. The Financial Aid Handbook is posted online at www.laspositascollege.edu/financialaid.

How Financial Need is Determined

The FAFSA allows the government to determine the Expected Family Contribution (EFC) for each student. The EFC is based on an impartial analysis of the student's total available resources. Financial need is determined by comparing the College's cost of attendance, available from the Financial Aid Office, with the student's Expected Family Contribution. Funds are distributed to students who indicate financial need through this process.

Registration Fee Waivers

California's Board of Governors Waiver (BOGW) Program waives enrollment fees for qualified residents of California for the entire school year. Students may receive a waiver for any number of units, with no minimum. All students with some financial need qualify in addition to those who receive Aid to Families with Dependent Children or Temporary Assistance to Needy Families (AFDC/TANF), Supplemental Security Income or General Assistance. Students must submit a FAFSA for processing in order to establish eligibility, or current documentation of receipt of TANF/CalWORKs, SSI or General Assistance.

How Grants are Determined

Grants are "gift aid" from the federal or state government that do not require repayment. Eligibility is determined from the results of the FAFSA in accordance with federal and state guidelines.

Federal Pell and SEOG Grants

Federal Pell Grant award amounts vary depending on the Expected Family Contribution and the student's enrollment status. Currently awards range from \$400 to \$4050/year. Priority for Federal SEOG grants (\$400/year) is given to full-time students who file their application prior to June 1.

Cal Grants

Students should file their FAFSA prior to March 2nd in order to qualify for a Cal Grant. Community college students who missed the March 2nd deadline may still apply by filing a FAFSA prior to September 2nd, and will be able to compete for remaining grants for community college students. In addition, each student must assure that a verification of

grade point average be sent to the California Student Aid Commission. All students who have completed 24 units (as of the end of the previous semester) at Las Positas College will have their GPA automatically sent electronically. All other students should contact the Financial Aid Office, Building 1500, for assistance in determining which school or college is required to complete GPA verification for that individual. Students will be notified directly by the California Student Aid Commission if they have been awarded a Cal Grant. Students who receive a California Aid Report (CAR) form should submit it to the Financial Aid Office.

Federal Workstudy

Students with unmet financial need may receive a grant to work on campus, or off campus in a community service position, as part of their financial aid package under the federal Workstudy program. Students should inquire about available positions at the Career/Transfer Center, Building 900.

Stafford Student Loans Subsidized and Unsubsidized

Once financial need has been established, students enrolled at least half-time may apply for student loans. Students must maintain half-time enrollment in order to remain eligible for loans. Those with need may receive subsidized loans (government pays interest while in school); those without need may receive unsubsidized loans (student pays interest while in school). Loan limits are federally established and may never exceed a student's cost of attendance. Student loans do not need to be repaid until beginning six months after graduating or dropping below half-time. An entrance and exit counseling session or orientation is required for all loan students so that terms of the promissory note, avoidance and consequences of default, and student notification and responsibilities are very clearly understood. Contact the Financial Aid Office for further information.

Satisfactory Academic Progress Policy

In order to remain eligible for continued federal and state grants and loans a recipient is required to maintain certain standards of progress known as a Financial Aid Satisfactory Academic Progress Policy. This policy addresses a minimum semester and cumulative grade point average (GPA) requirement, maximum time frame allowed to receive aid, percent of academic progress which must be made each semester relative to units attempted, consequences of not meeting the minimum requirements, reinstatement of financial aid eligibility, and appeal procedures.

The full policy is mailed to each student along with his or her financial aid award letter which is posted on the Financial Aid Website. It is each recipient's responsibility to read this policy and be responsible to understand it and ask for further clarification if needed.

Federal Return to Title IV Regulations

Students who withdraw from classes after receiving federal aid must repay a portion of the funds received. A federal law requires students to repay a portion of the funds received if they completely withdraw before the 60% point of the term, as measured in calendar days, not school days. NOTE: IF A STUDENT WITHDRAWS AFTER S/HE HAS EARNED 60% OF HIS/HER GRANT, THE STUDENT DOES NOT OWE ANY REPAYMENT. The Financial Aid Office will be able to indicate when exactly that 60% day of the term is.

Students who are considering withdrawing from the College are highly encouraged to visit the Financial Aid Office, Building 1500, first to discuss the situation and to receive advice about their potential repayment.

Once the College notifies the withdrawn student of the Return to Title IV amount due, the student will have 45 calendar days to repay the Federal amount due to the College, which then will be returned to the federal government. If not repaid within 45 days, the account will be referred to the federal government for collection, and a national 'HOLD' will be placed on the student's federal financial aid record. The student will lose eligibility for all federal aid nation-wide, until satisfactory repayment arrangements are made with the federal government or until the debt is repaid in full.

Additionally, the College must pay the government directly some of the unearned portion of financial aid funds received by the student based on the registration fees which would have been assessed (even if the student received a waiver). The amount of institutional funds the College pays the federal government on the student's behalf will be immediately posted on the student's account and a College hold will be placed. The hold will be lifted only upon full repayment arrangements. The hold will be reinstated if the repayment terms of the agreement are not upheld.

Any portion of the institutional portion of repayment due directly to the College which is unpaid at the end of the school year may be referred to the state COTOP collection program, which repays the debt (in addition to a 25% collection fee) by retaining funds from the student's state income tax refund.

Financial Aid

Financial Aid Handbook

A Financial Aid Handbook is posted on the Financial Aid webpage at www.laspositascollege.edu/financialaid. The handbook is a reference that clearly states general and specific financial aid program information, and Financial Aid Office policies and procedures. It also includes Las Positas College's Satisfactory Academic Progress Requirements for students receiving financial aid. All financial aid recipients are highly encouraged to read the handbook carefully and become familiar with its contents.

Other Sources of Funds

Scholarships are funds generally made available by sources other than the government (such as private businesses, organizations, clubs, colleges, etc.) for students to help with the costs of their education. Generally, students must compete for scholarships. Awards have many different criteria.

The Las Positas Scholarship Program

During the first week in February each year, the Las Positas College Scholarship Program is advertised, and students may begin to apply for a variety of awards available only to College students. Applications are available in Building 1500 and via the College website. The Scholarship Program Deadline is mid-March. Scholarship recipients are invited to attend the College's Annual Student Recognition Ceremony held in May.

Outside Scholarship List

A list of current "outside scholarships" is posted in the Financial Aid area and on the Financial Aid Website, www.laspositascollege.edu/financialaid, and is updated frequently. These are scholarships often from local, statewide and national organizations or foundations, which are not specifically for Las Positas students, but which may be of particular interest to LPC students. Deadlines vary greatly, so students should check the list frequently for updated information.

Other Scholarship Opportunities

Thousands of scholarship opportunities are available. The best source of scholarship information is through the World Wide Web. Students can search huge databases to seek scholarships for which they meet the qualifications, or take advantage of several FREE on-line scholarship searches, which do the searching for the student based on an application the student completes.

Las Positas College Financial Aid Website

www.laspositascollege.edu/financialaid

E-mail: financialaid@laspositascollege.edu

Directory of Resources for Financial Aid

FEDERAL STUDENT INFORMATION CENTER

For questions about Federal student financial aid:
8 A.M. - 8 P.M. Eastern Time
800.4.FEDAID (800.433.3243)

FEDERAL PELL INFORMATION CENTER

For specific questions about the status of your FAFSA processing
319.337.5665

U.S. DEPARTMENT OF EDUCATION HOME PAGE

Federal financial aid information
www.ed.gov/finaid.html
<http://studentaid.ed.gov>

FAFSA ON THE WEB

To file a financial aid application on the World Wide Web
www.fafsa.ed.gov

CALIFORNIA STUDENT AID COMMISSION (CSAC)

For questions and information about California financial aid opportunities, including Cal Grant A, B, and C
P.O. Box 419026, Rancho Cordova, CA 95741-9045
916.445.0880
www.csac.ca.gov

MAPPING YOUR FUTURE:

Information on career planning, college selection and financial aid

E-mail: mapping-your-future@tgslc.org or visit CSAC Website (listed above)

ED FUND (a service of the California Student Aid Commission)

For loan questions/ problem resolution
Ed Fund
www.edfund.org
P.O. Box 419045
Rancho Cordova, CA 95741-9045

DEFAULT PREVENTION HOTLINE: 800.298-9490

Post Default/ Borrower Disputes/ Closed School/ False Certification Line
800.367.1590
Paid-in-Full Letters for Defaulted Borrowers
800.367-1589

FINANCIAL AID INFORMATION PAGE

A free, comprehensive, objective, and independent guide to student financial aid resources, including scholarships, is sponsored by NASFAA (National Association of Student Financial Aid Administrators). It includes access to FASTWEB, an online searchable database of more than 180,000 private sector scholarships, fellowships, grants and loans.
www.finaid.org

FASTWEB

A free online scholarship research service
www.fastweb.com

SCHOLARSHIP SCAMS

Identify common financial aid and scholarship rip-offs and scams
www.finaid.org/scholarships/scams

SELECTIVE SERVICE REGISTRATION INFORMATION

Check your registration status or register directly on the World Wide Web
www.sss.gov/regist

BUREAU OF CITIZENSHIP AND IMMIGRATION SERVICES (BCIS)

Appraiser's Building., Room 300630 Sansome Street
San Francisco, CA 94111
415.705.4411

INTERNAL REVENUE SERVICE

For copies of tax forms or for free copy of 'Tax Summary'
800.829.1040
Blank tax forms can be downloaded from the following site
www.irs.ustreas.gov/prod/forms_pubs/forms

VETERANS EDUCATIONAL BENEFITS

Toll free number: 888.442.4551



Veterans Educational Benefits

Educational Benefits

Las Positas College is approved to offer instruction to service persons, reservists, and other eligible persons under Title 38, U.S. Code and Department of Veterans Affairs (V. A.) regulations. Eligibility for benefits under any of these programs is determined by the appropriate federal or state agency, and not by the College.

Dependents of Veterans

A student who is a dependent of a veteran with a service-connected disability or who died of a service-connected cause may be eligible to receive a waiver of tuition and registration fees through the California Dependents of Veterans College Fee Waiver Program. Application forms and additional information may be obtained by contacting the local county veterans service officer, listed in the telephone directory under county government, or by calling 916.653.2573. Approved authorization forms may be submitted directly to the Financial Aid Office for a fee waiver.

Certification Process

New students should first enroll in the College and register into courses, following the regular matriculation process for all students. Once enrolled, students may apply for V.A. benefits by completing a V.A. Application for Educational Benefits, which is available from the Veterans Office, Building 1500, and an Enrollment Certification Request form and must submit a DD214 if the veteran served on active duty. Students must request enrollment certification each semester. Students must notify the V.A. Office if their enrollment, major, or address changes. The V.A. Office will make necessary certifications of enrollment, changes in enrollment, and progress.

Advance Pay Option

Certification/processing is through the V.A. Regional Center in Muskogee, Oklahoma, and generally takes up to two months. New students or students who did not attend the previous term (including summer) may request certification with "Advance Pay", but must do so at least 35 days prior to the first day of the term. V.A. will subsequently forward a benefit check available when the term begins, which advances pay for the first two calendar months of the term.

Evaluation of Prior Education and Training

During the first semester, all students receiving veterans educational benefits are required to 1) have submitted to the Veterans Office or the Office of Admissions and Records, official academic transcripts from each school previously attended, 2) have submitted a DD214 if they were on active duty, and 3) complete a "Veterans Evaluation" with a College counselor, which establishes a personalized education plan based on prior education and training and the student's current academic objective. The institution will

conduct an evaluation of all previous education and training and will grant appropriate credit, shorten the veteran's or eligible person's duration of the intended course proportionately, and will notify the V.A. Regional Center and the student accordingly, in compliance with Title 38 regulations.

Course Restrictions for Certification

Courses will NOT be certified for benefits after the first semester until the Veterans Evaluation is complete. Only courses that meet requirements or their prerequisites for the major and degree objective as indicated on the evaluation will be certified for payment. If the academic objective is changed, the student must complete a new evaluation accordingly. The College can only certify for Certificate, AA, or AS majors listed in the Las Positas College Catalog, or for transfer majors for which official articulation has been completed between Las Positas College and the intended transfer college and program.

Veterans will be permitted to enroll into work experience courses but must do so under the Parallel Plan as practical training for their major.

There are individual academic programs and courses listed in the Catalog that may not meet V.A. approval for educational benefits. Contact the College Veterans Office, Building 1500, to determine if your intended program is approved for benefits. Note: Programs previously approved are subject to change as determined by the Department of Veterans Affairs.

For more information, contact the Las Positas College Veterans Office 925.373.5816 or the Veterans Administration Regional Office at 1.888.442.4551 or www.gibill.va.gov

Instructional Services

Library (Learning Resources Center, LRC)

The Library at Las Positas College is located in Building 2000. The mission of the Library is to provide the information services and resources required to meet the needs of the educational programs of Las Positas College. It exists to facilitate and improve learning by supporting and expanding the instructional capabilities of Las Positas College and providing students with the opportunity to develop information competency skills for lifelong learning. The Library offers reference and instructional services to meet the needs of students, faculty, and staff. The Library encompasses all types of print, non-print, and online resources including a wide variety of books, audiovisual materials, magazines and newspapers, and full-text periodical databases. The Library maintains an extensive website that provides access to the Chabot-Las Positas College Libraries online catalog, online databases, and research and instructional guides. The Library facilities include computer labs, study carrels, group and soundproof study rooms, and listening and viewing stations. Currently registered students, faculty, and staff may check out books and materials from both the Las Positas College and Chabot College Libraries. A current College ID is required.

Computer Laboratories

Las Positas College has computer laboratories on campus for student use. PC and Macintosh computers are loaded with a variety of software programs to assist students in completing course assignments and projects. In addition to the computers available in the LRC, the Computer Center, Building 800, and the English Laboratory, Building 400, have computers open to students on a first-come, first-served basis at various times during the day. Consult the lab staff for available hours.

Use of a College computer lab requires the purchase of a Print Fee Card obtained from the Bookstore or vending machines. Discounted print cards are available, and can be purchased in the Bookstore.

Distance Education

Distance Education classes are designed to accommodate the busy lifestyles and various learning styles of students. Las Positas College typically offers Distance Education classes in two formats: online, which are conducted over the Internet, and video-conferenced, which are two-way interactive courses between a classroom at Las Positas College and at least one other off-campus site. To take classes online, you must have experience using a web browser (Internet Explorer preferred), access to a computer with an Internet connection and a CD-ROM drive, and an e-mail address.

Las Positas College continues to expand its offerings of distance education. Current offerings can be found in the Class Schedule, on the CLASS-Web website, and on the Las Positas College Distance Education website. Links for the above websites can be found on the College's home page at www.laspositascollege.edu. For further information, call 925.373.4954.

Honors Transfer Program

The Honors Transfer Program began in Spring Semester 2000, and has transfer agreements with several colleges and universities throughout California. Members of the Honors Transfer Program (HTP) have the option to participate in honors academic activities (honors courses, honors contracts, and honors colloquia) designed specifically to encourage independent and creative learning. Honors academic activities are designated with an "H" (for Honors) on the student's transcript. At graduation, honors students receive special recognition and an Honors Seal affixed to their diploma.

Eligibility requirements for applying for membership in the Honors Transfer Program are:

- Cumulative GPA of 3.5;
- 12 units at Las Positas College;
- Eligibility for English 1A.

For additional information, contact the Honors Program Coordinator at 925.373.5800 or www.laspositascollege.edu/honors

Special Instructional Programs LapTechS - Business, Electronics/CIS

Las Positas Technical Support (LaPTechS) is an innovative entrepreneurial venture offering technical support services to the campus community. Within a work-based learning model, students get hands-on training in a workplace environment. Students practice hardware and software installations, computer repair, assessment, maintenance and troubleshooting techniques. Business applications include data and information collections, storage and retrieval, document preparation, customer service, verbal and nonverbal communications, and job skills preparation. LaPTechS creates opportunities to learn all aspects of business operations, technical support, and the development of interpersonal skills. For additional information call 925.373.5856.

Speech and Debate Program

The Speech and Debate Programs, otherwise known as "Forensics" or "The Talk Hawks" provides students with an intensive focus on enhancing research, writing and performance skills. Forensics students compete on an inter-collegiate basis at tournaments in the areas of Public Speaking, Oral Interpretation, and Debate. Besides traveling to competitions, students in the

nationally-reknowned program also host two on-campus tournaments a year and a Speech Performance night. With this opportunity, students experience accelerated growth in their communication skills and self-esteem. For more information refer to Catalog page 192.

Internships

Internship opportunities are available through Las Positas College. Interested students who meet qualifications are placed in carefully structured work environments with local employers. Internships provide opportunities to apply knowledge gained in the classroom in a real world setting and can be an important part of career development for students. Students must concurrently enroll in the Internship Seminar course. Placements are contingent upon the availability of an appropriate internship site, employer criterion and student qualifications, and are at the discretion of the employer. Students and employers should contact the Work-Based Learning Coordinator at 925.373.5856.

Occupational Work Experience Education

The Occupational Work Experience Program incorporates participants from business, industry, and all levels of governmental agencies. The program enables students to apply their classroom instruction to related career employment for training and experience. The program increases the practicality of students' class-work by giving them the opportunity to examine and utilize the latest techniques, procedures, and equipment in a business setting. Close coordination and supervision by the College ensures that the Work Experience Program becomes a real learning opportunity related to the student's area of study.

Las Positas College offers two Occupational Work Experience Programs. The Parallel Plan allows students to concurrently enroll in College courses while working. The Alternate Plan permits students to study full-time one semester and work full-time the following semester. Refer to Catalog page 211 for course descriptions.

Work Experience education is a requirement for graduation in many of the occupational programs at the College. Students majoring in programs requiring Work Experience should enroll in that program's Work Experience course. Other students seeking elective or transferable credit also may enroll in the Occupational Work Experience Program.

Regulations governing the operation of Work Experience education programs may be found on Catalog page 211.

Community Education and Services

Community Education classes are designed to provide personal development, cultural enrichment, and job training to people of all ages. These classes are fee-based and not for credit. At present, Community Education offers classes in fitness and health, human development, home and garden, computers, business, arts and letters, financing, and college preparatory skills. For information regarding Community Education classes at Las Positas College or to suggest a Community Education class, telephone 925.373.5867.

Continuing Education

Continuing education classes are designed to provide in-service education for persons who must maintain a professional license by periodic training and upgrading of their skills. Typically, such classes are required in the nursing, dental hygiene, real estate, and accounting professions. Organizations or individuals who desire information regarding continuing education opportunities, or who wish to suggest a needed continuing education class, should telephone 925.485.5212.

Contract Education

Contract education classes are offered by Las Positas College through the District Office through contracts for educational services with public or private agencies, corporations, associations, or individuals. An active outreach program in contract education is conducted by the District to help business, industrial and public organizations develop training programs tailored to meet their needs. Examples include Business Communications, Supervision, CPR and First Aid, English as a Second Language, Commercial Law, Word Processing and Computer Skills, Pre-Retirement Planning, Radiation Technology, Technical Writing, and certificate or degree programs in technical and general education. Courses can be offered "on-site" (at the employer facility) or on campus. Organizations or persons desiring information on how the District can provide educational training programs to meet specific training needs should telephone 925.485.5212.

QUEST (Expanding Education for Mature Adults)

College age lasts a lifetime, especially for those who are eager to learn. The QUEST program is designed to meet the educational needs of adults, 55 years and older. Classes are offered in a variety of disciplines such as art, English (writing), and physical fitness. Classes are held in senior and community centers throughout the valley.

QUEST students earn College credit and pay regular College fees. For further information, contact the QUEST Office 925.373.5811.

Tech Prep (Technical Preparation Programs)

Tech Prep establishes a balance between academic instruction, technical/vocational training, and career development for students. The Tri-Valley Educational Collaborative (TEC) is comprised of representatives from the Tri-Valley Regional Occupational Program (ROP), Las Positas College, local school districts, CSU-Hayward, local business and community partners. Faculty, administrators, and business representatives work together to build seamless career pathways designed to prepare students for careers from high school through college. For further information, contact the Dean of Academic Services, 925.373.5824.

High School Articulation

Las Positas College recognizes the value of coursework previously completed at the secondary level through local high schools or ROP's (Regional Occupational Programs). On an ongoing basis, articulation agreements between Las Positas College and these secondary schools are established when deemed appropriate by the College faculty in the discipline. These agreements provide high school (or ROP) students the ability to apply prior work towards Las Positas College requirements. There are two levels of articulation agreements: Noncredit Articulated Courses, and Credit-by-Examination Articulated Courses. In both instances, in order for the student to receive recognition of their work once they reach the College, the articulation agreement between the high school and Las Positas College must have been in place at the time the student completed the work at the high school.

The College home page, www.laspositascollege.edu, provides a detailed discussion of High School Articulation, along with directions and application forms for students, high schools/ROP's and College staff. This website also lists current Articulation Agreements between the College and high schools and ROP's. Forms, directions and a listing of current articulation agreements are also available in the Office of Student Services, Building 700.

Noncredit Articulated High School Courses

High schools and ROP's may request noncredit articulation* status for a course offered at the secondary level. The course will be accepted for articulation status if the College faculty determine that the course offered at the secondary level is comparable to a specific community college course. (Course agreements which had previously been identified as "2+2", fall into this definition.)

Noncredit articulated high school courses can be applied to Las Positas College requirements, but cannot be granted College credit, unless the student or course has also qualified under the Credit-by-Examination process (see discussion below). There are several advantages

to pursuing articulated courses at the high school level. Students moving from high school to Las Positas College will be much better prepared if the expectations of the College faculty are met through the preparation provided by high school teachers. Articulated courses can also meet certificate and major requirements for some degrees (primarily occupational) at Las Positas College. This enables students to go directly into the more advanced courses when they reach the College. (Students still need to meet full unit requirements for these certificates and degrees.)

** Noncredit Articulation of High School (Secondary) coursework is offered under the provisions of the California Administrative Code, Title 5 and the process is included in the CLPCCD Administrative Rules and Procedures. (High School (Secondary) Articulation).*

Credit-by-Examination Articulated High School Courses

This second level of high school course articulation** at Las Positas College can also provide students with college credit for certain courses completed at the High School or ROP. In addition to agreeing that the course content is comparable, the College faculty also must design or approve the final exam given for the course by the high school or ROP, or in some instances may require that the final be taken at the College. The College faculty members who normally teach the College course must determine the nature and content of the exam. Such credit may be granted only to a student who is registered at the College and in good standing, and only for a course listed in the Catalog. Student's transcript will be noted to show that credit was earned by examination. The amount of credit to be granted cannot be greater than that listed for the course in the Catalog. Units will not count toward the 12-credit residency requirement of the College.

*** Credit-by-Examination is offered under the provisions of the California Administrative Code, Title 5 and the process is included in the Administrative Rules and Procedures. (Course-wide Credit-by-Examination)*

In order for students to receive credit for a course with a Credit-by-Examination Articulation agreement, they need only to provide proof of completion at the high school level, after they begin a course of study at the College. Refer to the Las Positas College website for forms and directions. Individual students may also petition College instructors for Credit-by-Examination for College courses for which there are no Articulation Agreements. See Credit-by-Examination (Individual Student Application), Catalog page 37.

Student Life



Student Programs and Services

Counseling Services

Counseling services, located in Building 700, are central to student success at Las Positas College. Counselors provide academic, career, and personal counseling services. They orient new students and teach psychology-counseling courses in career selection, orientation to the College experience, study skills, peer support training, re-entry support and interpersonal relationships. Each student meets with a counselor to select courses based upon the student's skills and interests and develops a Student Education Plan (SEP) to meet career, and/or college or university transfer requirements. Assessment scores are interpreted for the student by the counselor and articulation agreements with four-year colleges and universities are used to construct accurate student plans for transfer. Counselors remain available to students throughout their college career to discuss concerns that may be affecting their academic progress. The Counseling program is organized under the major services explained below.

Academic Counseling

Counselors assist students with selection of courses in which they can succeed and that lead them toward their goals. Courses considered are based upon the student's assessed skills, their selected career and/or the institution to which they plan to transfer.

Career Counseling

Counselors are available to assist students in self-assessment and career selection processes. Students will be encouraged to examine their skills, interests and aspirations and to research career possibilities that offer opportunities for utilizing their unique skills and personal qualities.

Personal Counseling

Counselors hold graduate degrees in counseling psychology and are fully qualified to provide individual and group personal counseling. Short-term confidential personal counseling is available to help students discuss ways to remove personal barriers to their academic progress. Referral to community resources is available for those requiring long-term personal counseling.

Career/Transfer/Employment Center

The Center offers students the following resources to explore career, educational and employment opportunities:

- ▶ Career library with both career books and college catalogs;
- ▶ Technology and assistance to use in the search process;
- ▶ ASSIST;
- ▶ EUREKA—computerized California career information system;
- ▶ Admission applications for UC and CSU;
- ▶ Individual counseling;
- ▶ Job Board.



The Center offers the following activities throughout the year:

- ▶ Career and transfer workshops;
- ▶ Annual Transfer Day and regular visits from four-year university representatives;
- ▶ Special transfer admission program information, including "on-the-spot" admissions;
- ▶ Tours, job shadowing, employment fair and transfer reception.

Assessment

The assessment process is a vital part of the College's counseling service. New students, unless exempt, are assessed in English, mathematics, and chemistry skills. Counselors utilize this information, along with other measures, in helping students to select courses in which they will succeed. The Assessment and Tutorial Center, Building 1000, also provides both career interest and aptitude assessments that will help students to make informed career selection decisions. Counselors assign these assessments and interpret results to students in the career counseling process.

Multiple Measures Philosophy Statement

The mission of the Chabot-Las Positas Community College District is to provide quality educational opportunities to all students who seek to increase their knowledge and to improve their skills by enrolling in general education, career and transfer education, continuing education and basic skills courses. While it is recognized that the final responsibility for the selection of proper courses rests with the student, the College offers a variety of programs and services prior to enrollment to help advise students about how to match their individual educational needs with specific college resources. Past practice and legal mandates both indicate that any single assessment instrument will be inadequate for successfully advising students as to appropriate course enrollment. Multiple measures assessment must, therefore, be the process for all recommended course enrollments, including advice given by counselors, instructors, administrators and classified staff.

Multiple measures assessment is broad in scope. No list of factors that may be included in a multiple measures assessment is exhaustive; however, some general categories and examples can be outlined. Student factors may include cognitive skills, which may be inferred from test scores, GPA and transcripts; emotional well-being, motivational level and educational goals which may be elicited in an interview or self-reported; social factors, such as life experience, family responsibilities and social support for educational effort; economic factors, such as job demands and financial resources; and physical factors. Factors associated with the instructor, the institution and the community can often interact with student factors to further indicate the potential for success in a given course.

New Student Orientation Program Planning Session

Students new to Las Positas College and who are without previous college experience are required to attend a scheduled orientation session prior to registering for classes. The session, which includes counselor interpretation of the results of the student's English, mathematics, and chemistry assessments, is scheduled AFTER the English and mathematics assessment session. In this orientation session, counselors give new students vital information for making informed decisions about their college career, and help them select their first semester courses.

EXPO—Orientation Program

In addition, new students are encouraged to attend an EXPO LPC course scheduled for the week prior to the beginning of the Fall term or during the first week of classes. This student orientation program provides important information as well as opportunities to meet other new students, student leaders, faculty, counselors and administrators.

Counseling Electronic Mail (e-mail)

Students and potential students can contact the Counseling area to receive answers electronically from Counseling representatives at counseling@laspositascollege.edu.

Tutoring Program

The Tutoring Program, located in Building 1000, is dedicated to providing the support and assistance students need to be successful in their course work. Free individual and small group tutoring is provided in specific content areas as well as study skills assistance. Student tutors are recommended by faculty members for their positions and can receive course credit for tutoring as well as classes in tutor training. Positions as paid tutors are also available. Students are invited to visit the Assessment and Tutorial Center to request tutoring or to seek positions as tutors.

Disabled Students Programs and Services (DSPS)

The Disabled Students Programs and Services, is committed to excellence and accessibility for all students. DSPS offers support services for students with physical, communication, learning and psychological disabilities. Support services include priority registration, academic, career and disability-related counseling, new student orientation, interpreters, tutors, note takers, test-taking facilitation and community referrals. Students with verifiable disabilities are eligible for accommodations related to those disabilities. Credentialed, certified or licensed professionals must verify the disability. DSPS is located in Building 1500. Students may make appointments by calling 925.373.4921; the DSPS Coordinator can be reached at 925.373.5888.

High Tech Center

DSPS has a dedicated technology center in Building 1500 for students with disabilities. PC computers are available along with other adaptive hardware and software to assist students in the areas of reading, writing, spelling and computation skills.

Learning Skills Program

The Learning Skills Program is designed specifically to assist the learning disabled student who has the potential to succeed in a community college environment. The program includes an initial diagnostic assessment and evaluation to determine eligibility for learning skills lab classes, individualized instruction, academic advising, and open access to the High Tech Center instructional lab. The Learning Skills Program is located in Building 1500; the Learning Skills Specialist can be reached at 925.373.4921.

Web Accessibility

Las Positas College is committed to providing web pages that meet Section 508 guidelines for web accessibility. Toward that end, each of the top-level pages on the website and all other pages managed by the College's Webmaster have been or are being modified to meet accessibility guidelines. In addition, DSPS and the Web team are educating faculty and staff on accessibility concerns including information about Section 508 compliance for web page content. Students who experience difficulties accessing a web page should contact DSPS at 925.373.4921.

Extended Opportunity Programs and Services

Extended Opportunity Programs and Services (EOPS) provides financial assistance and support services for low-income students with unique and special needs created by language, social, and economic situations. A variety of programs, services, and activities have been directed to the identification, recruitment, retention, and transition of EOPS students to the four-year college/university and/or career

placement. Included services are: financial grants and book certificates; academic, career, and personal counseling; new student orientation and readiness programs; special assistance in tutoring and peer advising; transfer counseling; field trips and cultural enrichment activities; and information and referral services.

Program eligibility is based on a history of low income and demonstrated financial need. All candidates must be full-time students and complete required application forms. Information and assistance may be obtained at the EOPS Office, Building 1500, or call 925.373.5889.

Cooperative Agencies Resources for Education (CARE)

The CARE Program provides a variety of services and activities to assist single parent students in achieving educational goals. They receive special counseling, support groups, child care, stipends, book certificates, transportation expense reimbursements, automotive repair and maintenance service, job search assistance, tutoring and peer advising. To be eligible for CARE, students must be attending college full-time, receiving Temporary Assistance to Needy Families (TANF), have a child who is under fourteen years of age, and be determined eligible for Extended Opportunity Programs and Services (EOPS). The CARE office is located in Building 1500. For additional information call 925.373.5889 or 373.4933.

CalWORKS Program

The Tri-Valley CalWORKs (California Work Opportunities and Responsibility to Kids) Program serves parents who are attending school as part of their Welfare-to-Work plan with the county. The program offers career counseling, academic advising, coordination with county welfare offices, transitional child-care funding, and on-campus and off-campus job placement. In addition, eligible students may apply for the Tri-Valley Housing Scholarship through the CalWORKs Program. For more information contact the CalWORKs Coordinator, Building 900, or call 925.373.4932.

Student Employment Services

A listing of current part-time and full-time job opportunities is posted in the Student Center, Building 1700. Job listings are posted daily from the job listing service, Jobtrak. Contact is made directly to the employer by the student. Students can access Jobtrak and other job listing services online in the Career/Transfer/Employment Center, Building 900, and the Learning Resource Center, Building 2000.

Housing

Las Positas College does not provide dormitories or other types of College-sponsored housing. Listings of rentals in

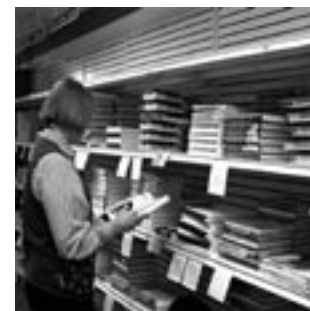
the area are posted on the bulletin board in the Student Center, Building 1700.

Public Transportation

Transportation to and from the College is an individual responsibility. WHEELS is a service of the Livermore-Amador Valley Transit Authority (LAVTA) and provides public transportation to and from the College. Route schedules are available in Building 1700. For more information contact WHEELS at 925.455.7500 or at www.wheelsbus.com.

Bookstore, Textbooks and Supplies

All students are required to furnish their own textbooks and supplies which are available at the Bookstore or online via www.follett.com. Typical costs for books and supplies average \$400 - \$500 per semester for students pursuing a full-time program. Students financially unable to buy their own books and supplies should consult the Office of Financial Aid, Vice President of Student Services, or a counselor. Bookstore hours are posted outside the bookstore, Building 1300. For information call 925.373.5812.



Student Health Center

The Student Health Center is staffed by a registered nurse practitioner and is located in the Student Center, Building 1700. Services include evaluation, treatment for minor illnesses and injuries, prescriptions, health education information and materials, birth control information, and health care referrals. Also available are mental health services and referrals. For more information, contact the Health Center at 925.371.3830. For information on the mandatory health service fee, refer to Catalog page 18, "Fees and Refunds."

Students who have a health condition that may require sudden emergency care are asked to advise and alert each of their instructors as well as the Nurse Practitioner in the Student Health Center to this condition at the beginning of each term.

Student Health and Accident Insurance

Students are responsible for providing their own health and accident insurance. For those students who do not have such coverage, health, accident, and dental policies may be obtained from the Student Health Center, Building 1700.



First Aid

First aid stations are located in the Security Office, Building 1600, and the Student Health Center located in the Student Center, Building 1700.

Medical Emergencies on Campus

For emergency assistance, dial #16 from campus payphones or 4999 from campus office phones. All cases of personal injury or medical emergency should be reported to the Security Office, Building 1600, or call 925.373.5890. The Student Health Center, located in the Student Center, Building 1700, can accommodate students with minor injuries and illnesses.

Security Services

Safety and Security Services are located in Building 1600. Security officers are responsible for providing the following services: information, assistance, escort service, security of personnel, security of facilities, emergency assistance, supervision of the College parking lots, investigation of crime on campus, and lost and found. Requests for service and reports of hazards and other problems should be directed to the Security Office, Building 1600, or call 925.373.5890.

Lost and Found

Lost and Found is located in the Security Office, Building 1600. Articles deposited with Lost and Found are held for six months. After this period, unclaimed items are disposed.

Escort Service

The College provides an escort service for students each evening from 6:00 p.m. to 11:00 p.m. Escort service can be obtained by contacting the Security Office, Building 1600 or call 925.373.5890.

Parking

Parking on campus is a privilege extended by the Board of Trustees to College faculty, staff, students and guests. To ensure safety and the efficient use of available parking space, rules and regulations for vehicle registration and parking are established. Drivers of vehicles using College parking lots shall comply with the Board approved rules and regulations. Drivers who do not comply may be cited and their vehicles may be towed away and impounded at the owner's expense. Repeated violations of the College rules and regulations may also cause a student to be subject to disciplinary action and may lead to the removal of the parking privilege.

Parking Permits

Parking at Las Positas College is by permit only. Student Parking Permits for each instructional term can be purchased at the Bookstore, Building 1300. Daily Parking Permits can be purchased from dispensers located in the parking lots. Parking Permits do not guarantee a parking space. They do authorize parking in available spaces. Refer to Catalog, page 18, for parking fee information. Students who have a DMV disabled placard may park in the handicapped designated areas of student lots. **Note:** There is no grace period for permits. You must display a Parking Permit each day you are parked on campus.

Visitor Parking

A 30-minute visitor parking zone is provided at the entrance to the College. Long-term visitor parking is available in each student lot when a daily Parking Permit is purchased from a ticket dispenser and displayed on the dashboard on the driver's side. Visitors who have a DMV disabled placard must purchase a daily parking permit and may park in handicapped designated areas of student lots.

Academic Regulations

Academic Standards

It is the policy of the Las Positas College Academic Senate that all academic courses be taught at a post-secondary level, particularly those courses for which Las Positas College has articulation agreements with four-year institutions. When a course is articulated, it assures that students completing the course have attained certain levels of academic skill and knowledge comparable with the equivalent course at a four-year institution.

It is understood that students enter Las Positas College with varying levels of scholarship and achievement. Because of this, some students will need to take extra measures (tutoring, basic skills work, remedial work, etc.) to master their college coursework. It is the student's responsibility to take appropriate action to ensure his/her success; faculty are not expected to alter course content below the college-level so that students enrolled in the class will pass. Course content and objectives are reflected in the course outline on file with the Office of Academic Services, Building 100, and are based on the academic foundation students are expected to have upon entering the course.

Faculty Office Hours

Las Positas College is noted for the close relationship of the faculty and students. The educational benefits of a student knowing and talking personally with his or her instructor are recognized. All members of the full-time faculty schedule office hours each week for this purpose. This schedule is posted outside each instructor's office. Students are encouraged to take advantage of this opportunity, the benefits of which include:

- ▶ Assistance in understanding and achieving specific course expectations;
- ▶ Development of concepts and understanding beyond the course expectations;
- ▶ Insight into career opportunities within the instructor's area of expertise;
- ▶ Encouragement, assistance, and direction in meeting both educational and personal needs; and
- ▶ Continuing association with a member of the academic community.

Attendance Requirements

It is assumed that each student will consider class attendance an absolute requirement. It is the student's responsibility to attend every class the scheduled length of time. Excessive absences, tardiness, and leaving class early may be taken into consideration by instructors in assigning grades.

Excessive Absence

A student absent for a total of four consecutive, or six cumulative, instructional hours and/or two consecutive weeks of instruction may be dropped from that class by

the instructor. This action constitutes an official termination of class enrollment and will be recorded as specified on Catalog, page 16.

Reporting Absence

Absences should be cleared personally with instructors. Messages may be left directly on the instructor's voice-mail.

Examinations and Evaluations

Students will be expected to take examinations and to complete and submit reports and/or projects. The instructor will determine the scheduling of exams and due dates of reports and projects. Unless the student and instructor have made prior arrangements, the instructor is under no obligation to reschedule missed exams or to extend deadlines for reports and/or projects.

Removal of Disruptive Students

Instructors may remove disruptive students from the classroom for the duration of a class period (Governing Board Policy No. 5512), but may not terminate their enrollment for disciplinary reasons. The Vice President of Student Services may recommend suspension of a student for due cause. Only the Board of Trustees can expel a student from the College.

Use of Tape Recorders

Students are not permitted to make tape recordings in class or in any campus meetings without the express approval of the instructors involved. Exceptions shall be made for students with disabilities who have a permit issued by the Disabled Student Programs and Services. The permit is evidence of the need of the student to use a tape recorder and of the student's agreement to not use, or allow to be used, the tape for any purpose other than course-related study.

Academic Regulations

Grades

Grades are a means of communicating student achievement within courses of instruction. College grades are defined as follows:

Grade	Meaning	Grade Value
A	Excellent	4 grade points per unit
B	Above Average	3 grade points per unit
C	Average	2 grade points per unit
D	Barely Passing	1 grade point per unit
F	Failure	0 grade points—units attempted with no units earned. <i>May negatively affect progress, see page 37.</i>
CR	Credit	0 grade points—units earned with no units attempted.
NC	No Credit	0 grade points—no units earned and no units attempted. <i>May negatively affect progress, see page 37.</i>
I	Incomplete	0 grade points—no units earned and no units attempted. <i>May negatively affect progress, see page 37.</i>

Credit/No Credit Grades

(Unit limitations may exist at transfer institutions)

In accordance with the California Education Code and the Chabot-Las Positas Community College District Board Policy, Las Positas College has established a grading policy that adds the "CR" (credit) and "NC" (no credit) grades to the standard letter grades (A,B,C,D,F) used in colleges and universities. Courses in which a "CR" grade is earned will apply toward the 60 units required for graduation, but will not affect the student's grade point average. A maximum of 12 units of "CR" may be attempted and applied toward the Associate in Arts Degree or Associate in Science Degree. Additional units may be applied provided the student secures prior approval of the Dean of Student Services. A course in which a "NC" grade is earned will not apply toward graduation and will not affect the student's grade point average. An excess number of "NC" grades will affect the student's progress.

Las Positas College offers:

- ▶ Some courses solely for a credit/no credit (CR or NC) grade;
- ▶ Some courses solely for a standard letter grade;
- ▶ Some courses the student may choose to complete for either a credit/no credit grade or for a standard letter grade.

Courses offered on a credit/no credit (CR or NC) basis are annotated in the Catalog and in the Class Schedule. On or before the last day of the fifth week of the semester, the student shall inform the Office of Admissions and Records, Building 700, by petition, of his or her intention to complete a course for a credit/no credit grade and the instructor shall report to the Assistant Dean of Admissions and Records a final grade of "CR" or "NC" for students who so petition. The student's decision to opt for credit/no credit grade may not be reversed by either the student or the instructor at a later date.

The "CR" grade will be given to indicate completion of a course with "C" or better work.

A student may repeat a course in which a grade of "D", "F" or "NC" is earned.

Administrative Symbols "IP", "RD" and "I"

Administrative Symbol "IP" In Progress

The administrative symbol "IP" is established to indicate coursework "in progress." The symbol "IP" is not a grade; therefore, it has no value in calculating unit credit or grade point average. The required coursework to remove the "IP" must be completed by the end of the term following the date the "IP" was granted. If a student is assigned an "IP" at the end of a term and does not complete that course during the subsequent term, the appropriate faculty member will assign an evaluative symbol (grade) to be recorded on the student's permanent record.

Administrative Symbol "RD", Report Delayed

Only the Assistant Dean of Admissions and Records can assign the administrative symbol "RD". It is to be used when there is a delay in reporting a grade due to extenuating circumstances. It is a temporary notation to be replaced by a permanent grade/symbol, as soon as possible. "RD" shall not be used in calculating grade point averages.

Administrative Symbol "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 by the instructor on the student's permanent record. The student may complete the course work by the end of the following term or semester

and receive an appropriate letter grade. If the student does not complete the course work before this deadline, the right of the student to make up the work is forfeited. The student may petition to extend the deadline date because of extenuating circumstances, but this will require the approval of the Assistant Dean of Admissions and Records of Las Positas College, or designee, and the instructor of record. The "I" will be replaced with the alternate letter grade assigned by the instructor at the time the incomplete was assigned.

A "grade change card" will contain the following documentation and shall be maintained by the Assistant Dean of Admissions and Records.

- ▶ The condition(s) stated by the instructor for removal of the "I";
- ▶ The letter grade to be assigned if the work has not been completed within the designated time limit;
- ▶ The letter grade assigned when the stipulated work has been completed; and
- ▶ The signature of the student.

The "I" symbol shall not be used in calculating units attempted or for grade points.

Academic Grade Point Average

The Academic Grade Point Average (GPA) is an index of the quality of a student's work.

To enable the calculation of the GPA, eligibility for honors and recognition, and other scholastic status, letter grades are converted to numerical form using the grade value as previously defined.

Grades earned in non-degree applicable courses (numbered 100-299) will not be used when calculating a student's degree applicable grade point average. Courses below the English 1A requirement are not degree applicable.

The GPA is calculated by dividing total grade points by total units attempted. Points are determined as follows:

Grade Points

- A = 4 points per unit
- B = 3 points per unit
- C = 2 points per unit
- D = 1 points per unit
- F = 0 points per unit

Example

History 1	3 units x 3 grade points (B) = 9 grade points
Math 1	5 units x 2 grade points (C) = 10 grade points
P.E. 1	.5 unit x 4 grade points (A) = 2 grade points
TOTAL:	8.5 units = 21 grade points
21 divided by 8.5 = 2.47 or C	

Scholastic Honors

Students who complete at least 6 units of work each semester with grades yielding a semester GPA of 3.25 or better are recognized for academic distinction by placement on the Academic Honors List and by a notation on the semester grade report and transcript.

Students who graduate with "Highest Honors" (GPA of 3.50 or better) and those who graduate with "Honors" (GPA of 3.25 or better) are recognized at graduation.

The Sigma Theta Chapter of Alpha Gamma Sigma (AGS) is a California Community College Honor Scholarship Society that recognizes academic achievement. Membership eligibility and other information are available in Building 700 or through the AGS advisor.

Grade Change Deadline Period

Awarding grades to students is the responsibility of the instructor of the course in which the student is registered. The determination of the student's grade by the instructor shall be final in the absence of mistake, fraud, bad faith, or incompetence.

When a student believes that an error has been made in the assignment of a grade, he or she should discuss the problem with the instructor. To correct an erroneous grade, a special "Request for Grade Change" form must be completed and presented to the Office of Admissions and Records by the instructor. The Office of Admissions and Records will forward the form to the Vice President of Academic Services. Final authorization to change the grade shall be granted by the College President or designee.

Requests for a grade change must be made during the semester immediately following the semester/session for which the grade was assigned. Responsibility for monitoring personal academic records rests with the student.

Grade changes will not be made after the established deadline except in cases with extenuating circumstances. These are acute medical, family or other personal problems that causes the student to be unable to meet the deadline. Requests for a grade change under this exception shall be made to the Vice President of Student Services (or designee) who may, upon verification of the circumstance(s), authorize the initiation of a grade change to "NGR" or "W". The student must present evidence of the extenuating circumstance(s).

Original copies of the instructor grade reports will be retired to microfilm after a five-year retention period. Grade changes shall not be made after that time.

Academic Renewal

Academic Renewal, in accordance with the California Education Code Sections 55764 and 55765, is a process that permits the alleviation of substandard (D's, F's) academic coursework not reflective of the student's current scholastic ability. Grades alleviated by this process will be disregarded in computing the student's grade point average. Only courses taken at the Chabot-Las Positas Community College District will apply. Work completed at other institutions may be considered for graduation eligibility only.

For students to be eligible for academic renewal they must be currently enrolled at Chabot and/or Las Positas College, and a period of at least two (2) years must have elapsed since completion of the coursework to be disregarded. The student may petition the Assistant Dean of Admissions and Records at Las Positas College, Building 700, or the Director of Admissions and Records at Chabot College for academic renewal upon completion of the following:

- ▶ a minimum of 12 units taken consecutively at Las Positas and/or Chabot with a grade point average of 2.5 or better; or
- ▶ a minimum of 20 units with at least a 2.0 grade point average.

Upon approval, the student's permanent record shall be annotated in such a manner that all courses disregarded shall remain legible on the transcript, indicating a true and accurate history of the student's record.

Students may petition for academic renewal only once. Once the academic renewal process has been completed, it cannot be reversed. A maximum of 24 units of work may be renewed.

Academic renewal at Chabot and Las Positas College does not guarantee that other colleges will accept this action. Acceptance of academic renewal is at the discretion of the receiving institution.

Catalog Requirements and Continuous Attendance

A student in continuous attendance in regular semesters may, for the purpose of meeting degree or certificate requirements, elect to meet the requirements in effect at any time during their period of continuous attendance at the Chabot-Las Positas Community College District.

Graduation requirements are listed in the Catalog. If a break in attendance occurs before graduation requirements have been met, the graduation requirements that apply to the student are those listed in the Catalog in force at the time continuous studies are resumed.

Continuous attendance is defined as enrollment in at least one semester during the academic year excluding summer

session. Any academic record symbol (A-F, C/NC, I, IP, RD, W) shall constitute enrollment. A student who drops out for one academic year or more is considered to be a returning student.

The Las Positas College Catalog Requirements and Continuous Attendance Policy do not necessarily apply to requirements in effect at transfer institutions. Courses applicable toward major and general education requirements may change. Students who are planning to transfer are advised to consult the catalog of the university to which they will transfer.

Notice of Unsatisfactory Work (Early Alert)

Instructors may notify students of unsatisfactory work at any time during the semester. Such notices are given to the student in person or mailed to the student at his/her home address. Excessive absences, academic deficiency, and failure to submit assignments constitute reasons for notices of unsatisfactory work. A student who receives such notices, or any student who experiences difficulty with academic achievement, is encouraged to consult with his/her instructor and counselor for assistance.

Scholastic Standards

The Academic Standards Policy of Las Positas College is established to assist students in making appropriate educational plans. There are two indices to academic standards: Academic Status and Academic Progress.

Academic Probation and Dismissal

A student who has attempted at least 12 semester units of college courses and has a cumulative grade point average of less than 2.0 will be placed on Academic Probation I.

A student on Academic Probation I who does not raise his/her cumulative grade point average to 2.0 or higher in the following semester will be placed on Academic Probation II. Note: Veterans lose certification for Veterans Benefits after two semesters of academic probation; refer to the Office of Veterans Affairs, Building 1500.

A student on Academic Probation II who does not raise his/her cumulative grade point average to a 2.0 or higher in the following semester of attendance will be dismissed. The first time a student is dismissed, he or she may apply for readmission after one semester, summer session not included, of non-attendance. In the case of a second dismissal, the student may apply for readmission after 5 years of non-attendance or upon appeal to the Vice President of Student Services. Summer session does not count as a semester in determining academic status.

Removal of Poor Academic Status

Once a student on academic probation raises his or her overall (cumulative) grade point average to a 2.0 ("C") or higher, he/she will be taken off Academic Probation status and will become a "student in good standing."

Progress Probation and Dismissal

Progress Probation is determined by the percentage of cumulative units with grades of W, NC, or I (Poor Progress Grades). A student who has attempted 12 cumulative semester units of College course work will be placed on Progress Probation I if 50% or more of the cumulative units attempted resulted in Poor Progress grades.

A student on Progress Probation I who does not reduce his/her percentage of cumulative poor progress units to below 50% will be placed on Progress Probation II.

If a student on Progress Probation II continues to have 50% or more of his/her cumulative units made up of Poor Progress grades in the following semester, he/she will be dismissed. The first time a student is dismissed he or she may apply for readmission after one semester (summer session not included) of non-attendance. In the case of a second dismissal, the student may apply for readmission after 5 years of non-attendance or upon appeal to the Vice President of Student Services, Building 700. Summer session does not count as a semester in determining progress status.

Removal of Poor Progress Status

In order to reverse poor progress status and become a student in good standing, a student must reduce the cumulative units of W, NC or I grades to less than 50% of his/her total units attempted. Summer session does not count as a semester in determining progress status.

Appeal Process

Under extenuating circumstances beyond the student's control or ability to foresee, exceptions to these policies are granted by the Vice President of Student Services or designee. Students should see a counselor to discuss their progress or academic status and for details associated with the academic standards policy.

Independent Study

Independent study courses are open to all students and may be offered under any subject area contained within the Catalog using the number 29. Independent study must be contracted through an instructor for research, field experience or skill development. Check with the Counseling Center, Building 700, concerning transferability of these courses to four-year institutions.

Credit-by-Examination (Individual Student Application)

Chabot-Las Positas Community College District supports the general proposition that the full value of classroom learning experience cannot be measured by any examination. Students who have achieved elsewhere an equivalent knowledge, understanding and experience to that required by regular college courses may receive units of credit based on successful completion of a comprehensive and searching course examination approved by the College discipline faculty. Students may apply individually for Credit-by-Examination for any course offered in the Catalog. In addition, the Credit-by-Examination process may also be used to provide credit for completion of certain coursework at the high school level, where deemed appropriate by the majority of faculty in the discipline (see High School Articulation, Catalog page 27.)

I. Eligibility

Any student applying for Credit-by-Examination will be expected to have had extensive experiences, which have prepared the person in the subject matter and for which the individual can provide acceptable evidence of those experiences at the time of application. The student must be registered at the College and in good academic standing.

II. Application and Administration

A student may apply for Credit-by-Examination through the petition process for courses listed in the Catalog. The petition must be approved by the appropriate discipline faculty and by the Division Dean. Applicable fees/and or tuition must be paid at the Office of Admissions and Records, Building 700. Arrangements for completing the examination and the actual administration will be made between the student and the instructor after the petition is approved. The examination itself may take a variety of forms, including written, oral, demonstration or a combination of methods.

III. Awarding of Credit

Upon completion of the examination, the administering instructor will verify the course and number of units to be received and will assign an appropriate grade. Students shall be offered a credit/no-credit option if that option is normally available for the course. The student must achieve a grade of "C" or better to be awarded credit under CBE policy.

IV. Limitations

Credit-by-Examination coursework may not be counted as part of the 12-unit residency requirement necessary for graduation from the College. The amount of credit which may be earned and counted toward graduation at the College is normally limited to 10 semester units.



Under certain circumstances, advanced placement credit may be awarded to a diploma graduate in nursing which may include up to 30 semester units (one year) of academic credit.

Advanced Placement for College Students (C.E.E.B.)

Las Positas College grants credit for successful completion of examinations of the Advanced Placement (AP) Program of the College Entrance Examination Board (CEEB). Students who want to receive credit for Advanced Placement examinations must petition the Assistant Dean of Admissions and Records and provide official verification of scores. Students who submit a petition for Advanced Placement credit will be required to meet with a counselor for advisement. See counseling, Building 700, for appropriate form. Exams and courses for which credit is granted will be posted on the student's transcript after completion of 12 units of course work at Las Positas College with a grade point average of 2.0 or better.

Credit granted on the basis of Advanced Placement scores does not necessarily transfer for either elective or specific course credit to other colleges or universities. Students planning to use Advanced Placement credit toward transfer requirements are advised to consult with appropriate representatives of the transfer institution for information regarding its policies and procedures.

Credit will be allowed at Las Positas College as follows:

- I. Course credit granted for Advanced Placement Examinations can be used to meet the requirements for a Las Positas College AA/AS degree.
- II. Advanced Placement test scores may be applied for Intersegmental General Education Transfer Curriculum (IGETC) course credit for acceptable scores on AP exams that are equivalent to Las Positas College IGETC approved courses. Current IGETC policy is to accept a score of 3 or higher to clear one course. Students may use only one course earned through Advanced Placement in each Area (1, 2, 3, 4, or 5).
- III. Advanced Placement test scores may be applied for CSU General Education Breadth requirement course credit. CSU policy is to grant credit according to the chart (see page 39, CSU GE CREDIT)

Currently, AP credit is granted according to the following chart. All other tests must be submitted to the Division Dean by petition for consideration of credit. Students should see their counselor to initiate the petition process.

Credit for Advanced Placement (AP) Examinations

EXAM TITLE	AP SCORES	LPC EQUIVALENT	AA/AS CREDIT	CSU GE CREDIT	IGETC CREDIT
Art: Studio/General	See Note Below*	Art 2A,10 or 11	3-6 units	N/A	N/A
Art: History of Art	3, 4, or 5	Art 4 and 5	6 units	3 units, Area C1	3 units, Area 3, Arts
Biology	3, 4, or 5	Biology 31	4 units	3 units, Area B2	3 units, Area 5, Bio Sci
Chemistry	3, 4, or 5	Chemistry 1A	5 units	6 units, Area B1 and B3 (lab)	5 units, Area 5, Phys Sci
Economics: Macroeconomics	3, 4, or 5	N/A	N/A	3 units, Area D2	N/A
Economics: Microeconomics	3, 4, or 5	N/A	N/A	3 units, Area D2	N/A
English: Language & Composition	3, 4, or 5	English 1A	3 units	3 units, Area A2	3 units, Area 1A
English: Literature & Composition	3, 4, or 5	English 1A and 3	6 units	3 units, Area A2 and C2	3 units, Area 1A or C, Humn
French: Language	3, 4, or 5	French 1A and 1B	10 units	6 units, Area C2	N/A
French: Literature	3, 4, or 5	N/A	N/A	6 units, Area C2	N/A
German: Language	3, 4, or 5	N/A	N/A	6 units, Area C2	N/A
Govt. & Politics: U.S.	3, 4, or 5	Political Science 7	4 units	3 units, Area D8	3 units, Area 4
Govt. & Politics: Comparative	3, 4, or 5	N/A	N/A	3 units, Area D8	N/A
History: European	3, 4, or 5	History 2	3 units	3 units, Area D6	3 units, Area 4
History: U.S.*	3, 4, or 5	History 7 and 8	6 units	3 units, Area D6	3 units Area 4
Latin: Vergil	3, 4, or 5	N/A	N/A	3 units, Area C2	N/A
Latin: Latin Literature	3, 4, or 5	N/A	N/A	3 units, Area C2	N/A
Math: Calc AB	3, 4, or 5	Math 1	5 units	3 units, Area B4	5 units, Area 2
Math: Calc BC	3, 4, or 5	Math 1 and 2	10 units	3 units, Area B4	5 units, Area 2
Music: Listening & Literature	3, 4, or 5	Music 1	3 units	N/A	3 units, Area 3, Arts
Music: Theory	3, 4, or 5	N/A	N/A	3 units Area C1	N/A
Physics B	3, 4, or 5	Physics 2A	4 units	3 units, Area B1 and B3 (lab)	3 units, Area 5, Phys Sci
Physics C: Mechanics	3, 4, or 5	Physics 8A	5 units	3 units, Area B1 and B3 (lab)	3 units, Area 5, Phys Sci
Physics C: Elect/Magnetism	3, 4, or 5	Physics 8B	5 units	3 units, Area B1 and B3 (lab)	3 units, Area 5, Phys Sci
Psychology	3, 4, or 5	N/A	N/A	3 units, Area D9	N/A
Spanish: Language	3, 4, or 5	Spanish 1A and 1B		6 units, Area C2	N/A
Spanish: Literature	3, 4, or 5	N/A	N/A	6 units, Area C2	N/A
Statistics	3, 4, or 5	Math 42A	3 units	3 units, Area B4	3 units, Area 2

*Note: Department consent and portfolio review

Student Rights and Responsibilities

Student Grievance Policy

The Chabot-Las Positas Community College District encourages all students to pursue academic studies and other College-sponsored activities. In pursuit of these goals, the student should be free of unfair or improper action from any member of the academic community. The Chabot-Las Positas Community College District accords every student the right of protection. Students, however, must also be aware that they are responsible for complying with all College regulations and for meeting the appropriate College requirements.

Student Grievance procedures have been developed by Las Positas College to provide students with a prompt and equitable means of seeking an appropriate remedy for any alleged violation of rights and to insure that each student is fully accorded due process. Both the Student Grievance Procedures and the Student Conduct and Due Process Procedures outline the process for seeking resolution, and develop the procedure for filing and processing complaints, including timelines and decision-making authority.

The general provisions and specific procedures related to this policy are available from the Office of the Vice President of Student Services, the Counseling Office, Building 700, and the Office of the Associated Students, Building 1700. You may also find this information online at www.laspositascollege.edu.

Student Conduct and Due Process

In joining the academic community, the student enjoys the right of freedom to learn and shares the responsibility in exercising that freedom with other members of the academic community. It is the policy of the District not to impose student discipline for acts occurring away from the College and not connected with College activities unless the student's conduct affects the functions of the College. Procedures within this section are based upon Title 5, California Administrative Code (sec. 41301 through 41304), and the California Education Code (sec. 76030-37).

When a student is charged with misconduct, such as: cheating, plagiarism, forgery, disruption, physical abuse or theft, the charge shall be processed in accordance with the policy and procedures in order to protect the student's rights and the College's interest. A student may be expelled, suspended, placed on probation or given a lesser sanction, as deemed appropriate, for one or more of the causes occurring on College/District premises.

The general provisions and specific procedures related to this policy are available from the Office of the Vice President of Student Services, the Counseling Office, and the Office of the Associated Students.

Academic Honesty

Academic honesty is a fundamental and guiding principle for Las Positas College. The College will not tolerate academic cheating, plagiarism, and duplicate use of written work. Any violation will be processed in accordance with the College policy on student misconduct. Actions can be taken to suspend, expel or impose other sanctions as appropriate. The actions will also be noted in the student's file in the case of repeated, flagrant or serious incidents. Information regarding this Policy can be found in the Vice-President of Student Services Office, Building 700.

Definitions:

A. Cheating

Cheating is defined as the act of obtaining or attempting to obtain credit for academic work through the use of any dishonest, deceptive, or fraudulent means including forgery. It also includes giving or attempting to give aid that is not authorized by the instructor.

B. Plagiarism

Plagiarism is defined as taking the words or substance of another and either copying or paraphrasing the work without giving credit to the source (through footnotes, quotation marks, or reference citations) and submitting it to fulfill academic requirements.

C. Duplicate use of written work

This form of academic dishonesty includes: multiple students submitting identical or substantially similar work for academic credit or a student submitting identical or substantially similar work to multiple courses without the permission of the instructors.

Faculty members will report suspected instances of academic dishonesty to the Office of the Vice President for Student Services.

Harassment/Sexual Harassment

In accordance with Title VII and Title IX of the Education Amendments of 1972, the Chabot-Las Positas Community College District provides a school and working environment free from all forms of harassment, including sexual harassment. The District also maintains an environment in which all students and employees model this behavior and are treated with dignity and respect.

No person shall be subjected to sexual overtures or conduct either verbal, visual or physical, which are intimidating, hostile, offensive, or unwelcome. Such conduct by employees or students is deemed unacceptable behavior and will not be tolerated by the District.

The Board of Trustees considers harassment a serious offense. Violation of this Policy will constitute cause for disciplinary action. Specific disciplinary action shall be related to the severity of the incident, and/or the degree to which

repeated incidents have occurred. Such disciplinary actions for employees may include, but are not limited to, verbal warnings, letters of reprimand, suspension with or without pay and dismissal. Such disciplinary actions for students may range from counseling to suspension and/or expulsion.

Las Positas College has designated a responsible officer, outlined procedures for seeking resolution, and developed procedures for filing and processing complaints, including timelines and decision-making authority. Las Positas College has established procedures that provide a person accused of harassment the opportunity to respond to allegations. These procedures ensure adequate communication of the Policy to all students and employees.

Sexual harassment may include, but is not limited to:

- I. Sending suggestive or obscene letters, notes, invitations; making derogatory comments, slurs, jokes, epithets, assaults; touching, impeding or blocking movement; leering, gesturing, displaying sexually suggestive objects, pictures or cartoons;
- II. Continuing to express sexual interest after being informed that the interest is unwelcome;
- III. Implying or withholding support for an appointment, promotion, or change of assignment; suggesting a poor performance report will be prepared; or suggesting probation will be failed; within the educational environment, implying or actually withholding grades earned or deserved; suggesting a poor performance evaluation will be prepared; or suggesting a recommendation or college application will be denied;
- IV. Engaging in coercive sexual behavior to control, influence, or affect the career, salary, and/or work environment of another employee; within the educational environment, engaging in coercive sexual behavior to control, influence, or affect the educational opportunities, grades and/or learning environment of a student;
- V. Engaging in offering favors of educational or employment benefits, such as grades or promotions, favorable performance evaluations, favorable assignments, favorable duties or shifts, recommendations, reclassification etc., in exchange for sexual favors.

For general provisions, specific procedures, and inquiries regarding the application of Sexual Harassment Policies contact:

Amber Machamer
 Director of Research and Planning
 925.373.5827

Americans with Disabilities Act

In accordance with the 1990 Americans with Disabilities Act (ADA), the Chabot-Las Positas Community College District prohibits discrimination against students and employees with physical or mental disabilities that substantially limit activities such as working, walking, talking, seeing, hearing, or caring for themselves. People who have a record of such an impairment, and those regarded as having an impairment, are also protected.

The District ensures that students and employees with disabilities will not be unlawfully subjected to discrimination or excluded from participating in or benefitting from programs, services or activities. Students and employees are accorded due process as outlined in the specific complaint procedures developed by the Colleges. Las Positas College has designated the responsible officer, outlined the process for seeking resolution, and developed the procedures for filing and processing complaints, including timelines for decision-making authority.

Las Positas College has on file, as required by ADA, a Self-Evaluation to ascertain information pertaining to access and accommodations of the instructional programs, services and activities, including plans or alternatives to correct any noted deficiencies.

Las Positas College also has on file a Transition Plan which evaluates accessibility of facilities and delineates timelines for the removal of physical and structural barriers that exist in facilities, programs, and services.

The general provisions and specific procedures related to this policy are available from the Office of the Vice President of Student Services, the Counseling Office, the Office of Disabled Students Programs and Services and the Office of the Associated Students.

Section 508 of the Rehabilitation Act

Las Positas College is committed to providing access to its programs and services to all qualified individuals as mandated by Section 508 of the Rehabilitation Act. Students who have disabilities will have access to and use of technology information and services that is comparable to the access and use available to non-disabled students according to Section 508.

For more information, contact the Disability Resource Center at 925.373.4921

Alcohol, Narcotics and Dangerous Drugs

Persons possessing or being under the influence of alcohol, narcotics or dangerous drugs on campus are in violation of state law and College regulations.

Student Rights and Responsibilities

Smoking Policy

In an effort to prevent the serious health risks associated with exposure to smoking and environmental tobacco smoke, faculty, staff, students and visitors at Las Positas College, who choose to use tobacco products, may do so in parking lots and designated areas only. Smoking is not permitted in any College-owned vehicle.

Drug-Free Workplace

Chabot-Las Positas Community College District is committed to maintaining a drug-free work/learning place in accordance with the requirements of the U.S. Drug-Free Workplace Act of 1988. The District certifies that it will provide a drug-free work/learning place by taking the actions required by the Drug-Free Workplace Act.

It is the intent of the District to make a good faith effort to continue to maintain a drug-free work/learning place through implementation of this policy. For further information, see the Vice President of Student Services.

Visitors

Visitors to Las Positas College must register with the receptionist in the Administration Building, Building 100. Visits to the classrooms are by permit only. Non-students, including children, must have a permit issued from the Office of the Vice President of Student Services, Building 700. Prior permission from the instructor is required. Permission to enter upon the property of the District, either stated or implied in other policies or practices, is subject to the District policy of time, place and manner.

Pets

No animals and/or pets of any kind or description are allowed within the boundaries of the College. This restriction also applies to animals and/or pets confined in any vehicle parked within the College boundaries.

Note: This policy does not apply to the use of a guide dog, signal dog, or service dog specially trained for assisting a totally or partially blind person, deaf person, hearing-impaired person, or person with physical disabilities.

Non-Discrimination Policy

Age

Las Positas College complies with the Age Discrimination in Employment Act of 1974 which prohibits discrimination in employment on the basis of age.

Disability

Las Positas College does not discriminate on the basis of disability in admission or access to, or treatment or employment in, its programs and activities. Sections 503 and 504 of the Rehabilitation Act of 1973, as amended, and the regulation adopted thereunder prohibit such discrimination.

Race, Color or National Origin

Las Positas College complies with the requirements of Title VI of the Civil Rights Act of 1964 and the regulations adopted thereunder. No person shall on the grounds of race, color, or national origin be excluded from participation in, be denied the benefits of, or otherwise be subjected to discrimination under any program of the College. Las Positas College complies with Title VII of the Act, which includes nondiscrimination on the basis of religion and sex. Limited language skills are not a barrier to occupational programs and services of the College.

Gender

Las Positas College does not discriminate on the basis of gender in the educational programs or activities it conducts. Title IX of the Educational Amendments of 1972, as amended, and the administrative regulations adopted thereunder prohibit discrimination on the basis of gender in education programs and activities operated by the College. Such programs and activities include admission of students and employment.

Declaración De No Discriminación

Las Positas College, de acuerdo con las leyes civiles, declara que no discrimina hacia ninguna persona a base de su raza, color, nacionalidad, ascendencia, religión, creencia, sexo, edad o incapacidad, en sus programas y políticas de empleo y educación. El conocimiento limitado del idioma no limita acceso a programas y servicios ocupacionales. Cualquier pregunta sobre la aplicación de esta declaración puede dirigirse a Sylvia Rodriguez, Assistant Dean of Admissions and Records, teléfono 925.373.4942; o al Regional Director of the Office of Civil Rights, Old Federal Building, 50 United Nations Plaza, Room 239, San Francisco, CA 94102, teléfono 415.437.7700.

Privacy Rights of Students

Each student and alumnus of Las Positas College has a right to (1) review the official educational records, files, documents, and other materials that contain information directly related to him or her; and (2) challenge such records that are inaccurate, misleading, or otherwise inappropriate.

It is also the policy of the College that, unless excluded by state or federal law, no record, files, documents, materials, or personally identifiable information contained therein shall be released to any individual, agency, or organization without the express written consent of the student.

Any student desiring to review his or her official educational records should contact the Office of the Assistant Dean of Admissions and Records, Building 700, to determine procedures for such review.

Any student desiring to challenge the content of his or her official educational records should contact the Office of the Vice President of Student Services, Building 700.

While the College does not provide general directory services, it may (by law under special circumstances) release the following information about a student: name, address, telephone number, date and place of birth, major field of study, class schedule, participation in officially recognized activities and sports, weight and height of members of athletic teams, dates of attendance, degree and awards received, and the most recent previous public or private school of attendance. Any student who does not wish such information to be released about his/her participation or status should notify the Admissions and Records Office in writing at the beginning of each semester or session of attendance.

For further details, refer to the brochure titled "Student's Rights, Duties and Responsibilities," that is available in Building 700.

Posting of Materials

The Vice President of Student Services or Division Deans must approve posting of fliers and posters.

Only posters related to activities, events or classes sponsored by Las Positas College or Chabot College will be approved for general display. Other announcements will be considered for approval for posting in the Student Center, Building 1700, only.

Hazing

Section 32050 of the Education Code makes participation in any kind of hazing a misdemeanor. Hazing is defined as "any method of initiation into a student organization or any pastime or amusement engaged in with respect to such an organization which degrades or disgraces or which causes bodily harm . . . to any student . . . attending any college or school . . . in California."

Secret Organizations

Membership in secret fraternities, sororities, and organizations, as described by the California Education Code (Section 76035), is prohibited. Las Positas College students who participate in such groups shall be subject to the penalties outlined in the Education Code.

Free Speech

Procedures regarding time, place and manner shall govern the exercise of free speech and related activities on the campus. The responsibility for maintaining conduct within the bounds of the law and compliance with the policies of



the Board of Trustees shall be assumed by individuals, organizations, and the sponsoring organization's officers and student organizations, advisors and all organizational members. Restrictions on speech content shall extend no further than to restrain speech that is obscene, libelous, or presents a clear and present danger.

Student Rights

Inquiries regarding application of Nondiscrimination Policies, Sexual Harassment, Disability Issues, and, Student Concerns and Grievances may be referred to the following individuals:

For inquiries regarding the application of Affirmative Action policies contact:

Sylvia Rodriguez
Assistant Dean of Admissions and Records
925.373.4942

For inquiries regarding the application of Sexual Harassment policies contact:

Amber Machamer
Director of Research and Planning
925.373.5827

For inquiries regarding the application of Disability Issues and Student Concerns and Grievances contact:

Pamela Luster
Vice President of Student Services
925.373.5805

Inquiries may also be addressed to the United States Department of Education, Office of Civil Rights, Old Federal Building, 50 United Nations Plaza, Room 239, San Francisco, CA 94102. 415.437.7700

Student Organizations and Activities

Philosophy

Las Positas College is committed to providing programs and services that foster student participation in government, activities, organizations and cultural events. The College recognizes the important role of students as active and meaningful participants in the shared governance decision-making process of the institution. Comprehensive leadership development and orientation programs for students to strengthen their knowledge, expand their understanding of governance issues, increase their preparedness, and enhance their credibility in the community are important and essential responsibilities of the College.

Associated Students of Las Positas College (ASLPC)

The Associated Students of Las Positas College is the campus student government, providing opportunities for students to participate in the governance of the College on both local and statewide levels. Elections of ASLPC officers and senators are held each spring. ASLPC representatives have the opportunity to serve on numerous College committees.

The ASLPC is organized in two bodies: the Executive Council (composed of the elected officers) and the Student Senate (composed of members who have obtained a specific number of student signatures). All officers and senators of ASLPC must be registered in at least 6.0 units at the College and are required to maintain a minimum 2.0 GPA.

Through ASLPC, special services are provided for students. These include social and cultural events, information on clubs and community services, and many other services that vary as opportunities develop.

The ASLPC office is located in Building 1700 and may be contacted at 925.373.5893.

Student Clubs and Inter-Club Council (ICC)

Students also have the opportunity to form clubs relating to common social, recreational, or other interests. Each club must have a College faculty advisor recruited and nominated by the club members.

The Inter-Club Council is the representative body that coordinates interclub activities and funds, promotes communication and cooperation among clubs on campus. The ICC is composed of a voting representative from each club, representing cultural, educational, honorary, philanthropic, and social interests.

Alpha Gamma Sigma

Alpha Gamma Sigma (AGS) is the official Las Positas College Honor Society. AGS membership will be noted on students' transcripts when they graduate or transfer from Las Positas College. Membership eligibility and other information are available from the club officers, the Office of Associated Students, Building 1700, or the Office of the Vice President of Student Services, Building 700.

Social Activities

Numerous social activities are offered at Las Positas College each semester through ASLPC. Students interested in working on social activities and entertainment should contact the Office of the Associated Students, Building 1700.

The Express Newspaper

The Express College newspaper is produced by students and published twice monthly. Students learn various aspects of newspaper production, including research, interviewing, reporting, writing, editing, proofreading, meeting deadlines, electronic typesetting, graphic design, advertising design, and page production using QuarkXpress, Adobe InDesign and PhotoShop. To join the team, come to Room 305, Building 300, call 925.371.3840, or e-mail LPCEXpress@laspositascollege.edu.





Performing Arts

A wide range of opportunities is available to Las Positas College students in performing arts. The theater program presents a fall semester play, spring semester musical, and summer outdoor Shakespeare production, plus touring children's theater show and student directed one acts. The Music Department's program includes choirs, vocal jazz ensembles, and an instrumental jazz ensemble, plus opportunities to perform at recitals held each semester. The Dance Production class presents two dance programs a year, featuring dances choreographed by students and faculty. Forensics Team events include reader's theater, oral interpretation and debate.

Intercollegiate Athletics

Opportunities to participate in intercollegiate athletics are available to all students of Las Positas College who meet eligibility requirements.

Las Positas College is a member of the Coast Conference. Men and women's athletic teams engage in intercollegiate competition with other Northern California teams in cross-country and soccer.

Students who participate in intercollegiate athletics must meet the requirements of the Athletic Code of the California Community Colleges Commission on Athletics and the Coast Conference that relates to legal residence, academic standing and previous seasons of college competition. The nature of these requirements is very exacting, and athletes are advised to become thoroughly familiar with them in order to avoid loss of eligibility. Information on these requirements should be obtained by interested students from the appropriate coach of the athletic team at the beginning of the school year.

Sports Activities

At Las Positas College a variety of intramural activities are offered, generally on Friday mornings and also at other selected times. Students are also encouraged to become involved in intercollegiate club sports programs which include bowling, fencing, handball, taekwondo, and ultimate frisbee. Contact the Physical Education/Athletic Office at Las Positas College for more information, 925.373.4901.



Degrees and Certificates

Las Positas College is authorized by the Board of Governors of the California Community Colleges to confer the Associate in Arts Degree, Associate in Science Degree, Certificate of Achievement and Certificate of Completion upon students who complete the necessary requirements.

Associate in Arts Degree Associate in Science Degree

The Associate in Arts (AA) and Associate in Science (AS) Degrees offered by Las Positas College include Transfer Programs and Occupational Programs. Within each AA and AS Degree, there is a required general education component (see General Education Requirements, pages 48 and 49). General Education courses are grouped into several broad areas and are designed to cultivate intellect and imagination and to broaden awareness of the relationship and interdependence of ideas and disciplines.

Associate in Arts Degree

The Associate in Arts Degree is conferred upon those students who complete the minimum of 60 semester units with a grade-point average of 2.0 or better and meet the graduation requirements as set forth on page 48.

Associate in Science Degree

The Associate in Science Degree is conferred upon those students who complete the minimum of 60 semester units with a grade-point average of 2.0 or better and meet the graduation requirements as set forth on page 49.

AA/AS Transfer Programs

Las Positas College provides the first two years of a four-year college or university program. Students who are planning to transfer to four-year colleges and universities may complete their lower division general education requirements and major field courses at Las Positas College; available majors are listed on page 53. In addition, students may develop Individual Transfer Majors for an Associate Degree. An Individual Transfer Major is earned by completion of 18 semester units of lower-division requirements in the selected major at the transfer institution. Students must complete the minimum of 60 semester units with a grade-point average of 2.0 or better and meet the graduation requirements as set forth on page 47. Students work in collaboration with a counselor to develop an Individual Transfer Major and should consult the catalog of the transfer institution for specific transfer information.

AA/AS Occupational Programs

The courses of study within these programs prepare for direct job entry, and can normally be completed in a two-year period by a full-time student (carrying at least 15 units

per semester). For a list of AA/AS Occupational Programs see pages 62 and 63. Students may also develop an Individual Occupational Major with a counselor, for approval by the Dean of Student Services.

Certificate of Achievement Certificate of Completion

The courses of study within these programs prepare for direct job entry. Many certificate programs can be completed in one year in daytime classes, while others are designed to be completed over a longer period in evening classes. Students are advised to consult a counselor for more information about time frames for completion of certificate programs. For a list of Certificate Programs see pages 62 and 63. Students may also develop an Individual Occupational Major with a counselor, for approval by the Dean of Student Services.

Certificate of Achievement

The Certificate of Achievement is awarded upon successful completion of a minimum of 20 semester units for the major with a grade-point average of 2.0 or higher.

Certificate of Completion

The Certificate of Completion is awarded upon successful completion of minimum of 10 semester units for the major with a grade-point average of 2.0 or higher. For information on graduation see page 47.

Graduation Requirements

Associate in Arts and Associate in Science

A student is eligible for graduation with the Associate in Arts Degree and the Associate in Science Degree after satisfactorily completing:

- ▶ The minimum of 60 degree applicable, semester units (12 of which must be completed in residence at Las Positas College) with a grade-point average of 2.0 or higher*;
- ▶ All requirements for the major plus electives to total 60 semester units (of these at least 18 must be in the major per Title V CCR.T5 55806);
- ▶ The General Education Requirements for the Associate in Arts Degree, see page 48, or the General Education Requirements for the Associate in Science Degree, see Catalog, page 49.

Official transcripts from other colleges must be submitted to the Office of Admissions and Records, Building 700, for coursework to be considered in meeting Las Positas College graduation requirements. For graduation purposes only, total attempted and completed units transferred from other colleges will be included in determining a student's overall cumulative grade- point average (GPA.)

Certificate of Achievement

A student is eligible for graduation with Certificate of Achievement after satisfactorily completing:

- ▶ The minimum of 20 degree applicable, semester units for the major with a grade point average of 2.0 or higher.*

Certificate of Completion

A student is eligible for graduation with Certificate of Completion after satisfactorily completing:

- ▶ The minimum of 10 degree applicable, semester units for the major with a grade point average of 2.0 or higher.*

**A student must complete at least eighty percent (80%) of the required program at Las Positas College, including the last three units. Grades earned in non-degree applicable courses (numbered 100-299) will not be used in calculating a student's degree applicable grade point average. No courses below the English 1A requirement are degree applicable.*

Application for Graduation

- ▶ At least one semester before the planned graduation, students should schedule an appointment with a counselor to check their progress in fulfilling the graduation requirements and arrange to complete the appropriate application for graduation.
- ▶ All transcripts from other colleges must be submitted to the Office of Admissions and Records before a graduation evaluation can be made.
- ▶ Students may receive degrees or certificates at the end of any semester or the end of summer session. Students should petition no later than the tenth instructional week of the semester in which they plan to complete the requirements. Deadline dates are listed in the College Calendar (printed in the College Catalog and Class Schedule). "Petition for Graduation" forms are available at the Office of Admissions and Records, Building 700.

Commencement Exercises are held in late May or early June. All students receiving degrees and/or certificates are cordially invited to participate.



General Education Requirements for the Degree of Associate in Arts 2004-2005 Effective Fall 2004

A student is eligible for graduation with the Associate in Arts Degree after satisfactorily completing:

1. The minimum of 60 semester units (12 of which must be completed in residence at Las Positas College) with a grade point average of 2.0 or better;
2. All requirements for the major (a minimum of 18 semester units) plus electives to total 60 semester units;
3. The General Education Requirements for the Associate in Arts Degree listed below.

AMERICAN CULTURES

The following courses have been identified as meeting the American Cultures requirement. Complete one course with a grade of "C" or higher or "CR." Where appropriate, the course can simultaneously satisfy other graduation or disciplinary requirements.

Anthropology 5
English 44
History 14, 27, 28
Music 5, 24
Sociology 3
Speech 11

AMERICAN INSTITUTIONS

6 SEM UNITS

Complete one course from Group 1 and one course from Group 2.
Group 1—History 7, 20 or Political Science 7
Group 2—History 8, 14, 21, 22, 25, 28, 32⁺ or Econ 5

COMMUNICATIONS AND ANALYTICAL THINKING

3 SEM UNITS

Complete 3 semester units from the following:

American Sign Language 1A, 1B
Business 52, 55
Computer Information Systems 80
Computer Science 1
Electronics Technology 50
Foreign Language 1A, 1B
Industrial Technology 74
Mathematics: 1, 2, 20, 33, 34, 36, 38, 41, 42A, 44, 45, 55, 55A, 55B, 57, 65, 65B, 71
Philosophy 12A
Speech 1, 2B, 10, 30, 40, 46
Theater Arts 3, 25

ENGLISH COMPOSITION

(LANGUAGE AND RATIONALITY)

6 SEM UNITS

Complete one of the following options:

1. English 52A and 70.
2. English 1A and 3 or 4 or 7 or 70
3. English as a Second Language (ESL) 25 and English 70

HEALTH EDUCATION

3 SEM UNITS

Complete the following course:

Health 1

HUMANITIES

3 SEM UNITS

Complete 3 semester units from the following:

American Sign Language 2A
Art 1, 2A, 3A, 4, 5, 10
Creative Arts 10
English 11, 12, 13, 20, 23, 27, 32, 38, 44**, 45, 47
Foreign Language 2A
History 1, 2
Humanities 1, 3, 7, 10, 28, 35, 40, 44
Music 1, 2, 4, 5**, 12, 14, 24**, 43, 44, 45, 46A, 46B
Philosophy 1, 2, 4, 7, 25
Photography 67
Religious Studies 1, 11
Speech 2A, 5, 11**
Theater Arts 1A, 1B, 10, 12, 47, 48

MATHEMATICS

The requirement of minimum proficiency in mathematics may be met in one of the following ways:

1. Demonstrate eligibility for intermediate algebra using multiple measures such as the Las Positas College Placement Examination and previous course work; or
2. Submit documentation that a course equivalent to one of the mathematics courses listed below has been completed (with a grade of "C" or higher or "CR") at another college/university; or
3. Complete one of the following courses (with a grade of "C" or higher or "CR"):
Mathematics 1, 2, 20, 33, 34, 36, 38, 41, 42A, 44, 45, 55, 55A, 55B, 57, 65, 65B, 71, Business 55, Electronics Technology 50, Industrial Technology 74.

NATURAL SCIENCES

3 SEM UNITS

Complete 3 semester units from the following:

Anatomy 1
Astronomy 1, 10, 20, 30
Biology 1, 5, 10, 20, 31, 50
Biotechnology 1, Botany 1
Chemistry 1A, 30A, 31
Ecology 10, 11
Geography 1**, 1L, 8, 15**
Geology 1A, 10, 10L, 12, 12L, 15
Microbiology 1
Physics 2A, 8A, 10, 10L
Physiology 1
Zoology 1

PHYSICAL EDUCATION

2 SEM UNITS

Exemption is allowed for illness or physical disability by filing a physician's statement at the Admissions & Records Office. Students who hold an AA/AS Degree or higher are also exempt.

Complete 2 semester units selected from:

Physical Education 1, 2, 3, 12, 30-48, Dance 1.

SOCIAL AND BEHAVIORAL SCIENCES

3 SEM UNITS

Complete 3 semester units from the following:

Anthropology 1, 2, 3, 5***
Business 30
Early Childhood Development 15
Economics 1, 2, 5, 10
History 20, 21, 22, 25, 28***, 32***
Geography 1***, 2, 3, 5, 12, 15***
Political Science 20, 25, 30
Psychology 1, 2, 3, 4, 15, 18, 50
Sociology 1, 3, 4, 11

*Meets either Natural Sciences or Social & Behavioral Sciences requirement.

**Meets Humanities and/or American Cultures requirement.

***Meets Social & Behavioral Sciences and/or American Cultures requirement.

⁺Does not satisfy AI for CSU GE or IGETCE

General Education Requirements for the Degree of Associate in Science 2004-2005 Effective Fall 2004

A student is eligible for graduation with the Associate in Science Degree after satisfactorily completing:

1. The minimum of 60 semester units (12 of which must be completed in residence at Las Positas College) with a grade point average of 2.0 or better;
2. All requirements for the major (a minimum of 18 semester units) plus electives to total 60 semester units;
3. The General Education Requirements for the Associate in Arts Degree listed below.

AMERICAN CULTURES

The following courses have been identified as meeting the American Cultures requirement. Complete one course with a grade of "C" or higher or "CR." Where appropriate, the course can simultaneously satisfy other graduation or disciplinary requirements.

Anthropology 5
English 44
History 14, 27, 28
Music 5, 24
Sociology 3
Speech 11

COMMUNICATIONS AND ANALYTICAL THINKING 3 SEM UNITS

Complete 3 semester units from the following:

American Sign Language 1A, 1B
Business 52, 55
Computer Information Systems 80
Computer Science 1
Electronics Technology 50
Foreign Language 1A, 1B
Industrial Technology 74
Mathematics: 1, 2, 20, 33, 34, 36, 38, 41, 42A, 44, 45, 55, 55A, 55B, 57, 65, 65B, 71
Philosophy 12A
Speech 1, 2B, 10, 30, 40, 46
Theater Arts 3, 25

ENGLISH COMPOSITION (LANGUAGE AND RATIONALITY) 6 SEM UNITS

Complete 3 semester units from the following:

English 1A, 52A, 70 or English as a Second Language (ESL) 25

HUMANITIES 3 SEM UNITS

Complete 3 semester units from the following:

American Sign Language 2A
Art 1, 2A, 3A, 4, 5, 10
Creative Arts 10
English 11, 12, 13, 20, 23, 27, 32, 38, 44*, 45, 47
Foreign Language 2A
History 1, 2
Humanities 1, 3, 7, 10, 28, 35, 40, 44
Music 1, 2, 4, 5*, 12, 14, 24*, 43, 44, 45, 46A, 46B
Philosophy 1, 2, 4, 7, 25
Photography 67
Religious Studies 1, 11
Speech 2A, 5, 11*
Theater Arts 1A, 1B, 10, 12, 47, 48

AMERICAN INSTITUTIONS OR HEALTH 3 SEM UNITS

Complete 3 semester units from the following:

Health 1 or History 7, 8, 14, 20, 21, 22, 25, 28, 32⁺ or
Political Science 7 or Economics 5

MATHEMATICS

The requirement of minimum proficiency in mathematics may be met in one of the following ways:

1. Demonstrate eligibility for intermediate algebra using multiple measures such as the Las Positas College Placement Examination and previous course work; or
2. Submit documentation that a course equivalent to one of the mathematics courses listed below has been completed (with a grade of "C" or higher or "CR") at another college/university; or
3. Complete one of the following courses (with a grade of "C" or higher or "CR"):
Mathematics 1, 2, 20, 33, 34, 36, 38, 41, 42A, 44, 45, 55, 55A, 55B, 57, 65, 65B, 71, Business 55, Electronics Technology 50, Industrial Technology 74.

NATURAL SCIENCES 3 SEM UNITS

Complete 3 semester units from the following:

Anatomy 1
Astronomy 1, 10, 20, 30
Biology 1, 5, 10, 20, 31, 50
Biotechnology 1, Botany 1
Chemistry 1A, 30A, 31
Ecology 10, 11
Geography 1**, 1L, 8, 15**
Geology 1A, 10, 10L, 12, 12L, 15
Microbiology 1
Physics 2A, 8A, 10, 10L
Physiology 1
Zoology 1

PHYSICAL EDUCATION 2 SEM UNITS

Exemption is allowed for illness or physical disability by filing a physician's statement at the Admissions & Records Office. Students who hold an AA/AS Degree or higher are also exempt.

Complete 2 semester units selected from:

Physical Education 1, 2, 3, 12, 30-48, Dance 1.

SOCIAL AND BEHAVIORAL SCIENCES 3 SEM UNITS

Complete 3 semester units from the following:

Anthropology 1, 2, 3, 5***
Business 30
Early Childhood Development 15
Economics 1, 2, 5, 10
History 20, 21, 22, 25, 28***, 32***
Geography 1***, 2, 3, 5, 12, 15***
Psychology 1, 2, 3, 4, 15, 18, 50
Sociology 1, 3, 4, 11

*Meets either Natural Sciences or Social & Behavioral Sciences requirement.
**Meets Humanities and/or American Cultures requirement.

***Meets Social & Behavioral Sciences and/or American Cultures requirement.

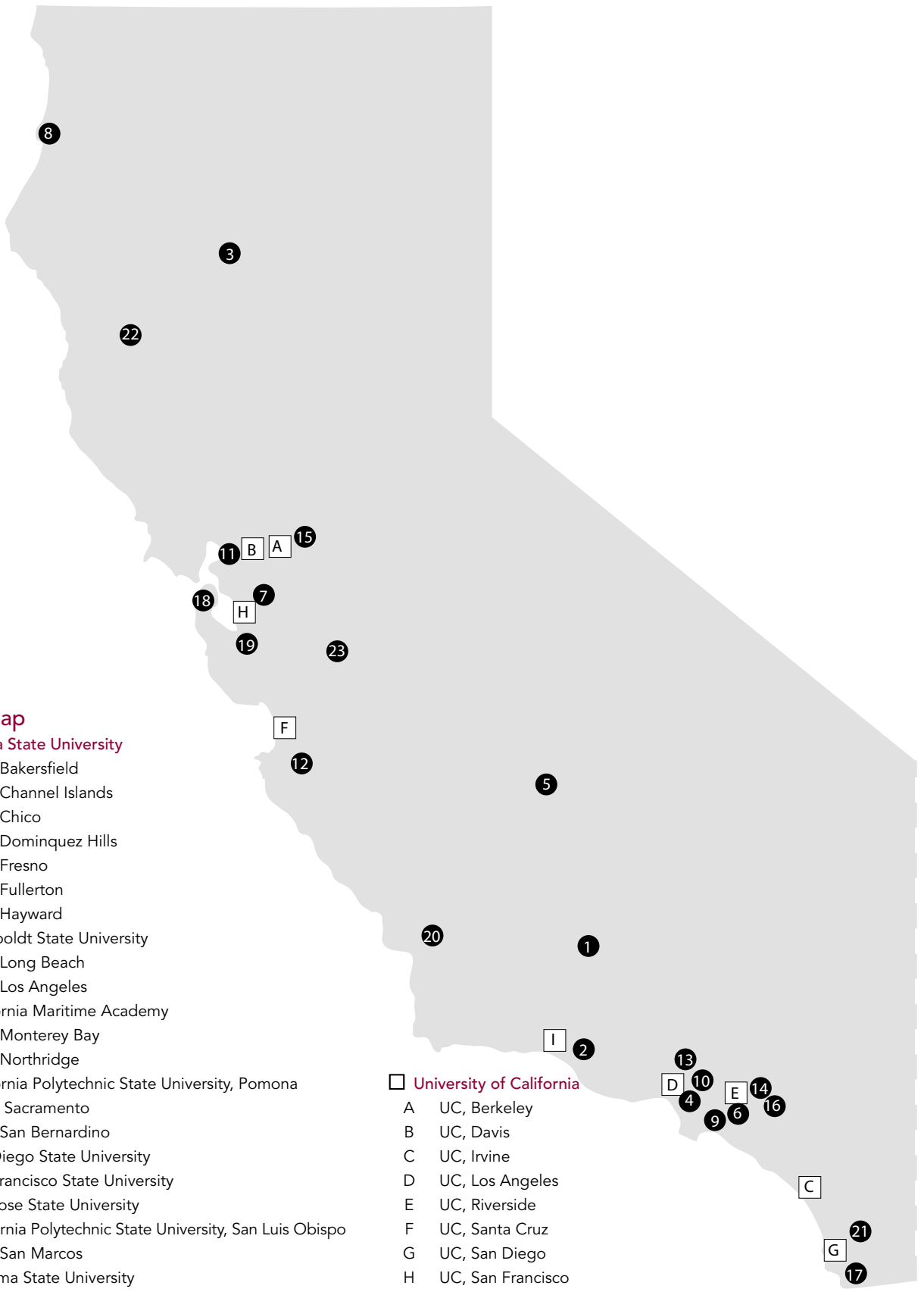
⁺Does not satisfy AI for CSU GE or IGETCE

Graduation



Transfer to a Four Year College or University

California's Four-Year Institutions



Key to Map

● **California State University**

- 1 CSU, Bakersfield
- 2 CSU, Channel Islands
- 3 CSU, Chico
- 4 CSU, Dominguez Hills
- 5 CSU, Fresno
- 6 CSU, Fullerton
- 7 CSU, Hayward
- 8 Humboldt State University
- 9 CSU, Long Beach
- 10 CSU, Los Angeles
- 11 California Maritime Academy
- 12 CSU, Monterey Bay
- 13 CSU, Northridge
- 14 California Polytechnic State University, Pomona
- 15 CSU, Sacramento
- 16 CSU, San Bernardino
- 17 San Diego State University
- 18 San Francisco State University
- 19 San Jose State University
- 20 California Polytechnic State University, San Luis Obispo
- 21 CSU, San Marcos
- 22 Sonoma State University
- 23 CSU, Stanislaus

□ **University of California**

- A UC, Berkeley
- B UC, Davis
- C UC, Irvine
- D UC, Los Angeles
- E UC, Riverside
- F UC, Santa Cruz
- G UC, San Diego
- H UC, San Francisco
- I UC, Santa Barbara

Transfer to a Four-Year College or University

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

Las Positas College provides the first two years of a four-year college or university program. Students with intentions to transfer to four-year colleges and universities may complete their lower division general education requirements AND major field courses while at Las Positas College. Students are advised to meet regularly with a counselor to assure a smooth transition to the transfer institution.

Current transfer flyers and official articulation agreements outlining specific transfer requirements are available in the Career/Transfer Center, Building 900 and the Counseling Center, Building 700.

Career/Transfer/Employment Center

The Center offers the following resources for students to explore career, educational and employment opportunities:

- ▶ A career library with both career books and college catalogs;
- ▶ Technology and assistance to use in the search process;
- ▶ ASSIST*;
- ▶ EUREKA – A computerized California career information system;
- ▶ Transfer admission applications for UC and CSU;
- ▶ Individual counseling;
- ▶ Job Board.

The Center offers the following activities throughout the year:

- ▶ Career and transfer workshops;
- ▶ Annual Transfer Day and regular visits from four-year university representatives;
- ▶ Special transfer admission program information, including "on-the-spot" admissions;
- ▶ Tours, job shadowing, employment fair and transfer reception.

**ASSIST is a computer software program and database of transfer-related information for California's colleges and universities. The ASSIST software is used to display and maintain the transfer information in the database.*

When students are considering which of the many California institutions they may want to attend, an abundance of transfer information is available. ASSIST (www.assist.org) provides students and counselors with an easy way to access accurate and complete information about transferring from one California college or university to another. ASSIST includes all of the postsecondary institutions in California and is the official repository of articulation information for California public postsecondary educational institutions.

Transferability of Courses

Students can transfer a maximum of 70 semester units to a four-year college or university. Many baccalaureate level courses offered at Las Positas have been articulated with the University of California, California State University, and many private institutions. The UC Transferable Course list (Flyer 6T) and the CSU Transferable Course list (Flyer 2T) are available in the Counseling and Career/Transfer Centers.

California Articulation Number (CAN) System

Las Positas College participates in the California Articulation Number (CAN) System. The CAN system is designed to help students transfer to other public colleges in California.

The California Articulation Number (CAN) System identifies some of the transferable, lower division, introductory, preparatory courses commonly taught within each academic discipline on college campuses. The system assures students that CAN courses on one participating campus will be accepted "in lieu of" the comparable CAN course on another campus.

In this Catalog, many courses are identified with a CAN designation. The CAN is listed parenthetically in the course description for each CAN identified course. For example Economics 2 is identified as CAN ECON 2. This means that all campuses in California participating in the CAN system will accept our Economics 2 in lieu of the specific Economics course on their campus that has been identified as CAN ECON 2. Each campus retains and uses its own course number and title. Following is the current list of Las Positas College CAN courses:

CAN COURSE.....LPC COURSE	CAN COURSE.....LPC COURSE
CAN AJ 2..... AJ 50	CAN BUS 8..... BUSN 18
CAN AJ 4..... AJ 60	CAN BUS SEQ A..... BUSN 1A+1B
CAN AJ 6..... AJ 61	CAN CHEM 2..... CHEM 1A
CAN AJ 8..... AJ 63	CAN CHEM 4..... CHEM 1B
CAN ANTH 2..... ANTH 1	CAN CHEM SEQ A CHEM 1A+1B
CAN ANTH 4..... ANTH 3	CAN CHEM SEQ B.....CHEM 30A+30B
CAN ANTH 6..... ANTH 2	CAN CSCI 10 CS 21
CAN ART 2..... ART 4	CAN CSCI 26 MATH 8
CAN ART 4..... ART 5	CAN ECON 2..... ECON 2
CAN ART 8..... ART 2A	CAN ECON 4..... ECON 1
CAN ART SEQ A..... ART 4+5	CAN ENGL 2..... ENG 1A
CAN BIOL 2 BIOL 1	CAN ENGL 4..... ENG 3
CAN BIOL 4 ZOOL 1	CAN ENGL SEQ A ENG 1A+3
CAN BIOL 6 BOT 1	CAN ENGR 8..... ENGR 35
CAN BIOL 10 ANAT 1	CAN FREN SEQ A..... FREN 1A+1B
CAN BIOL 14 MICRO 1	CAN FREN SEQ B..... FREN 2A+2B
CAN BIOL SEQ A..... BIOL 1	CAN GEOG 2..... GEOG 1
CAN BUS 2..... BUS 1A	CAN GEOG 4..... GEOG 2
CAN BUS 4..... BUSN 1B	CAN GEOL 2..... GEOL 1A

CAN COURSE.....LPC COURSE	CAN COURSE.....LPC COURSE
CAN GOVT 2 POLI 7	CAN PHIL 2 PHIL 1
CAN H EC 2 NUTR 1	CAN PHIL 4 PHIL 2
CAN HIST 2 HIST 1	CAN PHIL 6 PHIL 12A
CAN HIST 4 HIST 2	CAN PHYS 2 PHYS 2A
CAN HIST 8 HIST 7	CAN PHYS 4 PHYS 2B
CAN HIST 10 HIST 8	CAN PHYS 8 PHYS 8A
CAN HIST SEQ A HIST 1+2	CAN PHYS 12 PHYS 8B
CAN HIST SEQ B HIST 7+8	CAN PHYS SEQ A PHYS 2A+2B+2C
CAN JOUR 4 MCOM 5	CAN PHYS SEQ B PHYS 8
CAN MATH 8 MATH 36	CAN PSY 2 PSYC 1
CAN MATH 12 MATH 33	CAN SOC 2 SOC 1
CAN MATH 18 MATH 1	CAN SOC 4 SOC 2
CAN MATH 20 MATH 2	CAN SPAN SEQ A SPAN 1A + 1B
CAN MATH 22 MATH 3	CAN SPCH 4 SPCH 1
CAN MATH 24 MATH 4	CAN SPCH 6 SPCH 46
CAN MATH 34 MATH 34	CAN SPCH 8 SPCH 10
CAN MATH SEQ B MATH 1+2	CAN STAT 2 MATH 42A
CAN MATH SEQ C MATH 1+2+3	

Preparation of Students for Transfer

Las Positas College offers courses which fulfill the lower-division requirements of the four-year college or university. Students may complete many of the following requirements prior to transfer:

I. Lower-Division Major Requirements

Courses in the major allow one to concentrate in depth in a field of study. Students should take the specific lower-division courses required for their chosen major. Articulation agreements which list detailed information concerning specific majors and which describe course transferability and applicability between Las Positas College and baccalaureate degree granting institutions are available in either the Counseling Center, Building 700, or the Career/Transfer/Employment Center, Building 900.

II. General Education Requirements

To earn a bachelor's degree from the University of California or the California State University, each student must complete a program of general education. Several different patterns of general education courses fulfill the lower-division general education breadth requirements at four-year institutions. They include UC and CSU campus-specific patterns, CSU General Education Breadth Requirements, and the Intersegmental General Education Transfer Curriculum (IGETC).

III. Electives

These are courses of choice taken in addition to courses for the major and general education requirements. The list of elective transferable courses to the UC or CSU may be obtained through the Career/Transfer Center or Counseling Area.

Important Note: This three-part combination of requirements may be complex and necessitates that transfer students see their counselor to be assured the courses in which they enroll meet all their transfer college's requirements.

Transfer Majors

Some of the common transfer majors for which students may complete lower division requirements while enrolled at Las Positas College are:

- | | |
|---------------------------|---------------------------|
| Accounting | Forestry |
| Administration of Justice | Geography |
| Anthropology | Geology |
| Architecture | Health Education |
| Art | History |
| Astronomy | Humanities |
| Biological Sciences | Industrial Arts |
| Biotechnology | Journalism |
| Business Administration | Law Enforcement |
| Chemistry | Mass Communications |
| Computer Science | Mathematics |
| Criminology | Music |
| Predental | Prelegal |
| Drama | Prelibrarianship |
| Early Childhood Education | Premedical |
| Economics | Premistry |
| Education | Prenursing |
| Engineering | Preoptometry |
| Chemical | Prepharmacy |
| Civil | Preveterinary Medicine |
| Electrical | Philosophy |
| Industrial | Photography |
| Mechanical | Physical Education |
| Optical Science | Physics/Physical Sciences |
| General | Political Science |
| English | Psychology |
| Ethnic Studies | Sociology |
| Fine Arts | Social Welfare |
| Foreign Languages | Speech |
| French | Visual Communications |
| Spanish | Viticulture |

Transfer to a Four-Year College or University

Transfer Admission Agreements

Transfer Admission Agreement is a formal, written agreement that outlines the courses a student must complete before transferring, states the grade point average a student must earn, and lists specific requirements for impacted majors. Students who comply with the agreement and apply for admission on time during the appropriate filing period are guaranteed admission. Las Positas College has Transfer Admission Agreements with the following four-year institutions: CSU Hayward, CSU Sacramento, CSU Monterey Bay, San Jose State, CSU San Francisco, UC Davis, UC Santa Cruz, UC Riverside, UC Irvine (PAIF), and UC Santa Barbara. Consult with your counselor for additional information about Transfer Admission Agreements.

Concurrent Enrollment with University of California, Berkeley

Students who have completed 20 units with a 2.4 Grade Point Average in transferable course work may be eligible to cross-register with University of California, Berkeley while completing coursework at Las Positas College. Students must be a full-time student (12 units) between the two campuses and may enroll in one lower-division course (numbered 1-99 at UC, Berkeley). For further information contact the Career/Transfer/ Employment Center, Building 900.

CSU Hayward's Transfer Admission Guarantee

Transfer Admission Guarantee (TAG) is designed to assist students with baccalaureate degree objectives who plan to begin their college education at a community college before entering the University. TAG agreements must be completed no later than one year prior to intended entry into Cal State Hayward. Once a TAG agreement is completed, students are ready to apply and be admitted to CSU Hayward for a pre-selected term of entry. Benefits of the program are: early advising to ensure completion of general education and lower division major requirements, and waiver of the \$55 CSU application fee, a photo ID card permitting access to the university library and other facilities. For more information see a counselor, Building 700, or the Transfer Center, Building 900.

Cross Registration with California State University, Hayward

Students who have completed 20 units may be eligible to cross-register with California State University, Hayward while completing course work at Las Positas College. Las Positas College students who elect to "cross-register" may enroll in courses at the four year institutions which are either: (1) upper division or (2) not offered at any time by Las Positas College. For further information, contact the Assistant Dean of Admissions and Records, Building 700.

California State University (CSU) Admission Requirements for Transfer

Definition of a Transfer Student

If you have completed college units after graduation from high school, you are considered a transfer student.

- ▶ Students who have completed 59 or fewer transferable semester college units (83 quarter units) are considered lower-division transfer students;
- ▶ Students who have completed 60 or more transferable semester college units (84 quarter units) are considered upper-division transfer students;
- ▶ Students who completed college units before they graduated from high school or during the summer between high school graduation and CSU enrollment are considered first-time freshmen and must meet those admission requirements.

Lower Division Transfer Admission Requirements

You are eligible for admission* if you:

- ▶ Have a college grade point average of 2.0 or better in all transferable college units completed;
- ▶ Are in good standing at the last college or university attended, i.e., you are eligible to re-enroll;
- ▶ Meet the admission requirements for a first-time freshman or have successfully completed necessary courses to make up the deficiencies you had in high school if you did not complete the 15-unit pattern of college preparatory subjects;
- ▶ Meet the eligibility index required of a freshman.

Some campuses may require completion of English composition and general education math*.

*For information about admission status see a counselor, Building 700 or the Transfer Center, Building 900.

Upper Division Transfer Admission Requirements

You are eligible for admission if you:

- ▶ Have a college grade point average of 2.0 or better in all transferable college units completed;
- ▶ Are in good standing at the last college or university attended, i.e., you are eligible to re-enroll;
- ▶ Have completed or will complete 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.

Priority Admission for the CSU

Summer Term..... February 1-28 of that year
Fall Semester or Quarter November 1-30 of previous year
Winter Quarter..... June 1-30 of previous year
Spring Semester or Quarter... August 1-31 of previous year

University of California (UC) Admission Requirements for Transfer

Students who are eligible for admission to the University when they graduated from high school—i.e., have satisfied the Subject, Scholarship, and Examination Requirements—are eligible to transfer if they have a “C” (2.0) average in their transferable college coursework.

Students who met the Scholarship Requirement but did not satisfy the Subject Requirement must take transferable college courses in the subjects they are missing, earn a grade of “C” or better in each of these required courses, and earn an overall “C” (2.0) average in all transferable college coursework to be eligible to transfer. Students who met the Scholarship Requirement but did not meet the Examination Requirement must complete a minimum of 12 semester units (18 quarter units) of transferable work and earn an overall “C” (2.0) average in all transferable college coursework completed.

Students who were not eligible for admission to the University when they graduated from high school because they did not meet the Scholarship Requirement must:

- I. Complete 60 semester units (90 quarter units) of transferable college credit with a grade point average of at least 2.4, and
- II. Complete a course pattern requirement to include:
 - A. Two transferable college courses (3 semester or 4-5 quarter units each) in English composition; and
 - B. One transferable college course (3 semester or 4-5 quarter units each) in Mathematical Concepts and Quantitative Reasoning; and
 - C. Four transferable college courses (3 semester or 4-5 quarter units each) chosen from at least two of the following subject areas: the arts and humanities, the social and behavioral sciences, the physical and biological sciences.

Important Note: Higher grade point averages than those listed above are required at some campuses and for some majors.

Priority Admission for the UC

Summer Term..... February 1-28 of that year
 Fall Semester or Quarter October 1-30 of previous year
 Winter Quarter..... June 1-30 of previous year
 Spring Semester or Quarter... August 1-31 of previous year

General Education Requirements for Transfer

California State University (CSU) General Education Requirements

To earn a bachelor’s degree from the California State University, each student must complete a program of general education. Las Positas College offers two general education programs, which enable students to meet, prior to transfer, all of the lower-division general education requirements.

Students can complete either of the following patterns:

- I. Intersegmental General Education Transfer Curriculum (IGETC), refer to Catalog, page 57; or
- II. CSU General Education Breadth Requirements, refer to Catalog, page 56.

Completion of either of these patterns will permit a student to transfer from a community college to CSU without the need after transfer to take additional lower-division general education courses.

University of California (UC) General Education Requirements

To earn a bachelor’s degree from the University of California, each student must complete a program of general education. To meet the general education requirements of the UC, students can complete either the Intersegmental General Education Transfer Curriculum (IGETC), see Catalog page 56; or the general education requirements of the transfer campus. It is not advisable for all transfer students to follow IGETC. Some students may be better served by taking courses that fulfill the requirements of the UC campus to which they plan to transfer. The Counseling Center, Building 700, has a list of four-year schools and majors for which the IGETC is not advisable. Students are advised to consult a counselor for information about the general education pattern that will be best for them.

Certification of General Education for Transfer to UC and CSU

Upon a student’s request, Las Positas College will certify the completion of the Intersegmental General Education Transfer Curriculum (IGETC) or the CSU General Education Breadth Requirements. Students who transfer without certification will have to meet the general education requirements of the specific UC or CSU campus to which they are transferring. Certification is not automatic and must be requested after the completion of the last term prior to transfer. This request should be made in the Office of Admissions and Records, Building 700 when final transcripts are sent to UC or CSU.

Transfer to a Four-Year College or University

Las Positas College General Education Breadth Requirements For the California State University 2003-2004 Effective Fall 2003⁺

Area A

COMMUNICATIONS IN THE ENGLISH LANGUAGE AND CRITICAL THINKING

Select at least one course from Groups A1, A2 and A3, must be completed with a grade of "C" or better (9 semester units);

- Group A1 Speech 1, 30, 46
Group A2 English 1A
Group A3 English 4, 7, Speech 46

Area B

THE PHYSICAL AND LIFE SCIENCES AND MATHEMATICS

Select at least one course from Groups 1, 2, and 3. At least one course must include a laboratory. Underlined courses are laboratory courses. Laboratory course must be associated with the lecture course. (9-12 semester units)

- Group 1
Physical Sciences (B1)
Astronomy 1, 10, 20, 30
Chemistry 1A, 1B, 30A, 30B, 31
Geography 1, 1L, 8
Geology 1A, 1B, 10, 10L, 12, 12L, 21
Physics 2A, 2B, 8A, 8B, 10, 10L

- Group 2
Life Sciences (B2)
Anatomy 1
Anthropology 1*
Biology 1, 5, 10, 20, 25, 31, 40, 50
Biotechnology 1
Botany 1
Ecology 10, 11
Microbiology 1
Physiology 1
Psychology 4*
Zoology 1

*also listed in Area D but can only be used in one area.

- Group 3
Mathematics (B4)
Mathematics 1, 20, 33, 34, 36, 38, 41, 42A, 42B, 44, 45

Area C

ARTS, LITERATURE, PHILOSOPHY AND FOREIGN LANGUAGE

Select at least one course from Groups C1 and C2 (9-12 semester units)

C1 - Arts (Art, Dance, Music, Theater)

- Art 1, 2A, 3A, 4, 5, 10, 11
Creative Arts 10
Music 1, 2, 4, 5, 6, 8A, 8B, 12, 24, 44, 45
Photography 67
Theater Arts 1A, 3, 5, 10, 11, 12, 14, 25, 40

C2 - Humanities (Literature, Philosophy, Foreign Languages)

- American Sign Language 2A, 2B
English 3, 11, 12, 13, 20, 23, 27, 32, 38, 44*, 45, 47
French 2A, 2B
German 2A, 2B
History 1*, 2*
Humanities 1, 3, 10, 28, 35, 40, 44
Philosophy 1, 2, 4, 7, 25
Religious Studies 1, 11
Spanish 2A, 2B
Speech 2A, 5

*also listed in Area D but can only be used in one area.

+The CSU General Education Requirements list is updated annually. The Counseling and Career/Transfer Centers keep a complete and current list of these requirements. Refer to Flyer 4T.

Area D

HUMAN SOCIAL, POLITICAL AND ECONOMIC INSTITUTIONS AND BEHAVIOR

Select courses from at least two different disciplines from Groups D1 through D0. Courses in Area D may be listed in more than one discipline but may not be used in more than one discipline. (9-12 semester units)

- Anthropology and Archeology (D1)
Anthropology 1*, 2, 3, 5
*also listed in Area B but can only be used in one area.
Economics (D2)
Economics 1, 2, 5, 10, 12
Ethnic Studies (D3)
Anthropology 5
English 23, 44*
History 14, 20, 21, 22, 25, 28
Sociology 3
*also listed in Area C2 but can only be used in one area.

- Gender Studies (D4)
History 27
Sociology 11
Geography (D5)
Geography 2, 3, 5, 12, 15
History (D6)
History 1*, 2*, 7, 8, 14, 20, 21, 22, 25, 27, 28, 45
*also listed in Area B but can only be used in one area.

- Interdisciplinary Social or Behavioral Science (D7)
Business 30
Computer Information Systems 50
Marketing 50
Mass Communication 5
Political Science, Government, & Legal Institutions (D8)
Political Science 7, 12, 20, 25, 30

- Psychology (D9)
Early Childhood Development 15***
Psychology 1, 2, 3, 4*, 6, 12**, 15***, 43
* also listed in Area B but can only be used in one area.
** also listed in Area E but can only be used in one area.
*** same course, can only be counted once.

- Sociology and Criminology (D0)
Sociology 1, 3, 4, 6, 11

Area E

UNDERSTANDING AND SELF-DEVELOPMENT (3 semester units)

- Health 1, 2, 8, 14* + 14L*
Nutrition 1
Psychology 8, 12**, 14* + 14L*, 24
Psychology-Counseling 7▲, 10, 11, 14* + 14L*, 16, 20, 24▲
Sociology 8, 14* + 14L*
Speech 10
Physical Education Activity 1***, 2***, 24▲▲
* HLTH/PSYC/PSCN/SOC 14 maximum 2 units
HLTH/PSYC/PSCN/SOC 14L maximum 1 unit
** also listed in Area D but can only be used in one area
*** same as PE 24; can only be counted once
▲ for Area E credit, course must be taken once for 3 units
▲▲ same course, can only be counted once

AMERICAN INSTITUTIONS REQUIREMENT

Completion of the United States History, Constitution, and American Ideals Requirement is required for graduation from any CSU campus (Title 5 of the California Code of Regulations, Section 40404). All CSUs will allow up to six of the units taken to meet this requirement to be credited toward satisfying the General Education Breadth Requirements in Area D. Consult your counselor for clarification of this policy.

To satisfy the AI requirement complete one course from Group 1 and one course from Group 2.

- Group 1 - History 7, 20 or Political Science 7
Group 2 - History 8, 14, 21, 22, 25, 28 or Economics 5

Las Positas College Intesegmental General Education Transfer Curriculum For 2003-2004 Effective Fall 2003⁺

Area 1

ENGLISH COMMUNICATION

CSU - 3 courses required, 1 from Group 1A,1B, & 1C

UC - 2 courses required, 1 from Group 1A, and 1B

Group 1A - English Composition

1 course, 3 semester units/4-5 quarter units

English 1A

Group 1B - Critical Thinking/English Composition

1 course, 3 semester units/4-5 quarter units

English 4 or 7

Group 1C - Oral Communication (CSU requirement only)

1 course, 3 semester units/4-5 quarter units

Speech 1 or 46

Area 2

MATHEMATICAL CONCEPTS AND QUANTITATIVE REASONING

1 course, 3 semester/4-5 quarter units.

Math 1, 2, 3, 5, 7, 10, 20, 33, 34, 42A, 42B, 44 or 45

Area 3

ARTS AND HUMANITIES

At least 3 courses, 9 semester units/12-15 quarter units.

One course must be from the Arts and the other from the Humanities.

ARTS

Art 1, 4, 5

Creative Arts 10

Music 1, 5, 8A, 8B, 24

Photography 67

Theater Arts 10, 11, 12, 14*

*minimum of 3 units required for Area credit

HUMANITIES

English 3, 20, 23, 27, 32, 44, 45, 47

Foreign Language 2A, 2B

Humanities 1, 3, 10, 28, 35, 44

Music 2

Philosophy 1, 2, 4, 25

Religious Studies 1, 11

Area 4

SOCIAL AND BEHAVIORAL SCIENCES

At least three courses, 9 semester/12-15 quarter units.

Courses must be from at least two disciplines.

Anthropology 1*, 2, 3, 5

Economics 1, 2, 5, 10

Geography 2, 3, 5, 12

History 1, 2, 7, 8, 14, 20, 21, 22, 25, 27, 28, 45

Political Science 7, 20, 25, 30

Psychology 1, 2, 3, 4*, 6, 12, 18, 43

Sociology 1, 3**, 4, 6, 11

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

** This course will also satisfy UCB's American Cultures graduation requirement.

Area 5

PHYSICAL AND BIOLOGICAL SCIENCES

At least two courses required, 7-9 semester/9-12 quarter units.

One Physical Science course and one Biological Science course; at least one must include a laboratory. Courses with a laboratory are underlined. Laboratory course must be associated with the lecture course.

PHYSICAL SCIENCES

Astronomy 1, 10, 20, 30

Chemistry 1A, 1B, 12A, 12B, 30A, 30B

Geography 1, 1L, 8

Geology 1A, 1B, 10, 10L, 12, 12L, 21

Physics 2A, 2B, 8A, 8B, 8C, 8D, 10, 10L

BIOLOGICAL SCIENCES

Anatomy 1

Anthropology 1*

Biology 1, 5, 10, 20, 25, 31, 50

Botany 1

Ecology 10, 11

Microbiology 1

Physiology 1

Psychology 4*

Zoology 1

LANGUAGE OTHER THAN ENGLISH/UC REQUIREMENT ONLY

Students shall demonstrate proficiency in a language other than English equal to 2 years of high school study in the same language. This requirement may also be satisfied by demonstrating equivalent proficiency prior to transfer.

Foreign Language 1A

(French or Spanish)

AMERICAN INSTITUTIONS REQUIREMENT

This requirement is not part of IGETC. To fulfill this CSU requirement students should complete one of the following combinations. Courses used to fulfill this requirement may NOT be used to satisfy any other area.

Complete one course from Group 1 and one course from Group 2.

Group 1 - History 7, 20 or Political Science 7

Group 2 - History 8, 14, 21, 22, 25, 28 or Economics 5

Transfer credit may be limited on specific course sequences by the University of California. Consult the UC Transfer Course Agreement (Flyer 6T) available in the Counseling Office and Transfer Center.

* The Intesegmental General Education Transfer Curriculum list is updated annually. The Counseling and Career/Transfer Centers keep a complete and current list of these requirements. Refer to Flyer 10T (IGETC).

Programs and Courses

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Programs of Study and Course Descriptions

Administration of Justice	64	Humanities	150
American Sign Language	68	Human Services	186
Anatomy	78	Independent Study	151
Anthropology	68	Industrial Technology	152
Apprenticeship	69	Interior Design	153
Architecture	69	International Studies	155
Art (<i>see also Photography, Visual Communications</i>). . .	70	Internship	156
Astronomy	73	Italian	139
Automotive Technology	74	Journalism (<i>see Mass Communications</i>)	163
Biological Sciences	77	Laser Technology	157
Biology	78	Learning Skills	159
Biotechnology	79	Liberal Arts and Sciences (General)	160
Botany	79	Library Studies	162
Business (General)	81	Marketing	90
Business Studies	81	Mass Communications	163
Chemistry	94	Mathematics	165
Colloquia	95	Microbiology	79
Community Interest Studies	95	Music	168
Computing Studies	96	Nutrition	173
Computer Information Systems	97	Occupational Safety and Health	174
Computer Networking Technology	102	Philosophy	176
Computer Science	106	Photography (<i>see also Art, Visual Communications</i>).	177
Contemporary Studies	112	Physical Education	179
Continuing Education	112	Physics	182
Creative Arts	112	Physiology	79
Dance	113	Political Science	183
Design Technology	114	Psychology	184
Drama (<i>see Theater Arts</i>)	194	Psychology-Counseling	186
Early Childhood Development	117	Radiation Safety	188
Ecology	79	Recreation and Leisure Services	188
Economics	122	Religious Studies	188
Electronics Technology	123	Science Technology	189
Engineering	127	Social Science	190
English	129	Sociology	191
English as a Second Language	132	Spanish	139
Fire Service Technology	135	Special Studies	191
Foreign Languages	139	Speech	192
French	139	Supervision	92
General Studies	140	Theater Arts	194
Geography	141	Tutoring	196
Geology	142	Vacuum Technology	197
Graphics (<i>see Visual Communications</i>)	203	Visual Communications (<i>see also Art, Photography</i>).	199
Health	143	Viticulture and Winery Technology (<i>see also Horticulture</i>)	203
History	144	Welding Technology	208
Horticulture (<i>see also Viticulture and Winery Technology</i>)	146	Work Experience	211
Human Growth and Development (<i>see Early Childhood Development</i>)	117	Zoology	79

Course Information

Course Scheduling

Information regarding the days, hours, instructors, and rooms in which classes will be held in each semester and summer session is contained in the Class Schedule, available in the Bookstore prior to the start of each semester and summer session.

Registration

To receive credit, students must register in a course within the officially designated time. Auditing of specific classes is allowed (see page 15).

Semester Units

All courses in this Catalog are described in semester units.

Prerequisites

Many courses offered by the College require the completion of prerequisite courses. Students are advised to consult the course descriptions found in this Catalog for the identification of the prerequisites for a course. Courses with prerequisites are also designated in the current Class Schedule. See page 15 for prerequisite definitions and additional information.

Numbering System

Courses numbered 1-99 are generally transferable. Courses numbered 100-149 are basic skills courses and are not for AA Degree, AS Degree or transfer credit. Courses numbered 150-199 (Continuing Education) may be applied for graduation credit (limit 6 units).

- 9 Colloquia
- 29 Independent Study (Transfer)
- 49 Contemporary Studies
- 99 Special Studies
- 100-149 Basic Skills*
- 150-199 Continuing Education Studies
- 200-299 Community Interest Studies (Non-Credit)

**Students may not receive more than 30 semester units for pre-collegiate basic skills courses. English as a Second Language and learning disabled students are exempt.*

Course Notation

The courses in this Catalog have been annotated with the abbreviations used on the College transcript, e.g., Administration of Justice (AJ).

Course Description Annotations

The courses in this Catalog have been annotated with codes to identify:

- ▶ Grading Option
- ▶ Transfer status to baccalaureate-degree institutions;
- ▶ California Articulation Number (CAN) qualified courses.

The following information explains how to interpret these codes.

The grading option for a course is indicated as follows:

- OP May be taken for a letter grade or credit/no credit
- GR Must be taken for a letter grade only
- C/N Must be taken for credit/no credit only

Transfer credit is indicated as follows:

- UC University of California
- UC* Special Credit Limitations (see page 61)
- CSU California State University
- CSU* Special Credit Limitations

California Articulation Number (CAN)*

- CAN The California Articulation Number is listed parenthetically in the course description for each CAN identified course.

*California Articulation Number (CAN)

The California Articulation Number system identifies some of the transferable, lower-division, introductory, preparatory courses commonly taught within each academic discipline on college campuses. The system assures students that CAN courses on one participating campus will be accepted "in lieu of" the comparable CAN course on another participating campus.

Example: CAN ECON 2 on one campus will be acceptable for CAN ECON 2 on another campus.

Each campus retains its own numbering system. Refer to Catalog, page 52, for a complete list of CAN courses.

University of California
Unit Limitations On Transferable Courses

COURSE	COURSE NAME	UNITS	LIMITATIONS
ANAT 1	General Human Anatomy	4	ANAT 1 combined with BIOL 50 & PHSI 1: max credit, 2 courses
ASTR 10	Introduction to Astronomy: The Solar System	3	No credit for ASTR 10 or 20 if taken after ASTR 1
ASTR 20	Intro to Astronomy: Stars and the Universe	3	No credit for ASTR 10 or 20 if taken after ASTR 1
BIOL 10	Introduction to the Science of Biology	4	BIOL 10 and 31 combined, max credit, one course
BIOL 20	Contemporary Human Biology	3	BIOL 20 and 21 combined, max credit, 4 units
BIOL 21	Contemporary Human Biology with Lab	4	BIOL 20 and 21 combined, max credit, 4 units
BIOL 31	Introduction to College Biology	4	BIOL 10 and 31 combined, max credit, one course
BIOL 50	Anatomy and Physiology	4	BIOL 50 combined with ANAT 1 & PHSI 1: max credit, 2 courses
CHEM 1A	General College Chemistry	5	CHEM 1A and 30A combined, max credit, one course
CHEM 1B	General College Chemistry	5	CHEM 1B and 30B combined, max credit, one course
CHEM 30A	Introductory and Applied Chemistry	4	CHEM 1A and 30A combined, max credit, one course
CHEM 30B	Introductory and Applied Chemistry	4	CHEM 1B and 30B combined, max credit, one course
CHEM 31	Introduction to College Chemistry	4	No credit for CHEM 31 if taken after CHEM 1A or 30A
ECOL 10	Humans and the Environment	3	ECOL 10 and 11 combined, max credit, 4 units
ECOL 11	Humans and the Environment with Lab	4	ECOL 10 and 11 combined, max credit, 4 units
ECON 10	General Economics	3	No credit for ECON 10 if taken after ECON 1 or 2
ENGR 10	Introduction to Engineering	2	ENGR 10 and 15 combined: max credit, one course
ENGR 15	Introduction to Optical Science and Engineering	4	ENGR 10 and 15 combined: max credit, one course
ENG 23	Native American Writers	3	ENGR 23 and 27 combined: max credit, one course
ENG 27	From Folklore to Literature	3	ENGR 23 and 27 combined: max credit, one course
ESL 24	Advanced Reading and Composition	5	ESL 24, 25: Any or all of these courses combined, max credit, 8 units
ESL 25	Advanced Reading and Composition	5	ESL 24, 25: Any or all of these courses combined, max credit, 8 units
GEOL 10	Introduction to Geology	3	No credit for GEOL 10/10L if taken after GEOL1A or 1B
GEOL 10L	Intro to Geology Lab	1	No credit for GEOL 10/10L if taken after GEOL 1A or 1B
HLTH 1	Introduction to Health	3	HLTH 1 and 2 combined, max credit, one course
HLTH 2	Health Issues	2	HLTH 1 and 2 combined, max credit, one course
MATH 1	Analytic Geometry and Calculus I	5	MATH 1 & 2 and MATH 33 & 34 combined, max credit, one series
MATH 2	Analytic Geometry and Calculus II	5	MATH 1 & 2 and MATH 33 & 34 combined, max credit, one series
MATH 20	Precalculus Mathematics	5	MATH 20 and 45 combined, max credit, one course/max credit for 20 is 4 units.
MATH 34	Calculus for Business and Social Sciences	5	MATH 1 & 2 and MATH 33 & 34 combined, max credit, one series
MATH 41	Statistics for Business Majors	5	MATH 41, 42A, 42B and 44 combined: max credit, one course
MATH 42A	Introduction to Probability and Statistics	3	MATH 41, 42A, 42B and 44 combined: max credit, one course
MATH 42B*	Statistical Analysis	3	Note: no credit is given for MATH 42B/41, 42A, 42B and 44 combined: max credit, one course
MATH 44	Statistical Analysis	3	MATH 41, 42A, 42B and 44 combined: max credit, one course
MATH 45	College Algebra	3	MATH 20 and 45 combined, max credit, one course
PHED 21	Theory of Soccer	2	PHED 21, 23, 27: Any or all of these courses combined, max credit, 8 units.
PHED 23	Sports Officiating	2	PHED 21, 23, 27: Any or all of these courses combined, max credit, 8 units.
PHED 27	Principles of Coaching Interscholastic Sports	2	PHED 21, 23, 27: Any or all of these courses combined, max credit, 8 units.
PHYS 2A	Intro to Physics I	4	PHYS 2AB combined with PHYS 8ABCD, max credit, one series. Deduct credit for duplication of topics.
PHYS 2B	Intro to Physics II	4	PHYS 2AB combined with PHYS 8ABCD, max credit, one series. Deduct credit for duplication of topics.
PHYS 8A	General Physics I	5	PHYS 2AB combined with PHYS 8ABCD, max credit, one series. Deduct credit for duplication of topics.
PHYS 8B	General Physics II	5	PHYS 2AB combined with PHYS 8ABCD, max credit, one series. Deduct credit for duplication of topics.
PHYS 8C	General Physics III	5	PHYS 2AB combined with PHYS 8ABCD, max credit, one series. Deduct credit for duplication of topics.
PHYS 8D	General Physics IV	5	2AB combined with 8ABCD, max credit, one series. Deduct credit for duplication of topics.
PHYS 10	Descriptive Physics	3	No credit for PHYS 10/10L if taken after 2A or 8A.
PHYS 10L	Descriptive Physics Lab	1	No credit for PHYS 10/10L if taken after 2A or 8A.
PHSI 1	Human Physiology	5	PHSI 1 combined with BIOL 50 & ANAT 1: max credit, 2 courses

Note: This information is subject to change. See ASSIST for the most current limitations on UC transfer credit.

Transfer and Occupational: Degree and Certificate Programs

PROGRAM NAME	AA/AS	AA	AS	CERTIFICATE	PAGE
	TRANSFER PROGRAMS	OCCUPATIONAL PROGRAMS**			
Administration of Justice		▲			64
Art (Emphasis in Painting)	▲				70
Automotive Electronics Technology			▲		74
Automotive Service Technician				▲	74
Automotive Technician				▲	75
Biology	▲				77
Business Studies					
Business					
Accounting Technician				▲	85
Administrative Assistant		▲		▲	82
Business			▲		83
Business Administration	▲				84
Business Entrepreneurship		▲		▲	84
Business Workforce Proficiency				▲	85
Retail Management				▲	86
Marketing					
Marketing		▲		▲	90
Retailing Certificate				▲	91
Supervision					
Supervisory Management				▲	92
Chemistry	▲				94
Computing Studies					
Computer Information Systems					
Computer Information Systems		▲			97
Computer Applications Software				▲	98
Computer Networking Technology					
Cisco Network Associate				▲	103
Cisco Network Professional				▲	103
Computer Network Technician				▲	103
Computer Network Administration (Microsoft)				▲	103
Internetworking Technology & Cisco Administration			▲		102
Computer Science					
Computer Science	▲				107
Computer Programming			▲	▲	107
Computer Programming for the Web			▲	▲	108

* Transfer Preparation Programs designed for transfer, and do not confer a degree.

** Occupational Programs designed for direct job entry; however, many courses in these programs are transferable to many 4-year institutions. Students should consult a counselor for information.

Transfer and Occupational: Degree and Certificate Programs (continued)

PROGRAM NAME	AA/AS	AA	AS	CERTIFICATE	PAGE
	TRANSFER PROGRAMS	OCCUPATIONAL PROGRAMS**			
Design Technology			▲	▲	114
ECD-Early Childhood Development		▲			118
ECD-Associate Teacher Certificate				▲	118
ECD-Basic Teacher Certificate				▲	118
Family Childcare				▲	119
Electronics Telecommunications Systems				▲	124
Engineering	*see note				127
Fire Service Technology			▲	▲	135
Horticulture			▲	▲	146
Humanities (General)	▲				150
Industrial Technology			▲		152
Interior Design			▲	▲	153
International Studies	▲				155
Laser Technology			▲	▲	157
Liberal Arts and Sciences (General)	▲	▲			160
Mass Communications: Journalism				▲	163
Music	▲				168
Music - Beginning Piano Pedagogy				▲	169
Music - Intermediate Piano Pedagogy				▲	169
Occupational Safety and Health			▲	▲	174
Photography				▲	177
Physical Education	▲				179
Physical Education, Coaching				▲	180
Physical Education, Sports Medicine				▲	180
Physics	▲				182
Psychology	▲				184
Science Technology			▲		189
Social Science (General)	▲				190
Speech	▲				192
Theater Arts	▲				194
Vacuum Technology			▲	▲	197
Visual Communications		▲		▲	199
Viticulture and Winery Technology					
Viticulture			▲	▲	203
Enology			▲	▲	205
Viticulture and Enology	*see note				205
Welding Technology			▲	▲	208

Administration of Justice

Degree AA – Administration of Justice

About the Program

Las Positas College offers courses that lead to an Associate in Arts degree in Administration of Justice, including a Basic Peace Officer Academy for students seeking full-time employment in law enforcement. A Reserve Peace Officer course and several advanced officer courses are also offered in the program. The degree program prepares students for transfer to a four-year college or university while the Basic Peace Officer Academy and Reserve Peace Officer programs prepare students for direct job entry with a California law enforcement agency. While units in this program are transferable to many institutions, students should consult a counselor for transfer information.



AA – Administration of Justice

Freshman Year

Administration of Justice 50 (Introduction to Administration of Justice).....	3
Administration of Justice 54 (Investigative Reporting)	3
Administration of Justice 60 (Criminal Law)	3
Administration of Justice 61 (Evidence)	3
Electives*	0-6
General Education Courses: (See General Education Requirements, page 48)	
English Composition (Language and Rationality)	
Mathematics	
Social and Behavioral Sciences	
Natural Sciences	
Health Education	
Physical Education	

Sophomore Year

Administration of Justice 62 (The Justice System)	3
Administration of Justice 63 (Criminal Investigations).....	3
Administration of Justice 70 (Community Relations).....	3
Health 61 (First Responder).....	2.5
Electives*	0-6
General Education Courses: (See General Education Requirements, page 48)	
American Cultures	
American Institutions	
Humanities	
Communications and Analytical Thinking	
Physical Education	
Total units required	60

*Electives

Select from the following for a minimum of 6 units:

Administration of Justice 51 (Introduction to Security)
Administration of Justice 52 (Retail Security)
Administration of Justice 53 (Industrial Security)
Administration of Justice 55 (Introduction to Correctional Science)
Administration of Justice 56 (Fundamentals of Crime and Delinquency)
Administration of Justice 57 (Community Agencies and Treatment)
Administration of Justice 58 (Delinquency Prevention – A Family Approach)
Administration of Justice 59 (Child Abuse in the Community)
Administration of Justice 64 (Patrol Procedures)
Administration of Justice 66 (Juvenile Procedures)
Administration of Justice 67 (Defensive Tactics)
Administration of Justice 69 (Sex Crime Investigation)
Administration of Justice 71 (Narcotics and Drug Enforcement)
Administration of Justice 72 (Crisis Intervention)
Administration of Justice 74 (Gangs and Drugs)
Administration of Justice 79 (Homicide Investigation)
Administration of Justice 81 (Interpersonal Behavior)
Administration of Justice 82 (Current Legal Decisions)
Administration of Justice 84 (Interviewing—Interrogation)
Administration of Justice 86 (Police Computer Networks)
Administration of Justice 89 (Family Violence)

Administration of Justice (AJ)*Formerly (ADMJ)***AJ 50** 3 UNITS**INTRODUCTION TO ADMINISTRATION OF JUSTICE**

Grading Option: OP Transfer: CSU, UC

(Included in CORE curriculum of baccalaureate degree-granting institutions)

History and philosophy of administration of justice in America; recapitulation of the system; identifying the various subsystems, role expectations, and their interrelationships; theories of crime, punishment, and rehabilitation; ethics, education and training for professionalism in the system. 3 hours. (CAN AJ 2)

AJ 51 2 UNITS**INTRODUCTION TO SECURITY**

Grading Option: OP Transfer: CSU

Security systems and their uses within our society. Constitutional aspects, as well as federal, state and related laws as they apply to the different agencies responsible for carrying out the systems of security. Various types of devices and locks used in security and/or protection. 2 hours.

AJ 52 2 UNITS**RETAIL SECURITY**

Grading Option: GR

Retail security in relation to inventory shortages and their investigation. Organization and responsibilities of those involved in retail security. 2 hours.

AJ 53 2 UNITS**INDUSTRIAL SECURITY**

Grading Option: GR

All phases of industrial security, including history, legal aspects, agencies, controls, problems, responsibilities and security devices. 2 hours.

AJ 54 3 UNITS**INVESTIGATIVE REPORTING**

Grading Option: OP Transfer: CSU

Investigative reports with emphasis upon accuracy and details necessary. Includes arrest reports, incident reports, and miscellaneous field reports. Techniques and methods used to cover information; how to analyze and present information in a clear and concise report. 3 hours.

AJ 55 3 UNITS**INTRODUCTION TO CORRECTIONAL SCIENCE**

Grading Option: OP Transfer: CSU

Aspects of modern correctional process as utilized in rehabilitation of adult and juvenile offenders. Emphasis on custody, rehabilitation and treatment programs as recognized by modern penology. Exploration of career opportunities. 3 hours.

AJ 56 2 UNITS**FUNDAMENTALS OF CRIME AND DELINQUENCY**

Grading Option: OP Transfer: CSU, UC

Survey of the sociological and psychological theories pertaining to the causation of crime and delinquency. Includes ethnic considerations and their relationships. 2 hours.

AJ 57 2 UNITS**COMMUNITY AGENCIES AND TREATMENT**

Grading Option: OP Transfer: CSU

Correctional agencies and programs at local, state and federal levels, includes aspects of organization and administration. Control and treatment of juveniles and adults in modern society in the correctional setting. 2 hours.

AJ 58 2 UNITS**DELINQUENCY PREVENTION—A FAMILY APPROACH**

Grading Option: OP Transfer: CSU

Family's role in creating and perpetuating delinquency (criminality). Responsibility and reasons for supporting anti-social behavior. Development of a practical model for preventing continuing delinquency. 2 hours.

AJ 59 2 UNITS**CHILD ABUSE IN THE COMMUNITY**

Grading Option: OP Transfer: CSU

Dynamics of the battered child syndrome. Focus on the abusive caretaker, patterns of abuse, and means necessary for effective intervention and treatment including effective legal and social action to control child abuse in the community. 2 hours.

AJ 60 3 UNITS**CRIMINAL LAW**

Grading Option: GR Transfer: CSU, UC

(Included in CORE curriculum of baccalaureate degree-granting institutions)

Historical development, philosophy of law and constitutional provisions; definitions, classification of crime, and their application to the system of administration of justice; frequently used Penal Code and other code sections; case law, methodology, and concepts of law as a social force. 3 hours. (CAN AJ 4)

AJ 61 3 UNITS**EVIDENCE**

Grading Option: GR Transfer: CSU

(Included in CORE curriculum of baccalaureate degree-granting institutions)

Origin, development, philosophy and constitutional basis of evidence; constitutional and procedural considerations affecting arrest, search and seizure; kinds and degrees of evidence and rules governing admissibility; judicial decisions interpreting individual rights and case studies. 3 hours. (CAN AJ 6)

Administration of Justice

AJ 62 3 UNITS

THE JUSTICE SYSTEM

Grading Option: GR Transfer: CSU

(Included in CORE curriculum of baccalaureate degree-granting institutions)

Roles and responsibilities of each segment within the Administration of Justice System: law enforcement, judicial, corrections. Past, present and future exposure to each sub-system; procedures from initial entry to final disposition and the relationship each segment maintains with its system members. 3 hours.

AJ 63 3 UNITS

CRIMINAL INVESTIGATION

Grading Option: GR Transfer: CSU

Fundamentals of investigation; crime scene search and recording; collection and preservation of physical evidence; scientific aids; modus operandi; sources of information; interviews and interrogation; follow-up and case preparation of specific crimes. 3 hours. (CAN AJ 8)

AJ 64 3 UNITS

PATROL PROCEDURES

Grading Option: GR Transfer: CSU

Responsibilities, techniques of observation, community relations and methods of police patrol. Emphasis on legal and practical aspects. 3 hours.

AJ 65 3 UNITS

TRAFFIC RULES AND INVESTIGATION

Grading Option: GR Transfer: CSU

Traffic law enforcement, regulation and control; fundamentals of traffic accident investigation; California Vehicle Code. Prerequisite: Administration of Justice 61 (completed with a grade of "C" or higher). 3 hours.

AJ 66 2 UNITS

JUVENILE PROCEDURES

Grading Option: OP Transfer: CSU

Organization, functions and jurisdiction of juvenile agencies; processing and detention of juveniles; juvenile case disposition; juvenile statutes and court procedures. 2 hours.

AJ 67 2 UNITS

DEFENSIVE TACTICS

Grading Option: OP Transfer: CSU

Protection against persons armed with dangerous and deadly weapons; demonstration and drill in a limited number of holds and come-alongs; restraint of prisoners and the mentally ill; fundamental use of the baton safety procedures. 1 hour lecture, 3 hours laboratory.

AJ 69 3 UNITS

SEX CRIME INVESTIGATION

Grading Option: OP Transfer: CSU

Sexual assault investigations; human behavior in relation to sexual attitudes and behavior; sexual assault laws and investigations;

interview and interrogation techniques; court preparation and trial phase; sex crime prevention. 3 hours.

AJ 70 3 UNITS

COMMUNITY RELATIONS

Grading Option: GR Transfer: CSU, UC

Roles of the Administration of Justice practitioners and their agencies. Interrelationships and role expectations among various agencies and the public. Emphasis on the professional image of the system of Justice Administration and development of positive relationships between members of the system and the public. 3 hours.

AJ 71 2 UNITS

NARCOTICS AND DRUG ENFORCEMENT

Grading Option: OP Transfer: CSU

Local, state and federal narcotics problems and laws; application of investigative procedures and the work and methods of special narcotics units; methods of locating and apprehending violators; the use of informants and undercover persons. 2 hours.

AJ 72 2 UNITS

CRISIS INTERVENTION

Grading Option: C/N Transfer: CSU

Domestic relations problems as seen by agency personnel in the justice field; causes of marital disputes and tools for diagnosis of their severity and potential danger; effective intervention techniques, both legal and social. 2 hours.

AJ 73 1 UNIT

OFFICER SURVIVAL

Grading Option: C/N Transfer: CSU

Techniques for defensive officer survival; assaults against police and related incidents; training in techniques of survival. 1 hour.

AJ 74 2 UNITS

GANGS AND DRUGS

Grading Option: OP Transfer: CSU

Definition of a gang and gang activity. Historical and cultural aspects. Interrelationships among local, national and international gangs, including prison gangs. Gang activity in relation to drug trafficking. 2 hours.

AJ 75 .5 UNIT

SECURITY FIREARMS QUALIFICATION

Grading Option: C/N Transfer: CSU

Moral, legal aspects, civil and criminal liability of firearm use on the job. Emphasis on effective use of the firearm includes minimal qualification of actual firing on the range. 14 total hours.

AJ 76 .5 UNIT

BATON TRAINING FOR SECURITY GUARDS

Grading Option: C/N Transfer: CSU

Legal uses of the baton, emphasis on appropriate and legal use of the baton. Exercising self-discipline in the use of the baton. Includes training and demonstration of techniques. 12 total hours.

<p>AJ 77 .5 UNIT POWERS TO ARREST Grading Option: C/N Transfer: CSU Legal authority in powers to arrest; differences between detention and arrest. Designed for Security Guards to meet the California State law requirements. 9 total hours.</p>	<p>AJ 90 4 UNITS RESERVE MODULE A: ARREST AND CONTROL Grading Option: C/N Ethical considerations concerning arrest; laws of arrest; search and seizure; methods of arrest; investigation and communications; law enforcement ethics. Designed to satisfy the 1993 revised requirements of Penal Code 832. 4 hours.</p>
<p>AJ 79 3 UNITS HOMICIDE INVESTIGATION Grading Option: OP Transfer: CSU Process of analysis of all aspects of the death case in order to arrive at the true cause and manner of death, whether it is murder, suicide, accidental or natural. Emphasis on importance of the death scene related to investigation of cause. 3 hours.</p>	<p>AJ 91 2 UNITS RESERVE MODULE A: FIREARMS Grading Option: C/N Ethical considerations concerning the use of firearms. Firearms safety. Techniques of shooting and range qualification. Prerequisite: Administration of Justice 90 (completed with a grade of "C" or higher). 2 hours.</p>
<p>AJ 81 2 UNITS INTERPERSONAL BEHAVIOR Grading Option: C/N Transfer: CSU Interpersonal processes combined with self awareness; concepts of individual and group behavior; defense mechanisms; role interaction; self analysis; and experiences in situational group interactions. 2 hours.</p>	<p>AJ 92 3 UNITS RESERVE MODULE B, PART I: ROLE OF THE BACKUP OFFICER Grading Option: GR Elements involved in backing up another officer; professional orientation; communications; criminal law; traffic stops; custody issues; patrol. Designed to meet part of Module B for the Level II Reserve Peace Officer. Certified by the California Commission on Peace Officer Standards and Training. 2 hours lecture, 3 hours laboratory.</p>
<p>AJ 82 1 UNIT CURRENT LEGAL DECISIONS Grading Option: C/N Transfer: CSU <i>(May be repeated 3 times)</i> Legal decisions which are being rendered concerning appellate courts of both the state and federal judiciary system, and relation to current problems. 1 hour.</p>	<p>AJ 93 4 UNITS RESERVE MODULE B, PART II: ROLE OF THE BACKUP OFFICER Grading Option: GR Elements involved in backing up another officer; vehicle operations; First Aid/CPR; force and weaponry and remediation of skills. Designed to meet part of Module B for the Level II Reserve Peace Officer. Certified by the California Commission on Peace Officer Standards and Training. 2 hours lecture, 6 hours laboratory.</p>
<p>AJ 84 1 UNIT INTERVIEWING—INTERROGATION Grading Option: GR Transfer: CSU Techniques involved in interviewing victims and witnesses of crimes and the interrogation of persons suspected of crimes. Methods involved and various approaches utilized in these techniques. 1 hour.</p>	<p>AJ 94 5 UNITS RESERVE MODULE C Grading Option: GR Professional orientation; police community relations; patrol procedures; domestic violence; laws of evidence; traffic issues; criminal investigation. Designed to meet the legal requirements for Module C for Level I Reserve Peace Officer. Certified by the California Commission on Peace Office Standards and Training. Prerequisite: Administration of Justice 93 (completed with a grade of "C" or higher). 5 hours.</p>
<p>AJ 86 2 UNITS POLICE COMPUTER NETWORKS Grading Option: GR Transfer: CSU Processing methods, systems, and equipment used in data processing with emphasis on the Police Computer Networks consisting of input, retrieval, updating and deletion of items. 2 hours.</p>	<p>AJ 99.97 19.25 UNITS LAW ENFORCEMENT ACADEMY Grading Option: GR Transfer: CSU Basic concepts of law enforcement, covering investigation, procedures, records, laws tactics, firearms, and public human relations. The Law Enforcement Academy is certified by the Commission of Peace Officer Standards and Training (POST). Prerequisites: Administration of Justice 50, 60, 61, 62 and 70 (all completed with a grade of "C" or higher) or employment as a peace officer. 1050 hours.</p>
<p>AJ 89 2 UNITS FAMILY VIOLENCE Grading Option: GR Transfer: CSU Origins of violence in the family from the administration of justice perspective. Specific types of violent interactions and abuse among family members. Emphasis on techniques for use by peace officers to intervene effectively. 2 hours.</p>	



American Sign Language (ASL)

ASL 1A 3 UNITS

AMERICAN SIGN LANGUAGE I

Grading Option: GR Transfer: CSU, UC
Introduction to American Sign Language (ASL), including expressive and receptive skills, the manual alphabet, facial expression, and body gestures. Emphasis on conversational skills in functional situations, knowledge of Deaf culture and the Deaf community. 3 hours.

ASL 1B 3 UNITS

AMERICAN SIGN LANGUAGE II

Grading Option: GR Transfer: CSU, UC
Continued development of American Sign Language (ASL) receptive/ expressive skills and knowledge learned in American Sign Language 1A. Emphasis on conversational skills in functional situations, continued vocabulary and sentence structure expansion, and knowledge of Deaf culture and the Deaf community. Prerequisite: American Sign Language 1A (completed with a grade of "C" or higher). 3 hours.

ASL 2A 3 UNITS

AMERICAN SIGN LANGUAGE III

Grading Option: GR Transfer: CSU
Further development of American Sign Language (ASL) receptive/ expressive skills and knowledge learned in American Sign Language 1B. Emphasis on conversational skills in functional situations, continued vocabulary expansion and knowledge of Deaf culture and the Deaf community. Prerequisite: American Sign Language 1B (completed with a grade of "C" or higher). 3 hours.

ASL 2B 3 UNITS

AMERICAN SIGN LANGUAGE IV

Grading Option: GR Transfer: CSU
Further development of American Sign Language (ASL) receptive/ expressive skills and knowledge learned in American Sign Language 2A. Emphasis on conversational skills in functional situations, continued expansion of vocabulary and knowledge of Deaf culture and the Deaf community. Prerequisite: American Sign Language 2A (completed with a grade of "C" or higher). 3 hours.

Anatomy (ANAT)

See **Biological Sciences**

Anthropology (ANTH)

ANTH 1 3 UNITS

PHYSICAL ANTHROPOLOGY

Grading Option: OP Transfer: CSU, UC
Humans as a biological species through an examination of the fossil evidence for human evolution, behavior of nonhuman primates, and human evolutionary biology and genetics. Emphasis on uniquely human biological and behavioral characteristics, as well as those shared with other animals. Current anthropological issues such as the biological meaning of race, genetic diseases, and the influence of evolution on human behavior. 3 hours. (CAN ANTH 2)

ANTH 2 3 UNITS

INTRODUCTION TO ARCHAEOLOGY: PREHISTORY AND CULTURE GROWTH

Grading Option: OP Transfer: CSU, UC
Prehistoric development of human culture through studies of stone tools and other remains of the earliest human lifeways up to the growth of technologically advanced civilizations. Emphasis on modern archaeological theories and techniques for understanding cultural adaptation to different ecological conditions in the past. Review of important archaeological case studies. 3 hours. (CAN ANTH 6)

ANTH 3 3 UNITS

SOCIAL AND CULTURAL ANTHROPOLOGY

Grading Option: OP Transfer: CSU, UC
How human beings in different cultures meet basic biological, social and cultural needs, including kinship and marriage practices, political and social organization, economic institutions, religious and childrearing practices, social change, as well as other aspects of cultural behavior. Emphasis on understanding other cultures on their own terms. Includes the many subcultures making up North American populations. 3 hours. (CAN ANTH 4)

ANTH 5 3 UNITS

CULTURAL PLURALISM: ANTHROPOLOGICAL PERSPECTIVES OF RACE, CLASS, GENDER AND ETHNICITY

Grading Option: OP Transfer: CSU, UC
Issues relevant to understanding race, class, gender and ethnicity within the American setting. Historical as well as contemporary situation of the following groups: 1) African Americans; 2) Native Americans; 3) Hispanic Americans; 4) European Americans; and 5) Asian Americans, among other groups. Emphasis on analyzing the way that public understandings of culture and biology are translated into social policy. Contemporary social issues such as race relations, multiculturalism, affirmative action, bilingual education, and the use and abuse of I.Q. testing. 3 hours.

Apprenticeship (APAU)

Courses are offered in related instruction to meet requirements established by state law for every registered apprentice: practices and principles of the occupation; laws relating to the worker; safety procedures, care and use of tools and equipment; materials; applied mathematics and science.

The following Apprenticeship Program is currently offered:

Automotive Apprenticeship



Architecture (ARCH)

ARCH 62

2 UNITS

HOME DESIGN AND CONSTRUCTION TECHNOLOGY

Grading Option: GR

Transfer: CSU

Introduction to home concepts, design variations, estimating costs, financing, maintenance, and building contracts. 2 hours.

Art

Degree AA – Art – Emphasis in Painting

About the Program

Students who elect to major in the field of art have a variety of opportunities open to them. Choices include careers in teaching, art criticism, or work as practicing artists in graphic design, painting, drawing, and photography.

The Art (Painting) major offered by Las Positas College provides a secure foundation for the student. Courses in the Art department are designed to fulfill the needs of Art majors, as well as those whose interest is avocational or recreational. This program fulfills typical lower-division requirements at four-year transfer institutions. Some variation in requirements may exist at a particular four-year college or university; therefore, it is essential that the student also refer to the catalog of the prospective transfer institution and consult a counselor.

See also: **Photography**
Visual Communications



AA – Art – Emphasis in Painting

Freshman Year

Art 2A (Introduction to Drawing)	3
Art 2B (Drawing, Color and Composition).....	3
Art 12A (Oil/Acrylic Painting- Beginning I)	3
Art 12B (Oil/Acrylic Painting- Beginning II)	3
Art 3A (Figure and Composition I)	3
Art 1 (Introduction to Art)	3

General Education Courses: (See General Education Requirements, page 48)

- English Composition (Language and Rationality)
- Mathematics
- Social and Behavioral Sciences
- Natural Sciences
- Health Education
- Physical Education

Sophomore Year

Art 4 (Art History, Ancient).....	3
Art 5 (Art History, Renaissance to Modern)	3
Art 12C (Oil/Acrylic Painting- Advanced I)	3
Art 12D (Oil/Acrylic Painting- Advanced II)	3
Art 3B (Figure and Composition II).....	3
Art 10 (Design and Materials).....	3
Art 7A (Introduction to Watercolor Painting).....	3

General Education Courses: (See General Education Requirements, page 48)

- American Cultures
- American Institutions
- Humanities
- Communications and Analytical Thinking
- Physical Education

Total units required 60

Art (ART)**ART 1 3 UNITS****INTRODUCTION TO ART**

Grading Option: OP Transfer: CSU, UC
 Architecture, sculpture, painting, photography and design in relation to human inventiveness in providing for material and aesthetic needs; orientation to contemporary and historic art forms and principles. 3 hours.

ART 2A 3 UNITS**INTRODUCTION TO DRAWING**

Grading Option: OP Transfer: CSU, UC
 Skills development in light and shade composition, perspective, and other basics. The use of pencil, charcoal, and/or ink. 2 hours lecture, 4 hours studio. (CAN ART 8)

ART 2B 3 UNITS**DRAWING AND COMPOSITION I**

Grading Option: OP Transfer: CSU, UC
 Development of knowledge and skills introduced in Art 2A, emphasizing media and composition and introducing the use of color. Prerequisite: Art 2A (completed with a grade of "C" or higher). 2 hours lecture, 4 hours studio.

ART 3A 3 UNITS**FIGURE AND COMPOSITION I**

Grading Option: OP Transfer: CSU, UC
 Skill development drawing the figure with charcoal, conte or pastel, pencil, and ink with emphasis on composition. Strongly recommended: Art 2A. 2 hours lecture, 4 hours studio.

ART 3B 3 UNITS**FIGURE AND COMPOSITION II**

Grading Option: OP Transfer: CSU, UC
 Development of knowledge and skills introduced in Art 3A, emphasis on composition and color. Prerequisite: Art 3A (completed with a grade of "C" or higher). 2 hours lecture, 4 hours studio.

ART 3C 3 UNITS**FIGURE AND COMPOSITION III**

Grading Option: OP Transfer: CSU, UC
 Development of knowledge and skills introduced in Art 3B, emphasis on composition and color. Prerequisite: Art 3B (completed with a grade of "C" or higher). 2 hours lecture, 4 hours studio.

ART 3D 3 UNITS**FIGURE AND COMPOSITION IV**

Grading Option: OP Transfer: CSU, UC
 Development of knowledge and skills introduced in Art 3C. Drawing the figure with charcoal, conte, graphite, ink, watercolor, pastels, tempera and oils with emphasis on composition and color. Prerequisite: Art 3C (completed with a grade of "C" or higher). 2 hours lecture, 4 hours studio.

**ART 4 3 UNITS****ART HISTORY: ANCIENT**

Grading Option: OP Transfer: CSU, UC
 History of Western art from prehistoric times through Egyptian, Mesopotamian, Aegean, Greek, Etruscan, Roman, Early Christian, Byzantine, Medieval, Romanesque, and Gothic civilizations. 3 hours. (Art 4 + 5 = CAN ART SEQ A)

ART 5 3 UNITS**ART HISTORY: RENAISSANCE TO MODERN**

Grading Option: OP Transfer: CSU, UC
 History of Western art from Early Renaissance, High Renaissance, Mannerism, Baroque, Neoclassicism, Romanticism, Realism, Impressionism, Post-Impressionism, 20th Century developments of American art. 3 hours. (CAN ART 4; Art 4 + 5 = CAN ART SEQ A)

ART 7A 3 UNITS**INTRODUCTION TO WATERCOLOR PAINTING**

Grading Option: OP Transfer: CSU, UC
 Materials, methods, and techniques of transparent watercolor painting, including its effects and possibilities. Strongly Recommended: Art 2A and Art 2B. 2 hours lecture, 4 hours studio.

ART 7B 3 UNITS**WATERCOLOR PAINTING**

Grading Option: OP Transfer: CSU, UC
 Development of knowledge and skills introduced in Art 7A. Emphasis on experimenting with the watercolor medium leading to development of individual methods of expression. Prerequisite: Art 7A (completed with a grade of "C" or higher). 2 hours lecture, 4 hours studio.

ART 7C 3 UNITS**ADVANCED WATERCOLOR: PAINTING I**

Grading Option: OP Transfer: CSU, UC
 Development of knowledge and skills introduced in Art 7B directed toward individualized needs. Prerequisite: Art 7B (completed with a grade of "C" or higher). 2 hours lecture, 4 hours studio.



ART 7D 3 UNITS

ADVANCED WATERCOLOR PAINTING II

Grading Option: OP Transfer: CSU, UC
Development of knowledge and skills introduced in Art 7C directed toward individualized needs. Prerequisite: Art 7C (completed with a grade of "C" or higher). 2 hours lecture, 4 hours studio.

ART 10 3 UNITS

DESIGN AND MATERIALS

Grading Option: OP Transfer: CSU, UC
Introduction to the basic elements of design: line, texture, value, shape, color, light, and spatial concepts. Experimentation with paper, cardboard, cloth, etc. Emphasis on two dimensional design. 2 hours lecture, 4 hours studio. (CAN ART 14)

ART 11 3 UNITS

DESIGN, MATERIALS, AND COLOR

Grading Option: OP Transfer: CSU, UC
Color theory as it applies to two and three dimensional design. 2 hours lecture, 4 hours studio.

ART 12A 3 UNITS

OIL/ACRYLIC PAINTING: BEGINNING I

Grading Option: OP Transfer: CSU, UC
Beginning projects in oil painting with an emphasis on fundamental painting techniques and approaches. Strongly Recommended: Art 2A or equivalent. 2 hours lecture, 4 hours studio.

ART 12B 3 UNITS

OIL/ACRYLIC PAINTING: BEGINNING II

Grading Option: OP Transfer: CSU, UC
Projects in oil or acrylic painting with an emphasis on fundamental painting techniques and approaches. Prerequisite: Art 12A (completed with a grade of "C" or higher) or equivalent. 2 hours lecture, 4 hours studio.

ART 12C 3 UNITS

OIL/ACRYLIC PAINTING: ADVANCED I

Grading Option: OP Transfer: CSU, UC
Advanced projects in oil or acrylic painting with emphasis on individual creative work and development of personal ideas and style. Prerequisite: Art 12B (completed with a grade of "C" or higher) or equivalent. 2 hours lecture, 4 hours studio.

ART 12D 3 UNITS

OIL/ACRYLIC PAINTING: ADVANCED II

Grading Option: OP Transfer: CSU, UC
Advanced projects in oil or acrylic painting with emphasis on individual creative work and development of personal ideas and style. Prerequisite: Art 12C (completed with a grade of "C" or higher) or equivalent. 2 hours lecture, 4 hours studio.

ART 13A 3 UNITS

ACRYLIC PAINTING: BEGINNING I

Grading Option: OP Transfer: CSU, UC
Projects in acrylic painting with an emphasis on fundamental painting techniques. Strongly Recommended: Art 2A or equivalent. 2 hours lecture, 4 hours studio.

ART 13B 3 UNITS

ACRYLIC PAINTING: BEGINNING II

Grading Option: OP Transfer: CSU, UC
Projects in acrylic painting with an emphasis on fundamental painting techniques. Prerequisite: Art 2A or 12A or 13A (completed with a grade of "C" or higher) or equivalent. 2 hours lecture, 4 hours studio.

ART 13C 3 UNITS

ACRYLIC PAINTING: ADVANCED I

Grading Option: OP Transfer: CSU, UC
Advanced projects in acrylic painting with emphasis on individual creative work and development of personal ideas and style. Prerequisite: Art 12B or 13B (completed with a grade of "C" or higher) or equivalent. 2 hours lecture, 4 hours studio.

ART 13D 3 UNITS

ACRYLIC PAINTING: ADVANCED II

Grading Option: OP Transfer: CSU, UC
Advanced projects in acrylic painting with emphasis on individual creative work and development of personal ideas and style. Prerequisite: Art 12C or 13C (completed with a grade of "C" or higher) or equivalent. 2 hours lecture, 4 hours studio.

ART 48 3 UNITS

PERSPECTIVE DRAWING

Grading Option: OP Transfer: CSU, UC
Theory and practice of perspective in drawing and painting. Includes history, concepts and variations on the use of different mediums of perspective drawing. Prerequisite: Art 2A (completed with a grade of "C" or higher) or equivalent. 2 hours lecture, 4 hours studio.

Astronomy (ASTR)**ASTR 1** **3 UNITS****PRINCIPLES OF ASTRONOMY AND ASTROPHYSICS**

Grading Option: OP Transfer: CSU, UC

Includes planets, their motions, the sun and stars, stellar structure and evolution, black holes, galaxies, and cosmology. A companion science laboratory, Astronomy 30 is available. Strongly Recommended: Mathematics 36 or Mathematics 38 and Physics 2A, 8A or 10. 3 hours.

ASTR 10 **3 UNITS****INTRODUCTION TO ASTRONOMY: THE SOLAR SYSTEM**

Grading Option: OP Transfer: CSU, UC*

Introduction to history and physical principles of astronomy, focusing on our Solar System. Includes view of heavens, historical development of scientific models of the sky, telescopes, formation and evolution of the solar system, and the possibilities for life in space. Designed for non-majors in mathematics or physical science. A companion science laboratory, Astronomy 30, is also available. 3 hours.

* Transfer unit limitations, see page 61

ASTR 20 **3 UNITS****INTRODUCTION TO ASTRONOMY: STARS AND THE UNIVERSE**

Grading Option: OP Transfer: CSU, UC*

Introduction to the study of stars, galaxies, and cosmology. Includes the nature of light, telescopes, spectroscopy, stellar formation and evolution, galaxies, quasars, and cosmology. Designed for non-majors in mathematics or a physical science. A companion science laboratory, Astronomy 30, is also available. 3 hours.

* Transfer unit limitations, see page 61

ASTR 30 **1 UNIT****INTRODUCTION TO ASTRONOMY LABORATORY**

Grading Option: OP Transfer: CSU, UC

Introduction to laboratory principles and techniques in astronomy. Includes telescope operation and measuring stellar magnitudes, spectral lines, motions of the sun, moon and planets. Prerequisite: Astronomy 1, 10, or 20 (may be taken concurrently). 2-3 hours laboratory.

ASTR 40 **1 UNIT****OBSERVATIONAL ASTRONOMY**

Grading Option: C/N Transfer: CSU

Fundamentals of observing the sky with and without telescopes; constellations, major and minor planets, meteors and comets, moon and sun. 1 hour lecture, 1 hour laboratory.



Automotive Technology

Degree
AS - Automotive Electronics Technology

Certificate
Automotive Service Technician
Automotive Technician

About the Program

Each year the Bureau of Statistics lists the need for automotive technicians as one of the nation's highest. This shortage of well-trained technicians has been caused by the addition of technologically advanced computerized engine controls and the need to control automotive pollution. Las Positas College offers both the Associate degree and Certificate programs designed for direct job entry which will give the student a thorough and complete knowledge of the basics of the modern automobile. These programs are for technical career majors. While units in this program are transferable to many institutions, students should consult a counselor for information.

Additionally, Las Positas College offers industry-standard training for General Motors and Isuzu.



AS - Automotive Electronics Technology

Freshman Year

Automotive Technology 55 (Automotive Service)	3
Automotive Technology 61A (Fuel Induction, Emission and Computer Control Systems I).....	4
Automotive Technology 61B (Fuel Induction, Emission and Computer Control Systems II).....	4
Automotive Technology 60A (Automotive Electrics/Electronics I) ...	4
Automotive Technology 60B (Automotive Electrics/Electronics II)..	4
Automotive Technology 62 (Automotive Air Conditioning, Cooling and Heating Systems)	2.5
Automotive Technology 65 (Automotive Brake and Safety Inspection)	3
Automotive Technology 73 (Reading Automotive Service Manuals)..	3
Welding Technology 70 (Introduction to Welding)	2
General Education Courses: (See General Education Requirements, page 49)	
English Composition (Language and Rationality)	
Mathematics	
Social and Behavioral Sciences	
Natural Sciences	
Physical Education	

Sophomore Year

Automotive Technology 67A (Advanced Diagnosis and Troubleshooting of Automotive Systems).....	4
Automotive Technology 67B (Advanced Diagnosis and Troubleshooting of Automotive Systems).....	3
Automotive Technology 69 (Automotive Testing and Diagnosis)	3
Automotive Technology 66 (Automotive Steering and Suspension Systems).....	3
Automotive Technology 68 (California B.A.R. Clean Air Course).....	5
General Education Courses: (See General Education Requirements, page 49)	
American Cultures	
American Institutions/Health Education	
Humanities	
Communications and Analytical Thinking	
Total units required	66.5

Certificate of Achievement

Automotive Service Technician

Automotive Technology 55 (Automotive Service)	3
Automotive Technology 61A (Fuel Induction, Emission and Computer Control Systems I).....	4
Automotive Technology 61B (Fuel Induction, Emission and Computer Control Systems II).....	4
Automotive Technology 60A (Automotive Electrics/Electronics I) ...	4
Automotive Technology 60B (Automotive Electrics/Electronics II)..	4
Automotive Technology 73 (Reading Automotive Service Manuals)..	3
Total units required	22

Certificate of Achievement Automotive Technician

This program is recommended for students preparing to take the State of California tests for Smog Check License, Lamp Adjuster's License, Brake Adjuster's License, and Air Conditioning Refrigerant Recovery and Recycling Certification.

Automotive Technology 55 (Automotive Service)	3
Automotive Technology 61A (Fuel Induction, Emission and Computer Control Systems I).....	4
Automotive Technology 61B (Fuel Induction, Emission and Computer Control Systems II).....	4
Automotive Technology 60A** (Automotive Electrics/Electronics I)...	4
Automotive Technology 60B** (Automotive Electrics/Electronics II)..	4
Automotive Technology 62**** (Automotive Air Conditioning, Cooling and Heating Systems)	2.5
Automotive Technology 65*** (Automotive Brake and Safety Inspection)	3
Automotive Technology 68* (California B.A.R. Clean Air Course) ...	5
Automotive Technology 69 (Automotive Testing and Diagnosis)	3
Automotive Technology 73 (Reading Automotive Service Manuals)..	3
Total units required	35.5

These courses are recommended as preparation for the following California State and EPA tests for:

**Smog Check Mechanic's License*

***Lamp Adjuster's License*

****Brake Adjuster's License*

*****Air Conditioning Refrigerant Recovery and Recycling Certification*

Automotive Technology (AUTO)

AUTO 50 **2 UNITS**

INTRODUCTION TO THE AUTOMOBILE INDUSTRY

Grading Option: OP Transfer: CSU

(May be repeated 3 times)

History and employment opportunities in the automotive industry. Techniques and applications of sound shop/agency practices, hazardous waste management, job résumé, application and interviewing techniques. 2 hours.

AUTO 55 **3 UNITS**

AUTOMOTIVE SERVICE

Grading Option: OP Transfer: CSU

(May be repeated 3 times)

Role of the automotive service technician in the automotive industry with an emphasis on preventive maintenance, lubrication, and inspection. Introduction to hazardous waste handling. Development and theory of computer access to service manuals. 1.5 hours lecture, 5 hours laboratory.

AUTO 60A **4 UNITS**

AUTOMOTIVE ELECTRICS/ELECTRONICS I

Grading Option: OP

(May be repeated 3 times)

Automotive electrical/electronic systems, including electrical circuits, battery, starting, charging, ignition and wiring systems. Emphasis on diagnosis of electrical troubles, assembly, and repair of components and diagnostic equipment usage. Prerequisite: Automotive Technology 50 or 55 (may be taken concurrently). 2 hours lecture, 6 hours laboratory.

AUTO 60B **4 UNITS**

AUTOMOTIVE ELECTRICS/ELECTRONICS II

Grading Option: OP

(May be repeated 3 times)

Continuation of Automotive Technology 60A with emphasis on diagnosis and repair of electrical/electronic components including computer controlled circuits/systems using schematics, diagnostic procedures and equipment; headlamp adjusting and repair. Prerequisite: Automotive Technology 60A (completed with a grade of "C" or higher or equivalent). 2 hours lecture, 6 hours laboratory.

AUTO 61A **4 UNITS**

FUEL INDUCTION, EMISSION AND COMPUTER CONTROL SYSTEMS I

Grading Option: OP Transfer: CSU

(May be repeated 3 times)

Principles of automotive fuel induction and emission control systems, including inspection, diagnosis and repair of fuel and emission control systems/components governed by federal and state laws and standards. Prerequisite: Automotive Technology 50 or 55 (may be taken concurrently). 2 hours lecture, 6 hours laboratory.

AUTO 61B **4 UNITS**

FUEL INDUCTION, EMISSION AND COMPUTER CONTROL SYSTEMS II

Grading Option: OP Transfer: CSU

(May be repeated 3 times)

Continuation of Automotive Technology 61A with emphasis on emission control, fuel injection and computer control systems. Includes software/hardware concepts and applications, sensor and control circuits, diagnosis and repair of systems/components. Prerequisite: Automotive Technology 61A (completed with a grade of "C" or higher or equivalent). 2 hours lecture, 6 hours laboratory.

AUTO 62 **2.5 UNITS**

AUTOMOTIVE AIR CONDITIONING, COOLING AND HEAT SYSTEMS

Grading Option: GR

(May be repeated 3 times)

Diagnosis, testing, adjustment, and repair of air conditioning, cooling and heating systems. Includes heat and energy, psychometrics, air flow, refrigerant recycling, equipment and controls. Strongly Recommended: Automotive Technology 60A (may be taken concurrently) or equivalent. 1.5 hours lecture, 3.5 hours laboratory.

Automotive Technology

AUTO 65 3 UNITS

AUTOMOTIVE BRAKE AND SAFETY INSPECTION

Grading Option: OP
(May be repeated 3 times)

Diagnosis, inspection, adjustment, and repair of safety equipment, braking and antilock braking systems and devices. Includes the material on the California Brake Adjuster's Licensing Examination. Strongly Recommended: Automotive Technology 50, 55 or 60A (or equivalent). 1.5 hours lecture, 5 hours laboratory.

AUTO 66 3 UNITS

AUTOMOTIVE STEERING AND SUSPENSION SYSTEMS

Grading Option: OP
(May be repeated 3 times)

Diagnosis, testing, adjustment, and repair of steering and suspension systems. Includes common automotive steering and suspension system problems. Strongly Recommended: Automotive Technology 65 (or equivalent). 1.5 hours lecture, 5 hours laboratory.

AUTO 67A 4 UNITS

ADVANCED DIAGNOSIS AND TROUBLESHOOTING OF AUTOMOTIVE SYSTEMS

Grading Option: GR
(May be repeated 3 times)

Continuation of Automotive Technology 60B and 61B with emphasis on diagnosis of electronic problems including computer controlled circuits/systems using schematics, diagnostic procedures and equipment. Prerequisites: Automotive Technology 60B and 61B (both completed with a grade of "C" or higher) or industry training. 2 hours lecture, 6 hours laboratory.

AUTO 67B 3 UNITS

SPECIAL ADVANCED DIAGNOSIS AND TROUBLESHOOTING OF AUTOMOTIVE SYSTEMS

Grading Option: GR
(May be repeated 3 times)

Continuation of Automotive Technology 67A with emphasis on diagnosis of complex electronic problems in computer controlled systems. Prerequisite: Automotive Technology 67A (completed with a grade of "C" or higher). 1.5 hours lecture, 5 hours laboratory.

AUTO 68 5 UNITS

CALIFORNIA BAR CLEAN AIR CAR COURSE

Grading Option: OP
(May be repeated 3 times)

Motor vehicle emission inspection and maintenance. Provides the legal background necessary to analyze malfunctions, repair, assemble, and adjust those systems and devices of the automobile covered by legal standards and limitations. Techniques and applications of sound shop and/or agency practices. Overview of all modules of the complete "Clean Air Car" course. Prerequisite: (In order to be eligible to take the State Licensing exam at completion of the course): One year trade experience in emissions/tune up, or nine semester units in Automotive Technology, or 180 hours at an accredited automotive school. 4 hours lecture, 4 hours laboratory.

AUTO 69 3 UNITS

AUTOMOTIVE TESTING AND DIAGNOSIS

Grading Option: GR
(May be repeated 3 times)

Inspection, diagnosis and repair of connected and related components, and malfunctioning parts; replacing and adjusting components for maximum efficiency and emission standards. Review Clear Air Car Course. Prerequisite: Automotive Technology 60B and 61B (both completed with a grade of "C" or higher) or equivalent. 1.5 hours lecture, 5 hours laboratory.

AUTO 70 2 UNITS

INTRODUCTION TO AUTOMOTIVE MECHANICS

Grading Option: OP Transfer: CSU
(May be repeated 3 times)

Overview of major components and systems of the automobile, including the engine, fuel, electrical, drive train, brake, and suspension systems. 1 hour lecture, 3 hours laboratory.

AUTO 73 3 UNITS

READING AUTOMOTIVE SERVICE MANUALS

Grading Option: GR
(May be repeated 3 times)

Automotive service manuals and other related publications. Includes basic reading skills with emphasis on test preparation as it relates to automotive service manuals, Bureau of Automotive Repair (BAR) regulations, and certification tests preparation. 3 hours.

AUTO 99 0.3-3 UNITS

SELECTED TOPICS IN AUTOMOTIVE TECHNOLOGY

Grading Option: C/N Transfer: CSU*

Designed to explore special interest subjects drawn from the field of Automotive Technology. Emphasis will be on topics of practical use to automotive technicians as well as for persons employed in the automotive industry. Prerequisite may vary for specific topics. 3-9 hours. *Transfer units limited to 4 semester units

Biological Sciences

Degree AA – Biology

About the Program

Biologists study the origin, development, anatomy, physiology, ecology, behavior, and other basic principles of plants, animals, and other living organisms. Various areas of specialization are available to biologists in research, manufacturing, teaching, natural resource management, consulting, and administration. Biologists are usually classified according to specialty, e.g., microbiologists, ecologists, physiologists, molecular biologists, zoologists, botanists, naturalists, and geneticists. Preparation for some entry-level jobs in these and other areas generally requires a bachelor's degree in biology.

This program is designed to prepare students for transfer; however, completion of this AA degree also provides entry-level opportunities for laboratory technicians in industry and the academic environment. This program fulfills typical lower-division requirements at four-year transfer institutions. Some variation in requirements may exist at a particular four-year college or university; therefore, it is essential that the student also refer to the catalog of the prospective transfer institution and consult a counselor.



AA - BIOLOGY

Freshman Year

Botany 1 (General Botany).....	5
Zoology 1 (General Zoology).....	5
Chemistry 1A (General College Chemistry).....	5
Chemistry 1B (General College Chemistry).....	5
General Education Courses: (See General Education Requirements, page 48)	
English Composition (Language and Rationality)	
Mathematics	
Social and Behavioral Sciences	
Natural Sciences	
Health Education	
Physical Education	

Sophomore Year

Biology 1 (Introduction to Cell Biology)	5
Physics 2A (Introduction to Physics I)	4
Physics 2B (Introduction to Physics II)	4
General Education Courses: (See General Education Requirements, page 48)	
American Cultures	
American Institutions	
Humanities	
Communications and Analytical Thinking	
Physical Education	

Total units required 60



Biological Sciences

Anatomy (ANAT)

ANAT 1 4 UNITS

GENERAL HUMAN ANATOMY

Grading Option: GR Transfer: CSU, UC
Structure and function of the human body with emphasis on microscopic, gross, and developmental anatomy. Microscopic examination of normal and pathological tissues, and dissection, supplemented by use of charts, models and computer assisted instruction. Prerequisite: Biology 31 (completed with a grade of "C" or higher). Strongly Recommended: Eligibility for English 1A or 52A. 2 hours lecture, 6 hours laboratory. (CAN BIOL 10)



Biology (BIOL)

BIOL 1 5 UNITS

INTRODUCTION TO CELL BIOLOGY

Grading Option: GR Transfer: CSU, UC
Basic principles of biology with emphasis on the experimental approach to solving modern problems in biology. Includes cell physiology, biochemistry, genetics, DNA and evolution. Prerequisite: Zoology 1 or Botany 1 (completed with a grade of "C" or higher). Strongly Recommended: Chemistry 1B or concurrent enrollment; Physics 2A or concurrent enrollment, and eligibility for English 1A or 52A. 3 hours lecture, 6 hours laboratory. (CAN BIOL 2; BIOL 1 + ZOOL 1 + BOTN 1 = CAN BIOL SEQ A)

BIOL 5 4 UNITS

MARINE BIOLOGY

Grading Option: OP Transfer: CSU, UC
Ocean as a habitat, the organisms that inhabit marine waters, their ecology, adaptations and evolution, and the role of the ocean in the ecology of the biosphere. 3 hours lecture, 3 hours laboratory.

BIOL 10 4 UNITS

INTRODUCTION TO THE SCIENCE OF BIOLOGY

Grading Option: OP Transfer: CSU, UC*
Basic principles of biology dealing with the nature of living things, and the nature of scientific investigation and its bioethical impact in our modern world. Designed for non-majors in biology or the biomedical sciences. 3 hours lecture, 3 hours laboratory.

* Transfer unit limitations, see page 61

BIOL 20 3 UNITS

CONTEMPORARY HUMAN BIOLOGY

Grading Option: OP Transfer: CSU, UC*
Human organism, with emphasis placed on human origin and evolutionary legacy, the relationship with the environment, and the ethical implications of biological discoveries in science. 3 hours.

* Transfer unit limitations, see page 61

BIOL 31 4 UNITS

INTRODUCTION TO COLLEGE BIOLOGY

Grading Option: GR Transfer: CSU, UC*
Basic principles of biology. Includes origin of life, cell structure and function, cell division, reproduction, genetics, taxonomy, evolution, and cell metabolism. Laboratory emphasis on developing various laboratory skills, using the metric system, collecting data, graphing, interpreting data, preparing for and taking laboratory practicals. Designed to prepare the necessary concepts and laboratory skills that are needed to succeed in more advanced courses in biology. Strongly recommended: Mathematics 65 or 65B or 65Y and eligibility for English 1A or 52A. 3 hours lecture, 3 hours laboratory.

* Transfer unit limitations, see page 61

BIOL 40 3 UNITS

FIELD BIOLOGY

Grading Option: OP Transfer: CSU
California ecosystems and living vertebrates, their behavior, evolution and ecology, and their interactions with humans. 2 hours lecture, 3 hours laboratory.

BIOL 50 4 UNITS

ANATOMY AND PHYSIOLOGY

Grading Option: GR Transfer: CSU, UC*
Structure and function of the human body is studied. Emphasis on human anatomy and physiological principles at the cellular and systemic level. Designed primarily for majors in paramedic and medical assisting programs and pre-medical students who wish to explore the realm of anatomy and physiology. 3 hours lecture, 3 hours laboratory. * Transfer unit limitations, see page 61

Biotechnology (BIOT)

BIOT 1 5 UNITS

INTRODUCTORY BIOTECHNOLOGY METHODS

Grading Option: OP Transfer: CSU

Introductory Biotechnology Methods includes current basic theory and laboratory skills used in modern biology laboratories. Lectures cover concepts such as DNA structure, function and manipulations, basic protein biochemistry, sterile technique, solution production, record keeping, report writing, and bioethics. The laboratory illustrates lecture topics through media production, cell culture, transformations, and gel preparation, use and documentation. Prerequisites: Biology 31 and Chemistry 30B (completed with a grade of "C" or higher). 3 hours lecture, 6 hours laboratory.

Botany (BOTN)

BOTN 1 5 UNITS

GENERAL BOTANY

Grading Option: GR Transfer: CSU, UC

Plant structure and function, with emphasis on anatomy, morphology, and physiology of higher (flowering) plants. Includes evolutionary sequence of plant forms and basic principles of ecology. Strongly Recommended: Biology 31. 3 hours lecture, 6 hours laboratory. (CAN BIOL 6; BIOL 1 + ZOOL 1 + BOTN 1 = CAN BIOL SEQ A)

Ecology (ECOL)

ECOL 10 3 UNITS

HUMANS AND THE ENVIRONMENT

Grading Option: OP Transfer: CSU, UC*

Identification of problems created by humans' modification of their environment by focusing on ecological interactions involving the human species; investigating the life processes of organisms as they relate to specific environments. 3 hours lecture.

* Transfer unit limitations, see page 61

ECOL 11 4 UNITS

HUMANS AND THE ENVIRONMENT WITH LABORATORY

Grading Option: GR Transfer: CSU, UC*

Identification of the problems created by humans' modification of their environment by focusing on ecological interactions involving the human species; investigating the life processes of organisms as they relate to specific environments. 3 hours lecture, 3 hours laboratory.

* Transfer unit limitations, see page 61

Microbiology (MICR)

MICR 1 5 UNITS

MICROBIOLOGY

Grading Option: GR Transfer: CSU, UC

Bacteria, fungi, protozoans, parasites, and viruses with an emphasis on their relationship to humans. Cultivation, control, metabolism, body's defense against disease, microbial genetics, laboratory tests, and contemporary diseases are discussed. Methods used in the laboratory include staining, investigation, cultivation, identification of unknowns, and sensitivity testing. Prerequisite: Biology 31 and Chemistry 30A or Chemistry 1A (both completed with a grade of "C" or higher). Strongly Recommended: Anatomy 1, Eligibility for English 1A or 52A. 3 hours lecture, 6 hours laboratory. (CAN BIOL 14)

Physiology (PHSI)

PHSI 1 5 UNITS

HUMAN PHYSIOLOGY

Grading Option: GR Transfer: CSU, UC*

Cellular and systemic body functions. Emphasis placed on physico- and electro-chemical and clinical methods, collection and analysis of data, extrapolations and conclusions. Working models, including human responses, computer simulations are studied. Prerequisite: Chemistry 30A and Anatomy 1 (both completed with a grade of "C" or higher). Strongly Recommended: Chemistry 30B, Eligibility for English 1A or 52A. 3 hours lecture, 6 hours laboratory. (CAN BIOL 12) * Transfer unit limitations, see page 61

Zoology (ZOOL)

ZOOL 1 5 UNITS

GENERAL ZOOLOGY

Grading Option: OP Transfer: CSU, UC

Major groups of animals from Protozoa to Mammalia, with emphasis on the evolution of form and function and their relationship to behavior and ecology. Laboratory dissection and observation of anatomy with correlative studies in animal behavior in the laboratory and field. Designed for majors in biology, zoology, wildlife management and related fields. Strongly Recommended: Biology 31 or equivalent. 3 hours lecture, 6 hours laboratory. (CAN BIOL 4; BIOL 1 + ZOOL 1 + BOTN 1 = CAN BIOL SEQ A)

Business Studies

Las Positas College offers three areas of study under the broad heading, Business Studies.

These areas are:

General Business

Marketing

Supervision

In the pages that follow you will find program, certificate and course information about:

General Business

Degree

AA – Administrative Assistant

AS – Business

AA – Business Administration (Transfer Preparation)

AA – Business Entrepreneurship

Certificate

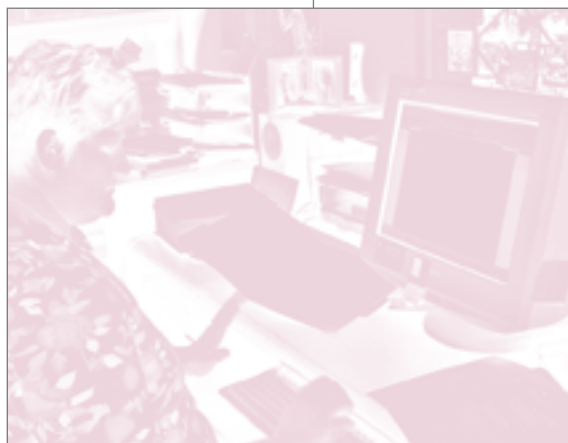
Accounting Technician

Administrative Assistant

Business Entrepreneurship

Business Workforce Proficiency

Retail Management



Marketing

Degree

AA- Marketing

Certificate

Retailing

Supervision

Certificate

Supervisory Management

Degrees

AA - Administrative Assistant

AS – Business

AA – Business Administration (TRANSFER PREPARATION)

AA – Business Entrepreneurship

Certificates

Accounting Technician

Administrative Assistant

Business Entrepreneurship

Business Workforce Proficiency

Retail Management

About the Program

These programs are designed to prepare students for a wide range of careers in the world of business. The areas of specialization available at Las Positas College reflect the current and projected needs of the business environment. Within the General Business area, students may pursue programs that prepare them for work or transfer. It is critical that students work closely with business faculty and counselors to determine what degrees or certificates are most consistent with career and/or transfer goals.

Special Instructional Programs

LaPTechS - Business

Las Positas Technical Support (LaPTechS) is an innovative entrepreneurial venture offering technical support services to the campus community. Within a work based learning model, students get hands on training in a workplace environment. Students practice hardware and software installations, computer repair, assessment, maintenance and troubleshooting techniques. LaPTechS creates opportunities to learn all aspects of business operations, technical support, and the development of interpersonal skills.

Internships

Internships opportunities are available through Las Positas College. Interested students who meet qualifications are placed in carefully structures work environments with local employers. Internships provide opportunities to apply knowledge gained in the classroom in a real world setting and can be an important part of career development for students. Students must concurrently enroll in the Internship Seminar course. Placements are contingent upon the availability of an appropriate internship site, employer criterion and student qualifications, and are at the discretion of the employer. Students and employers should contact the Work-Based Learning Coordinator at 925.373.5856.

Degree and Certificate Programs

AA and Certificate - Administrative Assistant

These programs provide students with professional office skills and technologies to meet the requirements of a constantly changing office environment. Emphasis is placed on state-of-the-art technology, software skills applications, telecommunications, and business management techniques. These programs offer students the opportunity for direct job entry or for upgrading skills for advancement.

AS - Business

This degree is designed as a non-transfer curriculum to provide individuals with the basic business knowledge, economic awareness, and skills needed to succeed in private and public organizations as supervisory managers, support employees, and/or owners. The degree is intended to prepare people to plan, organize, and manage human, financial, and material resources to achieve the objectives of a business. Graduates may find employment in entry-level positions where specific or advanced skills in business are not needed, such as trainee jobs in insurance, banking, the hospitality industry, marketing, purchasing or other related business fields. Note: Students interested primarily in transferring as business majors to four-year colleges or universities should consider the AA Degree in Business Administration, page 82.



AA - Business Administration

This degree prepares students working toward transfer to four-year institutions for continued study in business administration. This program fulfills typical lower-division requirements at four-year transfer institutions. Some variation in requirements may exist at a particular four-year college or university; therefore, it is essential that the student also refers to the catalogs of the prospective transfer institution and consults a counselor.

AA and Certificate - Business Entrepreneurship

These programs are designed to provide the necessary business foundation to enable potential or present entrepreneurs to learn and apply management principles to the selection, establishment and operation of a small business. The curriculum focuses on the problems encountered by small businesses. While units in this program are transferable to many institutions, students should consult a counselor for transfer information.

Certificate - Accounting Technician

This certificate program offers students opportunity to enter the employment field as accounting technicians. The curriculum is supported by related business and computer courses. While units in this program are transferable to many institutions, students should consult a counselor for specific transfer information.

Certificate - Business Workforce Proficiency

This program is designed to provide the basic and necessary foundation of skills for entry-level office workers. The curriculum focuses on basic computer skills (keyboarding, records and data management). Courses in basic office procedural skills, and orientation and preparation for the workplace are also available. While some units in this program are transferable to other institutions, students should consult a counselor for transfer information.

Certificate - Retail Management

Note: meets requirements of the Western Association of Food Chains (WAFC) Retail Management Certificate program.

This program prepares students for management in the Retail Sector. It is designed to provide students with a retail management foundation that will enable them, as current or prospective employees, to deal with the challenges of the retail environment. The curriculum includes courses in foundational skills (math and communication, oral and written) as well as courses focusing on marketing, accounting, supervision, human relations and retail management. While many units in this program are transferable to other institutions, students should consult a counselor for transfer information.

AA - Administrative Assistant

Freshman Year

Computer Information Systems 71C (Skills Development)	1
Computer Information Systems 71D (Speed and Accuracy Improvement)	1
Computer Information Systems 71E (Keyboarding Control and Development)	1
Computer Information Systems 72 (Records and Data Management).....	2
Computer Information Systems 73 (Calculator Applications).....	1
Computer Information Systems 75 (Office Technology/ Communications).....	1
Business 76 (Machine Transcription) or Business 74 (Office Procedures).....	2-3
Business 53 (Business Correspondence)	3
Computer Information Systems 50 (Introduction to Computer Information Systems)	3
Business 40 (Business Concepts).....	3
Business 51A (General Accounting I) or Business 1A (Principles of Accounting I)	3-4
Electives*	0-6
General Education Courses: (See General Education Requirements, page 48)	
English Composition (Language and Rationality)	
Mathematics**	
Social and Behavioral Sciences	
Natural Sciences	
Health Education	
Physical Education	

Sophomore Year

Computer Information Systems 88A (Introduction to Microsoft Word for Windows) and Computer Information Systems 88B (Advanced Microsoft Word for Windows).....	3
Computer Information Systems 89A (Desktop Presentation) and Computer Information Systems 89B (Desktop Publishing).....	3
Business 52 (Business Communications)	3
Computer Information Systems 54 (Excel Introduction to Spreadsheets)	4
Business 95 (Business Work Experience) or Business 92 (Workforce Laboratory).....	1-3
Business 96 (Business Work Experience Seminar) or Business 91 (Workforce Seminar).....	1-2
Electives*	0-6
General Education Courses: (See General Education Requirements, page 48)	
American Cultures	
American Institutions	
Humanities	
Communications and Analytical Thinking	
Physical Education	
Total units required	60

***Electives**

Select from the following for a minimum of 6 units:

- Business 78 (Shorthand)
- Business 80 (Speed Writing)
- Business 58 (Small Business Management)
- Business 60 (Consumer Finance)
- Computer Information Systems 55 (Integrated Business Software Applications for Personal Computers)
- Computer Information Systems 66 (Introduction to Local Area Networks)
- Supervision 80 (Elements of Supervision) or Business 56 (Concepts of Management)

** Business 55 recommended

AS – Business

Freshman Year

- Business 48 (Human Relations in the Workplace) or Business 52 (Business Communications)..... 3
- Business 40 (Business Concepts)..... 3
- Business 55** (Business Mathematics) 3
- Business 51A (General Accounting I) or Business 1A (Principles of Accounting I) 3-4
- CIS 50 (Introduction to Computer Information Systems) 3
- Economics 10*** (General Economics) or Economics 1*** (Microeconomics)..... 3
- Electives* 1-4
- General Education Courses: (See General Education Requirements, page 49)
 - English Composition (Language and Rationality)
 - Mathematics
 - Social and Behavioral Sciences
 - Natural Sciences
 - Physical Education

Sophomore Year

- Marketing 50 (Introduction to Marketing) 3
- Business 30*** (Business and Society) or Business 20 (International Business) 3
- Computer Information Systems 88A (Introduction to Microsoft Word for Windows) and Computer Information Systems 88B (Advanced Microsoft Word for Windows)..... 3
- Computer Information Systems 55 (Integrated Business Software Applications for Personal Computers) 4
- Business 18 (Business Law)..... 4
- Business 53 (Business Correspondence) or Business 43 (Professional Communications) 3-4
- Business 95 (Business Work Experience)..... 1-3

- Business 96 (Business Work Experience Seminar) 1
- Electives* 1-4
- General Education Courses: (See General Education Requirements, page 49)
 - American Cultures
 - American Institutions/Health Education
 - Humanities
 - Communications and Analytical Thinking
- Total units required 60**

***Electives**

Select from the following for a minimum of 1 unit:

- Business 60 (Consumer Finance and Ownership)
- CIS 54 (Excel: Introduction to Spreadsheets)
- CIS 71 (Computer Typing)
- CIS 72 (Records and Data Management)
- CIS 75 (Office Technology/ Communications)
- Supervision 80 (Elements of Supervision) or Business 56 (Concepts of Management)
- Any Marketing Course (except Marketing 50)

** Meets Math; Communications/Analytical Thinking Requirements

***Meets Social and Behavioral Sciences requirement



AA – Business Administration

(TRANSFER PREPARATION)

This degree prepares students interested in transferring to four-year institutions for continued study in business administration. The program outlined below fulfills typical lower-division requirements at four-year transfer institutions. Some variation in requirements may exist at a particular four-year college or university; therefore, it is essential that the student also refers to the catalog of the prospective transfer institution and consults a counselor.

Freshman Year

Business 40* (Business Concepts)	3
Business 18 (Business Law)	4
Computer Information Systems 50 (Introduction to CIS)	3
Economics 2 (Macroeconomics)	3
Math 33 (Finite Mathematics) or Math 34 (Calculus for Business and Social Sciences)	3-5
Computer Information Systems 71 (Computer Typing) or Library Studies 1 (Library Skills).....	1
General Education Courses: (See General Education Requirements, page 48)	
English Composition (Language and Rationality)	
Mathematics	
Social and Behavioral Sciences	
Natural Sciences	
Health Education	
Physical Education	

Sophomore Year

Business 1A (Principles of Accounting I).....	4
Economics 1 (Microeconomics)	3
Math 44 (Probability and Statistics) or Mathematics 41 (Statistics for Business Majors) or Mathematics 42A (Introduction to Probability and Statistics)...	3-5
Business 1B (Principles of Accounting II).....	4
General Education Courses: (See General Education Requirements, page 48)	
American Cultures	
American Institutions	
Humanities	
Communications and Analytical Thinking	
Physical Education	
Total units required	60

*Transfers to CSU as an elective course.

AA – Business Entrepreneurship

Freshman Year

Business 48 (Human Relations in the Workplace)	3
Business 40 (Business Concepts).....	3
Business 55** (Business Mathematics)	3
Business 43 (Professional Communications) or Business 53 (Business Correspondence).....	3-4
Business 51A (General Accounting I) or Business 1A (Principles of Accounting I)	3-4
Marketing 50 (Introduction to Marketing)	3
Economics 10*** (General Economics) or Economics 1*** (Microeconomics)	3
Recommended Electives*	
General Education Courses: (See General Education Requirements, page 48)	
English Composition (Language and Rationality)	
Mathematics	
Social and Behavioral Sciences	
Natural Sciences	
Health Education	
Physical Education	

Sophomore Year

Business 18 (Business Law)	4
Computer Information Systems 50 (Introduction to Computer Information Systems)	3
Business 58 (Small Business Management) or Marketing 60 (Retail Store Management)	3
Supervision 80 (Elements of Supervision) or Business 56 (Concepts of Management)	3
Business 95 (Business Work Experience)	1-3
Business 96 (Business Work Experience Seminar)	1
Recommended Electives*	
General Education Courses: (See General Education Requirements, page 48)	
American Cultures	
American Institutions	
Humanities	
Communications and Analytical Thinking	
Physical Education	
Total units required	60

*Recommended Electives

Business 20 (International Business)
Business 30 (Business and Society)
Business 52 (Business Communications)
Business 60 (Consumer Finance and Ownership)
Business 81 (Introduction to Investments)
Computer Information Systems 54 (Excel: Introduction to Spreadsheets)
Computer Information Systems 71 (Computer Typing)

** Meets Math; Communications/Analytical Thinking Requirements

***Meets Social and Behavioral Sciences requirement

Certificate of Achievement Accounting Technician

Business 40 (Business Concepts).....	3
Business 51A (General Accounting I) or Business 1A (Principles of Accounting I)	3-4
Business 51B (General Accounting II).....	3
Business 53 (Business Correspondence)	3
Business 55 (Business Mathematics).....	3
Computer Information Systems 50 (Introduction to Computer Information Systems)	3
Computer Information Systems 54 (Excel: Introduction to Spreadsheets)	4
Computer Information Systems 73 (Calculator Applications).....	1
<i>Select one set from the following:</i>	
Computer Information Systems 88A (Introduction to Microsoft Word for Windows) and Computer Information Systems 88B (Advanced Microsoft Word for Windows) or Computer Information Systems 89A (Desktop Presentation) and Computer Information Systems 89B (Desktop Publishing).....	3
Total units required	26-27

Certificate of Achievement Administrative Assistant

Computer Information Systems 71A (Keyboarding the Alphabet)...	1
Computer Information Systems 71B (Keyboarding Numbers and Symbols)	1
Computer Information Systems 71C (Skills Development)	1
Computer Information Systems 72 (Records and Data Management)	2
Computer Information Systems 73 (Calculator Applications).....	1
Computer Information Systems 75 (Office Technology/ Communications)	1
Business 76 (Machine Transcription) or Business 74 (Office Procedures).....	2-3
Business 53 (Business Correspondence)	3
Computer Information Systems 50 (Introduction to Computer Information Systems)	3
Computer Information Systems 88A (Introduction to Microsoft Word for Windows) and Computer Information Systems 88B (Advanced Microsoft Word for Windows).....	3
Business 51A (General Accounting)	3
Computer Information Systems 55 (Integrated Business Software Applications for Personal Computers) or Computer Information Systems 54 (Excel: Intro to Spreadsheets)....	4
Total units required	25-26

Certificate of Achievement Business Entrepreneurship

Computer Information Systems 50 (Introduction to Computer Information Systems)	3
Business 53 (Business Correspondence)	3
Business 55 (Business Mathematics)	3
Marketing 50 (Introduction to Marketing)	3
Business 18 (Business Law)	4
Business 40 (Business Concepts).....	3
Business 51A (General Accounting I) or Business 1A (Principles of Accounting I)	3-4
Business 58 (Small Business Management) or Marketing 60 (Retail Store Management)	3
Supervision 80 (Elements of Supervision) or Business 56 (Concepts of Management) or Business 48 (Human Relations in the Workplace)	3
Total units required	28-29

Certificate of Completion Business Workforce Proficiency

Business 82.2 (Success Strategies) or Psychology/Counseling 15 (College Study Skills).....	2
Business 82.1* (Workforce Orientation).....	33-.66
<i>Select from the following for a total of 2 units:</i>	
Computer Information Systems 71A (Keyboarding the Alphabet)	
Computer Information Systems 71B (Keyboarding Numbers & Symbols)	
Computer Information Systems 71C (Skills Development)	
Computer Information Systems 71D (Speed and Accuracy Improvement)	
Computer Information Systems 86 (Overcoming Computer Anxiety).....	1
Business 48 (Human Relations in the Workforce)	3
Business 53 (Business Correspondence)	3
Business 74 (Office Procedures)	3
<i>Select from the following for a total of 2 units:</i>	
Computer Information Systems 72A (Data Management) or Computer Information Systems 72B (Spreadsheet Integration with Word Processing)	
Business 91 (Workforce Development Seminar).....	1
Business 92** (Workforce Development Laboratory)	1-1.5
Total units required:	17-17.66

* Option

** May be taken for only 1 unit if Business 82.1 is taken.



Certificate of Achievement Retail Management

Business 55 (Business Mathematics).....	3 units
Business 52 (Business Communications) or Speech 10 (Interpersonal Communication).....	3 units
Computer Information Systems 50 (Introduction to CIS) or Three (3) units of Computer Application courses such as Word, Excel, etc	3 units
Business 53 (Business Correspondence) or English 52A (Essentials of Communication) or English 1A (Critical Reading and Composition).....	3 units
Business 56 (Concepts of Management) or Supervision 80 (Elements of Supervision)	3 units
Business 51A (General Accounting I) or Business 1A (Principles of Accounting I)	3-4 units
Marketing 50 (Introduction to Marketing)	3 units
Marketing 60 (Retail Store Management).....	3 units
Business 48 (Human Relations in the Workplace) or Supervision 81 (Human Relations in Business).....	3 units
Supervision 88 (Human Relations Management).....	3 units
Total	30-31 units

Business (BUSN)

BUSN 1A 4 UNITS

PRINCIPLES OF ACCOUNTING I

Grading Option: OP Transfer: CSU, UC
Basic theory and structure of accounting; accounting cycles and preparation of accounting statements for service and merchandising operations; receivables, inventory. Plant assets, current liabilities, payroll, accounting principles, concepts, and partnerships. 4 hours lecture, 0-1 hours laboratory. (CAN BUS 2; BUS 1A + BUS 1B = CAN BUS SEQ A)

BUSN 1B 4 UNITS

PRINCIPLES OF ACCOUNTING II

Grading Option: OP Transfer: CSU, UC
Corporations, long-term liabilities, investments, income tax, manufacturing accounting, cost accounting, cost-volume-profit, break-even analysis, capital expenditures, funds and cash flow, analysis of financial statements, segment evaluation, budgeting and standard costs. Emphasis on analysis and use of accounting within the organization. Prerequisite: Business 1A (completed with a grade of "C" or higher). 4 hours lecture, 0-1 hours laboratory. (BUS 1A + BUS 1B = CAN BUS SEQ A)

BUSN 18 4 UNITS

BUSINESS LAW

Grading Option: OP Transfer: CSU, UC
Legal setting in which business operates, with emphasis on legal reasoning and resolution, contracts, agency, partnerships and corporations. 4 hours. (CAN BUS 8)

BUSN 20 3 UNITS

INTERNATIONAL BUSINESS

Grading Option: OP Transfer: CSU
Exploration of major factors involved in developing international trade. A managerial overview of international law, monetary environment, foreign market analysis, physical distribution, documentation and international ethics. Emphasis on current events in international business. 3 hours.

BUSN 30 3 UNITS

BUSINESS AND SOCIETY

Grading Option: OP Transfer: CSU
Past and current political, social and ethical behavior of big business in American society. Emphasis on the responsibility of business toward customers, employees, stockholders, competitors, suppliers, government and the community at large. Strongly Recommended: Eligibility for English 1A or 52A. 3 hours.

BUSN 40 **3 UNITS**

BUSINESS CONCEPTS

Grading Option: OP Transfer: CSU, UC
 Concepts of economic systems, competition, and business enterprises in the international marketplace. Business ethics and laws, accounting and computer data and systems by which businesses are controlled, banking and securities. Types of business ownership for small and large enterprises, organizational structures and management function. Fundamentals of insurance, production, marketing, human resources, and employee motivation. 3 hours.

BUSN 43 **4 UNITS**

PROFESSIONAL COMMUNICATIONS

Grading Option: OP Transfer: CSU
 This course is designed to help students develop and refine the written and oral communication skills necessary to communicate effectively in a business environment. This will be accomplished through the planning, composing, and evaluating of written communication; report writing; and oral presentations. Additional focus will be placed on developing interpersonal skills, team participation skills, and professionalism. Students who have completed or are enrolled in Computer Information Systems 43, Computer Networking Technology 43, Computer Science 43, English 43, or Speech 43 may not receive credit. Strongly recommended: Eligibility for English 1A. 4 hours.

BUSN 48 **3 UNITS**

HUMAN RELATIONS IN THE WORKPLACE

Grading Option: OP Transfer: CSU
 Basic concepts of individual, group, and organizational human behavior as they affect human relations, performance, and productivity within the workplace. Strategies and techniques that influence interpersonal, administrative, and organizational communications and interactions among people. Fundamentals of the multi-disciplined science/nature of human relations in developing employee leadership, in working toward win/win situations, and in enhancing performance evaluations and respective reward systems. 3 hours.

BUSN 51A **3 UNITS**

GENERAL ACCOUNTING I

Grading Option: OP Transfer: CSU
 Bookkeeping practice; debit and credit practice; books of original entry; ledgers, working papers, adjusting and closing entries; income statement, balance sheet, and statement of owners equity, cash, payroll, special journals, merchandising firms. 3 hours lecture, 1 hour laboratory.

BUSN 51B **3 UNITS**

GENERAL ACCOUNTING II

Grading Option: OP Transfer: CSU
 Inventories, plant and equipment, corporations, cash flows, manufacturing firms. Integration of accounting procedures into the operation of a microcomputer-based accounting system. Emphasis on general ledger, accounts receivable, accounts payable, payroll, inventory, and financial statement analysis. Prerequisite: Business 1A or Business 51A (completed with a grade of "C" or higher). Strongly Recommended: Computer Information Systems 71A. 2 hours lecture, 3 hours laboratory.

BUSN 52 **3 UNITS**

BUSINESS COMMUNICATIONS

Grading Option: OP Transfer: CSU
 Process of transferring oral and non-verbal meanings and the techniques that help remove barriers. Delegating work assignments, planning, problem solving, conferences, employee counseling and making oral presentations. Strongly Recommended: Eligibility for English 1A or 52A. 3 hours.

BUSN 53 **3 UNITS**

BUSINESS CORRESPONDENCE

Grading Option: OP Transfer: CSU
 Development of skills in organizing and writing business letters, memoranda, reports, résumés, and letters of application with emphasis on rules for punctuation, spelling, and grammar which meet the needs of modern business. Strongly Recommended: Eligibility for English 1A or 52A. 3 hours lecture, 1 hour laboratory.

BUSN 55 **3 UNITS**

BUSINESS MATHEMATICS

Grading Option: OP Transfer: CSU
 Mathematics to solve typical business problems including simple interest, compound interest, installment sales, trade and cash discounts, mark on percents, pricing, discounting notes and drafts, depreciation, taxes, insurance, statistics, stocks and bonds, and distribution of ownership and profits. Strongly Recommended: Business 105B (with a grade of "C" or higher). 3 hours.

BUSN 56 **3 UNITS**

CONCEPTS OF MANAGEMENT

Grading Option: OP Transfer: CSU
 Principles and concepts of management; planning, organizing, coordinating and controlling in the firm; social responsibility and ethics in business, decision making, communications, and budgetary control. 3 hours.

General Business

Business Studies

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BUSN 58 **3 UNITS**

SMALL BUSINESS MANAGEMENT

Grading Option: OP Transfer: CSU
Application of management principles to the selection, establishment, and operation of a small business. Emphasis on the problems encountered by the small manufacturer or merchant. Strongly Recommended: Business 1A or 51A. 3 hours.

BUSN 59 **1 UNIT**

LEADERSHIP ACTIVITY

Grading Option: OP
(May be repeated 3 times)
Performance in marketing and management competitive events plus field trips, workshops, market research studies and projects designed to develop vocational competence and leadership abilities. 1 hour.

BUSN 60 **3 UNITS**

CONSUMER FINANCE AND OWNERSHIP

Grading Option: OP Transfer: CSU
Principles and practices of renting or owning real estate, vehicles, and other investments. Financial management of banking, options, credit, insurance, taxes, estate planning in relationship to business cycles and government relations. Strongly Recommended: Eligibility for English 1A and Math 65. 3 hours.

BUSN 74 **3 UNITS**

OFFICE PROCEDURES

Grading Option: OP
Office principles and procedures to include telephone skills, office equipment, reconciling bank statements, principles of pricing and discounts, payroll, taxes, expense reports, petty cash, record-keeping, postal services, utilizing the Internet for on-line financial services and resources, the usage of various business reference books, handbooks, manuals, periodicals, newspapers, and government publications. The importance of ethics in the application of professional business behavior. Strongly recommended: CIS 86 and CIS 71C. 2 hours lecture and 3 hours laboratory.

BUSN 76 **2 UNITS**

MACHINE TRANSCRIPTION

(May be repeated 1 time)
Grading Option: OP Transfer: CSU
Self-paced, individualized course in machine transcription. Training in the use of the Dictaphone transcribing machine and support features for computer transcription. Development of transcription skills in producing personal and business correspondence. Strongly Recommended: Eligibility for English 1A; minimum computer typing speed of 45 wpm and WordPerfect or Microsoft Word experience. 54 total hours.

BUSN 78 **2 UNITS EACH**

GREGG SHORTHAND

Grading Option: OP Transfer: CSU
Self-paced individualized, learning program in shorthand. Credit may be earned according to level of competency achieved. Program courses may include the following: (A) Gregg Shorthand Theory I (2 units); (B) Gregg Shorthand Theory II (2 units); (C) Gregg Shorthand Theory III (2 units); (D) Advanced Skills Development (2 units); (E) Refresher Shorthand (2 units). (Each course may be repeated one time.) Strongly Recommended: Eligibility for English 1A and computer typing skills. 54 total hours per 2 units.

BUSN 80 **1 UNIT EACH**

SPEED WRITING

Grading Option: OP Transfer: CSU
Self-paced, individualized, learning program in Speed Writing. Credit may be earned according to the level of competency achieved. Program courses include the following: (A) Speed Writing Theory I (1 unit); (B) Speed Writing Theory II (1 unit); (C) Introduction to Transcription (1 unit). (Each course may be repeated 1 time.) Strongly Recommended: Eligibility for English 1A and concurrent enrollment in Computer Typing and/or Word Processing. 42 total hours per unit. 8.5 total weeks.

BUSN 81 **3 UNITS**

INTRODUCTION TO INVESTMENTS

Grading Option: OP Transfer: CSU
Application of investment principles, including the various types of securities, the problems of securing capital for business ownership and the decisions involved in an individual or a corporate investment program. 3 hours.

BUSN 82.1 **.33 - .66 UNITS**

WORKFORCE ORIENTATION

Grading Option: OP
Orientation to Work Force Development opportunities, support, and responsibilities. Computer usage and connections to Internet; East Bay Works and other information resources. 13.5 - 27 hours laboratory.

BUSN 82.2 **2 UNITS**

SUCCESS STRATEGIES

Grading Option: OP
Study of professional and personal growth, college success skills, and career development. Emphasis is on enhancing one's self-image and self-knowledge and improving study skills. Students work on developing time management, writing, reading, test taking, note taking, memory, study, and relationship skills. Includes modeling, practice, and evaluation of study techniques. 2 hours.

BUSN 91 1 UNIT

WORK FORCE DEVELOPMENT SEMINAR

Grading Option: OP

(May be repeated 2 times)

LaPTechS (Las Positas Technical Support) is an on-campus business that provides on-the-job training in technical and business applications. Assessment of job-related skills, goal setting, time planning and prioritizing, improvement of listening and nonverbal communication strategies, development of critical thinking abilities in working with data, materials and people. Assessment, analysis and improvement of characteristics, values, attitudes that guide transition into the workplace. Corequisite: Business 92. 1 hour.

BUSN 92 1-2 UNITS

WORK FORCE DEVELOPMENT LABORATORY

Grading Option: OP

(May be repeated 2 times)

LaPTechS (Las Positas Technical Support), an on-campus, on-the-job training laboratory simulating a workplace environment wherein students perform typical workplace functions in either business or technical applications. Technical applications include: hardware and operating system support, job shadowing LPC tech support team, job skills preparation. Business applications include: data and information collections, storage and retrieval, document preparation, customer service, verbal and nonverbal communication, job skills preparation. Corequisite: Business 91. 4 or 8 hours laboratory/week/unit.

BUSN 95 1-3 UNITS

BUSINESS WORK EXPERIENCE

Grading Option: GR Transfer: CSU*

(May be repeated 3 times; refer to page 192 for program requirements.)

College supervised on-the-job training for work in a business related occupation. Through the cooperation of the work supervisor, contract to accomplish new learning objectives or broaden experiences in work field. Corequisite: Concurrent enrollment in Business 96. 5-15 hours of employment per week. **Limited to 6 semester units*

BUSN 96 1 UNIT

BUSINESS WORK EXPERIENCE SEMINAR

Grading Option: GR Transfer: CSU*

Focal point for the coordination of curriculum with college supervised part-time or full-time employment in major field. Case studies, job related problems, student cases and presentations, and material related to employment, organizations and management discussed; emphasis on building strong working relationships with supervisors, subordinates, and co-workers. Corequisite: Concurrent enrollment in Business Work Experience 95. 1 hour. **Limited to 6 semester units*

BUSN 105A 2 UNITS

BUSINESS ARITHMETIC

Grading Option: GR

(May be repeated 1 time)

Self-paced, individualized, mastery learning course covering decimals and fractions. Application of these arithmetic skills to common business problems such as: bank statement reconciliation, payrolls, insurance, measurement. 3 hours laboratory/lecture combination.

BUSN 105B 2 UNITS

BUSINESS ARITHMETIC

Grading Option: GR

(May be repeated 1 time)

Self-paced, individualized, mastery learning course covering percents, proportions, equations. Application of these arithmetic skills to common business problems such as: discounts, interest, prorating, solving for unknowns, linear equations. Prerequisite: Business 105A (completed with a grade of "C" or higher) or equivalent. 3 hours laboratory/lecture combination.

BUSN 107 3 UNITS

BUSINESS ARITHMETIC APPLICATIONS

Grading Option: OP

Application of decimals, fractions, percents, ratios, proportions and equations to common business problems including, but not limited to, bank statement reconciliation, payrolls, purchase orders, invoices, sales. 2 hours lecture, 3 hours laboratory.

Degrees AA - Marketing

Certificates Retailing

About the Program

Academic Preparation in Marketing can lead to work in product development, sales, advertising, retailing, research and more. The course offerings provide a solid foundation and preparation for entry-level marketing positions.

AA - Marketing

In addition to advertising and promotion, the field of marketing involves everything from researching whether a new product is needed, to labeling, packaging, transportation, warehousing, merchandising and sales. The ability of every organization to survive is directly affected by marketing. Entry-level jobs exist in manufacturing, service firms, wholesalers, retailers, advertising agencies, consulting firms and private and public non-profit organizations. While units in the program are transferable to many institutions, this program is designed to prepare students to enter the work force. Students should consult a counselor for information.

Certificate - Retailing

This program provides a detailed focus on marketing and retailing, and then allows the student to choose from a variety of business related options, depending on the student area, area of interest. While many units in this program are transferable to other institutions, students should consult a counselor for transfer information.



AA – Marketing

Freshman Year

Business 48 (Human Relations in the Workplace) or Business 52 (Business Communications) or Business 53 (Business Correspondence)	3
Business 55** (Business Mathematics)	3
Business 40 (Business Concepts).....	3
Business 51A (General Accounting I) or Business 1A (Principles of Accounting I)	3-4
Marketing 50 (Introduction to Marketing)	3
Economics 10*** (General Economics) or Economics 2*** (Macroeconomics)	3
Recommended Electives*	
General Education Courses: (See General Education Requirements, page 48)	
English Composition (Language and Rationality)	
Mathematics	
Social and Behavioral Sciences	
Natural Sciences	
Health Education	
Physical Education	

Sophomore Year

Marketing 61 (Professional Selling)	3
Business 18 (Business Law)	4
Computer Information Systems 50 (Introduction to CIS)	3
Marketing 64 (Introduction to Advertising) or Marketing 56 (Retail Strategies)	3
Business 95 (Work Experience)	1-2
Business 96 (Work Experience Seminar) or Supervision 80 (Elements of Supervision) or Business 56 (Concepts of Management)	1-3
Recommended Electives*	
General Education Courses: (See General Education Requirements, page 48)	
English Composition (Language and Rationality)	
Mathematics	
Social and Behavioral Sciences	
Natural Sciences	
Health Education	
Physical Education	
Total units required	60

*Recommended Electives

Business 30 (Business and Society)
Supervision 80 (Introduction to Supervision) or Business 56 (Concepts of Management)
Marketing 60 (Retail Store Management)

** Meets Math; Communications/Analytical Thinking Requirements

***Meets Social and Behavioral Sciences requirement

Certificate of Achievement Retailing

Business 55 (Business Mathematics).....	3
Marketing 50 (Introduction to Marketing)	3
Marketing 56 (Retail Strategies)	3
Marketing 60 (Retail Store Management).....	3
Marketing 61 (Professional Selling)	3
Work Experience 95 (Work Experience)	1-3
Work Experience 96 (Work Experience Seminar)	1
Electives*	15
Total units required	35-37

*Electives

Select from the following for a minimum of 15 units:

- Business 18 (Business Law)
- Business 40 (Business Concepts)
- Business 51A (General Accounting I) or
Business 1A (Principles of Accounting)
- Business 52 (Business Communications) or
Business 43 (Professional Communications)
- Business 53 (Business Correspondence)
- Business 58 (Small Business Management)
- Computer Information Systems 50 (Introduction to CIS)
- Marketing 64 (Introduction to Advertising)
- Business 48 (Human Relations in the Workplace)
- Supervision 80 (Elements of Supervision) or
Business 56 (Concepts of Management)

Marketing (MKTG)

MKTG 50 **3 UNITS**

INTRODUCTION TO MARKETING

Grading Option: OP Transfer: CSU

Marketing as an exchange process involving all members of society; research on the demographic and behavioral dimensions of markets; analyses of marketing strategies and the social, cultural, economic, competitive and legal factors affecting marketing mix decisions. 3 hours.

MKTG 52 **2 UNITS**

MARKETING STRATEGY

Grading Option: OP

Use of marketing principles to decide on the proper strategies for beating the completion and achieving company goals. Emphasis on decision making in a simulated dynamic marketing environment. Strongly Recommended: Marketing 50. 1 hour lecture, 3 hours laboratory.

MKTG 56 **3 UNITS**

RETAIL STRATEGIES

Grading Option: OP

Application of the principles of persuasion in advertising, image development, sales promotion and public relations programs of retailers. 3 hours.

MKTG 60 **3 UNITS**

RETAIL STORE MANAGEMENT

Grading Option: OP Transfer: CSU

Principles and practices used in the management of retail stores. Includes site selection, layout, organization, staffing, positioning, customer service, promotional techniques and all aspects of the critical buying function. 3 hours.

MKTG 61 **3 UNITS**

PROFESSIONAL SELLING

Grading Option: OP Transfer: CSU

Principles and techniques involved in selling products or services to consumers in stores and on a direct basis to manufacturers, distributors and institutions. Includes buying motives, sales call planning, ethics, customer service and territory management. 3 hours.

MKTG 63 **3 UNITS**

SALES FORCE MANAGEMENT

Grading Option: OP Transfer: CSU

Principles and techniques involved in recruiting, selecting, training, directing and controlling an outside sales force. Includes tasks of sales forecasting, budgeting, designing territories and analyzing sales results. Strongly Recommended: Marketing 61. 3 hours.

MKTG 64 **3 UNITS**

INTRODUCTION TO ADVERTISING

Grading Option: OP Transfer: CSU

Contributions of advertising to marketing and communication, including coordination and development of sales promotion programs, media selection, copy writing, layout, research and budgeting. 3 hours.

Supervision

Business Studies

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Certificate Supervisory Management

About the Program

Supervisors are responsible for providing direction and oversight for other employees. The Supervisory Management Certificate program provides knowledge of human relations and management techniques that is critical for success as a supervisor.

Certificate – Supervisory Management

All organizations have first-line supervisors. This certificate is designed to address challenges faced by all employees, including, for example, to provide organizational promotions of such employees as technicians, retail associates, food servers, warehouse personnel, teachers, and administrative assistants in first level management.



Certificate of Completion Supervisory Management

Supervision 81 (Human Relations in Business) or Business 48 (Human Relations in the Workplace)	3
Supervision 80 (Elements of Supervision) or Business 56 (Concepts of Management)	3
Supervision 88 (Human Resource Management).....	3
Supervision 82 (Organizational Behavior) or Business 30 (Business and Society)	3
Business Work Experience 95 and	1
Business Work Experience 96 (Seminar)	1
Electives:*	3
Total units required	17

*Electives (*emphasis in Law or Accounting*)

Select from the following for a minimum of 3 units:

Business 1A (Introduction to Accounting) or

Business 51A (General Accounting)

Business 18 (Business Law)

Business 40 (Business Concepts)

Business 43 (Professional Communications)

Business 58 (Small Business Management)

Business 60 (Consumer Finance and Ownership)

Supervision (SUPV)

SUPV 80 3 UNITS

ELEMENTS OF SUPERVISION

Grading Option: OP Transfer: CSU

Introduction to the functions and responsibilities of an effective supervisor. Functions of management-planning, organizing, leading and controlling. Current trends and developments in supervisory management including: team building, quality circles, and total quality management. Responsibilities of various organizational departments and current issues of supervisory management. Social responsibility, ethics, change, the environment, and the global economy. Students who have completed or are enrolled in Business 56 may not receive credit. 3 hours.

SUPV 81 3 UNITS

HUMAN RELATIONS IN BUSINESS

Grading Option: OP Transfer: CSU

Basic concepts of individual group, and organizational human behavior as they affect human relations and performance; skills that influence interpersonal and organizational communications; interactions among people; creating win-win situations; understanding the multi-disciplined science/nature of human relations; and personal development and organizational challenges. 3 hours.

SUPV 82 3 UNITS

BEHAVIOR IN ORGANIZATIONS

Grading Option: OP

Understanding the roles of individuals and groups within the organizational structure; basic concepts of individual behavior such as perception, attitudes, motivations, and learning; techniques managers may apply to improve the organizational environment; background of organizational development; conflict and conflict resolution; role of the manager in influencing members of an organization; and use of groups/teams to assure organizational success. Strongly Recommended: Supervision 80 or equivalent. 3 hours.

SUPV 83 3 UNITS

HUMAN RESOURCE TRAINING AND DEVELOPMENT

Grading Option: OP

Introduction to the training and development process; determination of training needs and selection of participants; learning theory, developing content and delivery methods; concepts of discussion leading; implementation and instruction of training programs. Strongly Recommended: Supervision 80. 3 hours.

SUPV 84 3 UNITS

EMPLOYEE SAFETY

Grading Option: OP

Human element in accident causation and prevention. Includes supervisor' role; OSHA, California SB 198 and the American Disabilities Act in relation to a safe work environment; different types of safety hazards; safety analysis of accident investigation; health and safety training, aids, stress, ergonomics and future challenges in safety issues. Strongly Recommended: Supervision 80. 3 hours.

SUPV 85 3 UNITS

INTRODUCTION TO LABOR MANAGEMENT RELATIONS

Grading Option: OP

History, organization, concepts, and legislation of labor/management relations; collective bargaining contract content, legal base, economics, and contract negotiation; contract administration; dispute resolution grievances arbitration, and mediation; public sector labor/management relations; global implications and emerging trends, issues and future challenges. Strongly Recommended: Supervision 80 or equivalent. 3 hours.

SUPV 88 3 UNITS

HUMAN RESOURCES MANAGEMENT

Grading Option: OP

Introduction to the management of human resources and an understanding of the impact and accountability to the organization in terms of human resource activities. Global human resource strategies, social and organizational realities, legal implications affecting people at work, union/non-union practices, comparable work, employee compensation and benefits, and employee rights. Strongly Recommended: Supervision 80 or equivalent. 3 hours.

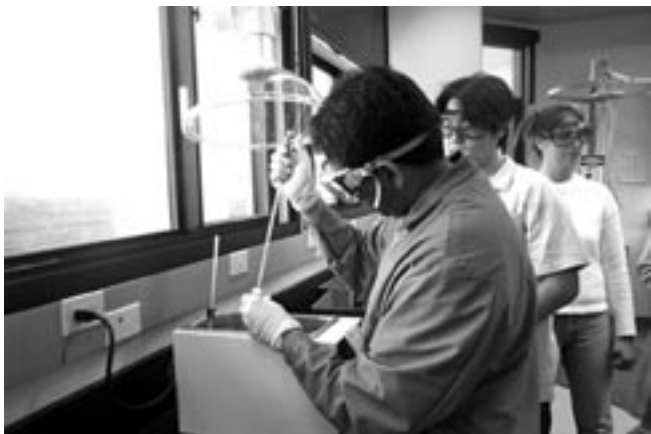
Chemistry

Degree AS – Chemistry (TRANSFER PREPARATION)

About the Program

The Chemistry degree prepares students for transfer to four-year institutions for continued study in the field of chemistry or for pre-professional studies for medical and dental programs. This program fulfills the lower-division requirements recommended by the American Chemical Society for Chemistry and is typical of requirements at four-year transfer institutions. The program also satisfies lower-division requirements in chemistry for engineering and biology transfer majors. General Education courses should be selected carefully to meet the requirements of the intended transfer institution.

Some transfer institutions require more general education units than are required by the AS degree. Students should consult the catalog of the transfer institution for requirements and should consult a counselor for more information.



AS – Chemistry (TRANSFER PREPARATION)

Freshman Year

Chemistry 1A** (General College Chemistry)	5
Chemistry 1B (General College Chemistry).....	5
Math 1 (Analytical Geometry and Calculus I)	5
Math 2 (Analytical Geometry and Calculus II)	5
Physics 8A (General Physics I).....	5
Physics 8B (General Physics II).....	5
Recommended Electives*	

General Education Courses: (See General Education Requirements, page 49)

- English Composition (Language and Rationality)
- Mathematics
- Social and Behavioral Sciences
- Natural Sciences
- Physical Education

Sophomore Year

Chemistry 12A (Organic Chemistry)	5
Chemistry 12B (Organic Chemistry)	5
Math 3 (Multivariable Calculus)	5
Physics 8C (General Physics III).....	5
Physics 8D (General Physics IV)	3
Recommended Electives*	

General Education Courses: (See General Education Requirements, page 49)

- American Cultures
- American Institutions/Health Education
- Humanities
- Communications and Analytical Thinking

Total units required 60

* Recommended Electives:

- Mathematics 5 (Differential Equations with Computer Applications)
- Mathematics 7 (Elementary Linear Algebra with Computer Applications)
- Computer Science 1 (Computing Fundamentals I)

** *Fulfills the Natural Science requirement for the AS degree.*

To remain in a chemistry class a student must demonstrate competency in chemistry lab safety procedures by receiving a satisfactory score on the safety quiz administered during the NGR period.

Chemistry (CHEM)**CHEM 1A** 5 UNITS**GENERAL COLLEGE CHEMISTRY**

Grading Option: GR Transfer: CSU, UC*
Introduction to atomic structure, bonding, stoichiometry, thermochemistry, gases, matter and energy, oxidation-reduction, chemical equations, liquids and solids, solutions, chemical energetics and equilibrium concepts. Laboratory includes both quantitative and qualitative experiments. Prerequisites: Mathematics 55 or 55B or 55Y and Chemistry 31 (both completed with a grade of "C" or higher). 3 hours lecture, 6 hours laboratory. * *Transfer unit limitations, see page 61*

CHEM 1B 5 UNITS**GENERAL COLLEGE CHEMISTRY**

Grading Option: GR Transfer: CSU, UC*
Continuation of Chemistry 1A. Includes chemical energetics and equilibria, solutions and ionic equilibria, acid-base chemistry, electrochemistry, coordination chemistry, kinetics, nuclear chemistry, organic chemistry, and the chemistry of family groups of the periodic table. Laboratory emphasizes quantitative techniques, including instrumentation, and qualitative analysis. Prerequisite: Chemistry 1A (completed with grade of "C" or higher). 3 hours lecture, 6 hours laboratory. (CAN CHEM 4; CHEM 1A + CHEM 1B = CAN CHEM SEQ A)
* *Transfer unit limitations, see page 61*

CHEM 12A 5 UNITS**ORGANIC CHEMISTRY**

Grading Option: GR Transfer: CSU, UC
Hydrocarbons, alkyl halides, alcohols, ethers, and an introduction to aromatic hydrocarbons. Structure, bonding, stereochemistry, conformational analysis, nomenclature, and physical properties in relation to these particular groups of compounds. Emphasis on reactivity and reaction mechanisms. Laboratory work includes microscale, macroscale, spectroscopic, and chromatographic techniques. Chemistry 12A is the first semester in a year-long course in organic chemistry designed for students majoring in chemistry and related disciplines. Prerequisite: Chemistry 1B (completed with a grade of "C" or higher). 3 hours lecture, 6 hours laboratory.

CHEM 12B 5 UNITS**ORGANIC CHEMISTRY**

Grading Option: GR Transfer: CSU, UC
Continuation of Chemistry 12A with an introduction to the chemistry of aromatics, amines, enols and enolate ions, carboxylic acids, aldehydes, ketones and biochemical topics focusing on structure, synthesis and mechanisms of reaction. Laboratory work in basic techniques, synthetic methods, qualitative, spectroscopic, and chromatographic analysis techniques. Designed for students whose interests require a full year in-depth study of organic chemistry. Prerequisite: Chemistry 12A (completed with a grade of "C" or higher). 3 hours lecture, 6 hours laboratory.

CHEM 30A 4 UNITS**INTRODUCTORY AND APPLIED CHEMISTRY**

Grading Option: GR Transfer: CSU, UC*
Chemistry of inorganic compounds, atomic theory, bonding, equations, gas laws, solutions, acid-base theory and oxidation-reduction. Designed to meet the requirements of certain programs in allied health and technological fields and for general education. Prerequisite: Mathematics 65 or 65B or 65Y (completed with a grade of "C" or higher). 3 hours lecture, 3 hours laboratory. (CHEM 30A + 30 B = CAN CHEM SEQ B) * *Transfer unit limitations, see page 61*

CHEM 30B 4 UNITS**INTRODUCTORY AND APPLIED CHEMISTRY**

Grading Option: GR Transfer: CSU, UC*
Continuation of Chemistry 30A with emphasis on organic and biochemical concepts related to human physiological systems. Prerequisite: Chemistry 30A (completed with a grade of "C" or better). 3 hours lecture, 3 hours laboratory. (CHEM 30A + 30 B = CAN CHEM SEQ B) * *Transfer unit limitations, see page 61*

CHEM 31 4 UNITS**INTRODUCTION TO COLLEGE CHEMISTRY**

Grading Option: OP Transfer: CSU, UC*
Elementary concepts of chemistry with emphasis on mathematical calculations; includes nomenclature, stoichiometry, atomic structure, gas laws, and acids and bases. Designed for majors in science and engineering. Prerequisites: Mathematics 55 or 55B or 55Y (completed with a grade of "C" or higher). 3 hours lecture, 3 hours laboratory.
* *Transfer unit limitations, see page 61*

Colloquia**COLLOQUIA** 1 UNIT

Grading Option: see note*** Transfer: CSU**, UC*
(May be repeated 3 times)

A colloquium is a group of students who meet with an instructor over a period of one semester to consider ideas or documents of continuing importance, or a special topic. The purpose is to stimulate serious thought through discussion and analysis. A student is limited to one colloquium each semester. A colloquium may be offered under any subject area contained in the Catalog, using the number 9. Open to all students not on probation. 2 hours. * *Transfer unit limitations, see page 61* **limited to 4 semester units ***Note: varies by department

Community Interest Studies

Community interest courses are non-credit and include both full-term and short-term courses in a wide variety of course patterns, field studies, seminars, workshops, and any other such educational activities that will meet the educational needs of the College community. May be offered under any course title contained in the Catalog, using the numbers 200 through 299.

Computing Studies

Las Positas College offers three areas of study under the broad heading, Computing Studies.

These areas are:

Computer Information Systems
Computer Networking Technology
Computer Science

In the pages that follow you will find program, certificate and course information about:

Computer Information Systems

Degree

AA – Computer Information Systems

Certificate

Computer Applications Software
(MICROCOMPUTERS)

Computer Networking Technology

Degree

**AS-Internetworking Technology and
Cisco Administration**

Certificate

Computer Network Technician
Computer Network Administration (Microsoft)
Cisco Network Associate
Cisco Network Professional



Computer Science

Degree

AS – Computer Science (Transfer Preparation)
AS – Computer Programming
AS – Computer Programming for the Web

Certificate

Computer Programming
Computer Programming for the Web

Computer Information Systems

Computing Studies

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Degree

AA – Computer Information Systems

Certificate

Computer Applications Software (Microcomputers)

About the Program

Computer Information Systems (CIS) degree and certificate programs are for the business professional with an emphasis on a variety of computer subjects applicable to the “real business world.” The types of jobs held by computer professionals fall into several general categories, including computer design and manufacturing, computer sales and service, system development and programming, and computer operations.

The Computer Information Systems (CIS) Program is designed to:

- ▶ Introduce all students to basic computer literacy skills;
- ▶ Build a solid foundation of knowledge to transfer to a four-year institution;
- ▶ Enhance, improve, and upgrade current computer skills; and
- ▶ Provide classes necessary to acquire computer industry certifications.

AA Computer Information Systems

This degree deals with applications of computer and information theory in business. Because computers have become an integral part of most organizations, CIS majors are needed in every area of a business—finance, manufacturing, marketing, personnel, accounting, distribution and the computer department itself.

Computer Applications Software (Microcomputer) Certificate

This program introduces microcomputer applications, focusing on the most widely used applications of word processing, spreadsheets and databases. This certificate prepares students for employment in many entry-level positions using business software.

AA – Computer Information Systems

Freshman Year

Computer Information Systems 50 (Introduction to CIS)	3
Computer Information Systems 65 (Introduction to Desktop Operating Systems) or Computer Networking Technology 50 (Introduction to Desktop Operating Systems)	2
Computer Information Systems 55 (Integrated Business Software Using Windows)	4
Computer Information Systems 88A (Introduction to Microsoft Word for Windows)	1.5
Computer Information Systems 88B (Advanced Microsoft Word for Windows)	1.5
Computer Information Systems 54 (Excel: Introduction to Spreadsheets)	4
Electives*	0-6
General Education Courses: (See General Education Requirements, page 48)	
English Composition (Language and Rationality)	
Mathematics	
Social and Behavioral Sciences	
Natural Sciences	
Health Education	
Physical Education	

Sophomore Year

Computer Information Systems 43 (Professional Communications)...	4
Computer Information Systems 66 (Networking Fundamentals) or Computer Networking Technology 52 (Networking Fundamentals)	3
Computer Information Systems 57 (Access: Introduction to Databases)	4
Computer Information Systems 60 (Systems Analysis and Design)....	3
Electives*	0-6
General Education Courses: (See General Education Requirements, page 48)	
American Cultures	
American Institutions	
Humanities	
Communications and Analytical Thinking	
Physical Education	
Total Units Required.....	60

*Electives

Select from the following for a minimum of 6 units:

Computer Information Systems 80 (Introduction to Programming using BASIC/Visual BASIC)	
Computer Information Systems 68 (Using Visual Basic for Microsoft Applications)	
Computer Information Systems 59 (Building Web Sites)	

Computer Information Systems

Computing Studies

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Certificate of Achievement Computer Applications Software (MICROCOMPUTERS)

Computer Information Systems 50 (Introduction to CIS)	3
Computer Information Systems 65 (Introduction to Desktop Operating Systems) or Computer Networking Technology 50 (Introduction to Desktop Operating Systems) or Computer Information Systems 84 (Windows)	1-2
Computer Information Systems 55 (Integrated Business Software Using Windows)	4
Computer Information Systems 75 (Office Technology/ Communications)	1
Business 1A (Principles of Accounting) or Business 51A (General Accounting 1)	3-4
Computer Information Systems 43 (Professional Communications) or Business 52 (Business Communications)	3-4
Computer Information Systems 88A (Introduction to Microsoft Word for Windows)	1.5
Computer Information Systems 88B (Advanced Microsoft Word for Windows)	1.5
Computer Information Systems 54 (Excel: Introduction to Spreadsheets)	4
Computer Information Systems 57 (Access: Introduction to Databases)	4
Electives*	3
Programming Options:	4
Computer Information Systems 80 (Introduction to Programming using BASIC/Visual BASIC)	
Computer Information Systems 68 (Using Visual Basic for Microsoft Applications)	
Computer Information Systems 59 (Building Web Sites)	
Desktop Publishing Options:	1-2
<i>Select from the following courses (or comparable) for a minimum of 1 unit:</i>	
Computer Information Systems 89A (Desktop Presentation)	
Computer Information Systems 89B (Desktop Publishing)	
Total Units Required	34-38

*Electives:

Select from the following courses for a minimum of 3 units:

- Business 58 (Small Business Management)
- Computer Information Systems 66 (Networking Fundamentals) or
Computer Networking Technology 52 (Networking Fundamentals)

Computer Information Systems (CIS)

CIS 43 4 UNITS

PROFESSIONAL COMMUNICATIONS

Grading Option: OP Transfer: CSU

This course is designed to help students develop and refine the written and oral communication skills necessary to communicate effectively in a business environment. This will be accomplished through the planning, composing, and evaluating of written communication; report writing; and oral presentations. Additional focus will be placed on developing interpersonal skills, team participation skills, and professionalism. Students who have completed or are enrolled in Business 43, Computer Networking Technology 43, Computer Science 43, English 43, or Speech 43 may not receive credit. Strongly recommended: Eligibility for English 1A. 4 hours.

CIS 50 3 UNITS

INTRO TO COMPUTER INFORMATION SYSTEMS

Grading Option: OP Transfer: CSU, UC

Use, impact, and functions of computerized information system capabilities in business and governmental organizations. Includes hardware, common software applications, security, telecommunications, artificial intelligence, methods of organizing computer resources within an organization, terminology, databases and the internal functioning of a computer system. Laboratory exercises include use of an IBM compatible personal computer and/or MacIntosh and the familiarization of the basic capabilities of word processing, electronic spreadsheets, database and a programming language such as BASIC. 3 hours lecture, 1 hour laboratory.

CIS 54 4 UNITS

EXCEL: INTRODUCTION TO SPREADSHEETS

Grading Option: OP Transfer: CSU

Introductory spreadsheet class using Excel on the PC to create a variety of spreadsheets with emphasis on business application programs. Identification of an Excel worksheet, adding numbers and text to a worksheet, calculations using functions and formulas, modify, change and format cell entries, save, retrieve and print a worksheet. Includes functions, templates, data query, charts, and macros. Strongly Recommended: Computer Information Systems 50 and 65. 3 hours lecture, 3 hours laboratory.

CIS 55 4 UNITS

INTEGRATED BUSINESS SOFTWARE USING WINDOWS

Grading Option: OP Transfer: CSU

Characteristics and basic capabilities of common business office applications including word processing, mail merging, financial spreadsheets, database, business oriented graphics, importing and exporting data from one application type into another application type, Standard Query Language (SQL), and telecommunications concepts. Personal computer's operating environment and how a computer performs basic functions using Microsoft DOS or Windows. Prerequisite: Computer Information Systems 50 (completed with a grade of "C" or higher). 3 hours lecture, 3 hours laboratory.

CIS 57 **4 UNITS**

ACCESS: INTRODUCTION TO DATABASES

Grading Option: OP Transfer: CSU

Introduction to database management systems, a computer program that is used to organize, store, and retrieve information. Understanding of data, file and database concepts using Microsoft Access for Windows with emphasis on business application. Identify and evaluate client needs/requirements and translate those needs into a working database application model. Integrate Access data with other Microsoft applications such as Word and Excel. Strongly recommended: Computer Information Systems 50 and 55. 3 units. 3 hours laboratory.

CIS 59 **2 UNITS**

BUILDING WEB SITES

Grading Option: OP Transfer: CSU

(May be repeated 1 time)

Design and development concepts and use of standard HTML tags to develop web pages. Topics include: the effects of various HTML tags, use of web editing tools, design considerations for intelligent and attractive web pages, use of multimedia (audio and video). Introduction to dynamic HTML tags such as: cascading style sheets, frames, table, image maps, meta tags. 2 hours lecture, 1 hour laboratory.

CIS 60 **3 UNITS**

SYSTEMS ANALYSIS AND DESIGN

Grading Option: OP Transfer: CSU

Principles of systems analysis; techniques of analysis and design. This course will explore systems analysis and design from the early days of second generation systems development up to and including graphical user interface design and development (GUI). Exercises and case projects to develop knowledgeable use of the entire system development life cycle. Data gathering, problem solving, data flow diagrams, decision tables, pseudocode, database design and implementation, program coding and the use of Computer-Aided Software Engineering (CASE) tools. Prerequisite: Computer Science 1 OR Computer Information Systems 55 and 57 and 80 (completed with a grade of "C" or higher). 3 hours lecture, 1 hour laboratory.

CIS 65 (Formerly CIS 51) **2 UNITS**

INTRODUCTION TO DESKTOP OPERATING SYSTEMS

Grading Option: OP Transfer: CSU

Students in this class will gain an understanding of desktop operating systems including DOS, Windows, Unix, and Macintosh. The role of hardware, application software and the operating system, and how it interacts with each will be explored. Students will install, configure, and update the operating system on a microcomputer system. Students who have completed or are enrolled in Computer Networking Technology 50 may not receive credit. Strongly recommended: Computer Information Systems 50. 2 hours lecture, 1 hour laboratory.

CIS 66 **3 UNITS**

NETWORKING FUNDAMENTALS

Grading Option: OP Transfer : CSU

This course is a foundation course that explains and describes how computer networks are designed, installed, and administrated. Introduction to communications concepts, data communications, networking, and internetworking. Review of major network components: hardware, software, protocols (TCP/IP, IPX/SPX, NETBEUI), topologies, and cabling. Overview of LAN administration, setup, and installation. Strongly recommended: Computer Information Systems 55. Students who have completed or are enrolled in Computer Networking Technology 52 may not receive credit. 3 hours lecture.

CIS 68 **2 UNITS**

USING VISUAL BASIC FOR MICROSOFT OFFICE APPLICATIONS

Grading Option: OP Transfer: CSU

(May be repeated 1 time)

Visual Basic for Applications, a programming language provided with Microsoft Office Suite, provides a common programming language for customizing Microsoft Office applications. With VBA, students will develop customized applications built around the standard Office applications of Word, Excel, PowerPoint, and Access for specific business needs. In this class students will learn how the Microsoft Office suite is related to Visual Basic for Applications (VBA). They will also become acquainted with the Visual Basic for Applications Integrated Development Environment (VBA IDE). They will learn to open the VBA IDE in multiple different Office applications. They will also create some simple programs into the VBA IDE and learn how to run those programs. Finally, students will learn how to create and run a macro and view the code created by the macro. Strongly recommended: Computer Information Systems 55. 2 hours lecture, 1 hour laboratory.

The following CIS 71 sequence courses are self-paced, individualized computer typing courses:

CIS 71A **1 UNIT**

KEYBOARDING (THE ALPHABET)

Grading Option: OP

(May be repeated 2 times)

Introduction to the alphabet letter keys on the computer keyboard for touch-typing. Learn basic keyboarding techniques for accuracy and speed. Develop skill in using the mouse for windows and software applications. This course is the first in a series of sequential courses in Keyboarding instruction. Students are advised to take these courses in sequence for best training results. 42 total hours.

Computer Information Systems

Computing Studies

CIS 71B 1 UNIT

KEYBOARDING (NUMBERS AND SYMBOLS)

Grading Option: OP
(May be repeated 2 times)

Introduction to the numbers and symbol keys on the computer keyboard for touch typing. Learn basic keyboarding techniques for building accuracy and speed. Develop skill in using the mouse for windows desktop use. Strongly Recommended: CIS 71A (*Note: If you have had no previous keyboard training, then you should take CIS 71A before attempting this course.) 42 total hours.

CIS 71C 1 UNIT

SKILLS DEVELOPMENT

Grading Option: OP
(May be repeated 2 times)

Development of keyboarding skill for those students who have learned the location of the keys on the keyboard by touch and are ready to increase speed. The keyboarding software analyzes participant's typing technique and suggests practice that will help to type faster. Skill progress is measured by keying text within specified time limits. (*Note: This course is the third module in a sequential series of beginning keyboarding instruction. Students should know the location of the keys on the keyboard before attempting this course. A typing speed of at least 25 wpm is also important to completing this course successfully.) Strongly Recommended: Computer Information Systems 71B competency. 42 total hours.

CIS 71D (Formerly CIS 71E) 1 UNIT

SPEED AND ACCURACY IMPROVEMENT

Grading Option: OP
(May be repeated 2 times)

This course continues the speed and accuracy progress achieved in CIS 71C. This is a course for all students working towards speed and accuracy development. Program software analyzes technique problems and assigns practices to improve speed and accuracy. Skill progress is measured by keying text within specified time limits. *Note: This course is the first of two advanced modules in speed building. Students should have successfully completed a beginning course. A typing speed of at least 35 wpm is required. Strongly Recommended: Computer Information Systems 71C competency. 42 total hours per unit.

CIS 71E (Formerly CIS 71F) 1 UNIT

KEYBOARDING CONTROL AND DEVELOPMENT

Grading Option: OP
(May be repeated 2 times)

The second advanced module in keyboarding speed and accuracy building. Practice keyboarding control of speed and accuracy on straight copy, rough draft copy, handwritten copy and copy with numbers, symbols, and tabulation. Progress measured through timed writings on various types of copy at specified time limits. Strongly Recommended: Computer Information Systems 71D competency. 42 total hours.

CIS 72 1 UNIT EACH

RECORDS AND DATA MANAGEMENT

Grading Option: OP Transfer: CSU

Self-paced, individualized courses in automated office procedures. Program courses may include the following: (A) Data Management (1 unit), (B) Spreadsheet Integration with Word Processing (1 unit). (Each course may be repeated one time.) Strongly Recommended: Computer Information Systems 71B. 42 total hours per unit. Total weeks: 8.5

CIS 73 1 UNIT EACH

CALCULATOR APPLICATIONS

Grading Option: OP
(May be repeated 2 times)

Self-paced, individualized, mastery learning program in business calculators. Credit earned according to level of mastery achieved in (A) Ten-key Skill Development (1 unit); (B) Math Applications on Calculators and Computers (1 unit); and (C) Data Applications (on computers) (1 unit). (Each course may be repeated one time.) 30 total hours per unit.

CIS 75 1 UNIT

OFFICE TECHNOLOGY/COMMUNICATIONS

Grading Option: OP

Overview of various technologies (such as bulletin boards, teleconferencing, shared resources, voice-messaging systems, and online services) used for communicating internally and externally with microcomputers. Hands-on practice with electronic mail, the Internet, MS Outlook, and integrating the MS Office Suite to perform administrative tasks and functions for managing the office. Strongly recommended: Eligibility for English 1A and Computer Typing at 30 wpm. 0.5 hour lecture, 1.5 hours laboratory.

CIS 80 4 UNITS

INTRODUCTION TO PROGRAMMING USING BASIC/VISUAL BASIC

Grading Option: OP Transfer: CSU, UC*

Computer programming in BASIC and Visual Basic with special emphasis on the analysis and solution to business application programs. Introduction to the fundamentals of interpretative BASIC language and object-oriented Visual Basic language programming. Students will code and execute programs with an emphasis on efficient structured programming techniques. Prerequisite: Computer Information Systems 50 or equivalent (completed with a grade of "C" or higher). 3 hours lecture, 3 hours laboratory. * Transfer unit limitations, see page 61

CIS 84 1 UNIT

WINDOWS

Grading Option: OP

Self-paced, hands-on instruction in Microsoft Windows operations. Includes document production and file management. 42 total hours. Total weeks: 8.5

CIS 86 1 UNIT

OVERCOMING COMPUTER ANXIETY

Grading Option: OP

Introduction to computers for users with reservations and anxiety about getting started. Course will be combining keyboard training with operating systems commands, fundamental features of word processing, database, spreadsheet and graphics software programs. .5 hours lecture, 1.5 hours laboratory.

CIS 88A 1.5 UNITS

INTRODUCTION TO MICROSOFT WORD FOR WINDOWS

Grading Option: OP Transfer: CSU

(May be repeated 2 times)

Word processing techniques and applications, including formatting, basic operating system commands for processing data and records management. Strongly Recommended: typing skills level of 30 wpm. 1 hour lecture, 1.5 hours laboratory.

CIS 88B 1.5 UNITS

ADVANCED MICROSOFT WORD FOR WINDOWS

Grading Option: OP Transfer: CSU

(May be repeated 2 times)

Word processing techniques and applications, including formatting, basic operating system commands for processing data and records management. Strongly Recommended: Computer Information Systems 88A. 1 hour lecture, 1.5 hours laboratory.

CIS 89A 1 UNIT

DESKTOP PRESENTATION

Grading Option: OP Transfer: CSU

Desktop presentation design techniques and enhancements. Application using current desktop presentation software. Hands-on experience creating, saving, printing slide shows. 6 week class. .5 hour lecture. 1.5 hours laboratory.

CIS 89B 2 UNITS

DESKTOP PUBLISHING

Grading Option: OP Transfer: CSU

Introduction to the concepts and techniques used in desktop publishing. Hands-on computer experience using desktop publishing software to combine text and graphics, worksheets and charts, and other program features to create publications. In the planning, designing, publishing process, problem solving/critical thinking techniques emphasized. 1 hour lecture. 1.5 hours laboratory.

CIS 99 .3-3 UNITS

SPECIAL STUDIES

Grading Option: OP Transfer: CSU

Special studies in a specialized technical-vocational major. Typically offered for a particular occupation or skill. Courses may be offered under any course title contained in the Catalog, using the number 99. .3-9 hours. Refer to the Schedule of Classes under Computer Information Systems 99, Special Studies, for a list of the current offerings.



REQUEST FOR COURSE SUBSTITUTION-SPECIAL STUDIES (CIS 99)

Students who wish to fulfill a degree or certificate program requirement with a Special Studies (CIS 99) course should complete a Request for Course Substitution or Waiver form. This form (available from the Division Offices and Counseling) should be completed by students in consultation with academic faculty in order for Special Studies to be accepted in fulfillment of the degree and certificate requirements.

Computer Networking Technology

Computing Studies

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Degree
AS – Internetworking Technology and Cisco Administration

Certificate
Computer Network Technician
Computer Network Administration (Microsoft)
Cisco Network Associate
Cisco Network Professional

About the Program

The Computer Networking Technology program prepares students for a variety of career opportunities including the networking field. CNT classes prepare students for Cisco CCNA and CCNP certification tests, Microsoft MCSE and MCSA tests, and CompTIA Net+, Security+ and A+ tests. Constantly evolving and modernizing classes include targeted skills training in Emerging Technologies like Wireless, VoIP, VPN, Computer Forensics, Incident Response, Network Security and OS Hardening. Many of these subjects have become basic required knowledge even in other career fields. Students in Business, the Sciences, Arts and Administration of Justice will all need skills in network technologies to excel in their fields.

Four Certificates of Completion provide quick paths to validate training in today's important tech knowledge areas.

The program also includes a new AS degree in Internetworking Technology and Cisco Administration. This degree incorporates the latest in Emerging Technologies and skills employers are seeking.

See also: **Electronics**



AS – Internetworking Technology and Cisco Administration

Approval by the State Chancellor's Office is pending.

Freshman Year

Computer Networking Technology 50 (Introduction to Desktop Operating Systems or	
Computer Information Systems 65 (Introduction to Desktop Operating Systems	2
Computer Networking Technology 51 (A+ Computer Fundamentals)	3
Computer Networking Technology 52 (Networking Fundamentals) ..	3
Computer Networking Technology 43 (Professional Communications)	4
Computer Networking Technology 60 (Cisco Networking Academy CCNA 1).....	2
Electives*	0-6
General Education Courses: (see General Education Requirements)	
English Composition (Language and Rationality)	
Mathematics	
Social and Behavioral Sciences	
Natural Science	
Physical Education	

Sophomore Year

Computer Networking Technology 61 (Cisco Networking Academy CCNA 2).....	2
Computer Networking Technology 62 (Cisco Networking Academy CCNA 3-4)	4
Computer Networking Technology 63 (Cisco CCNP Semester 5 - Advanced Routing)	4
Computer Networking Technology 64 (Cisco CCNP Semester 6 - Remote Access)	4
Electives*	0-6
General Education Courses: (see General Education Requirements)	
American Cultures	
American Institutions/Health Education	
Humanities	
Communications and Analytical Thinking	
Total Units Required.....	60

*Electives

Select from the following for a minimum of 6 units:

Computer Networking Technology 65 (Cisco CCNP Semester 7 - Multilayer Switching)
Computer Networking Technology 66 (Cisco CCNP Semester 8 - Internetworking Troubleshooting)
Computer Networking Technology 55 (Windows Server)
Computer Networking Technology 56 (Implementing Windows Network Infrastructure)
Computer Networking Technology 57 (Implementing Windows Active Directory Services)

*Computer Networking Technology 99 (Special Studies)

Certificate of Completion Computer Network Technician

Computer Networking Technology 50 (Introduction to Desktop Operating Systems) or Computer Information Systems 65 (Introduction to Desktop Operating Systems)	2
Computer Networking Technology 51 (A+ Computer Fundamentals)..	3
Computer Networking Technology 52 (Networking Fundamentals)..	3
Computer Networking Technology 43 (Professional Communications)	4
Total Units	12

Certificate of Completion Computer Network Administration (Microsoft)

Computer Networking Technology 50 (Introduction to Desktop Operating Systems) or Computer Information Systems 65 (Introduction to Desktop Operating Systems)	2
Computer Networking Technology 52 (Networking Fundamentals)..	3
Computer Networking Technology 54 (Windows Professional)	3
Computer Networking Technology 55 (Windows Server)	3
Computer Networking Technology 56 (Implementing Windows Network Infrastructure)	3
Computer Networking Technology 57 (Implementing Windows Directory Services)	3
Total Units	17

Certificate of Achievement Cisco Network Associate

Approval by the State Chancellor's Office is pending.

Computer Networking Technology 50 (Introduction to Desktop Operating Systems)	2
Computer Networking Technology 51 (A+ Computer Fundamentals).....	3
Computer Networking Technology 60 (Cisco Networking Academy CCNA 1).....	2
Computer Networking Technology 61 (Cisco Networking Academy CCNA 2).....	2
Computer Networking Technology 62 (Cisco Networking Academy CCNA 3-4)	4
Computer Networking Technology 43 (Professional Communications)	4
Computer Networking Technology 52 (Networking Fundamentals)	3
Total Units Required	20

Certificate of Achievement Cisco Network Professional

Approval by the State Chancellor's Office is pending.

Computer Networking Technology 50 (Introduction to Desktop Operating Systems)	2
Computer Networking Technology 51 (A+ Computer Fundamentals).....	3
Computer Networking Technology 60 (Cisco Networking Academy CCNA 1).....	2
Computer Networking Technology 61 (Cisco Networking Academy CCNA 2).....	2
Computer Networking Technology 62 (Cisco Networking Academy CCNA 3-4)	4
Computer Networking Technology 43 (Professional Communications)	4
Computer Networking Technology 52 (Networking Fundamentals)	3
Computer Networking Technology 63 (Cisco CCNP Semester 5 - Advanced Routing)	4
Computer Networking Technology 64 (Cisco CCNP Semester 6 - Remote Access)	4
Computer Networking Technology 65 (Cisco CCNP Semester 7 - Multilayer Switching).....	4
Computer Networking Technology 66 (Cisco CCNP Semester 8 - Internetworking Troubleshooting)	4

TOTAL UNITS REQUIRED

36 Computer Networking Technology (CNT)

CNT 43 **4 UNITS**

PROFESSIONAL COMMUNICATIONS

Grading Option: OP Transfer: CSU

This course is designed to help students develop and refine the written and oral communication skills necessary to communicate effectively in a business environment. This will be accomplished through the planning, composing, and evaluating of written communication; report writing; and oral presentations. Additional focus will be placed on developing interpersonal skills, team participation skills, and professionalism. Students who have completed or are enrolled in Business 43, Computer Information Systems 43, Computer Science 43, English 43, or Speech 43 may not receive credit. Strongly recommended: Eligibility for English 1A. 4 hours.

CNT 50 (Formerly CIS 51) **2 UNITS**

INTRODUCTION TO DESKTOP OPERATING SYSTEMS

Grading Option: OP Transfer: CSU

Students in this class will gain an understanding of desktop operating systems including DOS, Windows, Unix, and Macintosh. The role of hardware, application software and the operating system and how it interacts with each will be explored. Students will install, configure, and update the operating system on a microcomputer system. Students who have completed or are enrolled in Computer Information Systems 65 may not receive credit. Strongly recommended: Computer Information Systems 50. 2 hours lecture, 1 hour laboratory.

Computer Networking Technology

Computing Studies

CNT 51 (Formerly ELEC 54A) **3 UNITS**

A+ COMPUTER FUNDAMENTALS

Grading Option: OP Transfer: CSU

(May be repeated 1 time)

Preparation for the A+ Computer Exam. Students will build and configure several computer systems, install and configure a variety of expansion cards, install operating systems such as DOS, Windows and Linux and learn how to do basic hardware and operating system troubleshooting and repair. Personal computer functions, maintenance, and upgrade issues. Students will learn about and work with various CPU types, motherboards and BIOS, memory, disk drives, video, adapter cards, and peripherals. Strongly recommended: Computer Networking Technology 50. 2.5 hours lecture, 1.5 hours laboratory.

CNT 52 (Formerly CIS 66) **3 UNITS**

NETWORKING FUNDAMENTALS

Grading Option: OP Transfer: CSU

This course is a foundation course that explains and describes how computer networks are designed, installed, and administrated. Introduction to communications concepts, data communications, networking, and internetworking. Review of major network components: hardware, software, protocols (TCP/IP, IPX/SPX, NETBEUI), topologies, and cabling. Overview of LAN administration, setup, and installation. Preparation for the Network+ certification exam. Students who have completed or are enrolled in Computer Information Systems 66 may not receive credit. Strongly recommended: Computer Information Systems 55. 3 hours lecture.

CNT 54 (Formerly CIS 61 & ELEC 54B) **3 UNITS**

WINDOWS PROFESSIONAL

Grading Option: OP Transfer: CSU

(May be repeated 1 time)

Installation and configuration of Windows Professional operating system. Preparation for the Microsoft Certificated System Engineer (MCSE) exam. Students will learn to install and configure Microsoft Windows Professional on stand-alone computers and on client computers that are part of a workgroup or a domain. Creation of user and group accounts, group policies, administrating access to shared resources, configuration of hardware devices, monitoring of system resources, troubleshooting, and ensuring data integrity and security. Strongly recommended: Computer Network Technology 51 and Computer Network Technology 52. 2.5 hours lecture, 1.5 hours laboratory.

CNT 55 **3 UNITS**

WINDOWS SERVER 2003

Grading Option: OP Transfer: CSU

(May be repeated 1 time)

Installation and configuration of Windows Server operating system. Preparation for the Microsoft Certificated Engineer (MCSE) exam. Students will learn to install, configure, and administer Microsoft Windows Server 2003 in a domain environment. Networking fundamentals and protocols with emphasis on the TCP/IP suite. Mixed environment networking, data security server domain

models, network directory concepts. Server system administration, troubleshooting, and optimization. Creation of user and group accounts, group policies, administrating access to shared resources, configuration of hardware devices, monitoring of system resources, troubleshooting, and ensuring data integrity and security in a domain environment. Strongly recommended: Computer Networking Technology 51 and Computer Networking Technology 52. 2.5 hours lecture, 1.5 hours laboratory.

CNT 56 **3 UNITS**

IMPLEMENTING WINDOWS NETWORK INFRASTRUCTURE

Grading Option: OP Transfer: CSU

(May be repeated 1 time)

This course will enable students to install, configure, manage, and support a network infrastructure that uses the Microsoft Windows Server products. The course focuses heavily on TCP/IP and related services including DHCP server, DNS server, WINS, network security protocols, Public Key Infrastructure (PKI), Internet Protocol Security (IPSec), and remote access. This course also enables a student to configure Windows as a network router, configure Internet access for a network, configure a Web server, and manage a Windows deployment using Remote Installation Service (RIS). The student will also learn to enable network connectivity between NetWare, Macintosh, and UNIX networks. Strongly recommended: Computer Network Technology 54 and Computer Network Technology 55. 2.5 hours lecture, 1.5 hours laboratory.

CNT 57 **3 UNITS**

IMPLEMENTING WINDOWS ACTIVE DIRECTORY SERVICES

Grading Option: OP Transfer: CSU

(May be repeated 1 time)

Students will learn to install, configure, and administer Microsoft Windows Active Directory services. This course focuses on implementing Group Policy and understanding the Group Policy tasks required to centrally manage users and computers. Students will use Group Policy to configure and manage the user desktop environment, to configure and manage software and implement and manage security settings. Students will install and manage Windows domains and domain controllers through Active Directory. Strongly recommended: Computer Network Technology 54 and Computer Network Technology 55. 2.5 hours lecture, 1.5 hours laboratory.

CNT 60 (Formerly ELEC 58A) **2 UNITS**

CISCO NETWORKING ACADEMY CCNA 1

Grading Option: OP Transfer: CSU

(May be repeated 1 time)

This course is the first course in the Cisco Certified Network Associate (CCNA) curriculum. The course will cover the fundamentals of networking, including the OSI model and industry standards, concepts, network topologies, cabling, IP addressing, network hardware and various protocols, basic network design, LANs, WANs and network evaluation. Student should have basic computer skills and knowledge of Internet use. 1.5 hours lecture, 1.5 hours laboratory.

CNT 61 (Formerly ELEC 58B)

2 UNITS

CISCO NETWORKING ACADEMY CCNA 2

Grading Option: OP Transfer: CSU

(May be repeated 1 time)

This course is the second course in the Cisco Certified Network Associate (CCNA) curriculum. This course is an introduction to router and routing concepts and terminology including RIP and IGRP routing protocols, distance vector and link state routing, routing loop issues, routing theory, TCP/IP basics, IP addressing, router IOS, and basic router configuration. Students will get hands-on experience configuring Cisco routers. Student should have basic computer skills and knowledge of Internet use. Prerequisite: Computer Network Technology 60 (completed with a grade of "C" or higher). 1.5 hours lecture, 1.5 hours laboratory.

CNT 62 (Formerly ELEC 58C)

4 UNITS

CISCO NETWORKING ACADEMY CCNA 3-4

Grading Option: OP Transfer: CSU

(May be repeated 1 time)

This course is the third and fourth course in the Cisco Certified Network Associate (CCNA) curriculum. This course covers the advanced features of router and routing concepts including IGRP routing protocol, IPX routing, IP access lists, LAN segmentation using bridges and switches, network congestion issues, cut-through and store-forward switches, and the operation of the Spanning Tree protocol. This course also covers the various Wide Area Network services including Frame Relay, ISDN, HDLC, PPP, DDR, Frame Relay LMI, Frame Relay maps and Frame Relay subinterfaces. This class includes hands-on experience using Cisco routers. Student should have basic computer skills and knowledge of Internet use. Prerequisite: Computer Network Technology 61 (completed with a grade of "C" or higher). 3 hours lecture, 3 hours laboratory.

CNT 63

4 UNITS

CISCO CCNP SEMESTER 5—ADVANCED ROUTING

Grading Option: OP Transfer: CSU

(May be repeated 1 time)

This course is the first course in the Cisco Certified Network Professional (CCNP) curriculum. This course will cover the configuration of Cisco routers for operating in large or growing multiprotocol internetworks. This course includes lectures and laboratory exercises that focus primarily on scalable technologies and the Cisco IOS software features that are most useful in building large or growing internetworks. These features include scalable routing protocols, such as OSPF, EIGRP, and BGP, queuing, VLSM, route distribution, route summarization, and NAT. Recommend students take classes in order and only one CCNP course at a time. Prerequisite: Computer Network Technology 62 (completed with a grade of "C" or higher) or have a CCNA certificate. 3 hours lecture, 3 hours laboratory.

CNT 64

4 UNITS

CISCO CCNP SEMESTER 6—REMOTE ACCESS

Grading Option: OP Transfer: CSU

(May be repeated 1 time)

This is one of the four courses in the Certified Cisco Network Professional (CCNP) curriculum. This course is designed to provide students a combination of both lectures and laboratory experience in current and emerging networking technology. This will prepare them for the Cisco Certified Networking Professional (CCNP) exam: Building Cisco Remote Access Networks. Instruction includes ISDN, DDR, ODR, dialup networking, Cisco 700 series routers, Frame Relay, and AAA. Recommend students take classes in order and only one CCNP course at a time. Prerequisite: Computer Network Technology 62 (completed with a grade of "C" or higher) or have a CCNA certificate. 3 hours lecture, 3 hours laboratory.

CNT 65

4 UNITS

CISCO CCNP SEMESTER 7—MULTILAYER SWITCHING

Grading Option: OP Transfer: CSU

(May be repeated 1 time)

This is one of the four courses in the Certified Cisco Network Professional (CCNP) curriculum. This course is designed to provide students a combination of both lectures and laboratory experience in current and emergent networking technology. This will prepare them for the Cisco Certified Networking Professional (CCNP) exam: Building Cisco Multilayer Switching Networks. Instruction includes both routing and switching concepts, covering both Layer 2 and Layer 3 technologies. This course includes topics in LAN design, media types, VLANs, VLAN Trunking Protocol, ISL, 802.1Q, Spanning Tree, Inter-VLAN routing, Multilayer Switching, Flow Masks, HSRP, Multicasting, IGMP, and CGMP. Recommend students take classes in order and only one CCNP course at a time. Prerequisite: Computer Network Technology 62 (completed with a grade of "C" or higher) or have a CCNA certificate. 3 hours lecture, 3 hours laboratory.

CNT 66

4 UNITS

CISCO CCNP SEMESTER 8—INTERNETWORKING TROUBLESHOOTING

Grading Option: OP Transfer: CSU

(May be repeated 1 time)

This is one of the four courses in the Certified Cisco Network Professional (CCNP) curriculum. This course is designed to provide students a combination of both lectures and laboratory experience in current and emergent networking technology. This will prepare them for the Cisco Certified Networking Professional (CCNP) exam: Internetworking Troubleshooting and Support Exam. This advanced course provides networking professionals with the troubleshooting processes on Cisco Routers and Catalyst Switches. Students are taught how to baseline and troubleshoot an environment using Cisco routers and switches for multi-protocol client hosts and servers connected with: Ethernet, Fast Ethernet, Token Ring, Serial, Frame Relay, and ISDN BRI. Recommend students take courses in order and only one CCNP course at a time. Prerequisite: Computer Network Technology 62 (completed with a grade of "C" or higher), or have a CCNA certificate and have completed Computer Network Technology 63, 64 and 65 or industry equivalent experience. 3 hours lecture, 3 hours laboratory.

Computer Science

Computing Studies

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Degree

AS Computer Science

(Transfer Preparation)

AS Computer Programming

AS Computer Programming for the Web

Certificate

Computer Programming

Computer Programming for the Web

About the Program

Las Positas College offers Degrees and Certificates programs in Computer Science that prepare students for direct job entry and/or preparation for transfer to a four-year university.

These programs cover a wide range of computer related professions that include programming, systems analysis, data processing, and computer science. Students will learn to direct computer operations by writing detailed instructions in computer languages to solve a variety of problems in business, government, and science. These include information acquisition, processing storage, and transmission, using computers and computer peripherals.

Principal areas of study within computer science include artificial intelligence; computer systems and networks; database systems; human factors; numerical analysis; programming languages; software engineering and theory of computing.



AS - Computer Science

This degree prepares students for transfer to four-year institutions for continued study in computer science. The program outlined fulfills typical lower-division requirements at four-year transfer institutions. Some variation in requirements may exist at a particular four-year college or university; therefore, it is essential that the student also refer to the catalog of the prospective transfer institution and consult a counselor.

General Education courses should be selected carefully to meet the requirements of the intended transfer institution. Some transfer institutions require more general education units than are required by the AS degree.

AS and Certificate - Computer Programming

The curriculum in this program is designed to prepare students for employment as computer programming professionals. Programming professionals in this field have a variety of titles, such as Programmer, Programmer/Analyst, Business Analyst, Systems Analyst, Computer Scientist, Information Technologist, Information Systems Professional, Information Technology Professional, Programming Professional, Software Developer, or Software Engineer. Although successful programming careers are possible without a degree, the professional with a degree will have a marked advantage.

AS and Certificate - Computer Programming for the Web

The curriculum in this program is designed to prepare students for employment as computer programming professionals for the web. Programming professionals in this field have a variety of titles, such as Programmer, Programmer/Analyst, Business Analyst, Systems Analyst, Computer Scientist, Information Technologist, Information Systems Professional, Information Technology Professional, Programming Professional, Software Developer, or Software Engineer. Although successful programming careers are possible without a degree, the professional with a degree will have a marked advantage.

AS - Computer Science

(TRANSFER PREPARATION)

Freshman Year

Computer Science 1 (Computing Fundamentals I) or Computer Science 14 (Introduction to Structured Programming in C++).....	4-5
Computer Science 2 (Computing Fundamentals II) or Computer Science 15 (Introduction to Computer Science and Programming Methods in C++)	4-5
Computer Science 41 (Introduction to Unix)	2
Mathematics 1 (Analytical Geometry and Calculus I)	5
Mathematics 2 (Analytical Geometry and Calculus II)	5
General Education Courses: <i>(See General Education Requirements, page 49)</i>	
English Composition (Language and Rationality)	
Mathematics	
Social and Behavioral Sciences	
Natural Sciences	
Physical Education	

Sophomore Year

Computer Science 20 (Advanced Programming Methods with Data Structures Using C++)	4
Computer Science 21 (Computer Organization and Assembly Language Programming)	4
Mathematics 7 (Elementary Linear Algebra with Computer Applications) or Mathematics 41 (Statistics for Business Majors) or Mathematics 42A (Introduction to Probability and Statistics) or Mathematics 44 (Statistics and Probability)	3-5
Mathematics 10 (Discrete Mathematics)	4
General Education Courses: <i>(See General Education Requirements, page 49)</i>	
American Cultures	
American Institutions/Health Education	
Humanities	
Communications and Analytical Thinking	
Total units required	60

AS - Computer Programming

Freshman Year

Computer Science 1 (Computing Fundamentals I) or Computer Science 14 (Introduction to Structured Programming in C++).....	4-5
English 1A (Critical Reading and Composition)	3
Computer Information Systems 60 (Systems Analysis and Design)....	3
<i>Select one course from the following:</i>	
Computer Science 2 (Computing Fundamentals II) or Computer Science 15 (Introduction to Computer Science and Programming in Methods in C++)	4-5
Computer Science 21 (Assembly Language)	
Computer Science 30 (C++ Programming)	
Computer Science 31 (Java Programming)	
Computer Science 32 (Visual Basic Programming).....	4-5
Computer Science 43 (Professional Communications).....	4
General Education Courses: <i>(See General Education Requirements, page 49)</i>	
English Composition (Language and Rationality)	
Mathematics	
Social and Behavioral Sciences	
Physical Education	

Sophomore Year

Computer Science 45 (Database Programming)	3
<i>Select one course from the following:</i>	
Computer Science 20 (Data Structures) or Computer Science 33 (Advanced C++ Programming) or Computer Science 34 (Advanced Java Programming) or Computer Science 35 (Advanced Visual Basic Programming) or Computer Science 36 (Windows and MFC Programming)	4
<i>Select one course from the following:</i>	
Computer Science 2 (Computing Fundamentals II) or Computer Science 15 (Introduction to Computer Science and Programming in Methods in C++) or Computer Science 21 (Assembly Language) or Computer Science 30 (C++ Programming) or Computer Science 31 (Java Programming) or Computer Science 32 (Visual Basic Programming).....	4
Computer Science 47 (Capstone Project)	3
General Education Courses: <i>(See General Education Requirements, page 49)</i>	
American Cultures	
American Institutions/Health Education	
Humanities	
Communications and Analytical Thinking	
Total units required	60

AS - Computer Programming for the Web

Freshman Year

Computer Science 1 (Computing Fundamentals I) or Computer Science 14 (Introduction to Structured Programming in C++)	4-5
Computer Science 43 (Professional Communications)	4
English 1A (Critical Reading and Composition)	3
Computer Science 31 (Java Programming)	4
Computer Science 37 (Web Programming)	4
Visual Communications 53 (Digital Image Creation & Manipulation)	2
General Education Courses: (See General Education Requirements, page 49)	
English Composition (Language and Rationality)	
Mathematics	
Social and Behavioral Sciences	
Physical Education	

Sophomore Year

Computer Information Systems 60 (Systems Analysis and Design)	3
<i>Select one course from the following:</i>	
Computer Science 38 (Perl and CGI)	
Computer Science 39 (Java Servlets and JSP)	
Computer Science 40 (VBScript, ASP, ActiveX)	2
Computer Science 44 (Advanced Web Programming)	4
Computer Science 45 (Database Programming)	4
Computer Science 47 (Capstone Project)	3
General Education Courses: (See General Education Requirements, page 49)	
American Cultures	
American Institutions/Health Education	
Humanities	
Communications and Analytical Thinking	
Total units required	60

Certificate of Achievement Computer Programming

Programming Fundamentals:

Computer Science 1 (Computing Fundamentals I) or Computer Science 14 (Introduction to Structured Programming in C++)	4-5
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Intermediate Courses in two Programming Languages—Select 2:

Computer Science 21 (Assembly Language)	
Computer Science 30 (C++ Programming)	
Computer Science 31 (Java Programming)	
Computer Science 32 (Visual Basic Programming)	8

Advanced Course in any Programming Languages—Select 1:

Computer Science 20 (Data Structures)	
Computer Science 33 (Advanced C++ Programming)	
Computer Science 34 (Advanced Java Programming)	
Computer Science 35 (Advanced Visual Basic Programming)	
Computer Science 36 (Windows and MFC Programming)	4

Professional Competence:

Computer Information Systems 60 (Systems Analysis and Design)	3
Computer Science 43 (Professional Communications)	4
Computer Science 45 (Database Programming)	4
Computer Science 47 (Capstone Project)	3

Total Units 30-31

Certificate of Achievement Computer Programming for the Web

Programming Fundamentals:

Computer Science 1 (Computing Fundamentals I) or Computer Science 14 (Introduction to Structured Programming in C++)	4-5
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Computer Science 31 (Java Programming)

Scripting Languages/Imaging (Select 1):

Computer Science 38 (Perl and CGI)	
Computer Science 39 (Java Servlets and JSP)	
Computer Science 40 (VBScript, ASP, Active X)	2

Professional Competence:

Visual Communications 53 (Digital Image Creation and Manipulation)	2
Computer Science 37 (Web Programming)	4
Computer Science 43 (Professional Communications)	4
Computer Science 44 (Advanced Web Programming)	4
Computer Information Systems 60 (Systems Analysis and Design)	3
Computer Science 45 (Database Programming)	4
Computer Science 47 (Capstone Project)	3
Total Units	34-35

Computer Science (cs)

Formerly (CSCI)

CS 1 (Replaces CS 14) 5 UNITS

COMPUTING FUNDAMENTALS I

Grading Option: OP Transfer: CSU, UC

Computing systems; problem-solving concepts and algorithms; computer logic and architecture; number systems; program design, development, style, testing and documentation; algorithms; elementary data structures; functions and control statements; operating systems; arrays. Programming language: C++. Prerequisite: Mathematics 55 (completed with a grade of "C" or higher). 4 hours lecture, 3 hours laboratory.

CS 2 (Replaces CS 15) 5 UNITS

COMPUTING FUNDAMENTALS II

Grading Option: OP Transfer: CSU, UC

Data abstraction and structures; pointers; stacks; queues; recursive algorithms, searching and sorting; object-oriented programming, encapsulation, inheritance and polymorphism; file I/O. Programming language: C++. Prerequisite: Computer Science 1 or Computer Science 14 (completed with a grade of "C" or higher). 4 hours lecture, 3 hours laboratory.

CS 14 (Replaced by CS 1) 4 UNITS

INTRODUCTION TO STRUCTURED PROGRAMMING IN C++

Grading Option: OP Transfer: CSU, UC

Note: CS 14 is no longer offered. Students should take CS 1 instead. Students who have already completed CS 14 will NOT be required to take CS 1 in order to complete Degree or Certificate requirements.

Introduction to structured programming and problem solving using the C++ object oriented programming language. An overview of computational systems in use today. Introduction to computer logic and representation. C++ syntax includes elementary operators, control structures, user-defined and library functions, basic input/output. Arrays and sequential files introduced. Algorithm design, testing and debugging techniques, and documentation standards. Designed for Computer Science and related transfer majors. Strongly Recommended: Mathematics 55 or 55B (completed with a grade of C or higher). 3 hours lecture, 3 hours laboratory.

CS 15 (Replaced by CS 2) 4 UNITS

INTRODUCTION TO COMPUTER SCIENCE AND PROGRAMMING METHODS IN C++

Grading Option: OP Transfer: CSU, UC

Note: CS 15 is no longer offered. Students should take CS 2 instead. Students who have already completed CS 15 will NOT be required to take CS 2 in order to complete Degree or Certificate requirements.

Structured programming methods employed to design, program, test and document intermediate level problems in an object oriented language (C++). A thorough treatment of C++ language syntax including pointers, structures, unions and classes, general input and output functions and more general file handling. Breadth-based Computer Science topics include an introduction to computer logic,

architecture, operating systems, programming languages, and the role of the computer scientist. Designed for Computer Science and related transfer majors. Prerequisite: Computer Science 14. Strongly Recommended: Mathematics 20, 26, or 45 (both completed with a grade of "C" or higher). 3 hours lecture, 3 hours laboratory.

CS 20 4 UNITS

ADVANCED PROGRAMMING METHODS WITH DATA STRUCTURES USING C++

Grading Option: OP Transfer: CSU, UC

Design and implementation of larger programs in C++ using software engineering principles. Emphasis on definition and use of data structures. Includes specification of abstract data types, recursion, dynamic memory allocation, stacks, linked lists, queues, binary trees, random access files, and use of hash codes. Prerequisite: Computer Science 2 or Computer Science 15 (completed with a grade of "C" or higher). 3 hours lecture, 3 hours laboratory.

CS 21 4 UNITS

COMPUTER ORGANIZATION AND ASSEMBLY LANGUAGE PROGRAMMING

Grading Option: OP Transfer: CSU, UC

Basics of machine architecture, machine language, assembly language, operating system and higher level language interface. Data representation, instruction representation and execution, addressing techniques and use of macros. Space and time efficiency issues. Input/output including number conversion and use of system interrupts. Interrupt processing and interrupt handlers. Procedures including parameter passing and linkage to higher level languages. Prerequisite: Computer Science 1, or 14, or 15 or 18A (completed with a grade of "C" or higher). 3 hours lecture, 3 hours laboratory. (CAN CSCI 10)

CS 30 4 UNITS

C++ PROGRAMMING

Grading Option: OP Transfer: CSU, UC

Note: This course will not be offered at this time. Students are advised to take CS 1 instead.

Applications programming in C++ for the student already familiar with the concepts of programming. The following concepts are introduced: Object-oriented programming, encapsulation, inheritance and polymorphism; introduction to data abstraction and structures; pointer; file I/O. Prerequisite: Computer Science 1 (completed with a grade of "C" or higher). 3 hours lecture, 3 hours laboratory.

CS 31 4 UNITS

JAVA PROGRAMMING

Grading Option: OP Transfer: CSU, UC

Applications programming in Java for students already familiar with the concepts of programming. Topics will include in Applets and Swing, multimedia, presenting data files over the web, elementary data structures (queues, linked list, stacks) and vectors, binary searching, sorting, JDBC (Java Data Base Connectivity), Remote Method Invocation (RMI), and Java Beans. Prerequisites: Computer

Computer Science

Computing Studies

Science 1 or Computer Science 14 (completed with a grade of "C" or higher). 3 hours lecture, 3 hours laboratory.

CS 32 4 UNITS

VISUAL BASIC PROGRAMMING

Grading Option: OP Transfer: CSU,UC

Applications programming in Visual Basic to create Windows oriented applications for student already familiar with the concepts of programming. Emphasis on algorithms, I/O, multimedia capabilities, data file I/O, loops, decision-making, string processing, functions, control objects (such as sliders, combination boxes, radio buttons), ActiveX controls, Object Linking and Embedding (OLE), use of the grammar and syntax for a foundation for VBScript and Visual Basic for Applications. Prerequisite: Computer Science 1 or Computer Science 14 (completed with a grade of "C" or higher). 3 hours lecture, 3 hours laboratory.

CS 33 4 UNITS

ADVANCED C++ PROGRAMMING

Grading Option: OP Transfer: CSU,UC

Note: This course will not be offered at this time. Students are advised to take CS 2 instead.

This is an advanced course in C++ programming. Advanced topics will be covered which will build on the skills acquired in earlier courses. Topics include advanced OOP, class libraries, STL, templates, Input and Output, graphics, files, multimedia, database, prototyping, interface design. Prerequisite: Computer Science 30 or Computer Science 2 (completed with a grade of "C" or higher). 3 hours lecture, 3 hours laboratory.

CS 34 4 UNITS

ADVANCED JAVA PROGRAMMING

Grading Option: OP Transfer: CSU,UC

This is an advanced course in Java programming. Contents include advanced topics that will build on the skills acquired in earlier courses. It will cover advanced topics in Java: design and implementation of graphical user interfaces, exception handling, multithreading, database connectivity (JDBC), Servlets, networking, data structures, utility packages, collections, and JavaBeans. Prerequisite: Computer Science 31 (completed with a grade of "C" or higher). 3 hours lecture, 3 hours laboratory.

CS 35 4 UNITS

ADVANCED VISUAL BASIC PROGRAMMING

Grading Option: OP Transfer: CSU,UC

This is an advanced course in Visual Basic programming. The contents will build on the skills acquired in earlier courses. Topics include advanced OOP, class libraries, Input and Output, graphics, files, multimedia, database, prototyping, interface design. Prerequisite: Computer Science 32 (completed with a grade of "C" or higher). 3 hours lecture, 3 hours laboratory.

CS 36 4 UNITS

WINDOWS AND MFC PROGRAMMING

Grading Option: OP Transfer: CSU

This is an advanced course in Windows programming using C++. Teaches Applied Windows Programming in C++. This course presents a comprehensive introduction to the Windows C++ programming and its role in the Internet and database programming. A variety of OOP topics covered will include building basic Windows applications including menus, dialog boxes, main window, buttons, MFC Wizards, ODBC, OLE-DB/ADO, DHTML, and ActiveX. Prerequisite: Computer Science 30 or Computer Science 2 (completed with a grade of "C" or higher). 3 hours lecture, 3 hours laboratory.

CS 37 4 UNITS

WEB PROGRAMMING

Grading Option: OP Transfer: CSU

The objective of this course is to develop skills and understanding in designing Web Pages using "static" and "dynamic" HTML tags for page layouts, hypertext links, site navigation, multimedia presentations, and audiovisual special effects. To enhanced web site appearance and functionality, JavaScript will also be introduced. Participants will learn to use various web programming tools such as HTML editors, graphic image editors, graphic animators, and image map makers. Participants will also learn proper web design principles and develop web pages based upon current mainstream browser capabilities and limitations. Prerequisite: Computer Science 1 or Computer Science 14 (completed with a grade of "C" or higher). 3 hours lecture, 3 hours laboratory.

CS 38 2 UNITS

PERL AND CGI PROGRAMMING

Grading Option: OP Transfer: CSU

Introductory course in Programming Evaluation and Reporting Language (PERL) and its use in elementary Common Gateway Interface on a UNIX server. Topics include basic PERL grammar and syntax, creating CGI scripts and HTML calls. Prerequisite: Computer Science 1 (completed with a grade of "C" or higher). Strongly recommended: Computer Science 41, Computer Science 37. 1.5 hours lecture, 1.5 hours laboratory.

CS 39 2 UNITS

JAVA SERVLETS AND JSP

Grading Option: OP Transfer: CSU

Introduction to basic Java Servlet capabilities as an alternative to Common Gateway Interface (CGI) to create interactive web pages including secure access to the web site, database interactivity, generate dynamic web pages and maintain client session data (i.e., cookies). Prerequisites: Computer Science 31 and Computer Science 37 (both completed with a grade of "C" or higher). 1.5 hours lecture, 1.5 hours laboratory.

CS 40 **2 UNITS**

VBS SCRIPT, ASP, ACTIVE X

Grading Option: OP Transfer: CSU
Introductory coding of ActiveX Controls, VBScript and ASP capabilities in web applications designed to run primarily under Microsoft Internet Explorer. Demonstration and use of user interface ActiveX objects, the VBScript that allows these controls to operate and the use of ASP to access database data over the web. Designed as an introductory course for Microsoft Internet Explorer web page authors with a moderate background in programming to develop user controlled event driven applications with the potential capability to access data over the web. Prerequisite: Computer Science 32 (completed with a grade of "C" or higher). 1.5 hours lecture, 1.5 hours laboratory.

CS 41 **2 UNITS**

INTRODUCTION TO UNIX/LINUX

Grading Option: OP Transfer: CSU
Introduction to the UNIX/Linux operating system. Includes components of a UNIX/Linux system, getting started on a UNIX/Linux system, working with directories and files, using redirection and pipes, user to user communication, shell commands, and text manipulation including the vi editor. 1.5 hours lecture and 1.5 hours laboratory.

CS 42 **2 UNITS**

UNIX/LINUX ENVIRONMENT AND SYSTEM ADMINISTRATION

Grading Option: OP Transfer: CSU
Continuation of Computer Science 41. Introduction to UNIX/Linux shell programming, system administration, and security including how to install and configure Linux. Prerequisite: Computer Science 41 (completed with a grade of "C" or higher). Strongly recommended: Computer Science 1 or Computer Science 14. 1.5 hours lecture, 1.5 hours laboratory.

CS 43 **4 UNITS**

PROFESSIONAL COMMUNICATIONS

Grading Option: OP Transfer: CSU
This course is designed to help students develop and refine the written and oral communication skills necessary to communicate effectively in a business environment. This will be accomplished through the planning, composing, and evaluating of written communication; report writing; and oral presentations. Additional focus will be placed on developing interpersonal skills, team participation skills, and professionalism. Students who have completed or are enrolled in Business 43, Computer Information Systems 43, Computer Networking Technology 43, English 43, or Speech 43 may not receive credit. Strongly recommended: Eligibility for English 1A. 4 hours.

CS 44 **4 UNITS**

ADVANCED WEB PROGRAMMING

Grading Option: OP Transfer: CSU
The objective of this course is to develop skills and understanding in designing eCommerce websites. This is a programming course that goes beyond mere "formatting" of web pages found with

HyperText Markup Language (HTML). This course extends web page "functionality" with interactivity, multimedia, security, and database capability using prior knowledge of a scripting language (HTML, JavaScript, etc.). The participant will learn about database sorting and filtering capabilities of eXtensible Markup language (XML) that identifies data fields (e.g., <automfg> to refer to auto manufacturers). The participant will also learn eXtensible Stylesheet Language (XSL) – which specifies the presentation of a class of XML documents by describing how an instance of the class is transformed into an XML document that uses the formatting vocabulary. SXL is based on and extends the Document Style Semantics and Specification Language (DSSSL) and the Cascading Style Sheet, level 1 (CSS1) standards. Additional topics include good design principles, examples of scripts (JavaScript, ASP, ActiveX, VBScript, Servlets, JSP, Perl or CGI), discussion of security (SET, SSL, etc.), and examples of "good, bad, ugly" eCommerce websites. Prerequisite: Computer Science 37 (completed with a grade of "C" or higher). 3 hours lecture, 3 hours laboratory.

CS 45 **4 UNITS**

DATABASE PROGRAMMING

Grading Option: OP Transfer: CSU
This is a programming course that goes beyond mere "desktop" database management. Participants explore dynamic applications that interact with a database using client-side scripts, server-side scripts, and compiled server programs. Learn database concepts, relational database principles, and Structured Query Language (SQL). Prerequisite: Computer Science 2 or Computer Science 30 or Computer Science 31 or Computer Science 32 (completed with a grade of "C" or higher). 3 hours lecture, 3 hours laboratory.

CS 47 **3 UNITS**

CAPSTONE PROJECT

Grading Option: OP Transfer: CSU
This is the last course in the Computer Programming (CP) degree or certificate sequence. Students will work in teams and write a client-driven work-like project requiring planning, writing, execution and presentation. The project will require the development of a large application selected by each team. According to client specifications, each team will define their project and break it down into parts. Each member of the team will write one of the parts. The team will prepare a written and oral report to present their project. This course will require the use of all of the programming and systems analysis skills developed in previous courses and will serve as a means of demonstration of mastery of program competencies. Prerequisites: Computer Information Systems 60 and Computer Science 43 and either Computer Science 20 or Computer Science 33 or Computer Science 34 or Computer Science 35 or Computer Science 36 or Computer Science 44 (completed with a grade of "C" or higher). Strongly recommended: Computer Science 45. 1 hour lecture, 6 hours laboratory.

Contemporary Studies

Contemporary Studies

CONTEMPORARY STUDIES 49 .5-4 UNITS

Grading Option: OP Transfer: CSU**, UC*

Content developed around selected areas of contemporary issues and thought. May be offered through any non technical-vocational course title contained in the Catalog by using the number 49. The same course content may not be offered more than 2 semesters under this course number. 1-6 hours.

*Transfer unit limitations, see page 61 **Limited to 2.5 semester units

Continuing Education Studies

Continuing education courses include both full-term and short-term courses in a wide variety of course patterns, field studies, seminars, workshops, and any other such educational activities that will meet the educational needs of the College community. May be offered under any course title contained in the Catalog, using the numbers 150 through 199. continuing Education studies may be repeated; however, graduation credit is limited to 6 units. 1-12 hours.

Creative Arts (CRAR)

CRAR 10

PERFORMING AND VISUAL ARTS 3 UNITS

Grading Option: OP Transfer: CSU, UC

Interdisciplinary approach to art, music, and drama which may also include film and opera. Critical analysis and response through observing, analyzing, reporting, and discussing local performances and exhibits attended. 3 hours.



Dance (DANC)**DANC 1** .5 UNIT**DANCE TECHNIQUE**

Grading Option: OP Transfer: CSU, UC*

(May be repeated 3 times)

Movement skills, rhythmic structure of dance, qualities of movement, special design and appreciation of dance. Emphasis on creation of individual and group compositions. Includes Afro-American dance, ballet, disco/ballroom dance, folk dance, jazz dance, modern dance, square dance, and tap dance (see Physical Education 1). 2 hours.

* Transfer unit limitations, see page 61

DANC 5 1.5 UNITS**DANCE WORKSHOP**

Grading Option: OP Transfer: CSU, UC

(May be repeated 3 times)

Dance techniques, choreographic principles and stage presentation. Includes classical ballet, modern ballet, modern dance, polyrhythmic jazz, improvisation, Broadway musical, ethnic and folk dance. 1 hour lecture, 2 hours laboratory.

DANC 6 1-3 UNITS**DANCE PRODUCTION: CHOREOGRAPHY**

Grading Option: OP Transfer: CSU, UC

(May be repeated 3 times)

Choreographic principles of dance composition and stage presentation. Participation in dance production with the creation of new works directed toward large groups, trios, duets, and solos, possibly leading to scheduled performances; minimal participation in technical and business aspects of production. Prerequisite: Dance 5. 3-9 hours laboratory.

See also: **Physical Education Activities Courses 1,2,3**

Design Technology

Degree
AS – Design Technology

Certificate
Design Technology

About the Program

The Design Technology program is an industry-advised program designed to prepare students for entry into the highly technical fields of electronic, mechanical and electro-mechanical design. The program focuses on the use of computer-aided drafting and design (CADD) tools, including the construction of solid models and virtual realities, to visualize and design products for industry, scientific research, and construction. Designers give ideas life from sketches and instructions furnished by engineers and scientists.



AS - Design Technology

Freshman Year

Design Technology 52 (Technical Graphics)	3
Design Technology 54 (Manufacturing Processes)	2
Design Technology 57 (Electrical Systems)	2
Design Technology 61 (Electronic Design)	3
Design Technology 62A (Computer-Aided-Drafting (CAD)).....	3
Design Technology 62B (Computer-Aided-Design (CAD)).....	3
Mathematics 36 (Trigonometry) or	
Mathematics 38 (Trigonometry with Geometry)	3-5
General Education Courses: (See General Education Requirements, page 49)	
English Composition (Language and Rationality)	
Mathematics	
Social and Behavioral Sciences	
Natural Sciences	
Physical Education	

Sophomore Year

Design Technology 62C (Three-Dimensional Modeling) or	
Design Technology 70 (Manufacturing and Design Using	
Pro/Engineer)	3
Design Technology 66A (Mechanical Design Concepts).....	3
Design Technology 66B (Electro-Mechanical Design).....	3
Design Technology 69 (Structural Design Concepts)	4
Design Technology 75 (Design Materials Technology).....	2
Design Technology 76 (Graphical Kinematics)	2
General Education Courses: (See General Education Requirements, page 49)	
American Cultures	
American Institutions/Health Education	
Humanities	
Communications and Analytical Thinking	
Total units required	60

Certificate of Achievement Design Technology

Design Technology 52 (Technical Graphics)	3
Design Technology 54 (Manufacturing Processes)	2
Design Technology 57 (Electrical Systems)	2
Design Technology 61 (Electronic Design)	3
Design Technology 62A (Computer-Aided-Drafting (CAD)).....	3
Design Technology 62B (Computer-Aided-Design (CAD)).....	3
Design Technology 62C (Three-Dimensional Modeling) or	
Design Technology 70 (Manufacturing and Design Using	
Pro/Engineer)	3
Design Technology 66A (Mechanical Design Concepts).....	3
Design Technology 66B (Electro-Mechanical Design).....	3
Design Technology 69 (Structural Design Concepts)	4
Design Technology 75 (Design Materials Technology).....	2
Design Technology 76 (Graphical Kinematics)	2
Mathematics 36 (Trigonometry) or	
Mathematics 38 (Trigonometry with Geometry)	3-5
Total units required	36-38

Design Technology (DSNT)*Formerly Drafting Technology (DRFT) and Engineering Technology (ENGT)*

DSNT 50 (Formerly DRFT 50) 2 UNITS

MECHANICAL DRAFTING FOR NON-MAJORS

Grading Option: OP Transfer: CSU

Drafting tools and materials, basic fundamentals of freehand sketching, pictorial drawings, orthographic projection, lettering, geometric construction, dimensioning, sectioning, and linework. Includes a general approach to Computer Aided Drafting (CAD) commands and operations. Designed to provide a working knowledge of methods of graphical communication for non-majors in drafting. 1 hour lecture, 3 hours laboratory.

DSNT 51A (Formerly DRFT 51A) 3 UNITS

TECHNICAL ILLUSTRATION I

Grading Option: GR Transfer: CSU

Development of skills and knowledge involved in constructing three-dimensional drawings. Shading techniques and rendering in black and white and pastels. Application and consideration of materials and equipment pertinent to technical illustration. Inking and lettering devices. Prerequisite: Drafting Technology 50 (completed with a grade of "C" or higher) or equivalent. 1.5 hours lecture, 4.5 hours laboratory.

DSNT 51B (Formerly DRFT 51B) 3 UNITS

TECHNICAL ILLUSTRATION II

Grading Option: GR Transfer: CSU

Development of skills and knowledge involved in axonometric projection. Applications and consideration of materials and equipment pertinent to technical illustration. Rendering conceptual drawings, specification of type styles and human factors. Prerequisite: Drafting Technology 51A (completed with a grade of "C" or higher). 1.5 hours lecture, 4.5 hours laboratory.

DSNT 52 (Formerly DRFT 52) 3 UNITS

TECHNICAL GRAPHICS

Grading Option: OP Transfer: CSU

A general approach to graphical communication and technical problem solving using sketches, traditional tools, and Computer-Aided Drafting (CAD). Introduction to the concepts and skills needed to graphically represent technical design data. Emphasis is on the development of visualization techniques and understanding design process as the foundation of the Design Technology sequence. 1.5 hours lecture, 4.5 hours laboratory.

DSNT 54 2 UNITS

MANUFACTURING PROCESSES

Grading Option: GR Transfer: CSU

Overview of machine shop procedure, welding, and general manufacturing processes, practice in the use of hand tools, basic machine tools, and welding equipment; understanding the relationship between manufacturing processes and design. 1 hour lecture, 3 hours laboratory.

DSNT 55 (Formerly DRFT 55) 2 UNITS

BLUE PRINT READING AND SKETCHING

Grading Option: OP Transfer: CSU

Orthographic projection (or equivalent), principles of sectioning, functional drawing practices, dimensioning; sketching, using orthographic and isometric principles; familiarity with specifications; reading of blueprints; interpretation of various symbols commonly used; interpretation of materials lists and bills of materials; making of takeoffs. 1 hour lecture, 3 hours laboratory.

DSNT 57 (Formerly ENGT 57) 2 UNITS

ELECTRICAL SYSTEMS

Grading Option: GR Transfer: CSU

Introduction to electrical systems, components for electrical systems and circuits, basic electrical theorem, magnetism, and electrostatics for application to design process. Strongly recommended: Mathematics 36 or Mathematics 38. 1 hour lecture, 3 hours laboratory.

DSNT 61 (Formerly DRFT 61) 3 UNITS

ELECTRONIC DESIGN

Grading Option: GR Transfer: CSU

Preparation of electrical and electronic drawings using standard graphical symbols and annotation currently utilized in industry, including wiring, cable, interconnecting, logic, and schematic diagrams. Introduction to printed circuit board layout and design using CAD and surface mounting technology. Prerequisite: Design Technology 62A (may be taken concurrently). 1.5 hours lecture, 4.5 hours laboratory.

DSNT 62A (Formerly DRFT 62A) 3 UNITS

COMPUTER-AIDED DRAFTING (CAD)

Grading Option: OP Transfer: CSU

(May be taken 2 times)

Introduction to the basic understanding of Computer-Aided Drafting, with emphasis on user terminology and exposure to various types of CAD systems, hardware, and associated software. How to set up drawings, create geometric shapes and constructions to form multiviews, and use special editing operations that increase productivity. Prerequisite: Design Technology 52 (may be taken concurrently). 1.5 hours lecture, 4.5 hours laboratory.

DSNT 62B (Formerly DRFT 62B) 3 UNITS

COMPUTER-AIDED DESIGN (CAD)

Grading Option: GR Transfer: CSU

(May be taken 2 times)

Continuation of the knowledge and skills learned in Design Technology 62A, focusing on the design processes to complete and present drawings and accompanying documentation effectively using CAD; dimensioning, tolerancing, and crosshatching to facilitate creation of multiview layouts, managing symbol libraries to streamline pictorial assemblies, and plotting/presentation techniques to captivate. Prerequisite: Design Technology 62A (completed with a grade of "C" or higher). 1.5 hours lecture, 4.5 hours laboratory.

Design Technology

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DSNT 62C 3 UNITS

THREE-DIMENSIONAL MODELING

Grading Option: GR Transfer: CSU

(May be taken 2 times)

This course develops skills in visualizing and drawing three-dimensional shapes for modeling, testing, analysis, manufacturing, assembly, and marketing, as well as form the basis of computer animations and virtual worlds. A variety of skills and techniques for drawing, designing, editing, and display of 3-D wireframes, surfaces, and solids will be studied. Prerequisite: Design Technology 62B (completed with a grade of "C" or higher). 1.5 hours lecture, 4.5 hours laboratory.

DSNT 65 (Formerly DRFT 65) 3 UNITS

ELECTRONIC DESIGN DRAFTING

Grading Option: GR Transfer: CSU

Preparation of logic diagrams with the use of logic symbols. Introduction to printed circuit design. Analog and digital printed circuit layout and taping techniques. Printed circuit documentation and parts list. Strongly Recommended: Drafting Technology 61 (or equivalent) or Engineering 20 (or equivalent). 1.5 hours lecture, 4.5 hours laboratory.

DSNT 66A (Formerly DRFT 66A) 3 UNITS

MECHANICAL DESIGN CONCEPTS

Grading Option: GR Transfer: CSU

Continued refinement of the principles of Mechanical Design Technology through original design and analysis, application of descriptive geometry, auxiliary views and revolutions to mechanical detail drawings, and geometric tolerancing applied to complete design assemblies. Prerequisite: Design Technology 52 (completed with a grade of "C" or higher). 1.5 hours lecture, 4.5 hours laboratory.

DSNT 66B (Formerly DRFT 66B) 3 UNITS

ELECTRO-MECHANICAL DESIGN

Grading Option: GR Transfer: CSU

Continuation of mechanical design principles with the addition of electronic/electrical concepts. Part design with concentration on the flow and interaction between manufacturing and design, documentation, revision systems, Engineering change orders and requests, complex drawing and notation of entire systems. Also includes résumé, portfolio, and interview preparation, career opportunities, skills and attitudes necessary to succeed in industry. Prerequisites: Design Technology 61 and 66A (both completed with a grade of "C" or higher). 1.5 hours lecture, 4.5 hours laboratory.

DSNT 69 (Formerly DRFT 69) 4 UNITS

STRUCTURAL DESIGN CONCEPTS

Grading Option: GR Transfer: CSU

Introduction to technical statics, including resolution of forces and basic coplanar force systems. Emphasis on graphical analysis. Prerequisite: Mathematics 36 or Mathematics 38 (completed with a grade of "C" or higher). 3 hours lecture, 3 hours laboratory.

DSNT 70 (Formerly ENGT 99.51) 3 UNITS

MANUFACTURING AND DESIGN USING PRO/ENGINEER

Grading Option: GR Transfer: CSU

(May be taken 3 times)

Fundamentals of computer-aided design and drafting using Pro/ENGINEER software, a 3-D solid modeler. Application of operating system, software, hardware, and peripherals in creating manufacturing models. Prerequisite: Engineering 20 or Design Technology 52 (completed with a grade of "C" or higher) or equivalent. Strongly recommended: Design Technology 66A. 2 hours lecture, 3 hours laboratory.

DSNT 71 (Formerly ENGT 99.52) 3 UNITS

ASSEMBLY AND DESIGN USING PRO/ENGINEER

Grading Option: GR Transfer: CSU

(May be taken 3 times)

Continuation class in a series for developing fundamentals of computer-aided design using Pro/ENGINEER software, a 3-D solid modeler. Application of the Pro/ENGINEER CAD System in assembling manufacturing models and creating drawings. Prerequisite: Design Technology 70 (completed with a grade of "C" or higher). Strongly recommended: Design Technology 66B. 2 hours lecture, 3 hours laboratory.

DSNT 75 (Formerly ENGT 60) 2 UNITS

DESIGN MATERIALS TECHNOLOGY

Grading Option: GR Transfer: CSU

Introduction to physical and mechanical characteristics and behavior of materials used in design and engineering applications. Emphasis will be on material processing of metals, ceramics, and polymers; basics of metallurgy, tension testing, hardness testing, and heat treatment. Strongly recommended: Chemistry 31. 1 hour lecture, 3 hours laboratory.

DSNT 76 (Formerly ENGT 66) 2 UNITS

GRAPHICAL KINEMATICS

Grading Option: GR Transfer: CSU

A study of elementary mechanisms with emphasis on the fundamentals of displacement, velocity and acceleration, and on the application of these to the analysis and design of mechanisms such as linkages, slides, cams, cranks, gears, and gear-trains. Strongly recommended: Engineering 20 or Design Technology 52 and Mathematics 36 or Mathematics 38. 1 hour lecture, 3 hours laboratory.

Early Childhood Development

Degree

AA – Early Childhood Development

Certificate

Associate Teacher Certificate

Basic Teacher Certificate

Family Childcare

About the Program

The early childhood development courses and programs are designed to prepare students for employment working with young children. A broad range of employment opportunities are available by fulfilling the various certificate and degree requirements listed on the following pages. Completion of the appropriate courses or programs will allow employment in state supported or private programs as Associate Teacher, Teacher, Master Teacher, or Director of an early education and care center. Family child care providers can benefit from courses designed to advance their skills both as care providers and entrepreneurs of their own in-home business.

The instructional program provides students with a fundamental understanding of the principles of child growth and development, as well as experience in the application of these principles.

Completion of certificate programs dovetails with the California Child Development Permit as well as the requirements of Community Care Licensing for Title 22 programs. The Child Development Permit is required for employees of California State Funded Programs. Title 22 Programs are those that are privately owned and operated either for-profit or non-profit. Many early childhood development units are transferable to four-year institutions for elective credit but a counselor should be consulted for specific transfer information.

AA – Early Childhood Development

This degree requires 29-30 units of work in ECD and includes theoretical courses, hands-on application classes, and a supervised work experience (practicum) opportunity.

- ▶ Graduates are qualified as Teachers.
- ▶ Graduates may transfer to a four-year institution.
- ▶ With eight additional units in administration and supervision graduates are qualified to be at the site supervisor level on the Child Development Permit.



Basic Teacher Certificate

This program requires 25 units of work in ECD and will include those courses considered to be "core" as well as additional classes focusing on the principles of child development and hands-on application courses. The program also requires a supervised work experience class.

- ▶ Graduates with this certificate will be qualified as Teachers in Title 22 centers and preschools under Community Care Licensing guidelines.
- ▶ Permit holders need 16 additional units of General Education classes, in 4 specific disciplines to be at the Teacher level on the Child Development Permit.

Associate Teacher Certificate

This program requires 13 units of course work. The ECD "core" courses are included.

- ▶ Graduates holding this certificate are qualified as Teachers in schools and centers operating under the Title 22 regulations of Community Care Licensing.
- ▶ Graduates are qualified at the Associate Teacher level on the Child Development Permit.

Family Child Care Certificate

This program requires 20-22 units of work in ECD. The "core" courses for the ECD program are required as this provides a good foundation in child development and appropriate curricula. Nine additional units are specifically tailored for the Family Child Care Provider.

- ▶ Graduates will have the information and techniques to enable them to operate a business from their home.

Early Childhood Development

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AA – Early Childhood Development

Freshman Year

Early Childhood Development 50 (Early Childhood Education and Care)	3
Early Childhood Development 51 (Prenatal to Early Childhood)	3
Early Childhood Development 62 (Child, Family and Community)..	3
Early Childhood Development 63 (Early Childhood Curriculum)	4
Electives*	0-4
General Education Courses: (See General Education Requirements, page 48)	
English Composition (Language and Rationality)	
Mathematics	
Social and Behavioral Sciences	
Natural Sciences	
Health Education	
Physical Education	

Sophomore Year

Early Childhood Development 55 (Professional Care-Giver).....	2
Early Childhood Development 60 (Teaching Special Needs Infants and Preschoolers).....	3
Early Childhood Development 90 (Supervised Experience)	4
Early Childhood Development 95** (Work Experience).....	2-3
Early Childhood Development 96+ (Work Experience Seminar)	1
Electives*	0-4
General Education Courses: (See General Education Requirements, page 48)	
American Cultures	
American Institutions	
Humanities	
Communications and Analytical Thinking	
Physical Education	
Total units required	60

*Electives

Select from the following for a minimum of 4 units:

- ECD 15 (Problems of Childhood)
- ECD 52 (Childhood and Adolescence)
- ECD 53 (Emergency and Preventive Health for Infants and Children)
- ECD 61 (Literature for the Young Child)
- ECD 64 (Play: Materials and Environments)
- ECD 65 (Administration)
- ECD 67 (Infant and Toddler Development and Care Giving)
- ECD 68 (Program Supervision)
- ECD 78 (Language Development)
- ECD 79 (Anti-Bias Curriculum for Young Children)
- ECD 80 (Advanced Topics in Childhood Development)
- ECD 83 (Adult Supervision)
- Nutrition 2 (Nutrition for Human Development)

**ECD 53 (Emergency and Preventive Health for Infants and Children) may be substituted for 1 unit of ECD 95 (Work Experience) requirement.

+ See page 211 for enrollment requirements

Certificate of Achievement Early Childhood Development— Basic Teacher Certificate

Early Childhood Development 50 (Early Childhood Education and Care)	3
Early Childhood Development 51 (Prenatal to Early Childhood)	3
Early Childhood Development 55 (Professional Care-Giver).....	2
Early Childhood Development 60 (Teaching Special Needs Infants and Preschoolers).....	3
Early Childhood Development 62 (Child, Family and Community)..	3
Early Childhood Development 63 (Early Childhood Curriculum)	4
Early Childhood Development 90 (Supervised Experience)	4
Early Childhood Development 95+ (Work Experience)	2
Early Childhood Development 96* (Work Experience Seminar)	1
Total units required	25

* See page 211 for enrollment requirements.

+ Early Childhood Development 53 (Emergency and Preventive Health for Infants and Children) may be substituted for 1 unit of Early Childhood Development 95 (Work Experience) requirement.

Certificate of Completion Early Childhood Development— Associate Teacher Certificate

Early Childhood Development 50 (Early Childhood Education and Care)	3
Early Childhood Development 51 (Prenatal to Early Childhood)	3
Early Childhood Development 62 (Child, Family and Community)..	3
Early Childhood Development 63 (Early Childhood Curriculum)	4
Total Units Required.....	13

Certificate of Achievement Early Childhood Development— Family Child Care

Early Childhood Development 50 (Early Childhood Education and Care)	3
Early Childhood Development 51 (Prenatal to Early Childhood)	3
Early Childhood Development 62 (Child, Family and Community)..	3
Early Childhood Development 70 (Family Child Care Profession) ...	2
Early Childhood Development 95 (Work Experience).....	1-3
Early Childhood Development 96 (Work Experience Seminar).....	1
Electives*	7

*Electives

Select from the following for a minimum of 7 units:

Early Childhood Development 15 (Problems of Childhood)	
Early Childhood Development 60 (Teaching Special Needs Infants and Toddlers)	
Early Childhood Development 71 (Creative Programming for Family Child Care)	
Early Childhood Development 72 (CORE (Caring, Observing, Responding, Extending) Curriculum for Family Child Care	
Early Childhood Development 73 (Family Child Care Provider Advanced Enrichment Course)	
Early Childhood Development 74 (Discipline Strategies)	
Early Childhood Development 75 (Orientation to School Age Child Care Programs)	
Total units required	20-22

Early Childhood Development (ECD)

These courses are designed to satisfy the recommendations of the Department of Social Services, Title 22, regarding child care personnel and the Commission on Teacher Preparation and Licensing for the Child Development Permit, Title 22.

ECD 15 3 UNITS PROBLEMS OF CHILDHOOD

Grading Option: OP Transfer: CSU
An exploration of the emotional, cognitive, developmental, and behavioral problems of childhood and adolescence. Topics include: common stresses and problems of adjustment; the effects of stress, abuse, and traumas on development; mental retardation, autism and other developmental disabilities; normal and abnormal problems of attention, conduct, mood anxiety, sleep, eating, sex, learning and speech. Examination of theories of cause of mental health problems in children and adolescents and approaches to treatment. Examination of information and theory for practical application. Students who have completed or are enrolled in Psychology 15 may not receive credit. 3 hours.

ECD 50 3 UNITS

EARLY CHILDHOOD EDUCATION AND CARE

Grading Option: OP Transfer: CSU
Historical and contemporary systems of Early Childhood group care, career opportunities, licensing requirements, personal qualifications, differing orientations to early childhood education, developmental stages of young children as related to quality programs with developmentally appropriate curriculum. 3 hours.

ECD 51 3 UNITS

PRENATAL TO EARLY CHILDHOOD

Grading Option: GR Transfer: CSU, UC*
Development of the child from prenatal life to early childhood; developmental characteristics, influences affecting development in prenatal life and infancy; individual differences; physical, emotional, intellectual, and social development. Emphasis on scientific method, research strategies, historical overview, social and cultural context, methods of observing children, and theories. 3 hours. * Transfer unit limitations, see page 61

ECD 52 3 UNITS

CHILDHOOD AND ADOLESCENCE

Grading Option: OP Transfer: CSU, UC*
Development of the child from elementary school age through adolescence; physical, intellectual, social and personality factors. Emphasis on the continuity, observation, scientific methods, and stages of development. 3 hours. * Transfer unit limitations, see page 61

ECD 53 1 UNIT

EMERGENCY CARE AND PREVENTIVE HEALTH FOR INFANTS AND CHILDREN

Grading Option: OP
(May be repeated 3 times)
Cardiopulmonary resuscitation, first aid principles and prevention of disease transmission for adults, infants and children. Designed for early childhood development majors. 1 hour.

ECD 55 2 UNITS

THE PROFESSIONAL CARE-GIVER

Grading Option: GR Transfer: CSU
Analysis of motives, goals, qualifications, competencies and attitudes of the successful professional and relationships with clients; includes individual assessments and strategies for career success. Strongly Recommended: Early Childhood Development 50. 2 hours.

ECD 60 3 UNITS

TEACHING SPECIAL NEEDS INFANTS AND PRESCHOOLERS

Grading Option: OP Transfer: CSU
Introduction to early childhood education for the special needs infant and preschooler. Developmental characteristics and abilities found in infants and preschoolers identified as "at risk" or handicapped. Instructional methods, assessments, interventions, learning and mainstreaming environments for the special needs infant and preschooler. Prerequisite: Early Childhood Development 51 (completed with a grade of "C" or higher). 3 hours.

Early Childhood Development

ECD 61 3 UNITS

LITERATURE FOR THE YOUNG CHILD

Grading Option: GR Transfer: CSU

Selection, evaluation and use of fiction, non-fiction, prose and poetry from existing written and or recorded children's literature for appropriate class presentation. Includes puppets, flannel boards and props. Role of books in early literacy. 3 hours.

ECD 62 3 UNITS

CHILD, FAMILY AND COMMUNITY

Grading Option: GR Transfer: CSU

Patterns of family living in contemporary society including the varying roles and interactions of family members; demographic, socio-cultural, racial and economic factors affecting family life; relationship of the family to early care and education and to community resources. 3 hours.

ECD 63 4 UNITS

EARLY CHILDHOOD CURRICULUM

Grading Option: GR Transfer: CSU

Professional application of the principles of human growth and development in: the study of play based curriculum, the physical environment and learning experiences including program content, the use of materials, the facilitation and guidance of children's experiences based on developmentally appropriate principles, the methods used to meet children's physical, social, emotional, cognitive and creative needs within cultural context. Prerequisite: Early Childhood Development 50 and Early Childhood Development 51 (both completed with a grade of "C" or higher). 4 hours lecture or 3 hours lecture, 3 hours laboratory.

ECD 64 3 UNITS

PLAY: MATERIALS AND ENVIRONMENTS

Grading Option: GR Transfer: CSU

Application of principles of human growth and development in the consideration of play materials and environments for children from birth through early elementary. The selection and development of play materials and environments that are developmentally, culturally, and age-appropriate. Prerequisite: Early Childhood Development 51 (completed with a grade of "C" or higher). 3 hours.

ECD 65 3 UNITS

ADMINISTRATION

Grading Option: GR Transfer: CSU

Principles and practices of program planning, organization, budgeting, personnel, records; relationships with community resources, regulatory agencies and with parents; child nutrition, food purchasing; and requirements of State and Federal programs. Prerequisite: Early Childhood Development 62 and Early Childhood Development 63 (both completed with a grade of "C" or higher). 3 hours.

ECD 67 3 UNITS

INFANT AND TODDLER DEVELOPMENT AND CARE GIVING

Grading Option: GR

Analysis of child development with emphasis on infants and toddlers. Observation of current practices in infant/toddler care giving in group settings in both centers and family day care homes. Assessments and planning of care giving techniques and environments based on principles of human development, health and safety, and legal requirements. Prerequisite: Early Childhood Development 50 and Early Childhood Development 51 (completed with a grade of "C" or higher). 3 hours.

ECD 68 3 UNITS

PROGRAM SUPERVISION

Grading Option: GR

Group dynamics, supervision of staff and parents development of motivation and morale, leadership skills, functions of personnel, interviewing, interpersonal and group conflicts, staff evaluations working with and being effective with parents and parent board members. Designed to provide knowledge of methods and principles of working with adults in a supervisory capacity in a child care setting. Prerequisite: Early Childhood Development 62 and Early Childhood Development 63 (both completed with a grade of "C" or higher). 3 hours.

ECD 70 2 UNITS

FAMILY CHILD CARE PROFESSION

Grading Option: OP

This course will focus on all aspects of setting up and operating a family child care home business. The course explores creation of an optimum child care environment, relationships with the child's parents, the impact of child care on the provider's family, and the relationship between family child care homes and centers. 2 hours.

ECD 71 1 UNIT

CREATIVE PROGRAMMING FOR FAMILY CHILD CARE

Grading Option: OP

The focus for this course is on increasing the practical skills necessary for working with young children in a family child care situation. Information will be given about inexpensive and easily obtainable materials and how these can improve the physical and emotional quality of the child care provided. Available community resources that provide support for families and children will be researched. 1 hour.

ECD 72 2 UNITS

CORE (CARING, OBSERVING, RESPONDING, EXTENDING) CURRICULUM FOR FAMILY CHILD CARE

Grading Option: OP

Basic competencies of caring about children and their families; Observing children and their activities; Responding by interacting with children based on observation; Extending by building on observations of children and their activities (CORE). The CORE concept is also used as a focus for the family home provider to look at her/his business in relation to the families served. 2 hours.

ECD 73 **2 UNITS**
THE FAMILY CHILD CARE PROVIDER ADVANCED ENRICHMENT COURSE
 Grading Option: OP

This course of instruction is designed to assist the family child care provider in developing new and advanced knowledge and skills that will enhance the provider's career and self-esteem. It examines the blending of the business and the nurturing sides of family child care and offers creative coping solutions aimed at promoting provider longevity, credibility, professionalism, ultimately resulting in his/her home/business providing quality child care. 2 hours.

ECD 74 **2 UNITS**
DISCIPLINE STRATEGIES

Grading Option: OP
 Designed to suggest various methods of managing, controlling, disciplining and motivating children while teaching. Techniques for working with aggressive, disruptive, hyperactive, repressed and other children whose behavior may be a problem in the classroom. 2 hours.

ECD 75 **1 UNIT**
ORIENTATION TO SCHOOL AGE CHILD CARE PROGRAMS

Grading Option: OP
(May be repeated 2 times)
 An introduction to the developmentally appropriate behavior of school age children and how to provide activities that will build their self-esteem, meet and challenge their diverse interest, expose them to creative art, music, literature and give their high energy a productive outlet. Promoting positive behavior and dealing effectively with discipline issues. Designed for child care centers and family day care home providers. 1 hour.

ECD 78 **3 UNITS**
LANGUAGE DEVELOPMENT

Grading Option: OP Transfer: CSU
 Principles of language development of young children. Skills involved in communication. Facilitating acquisition and use of communication skills. Prerequisite: ECD 51 (completed with a grade of "C" or higher). 3 hours.

ECD 79 **3 UNITS**
ANTI-BIAS CURRICULUM FOR YOUNG CHILDREN

Grading Option: OP Transfer: CSU
 Developing approaches which help young children and the adults who care for them to enhance human diversity, recognize social bias, and take action for their own and others' behalf. 3 hours.

ECD 80 **1-3 UNITS**
ADVANCED TOPICS IN CHILDHOOD DEVELOPMENT

Grading Option: OP
(May be repeated 3 times)
 Development and presentation of advanced topics in Early Childhood Development. Emphasis on creative arts, math and science, music and movement. Prerequisite: Early Childhood Development 63 (completed with a grade of "C" or higher). 1-3 hours.



ECD 81 **3 UNITS**
PLANNING CURRICULUM FOR THE SCHOOL-AGE CHILD

Grading Option: GR Transfer: CSU
 Fundamentals of planning, implementing and evaluating curriculum for before and after school care of school-age children (K-6). Emphasis on developmental levels, age-appropriate activities and developing an integrated curriculum. 3 hours.

ECD 82 **3 UNITS**
COMMUNICATING EFFECTIVELY WITH THE SCHOOL-AGE CHILD

Grading Option: GR Transfer: CSU
 Communication skills that promote self-discipline, techniques for resolving conflicts with the school-age child and effective interactions with parents. Consideration of: environment, appropriateness of program, materials, games and equipment; developmental age of children as instrumental to behavior management; development of pro-social behavior, multicultural awareness, diversity issues, and anti-bias curriculum. 3 hours.

ECD 83 **2 UNITS**
ADULT SUPERVISION

Grading Option: OP Transfer: CSU
 Methods and principles of supervising adults in early childhood classrooms. Emphasis on the role of experienced classroom teachers who function as mentors to new teachers while simultaneously addressing the needs of children, parents and other staff. Prerequisite: Early Childhood Development 62 and Early Childhood Development 63 (completed with a grade of "C" or higher). 2 hours.

ECD 90 **4 UNITS**
SUPERVISED EXPERIENCE

Grading Option: GR Transfer: CSU
 Direct experience working with young children. Observation and evaluation of individual children, group activities, roles of adults in the preschool and the entire school program. Planning instructional activities, developing educational plans, planning parent conferences, and discussion of on-site experiences. Prerequisite Early Childhood Development 55 (may be taken concurrently) and Early Childhood Development 63. 2 hours lecture, 6 hours laboratory.



ECD 95 1-3 UNITS

WORK EXPERIENCE

Grading Option: GR Transfer: CSU*
(Refer to page 211 for program requirements)

Application of principles and skills through participation in on-the-job training. Corequisite: Concurrent enrollment in Early Childhood Development 96. 5-15 hours experience per week. **Limited to 6 semester units*

ECD 96
1 UNIT

WORK EXPERIENCE

Grading Option: GR Transfer: CSU*
(Refer to page 211 for program requirements)

Discussion and analysis of problems encountered on the job. Case studies on the job problems often encountered by employees. Application of quality standards to the job site. Prerequisite: Concurrent enrollment in Early Childhood Development 95. 1 hour. **Limited to 6 semester units*

Ecology (ECOL)
 See **Biological Sciences**

Economics (ECON)

ECON 1 3 UNITS

PRINCIPLES OF MICROECONOMICS

Grading Option: OP Transfer: CSU, UC
 Economic analysis of market systems price theory; supply and demand analysis, elasticity, cost and revenue concepts, perfect and imperfect competition, monopoly, pricing of the factors of production and poverty and income inequalities. Strongly Recommended: English 1A eligibility and Mathematics 65 or one year of high school algebra. 3 hours. (CAN ECON 4)

ECON 2 3 UNITS

PRINCIPLES OF MACROECONOMICS

Grading Option: OP Transfer: CSU, UC
 Economic analysis of the theory of income determination, including national income analysis, business cycles, the consumption function, the multiplier, fiscal policy, monetary policy, money and banking, the public debt, economic growth and development, comparative economic systems and international trade. Strongly Recommended: English 1A eligibility and Mathematics 65 or one year of high school algebra. 3 hours. (CAN ECON 2)

ECON 5 3 UNITS

ECONOMIC HISTORY OF THE UNITED STATES

Grading Option: OP Transfer: CSU, UC
 Origins and historical development of major economic forces, institutions, and philosophies that have shaped the U.S. market economy from colonial times to the present. Interactions among major ethnic and social groups in the historical development of the U.S. economy. The effects of geography, politics, and social movements on the development of the U.S. economy. 3 hours.

ECON 10 3 UNITS

GENERAL ECONOMICS

Grading Option: OP Transfer: CSU, UC*
 Survey of the economic system of the United States, covering such macroeconomic and microeconomic topics as supply and demand, firms' output and pricing decisions, international trade, comparative economic systems, economic growth, business cycles, fiscal and monetary policy, labor, and money and banking. 3 hours.

** Transfer unit limitations, see page 61*

Electronics Technology

Degree
AS – Electronics
Telecommunications Systems

Certificate
Electronics Telecommunications Systems

About the Program

The Electronics programs are designed to prepare students for a variety of career opportunities in the fields of electronics, computers, and related technologies. Students may prepare for direct job entry as technicians in computer sales, installation and repair.

The Electronics Telecommunications Systems AS and Certificate programs prepare students for entry-level employment as technicians in the Electronics Communications (Telecommunications) fields.

While units in the program are transferable to many institutions, students should consult a counselor for information.

Special Instructional Programs - Electronics/CIS

Las Positas Technical Support (LaPTechS) is an innovative entrepreneurial venture offering technical support services to the campus community. Within a work based learning model, students get hands on training in a workplace environment. Electronics and computer applications include troubleshooting, repair (hardware and software), configuration, help desk, customer service and job skills preparation. LaPTechS creates opportunities to learn all aspects of business operations, technical support, and the development of interpersonal skills.

See also: [Computer Networking Technology](#)

AS – Electronics Telecommunications Systems

Freshman Year

Electronics Technology 50 (Fundamentals of Electronics) or Electronics Technology 85.1, 85.2, 85.3, 85.4	6
Electronics Technology 53** (Fabrication and Repair Techniques) ..	2
Computer Networking Technology 51 (A+ Computer Fundamentals) or Electronics Technology 85.5, 85.6	3-4
General Education Courses: (See General Education Requirements, page 49)	
Physical Education	
English Composition (Language and Rationality)	
Mathematics	
Social and Behavioral Sciences	
Natural Sciences	

Sophomore Year

Electronics Technology 56A* (Radio Communications I).....	4
Electronics Technology 56B* (Radio Communications II)	4
General Education Courses: (See General Education Requirements, page 49)	
American Cultures	
American Institutions/Health Education	
Humanities	
Communications and Analytical Thinking	
Total units required	60

Note:

* This program is offered in alternate years: ET 56A-56B offered every other year.

** Electronics Technology 53 offered Summer Session only.



Certificate of Achievement Electronics Telecommunications Systems

Electronics Technology 50 (Fundamentals of Electronics) or Electronics Technology 85.1, 85.2, 85.3, 85.4	6
Electronics Technology 53** (Fabrication and Repair Techniques) ..	2
Computer Networking Technology 51 (A+ Computer Fundamentals) or Electronics Technology 85.5, 85.6	3-4
Electronics Technology 56A* (Radio Communications I).....	4
Electronics Technology 56B* (Radio Communications II).....	4
Total units required	19-20

Note:

- * This program is offered in alternate years: ET 56A-56B offered every other year.
- ** Electronics Technology 53 offered Summer Session only.

Electronics Technology (ELEC)

General

ELEC 50 **6 UNITS**

FUNDAMENTALS OF ELECTRONICS

Grading Option: OP Transfer: CSU

(May be repeated 3 times)

Fundamentals of DC and AC electronic circuits using resistors, capacitors, inductors, diodes, transistors, and integrated circuits. Measurements using the digital multimeter and oscilloscope. Strongly Recommended: 1 year high school algebra or equivalent. 5 hours lecture, 3 hours laboratory.

ELEC 52 **4 UNITS**

CIRCUITS AND SYSTEMS

Grading Option: OP Transfer: CSU

(May be repeated 3 times)

Analysis and troubleshooting of operational amplifier circuits with negative and positive feedback, such as linear amplifiers, comparators, active filters, non-linear waveshaping circuits, and oscillators. Interfacing to transducers; digital to analog and analog to digital conversion. Linear and switching power regulators. Prerequisite: Electronics Technology 50 (completed with a grade of "C" or higher) or equivalent. 3 hours lecture, 3 hours laboratory.

ELEC 53 **2 UNITS**

FABRICATION AND REPAIR TECHNIQUES

Grading Option: OP Transfer: CSU

(May be repeated 3 times)

Soldering and removal of components on printed circuit boards, including surface mounted components. Prerequisite: Electronics Technology 50 (completed with a grade of "C" or higher). 1 hour lecture, 3 hours laboratory.

ELEC 59 **2 UNITS**

OPTICAL ELECTRONICS

Grading Option: OP Transfer: CSU

Fundamental principles of light, geometric and wave optics, sources of light, displays, optical sensors, fiber optics, and opto-isolators. System applications of optical electronics. Prerequisite: Electronics Technology 50 or equivalent. 1 hour lecture, 3 hours laboratory.

ELEC 70 **2 UNITS**

INTRODUCTION TO ELECTRONICS

Grading Option: OP Transfer: CSU

(May be repeated 3 times)

A survey course in electronic technology. Ohm's Law and fundamental DC and AC circuit analysis; magnetism and capacitance; semiconductor technology with applications; digital building blocks with application to computer technology; survey of the electronic technology fields; use of basic electronic test equipment. Intended for non-majors. Strongly Recommended: Elementary course in algebra. 1 hour lecture, 3 hours laboratory.

Telecommunications

ELEC 55 **3 UNITS**

TELECOMMUNICATION EXAMINATION PREPARATIONS

Grading Option: GR Transfer: CSU

Designed to aid in passing the F.C.C. General Radiotelephone Operator License examination. Electronics theory, radiotelephone operations, and radiotelephone rules and regulations. A requirement for servicing of marine or aviation radio equipment. Prerequisite: Electronics Technology 50 (completed with a grade of "C" or higher) or equivalent. 3 hours.

ELEC 56A **4 UNITS**

RADIO COMMUNICATIONS I

Grading Option: GR Transfer: CSU

Basic modulation techniques, radio transmitters, radio receivers, and the associated circuits employed by each. Circuits include AM, FM, PM, and SSB modulators and detectors, RF amplifiers, oscillators, and PLL circuits, frequency multipliers, voice processing circuits, filters, and squelch circuits. Includes specialized test equipment and the performance of EIA standard tests and measurements. Prerequisite: Electronics Technology 50 (completed with a grade of "C" or higher) or equivalent. 2 hours lecture, 6 hours laboratory.

ELEC 56B **4 UNITS**

RADIO COMMUNICATIONS II

Grading Option: GR Transfer: CSU

A continuation of Electronics Technology 56A with emphasis on advanced circuits, total systems, and new technology. Includes transmission line theory, wave propagation, antenna theory, control systems, digital modulation techniques, transmitter and receiver combining, and electromagnetic interference control. Prerequisite: Electronics Technology 56A (completed with a grade of "C" or higher) or equivalent. 2 hours lecture, 6 hours laboratory.

F.A.C.E.T. Courses

The F.A.C.E.T. (Fault Assisted Circuits for Electronics Training) program is an independent, self-paced, interactive computer-based training program in the field of electronics. This course of study allows students to earn college credit in electronics. Enrollment in the F.A.C.E.T. program is open-ended throughout the semester. Courses numbered 85, 86, and 87 are F.A.C.E.T. courses.

ELEC 85.1 **1.5 UNITS**

DC FUNDAMENTALS

Grading Option: OP Transfer: CSU

(May be repeated 2 times)

Self-paced individualized course using interactive computer instruction on DC circuits with resistors connected in series, parallel, and series-parallel. The use of Ohm's Law, DC power, and use of the digital multimeter. 4.5 hours laboratory.

ELEC 85.2 **1.5 UNITS**

AC1 FUNDAMENTALS

Grading Option: OP Transfer: CSU

(May be repeated 2 times)

Self-paced individualized course using interactive computer instruction on AC circuit measurements, use of the oscilloscope, transformers, RC & RL circuits. Prerequisite: ET 85.1. 4.5 hours laboratory.

ELEC 85.3 **1.5 UNITS**

AC2 FUNDAMENTALS

Grading Option: OP Transfer: CSU

(May be repeated 2 times)

Self-paced individualized course using interactive computer instruction on electronic filters and resonant circuits. Prerequisite: ET 85.2. 4.5 hours laboratory.

ELEC 85.4 **1.5 UNITS**

SEMICONDUCTOR DEVICES

Grading Option: OP Transfer: CSU

(May be repeated 2 times)

Self-paced individualized course using interactive computer instruction on diodes, diode rectification, zener diode voltage regulation, and transistor fundamentals. Prerequisite: ET 85.3. 4.5 hours laboratory.

ELEC 85.5 **1.5 UNITS**

DIGITAL LOGIC FUNDAMENTALS

Grading Option: OP Transfer: CSU

Self-paced individualized course using interactive computer instruction on the fundamentals of digital logic gates and flip-flops. Prerequisite: Electronics Technology 85.4 or 70% minimum test score on pretest. 4.5 hours laboratory.

ELEC 85.6 **1.5 UNITS**

DIGITAL CIRCUITS 1

Grading Option: OP Transfer: CSU

Self-paced individualized course using interactive computer instruction on digital counters, shift registers, and arithmetic circuits. Prerequisite: Electronics Technology 85.5 or 70% minimum test score on pretest. 4.5 hours laboratory.

ELEC 85.7 **2 UNITS**

DIGITAL CIRCUITS 2

Grading Option: OP Transfer: CSU

(May be repeated 2 times)

Self-paced individualized course using interactive computer instruction on decoders, encoders, multiplexers, parity generator/checker, and troubleshooting MSI circuits. Prerequisite: ET 85.6. 6 hours laboratory.

ELEC 86.1 **1.5 UNITS**

OPERATIONAL AMPLIFIER FUNDAMENTALS

Grading Option: OP Transfer: CSU

(May be repeated 2 times)

Self-paced individualized course using interactive computer instruction on the fundamentals of operational amplifiers. Prerequisite: ET 85.4. 4.5 hours laboratory.

ELEC 86.2 **1.5 UNITS**

OPERATIONAL AMPLIFIER APPLICATIONS

Grading Option: OP Transfer: CSU

(May be repeated 2 times)

Self-paced individualized course using computer instruction on operational amplifier applications, such as filters and integrators. Prerequisite: ET 86.1. 4.5 hours laboratory.

ELEC 86.3 **1.5 UNITS**

POWER SUPPLY REGULATION

Grading Option: OP Transfer: CSU

(May be repeated 2 times)

Self-paced individualized course using interactive computer instruction on power supply regulators and IC regulators. Prerequisite: ET 86.2. 4.5 hours laboratory.



ELEC 87.1 1.5 UNITS

DC NETWORK THEOREMS

Grading Option: OP Transfer: CSU

(May be repeated 2 times)

Self-paced individualized course using interactive computer instruction on network theorems, including Kirchoff's voltage and current laws and Thevenin's theorem. Prerequisite: ET 85.1. 4.5 hours laboratory.

ELEC 87.2 1.5 UNITS

TRANSISTOR AMPLIFIER CIRCUITS

Grading Option: OP Transfer: CSU

(May be repeated 2 times)

Self-paced individualized course using interactive computer instruction on common base, common emitter, common collector, RC coupled, transformer coupled, and direct coupled transistor amplifiers. Prerequisite: ET 85.4. 4.5 hours laboratory.

ELEC 87.3 1.5 UNITS

TRANSISTOR POWER AMPLIFIERS

Grading Option: OP Transfer: CSU

(May be repeated 2 times)

Self-paced individualized course using interactive computer instruction on transistor power amplifiers and Darlington pair operation. Prerequisite: ET 87.2. 4.5 hours laboratory.

ELEC 87.4 1.5 UNITS

TRANSISTOR FEEDBACK AMPLIFIERS

Grading Option: OP Transfer: CSU

(May be repeated 2 times)

Self-paced individualized course using interactive computer instruction on transistor feedback amplifiers. Prerequisite: ET 87.3. 4.5 hours laboratory.

ELEC 87.5 1.5 UNITS

FIELD EFFECT TRANSISTORS

Grading Option: OP Transfer: CSU

(May be repeated 2 times)

Self-paced individualized course using interactive computer instruction on JFET and MOSFET operation and applications. Prerequisite: ET 85.4. 4.5 hours laboratory.

ELEC 87.6 1.5 UNITS

THYRISTOR AND PHASE CONTROL CIRCUITS

Grading Option: OP Transfer: CSU

(May be repeated 2 times)

Self-paced individualized course using interactive computer instruction on thyristor operation and use to control electrical power. Prerequisite: ET 87.5. 4.5 hours laboratory.

ELEC 87.7 2 UNITS

32-BIT MICROPROCESSOR

Grading Option: OP Transfer: CSU

(May be repeated 2 times)

Self-paced individualized course using interactive computer instruction on microprocessor operation, data transfer, programming, and interfacing. Prerequisite: ET 85.7. 6 hours laboratory.

Engineering (TRANSFER PREPARATION)

About The Program

Engineers seek to understand and solve a broad range of technological problems faced by society. Engineers are responsible for such projects as converting raw materials and power sources into useful products and systems, developing scientific equipment, taking an abstract idea and making it real, planning and designing the construction of buildings and process plants, and designing the processes and equipment for the microprocessor and optical industries.

Engineering as a profession continues to experience a period of rapid growth, impacting virtually every aspect of our lives. A career in engineering offers many options such as: Aeronautical, Mechanical, Electrical, Optical, Civil, Materials and Chemical Engineering. As society becomes more technologically complex, so do the ever-emerging branches of engineering.

Students interested in majoring in engineering should discuss their course planning with a counselor to ensure they are following the guidelines for transferring to a four-year college.

For program information call, 925.373.4979.



Requirements Engineering (TRANSFER PREPARATION)

Freshman Year

Chemistry 1A* (General College Chemistry)	5
Engineering 10 (Introduction to Engineering).....	2
Engineering 20 (Engineering Graphics).....	2
Engineering 21 (Descriptive Geometry)	3
Mathematics 1 (Analytic Geometry and Calculus I).....	5
Mathematics 2 (Analytic Geometry and Calculus II).....	5
Physics 8A (General Physics I).....	5
Physics 8B (General Physics II).....	5
Computer Science 1 (Computing Fundamentals I)	4-5

Sophomore Year

English 1A (Critical Reading and Composition)	3
Engineering 35 (Statics).....	3
Engineering 44 (Introduction to Circuit Analysis)	4
Engineering 46 (Materials of Engineering)	3
Mathematics 3 (Multivariable Calculus)	5
Mathematics 5 (Differential Equations with Computer Applications).....	3.5
Mathematics 7*** (Elementary Linear Algebra with Computer Applications)	3.5
Mathematics 10*** (Discrete Mathematics).....	4
Physics 8C (General Physics III).....	5
Physics 8D** (General Physics IV)	3
Speech 1 (Fundamentals of Speech Communication).....	3

* Chemical Engineering and Materials Engineering majors should also take Chemistry 1B

** Physics 8D may not be required by some universities for specific engineering majors

***Mathematics 7 and 10 may not be required by some universities for specific engineering majors.

Students interested in pursuing a degree in Optical Science Engineering should take Engineering 15 in the freshman year.

Engineering

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Engineering (ENGR)

ENGR 10 2 UNITS

INTRODUCTION TO ENGINEERING

Grading Option: OP Transfer: CSU, UC*
Introduction to careers, activities, and topics related to the field of engineering, including computer applications to design and problem solving. Strongly Recommended: Eligibility for English 1A or 52A. 2 hours. * Transfer unit limitations, see page 61

ENGR 15 4 UNITS

INTRODUCTION TO OPTICAL SCIENCE AND ENGINEERING

Grading Option: GR Transfer: CSU, UC*
An introduction to the field of optical science and engineering. Basic concepts of the manipulation of light. Discussion of the opportunities and professional practice in the field including: application of engineering principles, ethics, and responsibilities. 3 hours lecture, 3 hours laboratory. * Transfer unit limitations, see page 61

ENGR 20 2 UNITS

ENGINEERING GRAPHICS

Grading Option: GR Transfer: CSU, UC
Principles of graphics in engineering including lettering, geometric construction orthographic projection, pictorial drawing, dimensioning, tolerances, section views, auxiliary views, and sketching. Strongly Recommended: Mathematics 36 or Mathematics 38 (may be taken concurrently), and English 1A or 52A. 1 hour lecture, 3 hours laboratory.

ENGR 21 3 UNITS

DESCRIPTIVE GEOMETRY

Grading Option: GR Transfer: CSU, UC
Graphical solutions to three-dimensional problems with application to various engineering disciplines. Prerequisite: Engineering 20 (completed with a grade of "C" or higher.) 2 hours lecture, 3 hours laboratory.

ENGR 35 3 UNITS

STATICS

Grading Option: GR Transfer: CSU, UC
Force systems under equilibrium conditions, rigid body structures; vector; graphical and algebraic solution of problems. Prerequisite: Physics 8A, Mathematics 2, Engineering 21 (all completed with a grade of "C" or higher). 2 hours lecture, 3 hours laboratory. (CAN ENGR 8)

ENGR 44 4 UNITS

INTRODUCTION TO CIRCUIT ANALYSIS

Grading Option: GR Transfer: CSU, UC
Analysis of introductory engineering AC and DC circuits. Natural, forced, and complete circuit response. Prerequisite: Physics 8A (completed with a grade of "C" or higher.). 3 hours lecture, 3 hours laboratory.

ENGR 46 (Formerly ENGR 45)

3 UNITS

MATERIALS OF ENGINEERING

Grading Option: GR

Transfer: CSU, UC

Application of principles of chemistry and physics to the properties of engineering materials; the relation of microstructure to mechanical, electrical, thermal and corrosion properties of metals; ceramics and polymers. Prerequisites: Physics 8A and Chemistry 1A (both completed with a grade of "C" or higher). 2 hours lecture, 3 hours laboratory. Application of principles of chemistry and physics to the properties of engineering materials, the relation of microstructure to mechanical, electrical, thermal and corrosion properties of metals, ceramics and polymers. Prerequisite: Physics 8A (may be taken concurrently), Chemistry 1A, and Engineering 21 (all completed with a grade of "C" or higher). 2 hours lecture, 3 hours laboratory.

English (ENG)

Composition and Literature

ENG 1A 3 UNITS

CRITICAL READING AND COMPOSITION

Grading Option: GR Transfer: CSU, UC
Integrated approach to reading, writing, and critical thinking intended to develop ability to read and write complex, college-level prose. Examination of ideas in relation to individuals' world view and contexts from which these ideas arise. Some research required. Prerequisite: English 100B or 104 or equivalent or an appropriate skill level demonstrated through the English assessment process. 3 hours. (CAN ENGL 2; ENGL 1A + ENGL 3 = CAN ENGL SEQ A)

ENG 3 3 UNITS

COMPOSITION AND ANALYSIS OF LITERATURE

Grading Option: GR Transfer: CSU, UC
Continues instruction in the composing and revision process. Develops critical and analytical reading and writing skills based on the study of fiction, drama and poetry; emphasizes characteristics of both the genre and the individual work; explores the variety of literary approaches to human experience. Prerequisite: English 1A completed with a grade of "C" or higher. 3 hours. (CAN ENGL 4; ENGL 1A + ENGL 3 = CAN ENGL SEQ A)

ENG 4 3 UNITS

CRITICAL THINKING AND WRITING ABOUT LITERATURE

Grading Option: GR Transfer: CSU, UC
Develops critical thinking, reading, and writing skills as they apply to the analysis of fiction, poetry and drama; literary criticism; and related non-fiction from diverse cultural sources and perspectives. Emphasis on the techniques and principles of effective written argument as they apply to literature. Some research required. Prerequisite: English 1A (completed with a grade of "C" or higher). 3 hours.

ENG 7 3 UNITS

CRITICAL THINKING AND WRITING ACROSS DISCIPLINES

Grading Option: GR Transfer: CSU, UC
Develops critical thinking, reading, and writing skills as they apply to the textual analysis of primary and secondary book-length works from a range of academic and cultural contexts. Emphasis on the techniques and principles of effective written argument in research-based writing across disciplines. Prerequisite: English 1A (completed with a grade of "C" or higher). 3 hours.

ENG 11 3 UNITS

INTRODUCTION TO CREATIVE WRITING

Grading Option: OP Transfer: CSU
Elements of creative writing, including narrative, verse and dialogue, using materials drawn from individual's own work and selected texts. Strongly recommended: Eligibility for English 1A. 3 hours.

ENG 12 3 UNITS

THE CRAFT OF WRITING FICTION

Grading Option: OP Transfer: CSU
(May be repeated 2 times)

Practice in writing fiction. Developing internal and external sources for stories and novels; biographical sources, characterization, plotting, points of view, narrative techniques; analysis and criticism of published writing and individual's own work. Strongly recommended: Eligibility for English 1A or 52A. 3 hours.

ENG 13 3 UNITS

THE CRAFT OF WRITING - POETRY

Grading Option: OP Transfer: CSU
(May be repeated 2 times)

Practice in writing poetry, using materials drawn from published poetry and individual's own work for analysis and criticism, with a focus on techniques of revision. Strongly recommended: Eligibility for English 1A or 52A. 3 hours. Transfer: CSU; GE: AA/AS

ENG 19 1 UNIT

LITERARY MAGAZINE WORKSHOP

Grading Option: OP
(May be repeated 2 times)

Practical workshop training in the managing, editing, and printing of a literary supplement and/or magazine. Workshop enrollment constitutes the staff of the magazine. 1 hour.

ENG 20 3 UNITS

STUDIES IN SHAKESPEARE

Grading Option: OP Transfer: CSU, UC
Readings of the sonnets and representative comedies, histories, tragedies, and romances of William Shakespeare, with attention to the early, middle and late phases of his art and to the Age of Elizabeth. Strongly Recommended: English 3 or 4. 3 hours.

ENG 23 3 UNITS

NATIVE AMERICAN LITERATURE

Grading Option: OP Transfer: CSU, UC*
Introduction to traditional forms of Native American narrative and to current literature by Native American writers. Readings include creation myths, hero legends, journey to the other world tales and Trickster tales as well as 20th century literary works which reflect Native American concerns in poem and novel. Strongly recommended: Eligibility for English 1A or 52A. 3 hours. * Transfer unit limitations, see page 61

ENG 27 3 UNITS

FROM FOLKLORE TO LITERATURE

Grading Option: GR Transfer: CSU, UC*
Heroes and legendary creatures in folklore and literature. Reading and critical analysis of modern works which grow out of myth, legend, and folk tale. Consideration of folklore's influence on contemporary culture. Strongly recommended: Eligibility for English 1A or 52A. 3 hours. * Transfer unit limitations, see page 61

ENG 32 3 UNITS**U.S. WOMEN'S LITERATURE**

Grading Option: GR Transfer: CSU, UC
Chronicles the expression of U.S. women authors through readings in a variety of genres such as fiction, poetry, drama, and the essay. Explores works by authors of varied racial and ethnic backgrounds in an effort to understand the diversity of women's voices, especially in the 20th century. Strongly recommended: Eligibility for English 1A. 3 hours.

ENG 38 3 UNITS**19TH AND 20TH CENTURY BRITISH LITERATURE**

Grading Option: OP Transfer: CSU, UC
(May be repeated 3 times)
Survey of British poetry, drama and prose fiction studied in the context of the important historical and cultural events of the last two centuries, including but not limited to the rise of science, the impact of industrialism and colonialism, the consequences of the two world wars and the collapse of the British Empire. Strongly Recommended: Eligibility for English 1A. 3 hours.

ENG 43 4 UNITS**PROFESSIONAL COMMUNICATIONS**

Grading Option: OP Transfer: CSU
This course is designed to help students develop and refine the written and oral communication skills necessary to communicate effectively in a business environment. This will be accomplished through the planning, composing, and evaluating of written communication; report writing; and oral presentations. Additional focus will be placed on developing interpersonal skills, team participation skills, and professionalism. Students who have completed or are enrolled in Business 43, Computer Networking Technology 43, Computer Information Systems 43, Computer Science 43, or Speech 43 may not receive credit. Strongly recommended: Eligibility for English 1A. 4 hours.

ENG 44 3 UNITS**LITERATURE OF THE AMERICAN WEST**

Grading Option: OP Transfer: CSU, UC
Critical analysis of the cultural and historical experiences of diverse peoples of the American West as expressed in their literatures, including the novel, short story, poetry, autobiography, memoirs, as-told-to narratives, and secondary works. Exploration of interrelationships among peoples and cultures of the West, considering place and community, gender, and ethnicity as given voice in literature. Study of the works of at least three of the following groups: African Americans, Asian Americans, European Americans, Hispanic Americans, Native Americans. Emphasis upon techniques of critical review of and response to literary works, including gaining understanding of one's identity as a Westerner and an American. 3 hours.

ENG 45 3 UNITS**STUDIES IN FICTION**

Grading Option: OP Transfer: CSU, UC
(May be repeated 3 times)
Form, development, and cultural insights of the novel and short story; exploration of particular themes or periods as reflected in works of fiction. Strongly Recommended: Eligibility for English 1A or 52A. 3 hours.

ENG 47 3 UNITS**THE BIBLE**

Grading Option: OP Transfer: CSU, UC
Literature of the Old and New Testaments, their styles, genres, background, authors, events, and language. Strongly Recommended: Eligibility for English 1A. 3 hours.

ENG 52A 3 UNITS**ESSENTIALS OF COMMUNICATION**

Grading Option: OP Transfer: CSU
Development of reading and writing skills with a focus on academic as well as career-oriented materials. Designed for certificate or associate degree majors. Strongly Recommended: English 100B or 104 or appropriate skill level demonstrated through the English assessment process. 3 hours.

ENG 70 3 UNITS**REPORT WRITING**

Grading Option: OP Transfer: CSU
Preparation of reports in industrial and technical fields, including explanations, instructions and other kinds of writings, based on the demands of the occupations. Strongly Recommended: Eligibility for English 1A or 52A. 3 hours.

Preparatory Reading and Writing

Important Note: Students not yet eligible for English 1A should check with a counselor to determine whether their English prerequisite will be English 100A/100B or English 104.

ENG 100A 4 UNITS**READING - REASONING, AND WRITING I**

Grading Option: C/N
Preparation in English for success in college. Integrates reading, critical thinking, and writing assignments, using materials that present a variety of perspectives from across the curriculum. Strongly recommended: Appropriate skill level demonstrated through the English assessment process. 3 hours lecture, 3 hours laboratory.

ENG 100B**4 UNITS****READING - REASONING, AND WRITING II**

Grading Option: C/N

Continues preparation in English for success in college. Integrates reading, critical thinking, and writing assignments, using materials that present a variety of perspectives from across the curriculum. Prerequisite: English 100A (completed with a grade of "C" or higher). 3 hours lecture, 3 hours laboratory.

ENG 104**4 UNITS****READING, REASONING, AND WRITING I AND II ACCELERATED**

Grading Option: C/N

An accelerated one-semester preparation in English for success in college. Integrates reading, critical thinking and writing assignments, using materials that present a variety of perspectives from across the curriculum. Strongly recommended: Appropriate skill level demonstrated through the English assessment process. 3 hours lecture, 3 hours laboratory.



English as a Second Language (ESL)



ESL 23 **3 UNITS**

COLLEGE GRAMMAR

Grading Option: OP Transfer: CSU

This is a one semester advanced grammar course for academic purposes designed to enable students to use linguistic forms accurately, meaningfully and appropriately in both oral and written expression. The course includes 1) verb tense in discourse, 2) relative clauses, 3) modal perfect verbs, 4) hypothetical statements, 5) perfect infinitives, 6) subjunctive verbs in clauses, 7) grammar in discourse. Prerequisite: Eligibility for ESL 24 or appropriate skill level demonstrated through the ESL assessment process. Students are advised to enroll concurrently in ESL 23 and 24. 3 hours lecture.

ESL 24 **5 UNITS**

ADVANCED READING AND COMPOSITION

Grading Option: OP Transfer: CSU, UC*

This is the first semester of a one-year advanced reading and writing course for academic purposes. Emphasis is on critical reading techniques and writing expository essays as well as on grammar and vocabulary development. Prerequisite: ESL 120B, 121B, and 122B or an appropriate skill level demonstrated through the ESL assessment process. 5 hours. * *Transfer unit limitations, see page 61*

ESL 25 **5 UNITS**

ADVANCED READING AND COMPOSITION

Grading Option: OP Transfer: CSU, UC*

This is the second semester of a one-year reading and writing course for academic purposes. Emphasis is on critical reading and techniques of exposition, analysis and argumentation. Prerequisite: ESL 24 or an appropriate skill level demonstrated through the ESL assessment process. 5 hours. * *Transfer unit limitations, see page 61*

ESL 26 **3 UNITS**

ADVANCED EDITING

Grading Option: OP Transfer: CSU

(May be repeated 1 time)

This course is designed to increase student awareness of their own use of written language, strengthen their linguistic monitors and give them practice in editing strategies which will enable them to use linguistic forms accurately, meaningfully and appropriately in written expression. Prerequisite: Eligibility for ESL 24. 3 hours.

ESL 120A **4 UNITS**

INTERMEDIATE GRAMMAR

Grading Option: C/N

(May be repeated 1 time)

This is the first semester of a one-year course in intermediate grammar for academic purposes designed to enable students to use linguistic forms accurately, meaningfully, and appropriately in both oral and written expression. The course introduces 1) clauses, 2) modal auxiliaries, 3) verb tense and aspect, 4) passive voice, 5) phrasal verbs, 6) hypothetical conditionals. Prerequisite: ESL 130B or appropriate skill level demonstrated through the ESL assessment process. Students are advised to enroll concurrently in ESL 120A, 121A, and 122A. 4 hours.

ESL 120B **4 UNITS**

INTERMEDIATE GRAMMAR

(May be repeated 1 time)

Grading Option: C/N

This is the second semester of a one-year intermediate grammar for academic purposes designed to enable students to use linguistic forms accurately, meaningfully and appropriately in both oral and written expression. The course introduces 1) overview of verb tense and aspect, 2) gerunds and infinitives, 3) clauses, 4) hypothetical statements, 5) past modals, 6) verbs with subjunctive, 7) grammar in discourse. Prerequisite: ESL 120A or appropriate skill level demonstrated through the ESL assessment. 4 hours.

ESL 121A **4 UNITS**

INTERMEDIATE WRITING

Grading Option: C/N

(May be repeated 1 time)

The first semester of a one-year course in intermediate academic writing. Designed to enable students to use linguistic forms accurately, meaningfully, and appropriately in written expression. Focus on development of skills in writing sentences, paragraphs and short essays, development of cultural understanding, vocabulary, and fluency through a variety of reading and writing tasks. Prerequisite: ESL 131B or appropriate skill level demonstrated through the ESL assessment process. Students are advised to enroll concurrently in ESL 120A, 121A, and 122A. 4 hours.

ESL 121B**4 UNITS****INTERMEDIATE WRITING**

Grading Option: C/N

(May be repeated 1 time)

The second semester of a one-year course in intermediate academic writing. Designed to enable students to use linguistic forms accurately meaningfully, and appropriately in written expression. Focus on the development of skills in writing sentences, paragraphs and short essays, development of cultural understanding, vocabulary, and fluency through a variety of reading and writing tasks. Prerequisite: ESL 121A or an appropriate skill level demonstrated through the ESL assessment process. Students are advised to enroll concurrently in ESL 120B, 121B, and 122B. 4 hours.

ESL 122A**3 UNITS****INTERMEDIATE READING**

Grading Option: C/N

(May be repeated 1 time)

The first semester of a one-year intermediate reading course for academic purposes which focuses on improving strategies for reading comprehension and analysis, flexibility, interactive reading, and vocabulary development. Activities include reading graphs and charts, outlining, thinking about and discussing reading selections, and analysis of purpose and style. Topics include both fiction and non-fiction. Prerequisite: ESL 130B and 132B or an appropriate skill level demonstrated through the ESL assessment process. Students are advised to enroll concurrently in ESL 120A, 121A, and 122A. 3 hours.

ESL 122B**3 UNITS****INTERMEDIATE READING**

Grading Option: C/N

(May be repeated 1 time)

The second semester of a one-year intermediate reading course for academic purposes which focuses on improving strategies for reading comprehension and analysis, flexibility, interactive reading, and vocabulary development. Activities include reading graphs and charts, outlining, notetaking, analyzing purpose and style and responding. Topics include both fiction and non-fiction. Prerequisite: ESL 122A or appropriate skill level demonstrated through the ESL assessment process. Students are advised to enroll concurrently in ESL 120B, 121B, and 122B. 3 hours.

ESL 126**2 UNITS****PRONUNCIATION OF ENGLISH**

Grading Option: C/N

(May be repeated 1 time)

Intensive practice in recognizing and pronouncing the sounds of American English with emphasis on words and phrases, stress, intonation, phrasing, reduction. Attention to individual as well as group priorities. 2 hours lecture, 1 hour laboratory.

**ESL 130A****4 UNITS****BEGINNING GRAMMAR**

Grading Option: C/N

(May be repeated 1 time)

This is the first semester of a one-year course in beginning grammar for academic purposes designed to enable students to use linguistic forms accurately, meaningfully and appropriately in both oral and written expression. The course introduces 1) simple sentences, 2) modifiers, 3) phrases, and 4) verb tenses, especially simple present and present progressive. Strongly recommended: appropriate skill level demonstrated through the ESL assessment process. Students are advised to enroll concurrently in ESL 130A, 131A, 132A, and 133A. 4 hours.

ESL 130B**4 UNITS****BEGINNING GRAMMAR**

Grading Option: C/N

(May be repeated 1 time)

The second semester of a one-year course in beginning grammar for academic purposes. Designed to enable students to use linguistic forms accurately, meaningfully and appropriately in both oral and written expression. Addresses form, meaning, and use of each grammatical structure. Focus on 1) basic sentences, 2) modifiers, 3) phrases, and 4) verb tense and aspect. Prerequisite: ESL 130A or appropriate skill level demonstrated through the ESL assessment process. Students are advised to enroll concurrently in ESL 130B, 131B, 132B, and 133B. 4 hours.

ESL 131A**4 UNITS****BEGINNING WRITING**

Grading Option: C/N

(May be repeated 1 time)

This is the first semester of a one-year course in beginning academic writing. The course is designed to enable students to use linguistic forms accurately, meaningfully, and appropriately in written expression. Classes will focus on the development of skills in writing simple sentences and short paragraphs, development of cultural understanding, vocabulary, and fluency through a variety of writing tasks. Strongly recommended: Appropriate skill level demonstrated through the ESL assessment process. Students are advised to enroll concurrently in ESL 130A, 131A, 132A, and 133A. 4 hours.

English as a Second Language

ESL 131B 4 UNITS

BEGINNING WRITING

Grading Option: C/N

(May be repeated 1 time)

The second semester of a one-year course in beginning academic writing. Designed to enable students to use linguistic forms accurately, meaningfully, and appropriately in written expression. Focus on the development of skills in writing sentences and paragraphs, development of cultural understanding, vocabulary, and fluency through a variety of writing tasks. Prerequisite: ESL 131A or appropriate skill level as demonstrated through the ESL assessment process. Students are advised to enroll concurrently in ESL 130B, 131B, 132B, and 133B. 4 hours.

ESL 132A 3 UNITS

BEGINNING READING

Grading Option: C/N

(May be repeated 1 time)

This is the first semester of a one-year beginning reading course which focuses on developing strategies for reading comprehension and flexibility, interactive reading, and vocabulary development for academic purposes. Strongly recommended: Appropriate skill level demonstrated through ESL assessment process. Students are advised to enroll concurrently in ESL 130A, 131A, 132A, and 133A. 4 hours.

ESL 132B 3 UNITS

BEGINNING READING

Grading Option: C/N

(May be repeated 1 time)

The second semester of a one-year beginning reading course for academic purposes which focuses on developing strategies for reading comprehension and flexibility, interactive reading, and vocabulary development. Students move beyond literal meaning to develop strategies for interpreting meaning, tone, purpose and style. Prerequisite: ESL 132A or appropriate skill level demonstrated through the ESL assessment process. 3 hours.

ESL 133A 3 UNITS

BEGINNING ORAL COMMUNICATION

Grading Option: C/N

(May be repeated 1 time)

This is the first semester of a one-year course in beginning oral communication. This course will enable students to use linguistic forms accurately, meaningfully and appropriately, emphasizing conversational skills: listening and speaking in small groups, using new grammar structures, learning new words and expressions, comprehending and using idiomatic expressions. Strongly recommended: Appropriate skill level demonstrated through ESL assessment process. Students are advised to enroll concurrently in ESL 130A, 131A, 132A, and 133A. 3 hours.

ESL 133B 3 UNITS

BEGINNING ORAL COMMUNICATION

Grading Option: C/N

(May be repeated 1 time)

The second semester of a one-year course in beginning oral communication. This course will enable students to use linguistic forms accurately, meaningfully and appropriately, emphasizing conversational skills: listening and speaking in small groups, using new grammar structures, learning new words and expressions, learning and using idiomatic expressions. Prerequisite: ESL 133A or appropriate skill level demonstrated through the ESL assessment process. Students are advised to enroll concurrently in ESL 130B, 131B, 132B, and 133A. 3 hours.

Fire Service Technology

Degree
AS – Fire Service Technology

Certificate
Fire Service Technology

About the Program

Fire protection is a highly specialized professional field in public service or private industry requiring extensive knowledge and use of scientific principles. This program teaches successful application of the fundamental principles of fire protection including suppression and extinguishment of fires, rescue, emergency medical services, prevention techniques and practices, preplanning for fire protection, and disaster control. Designed for direct job entry, this program provides technical knowledge and the ability to work within an organized system at a fire or other emergency scene. While units in the program are transferable to many institutions, students should consult a counselor for information.

Important Note

The following courses satisfy part of the requirements for the State Fire Officer I Certification:

FST 71A, 71B, 72, 73A, 73B, 74A, 75A, 75B

FST 73A and 73B Preparation for Level I Fire Prevention Officer Certification

FST 74A Preparation for Level I Fire Investigator Certification

FST 75A and 75B Preparation for Level I Fire Instructor Certification

AS – Fire Service Technology

Freshman Year

Fire Service Technology 50* (Fire Protection Organization)	3
Fire Service Technology 51* (Fire Service Operations).....	3
Fire Service Technology 52* (Fire Safety and Public Education)	3
Fire Service Technology 53* (Fire Behavior and Combustion)	3
Fire Service Technology 54 (Fire Prevention Technology)	3
Fire Service Technology 65* (First Responder Hazardous Materials/ Incident Command ICS 200).....	3
Fire Service Technology 86* (Wildland Interface Fire Fighting)	2
Health 61* (Emergency Response).....	2.5
General Education Courses: (See General Education Requirements, page 49)	
Physical Education	
English Composition (Language and Rationality)	
Mathematics	
Social and Behavioral Sciences	
Natural Science	

Sophomore Year

Fire Service Technology 55 (Fire Protection Equipment and Systems) ...	3
Fire Service Technology 56 (Fundamentals of Building Construction for Fire Protection)	3
Health 81 (EMT I (Basic)).....	6.5
Fire Service Technology 90A (Firefighter I Certification Preparation A)	2
Fire Service Technology 90B (Firefighter I Certification Preparation B)	2
Fire Service Technology 90C (Firefighter I Certification Preparation C)	2
General Education Courses: (See General Education Requirements, page 49)	
American Cultures	
American Institutions/Health Education	
Humanities	
Communications and Analytical Thinking	
Total Units Required.....	60

* Classes so marked are required for entry into the Fire Service Technology 90A, 90B, and 90C courses (Fire Fighter I Certification Preparation)



Fire Service Technology

Certificate of Achievement Fire Service Technology

Fire Service Technology 50** (Fire Protection Organization)	3
Fire Service Technology 51** (Fire Service Operations).....	3
Fire Service Technology 52** (Fire Safety and Public Education).....	3
Fire Service Technology 53** (Fire Behavior and Combustion).....	3
Fire Service Technology 54 (Fire Prevention Technology)	3
Fire Service Technology 55 (Fire Protection Equipment and Systems)...	3
Fire Service Technology 56 (Fundamentals of Building Construction for Fire Protection).....	3
Health 61* (Emergency Response)	2.5
Health 81 EMT 1 (Basic)	6.5
Electives*	2-3
Total Units Required.....	32-33

*Electives

Select from the following for a minimum of 2 units:

Fire Service Technology 65 (First Responder Hazardous Materials/
Incident Command ICS 200)

Fire Service Technology 74A (Fire Investigation 1A)

Fire Service Technology 86 (Wildland Interface Fire Fighting)

**Fulfills the Fire Fighter I Certification requirements and required
for entry into the Fire Service Technology 90A, 90B, and 90C courses
(Fire Fighter I Certification Preparation)

Fire Service Technology (FST)

Fire Service Technology courses may be scheduled alternating
years. Students may be required to take day and evening classes to
complete the Associate Degree.

FST 50 **3 UNITS**

FIRE PROTECTION ORGANIZATION

Grading Option: GR Transfer: CSU

Introduction to fire protection; career opportunities in fire protection
and related fields; philosophy and history of fire protection; fire
loss analysis; organization and function of public and private fire
protection services; fire departments as part of local government; laws
and regulations affecting the fire service; fire service nomenclature;
specific fire protection systems; basic fire chemistry and physics;
introduction to fire protection systems, introduction to fire strategy
and tactics. 3 hours lecture, plus a total of 12 hours laboratory for
the semester.

FST 51 **3 UNITS**

FIRE SERVICE OPERATIONS

Grading Option: GR Transfer: CSU

Fundamentals of fire department organization, management and
resources; fire company organization; resources to control various
emergencies; multi-agency coordinating systems; support and
regulatory agencies; strategy and tactics applied to structural fire

fighting; wildland fire fighting and hazardous material emergencies;
and safety conditions to be considered. Prerequisite: Fire Service
Technology 50 (completed with a grade of "C" or higher). 3 hours
lecture, plus a total of 12 hours laboratory for the semester.

FST 52 **3 UNITS**

FIRE FIGHTER SAFETY AND PUBLIC EDUCATION

Grading Option: GR

Assessing fire dangers and handling common fire situations in the
home and in the work place; risk abatement and personal preparation
for unforeseen fire emergencies; roles and responsibilities in
educating the public on fire safety. 3 hours.

FST 53 **3 UNITS**

FIRE BEHAVIOR AND COMBUSTION

Grading Option: GR Transfer: CSU

Theory and fundamentals of why fires start, spread, and are controlled.
An in depth study of fire chemistry and physics fire characteristics of
materials, extinguishing agents, and fire control techniques. 3 hours.

FST 54 **3 UNITS**

FIRE PREVENTION TECHNOLOGY

Grading Option: GR Transfer: CSU

Provides fundamental information regarding the history and
philosophy of fire prevention, organization and operation of a fire
prevention bureau, use of fire codes, identification and correction
of fire hazards, and the relationships of fire prevention with built-in
fire protection systems, fire investigation and fire safety education.
Provides skills necessary for California Fire Service Training and
Education System, Certified Firefighter I and Fire Inspector I.
Prerequisite: Fire Service Technology 50 (completed with a grade of
"C" or higher). 3 hours.

FST 55 **3 UNITS**

FIRE PROTECTION EQUIPEMENT AND SYSTEMS

Grading Option: GR Transfer: CSU

History and development of the Uniform Fire Code; features, design,
and operations of fire alarm systems and smoke detection systems;
means and adequacy of required exiting systems. Installation
and maintenance of automatic, manual, and other private fire
extinguishing equipment, heat and smoke control systems, water or
sprinkler supply, water supply for fire protection and portable fire
extinguishers. 3 hours.

FST 56 **3 UNITS**

FUNDAMENTALS OF BUILDING CONSTRUCTION FOR FIRE PROTECTION

Grading Option: OP Transfer: CSU

Study of the components of building construction that relate to fire/life
safety. Elements of construction and design of structures are shown to
be key factors when inspecting buildings, preplanning fire operations,
and operating at fires/collapse emergencies. Development and
evolution of building and fire codes will be studied in relationship
to past fire/collapses in residential, commercial, and industrial
occupancies. Prerequisite: Fire Service Technology 50. 3 hours.

FST 64A **2 UNITS**

HAZARDOUS MATERIALS I

Grading Option: GR Transfer: CSU
Storage, handling laws, standards, and fire fighting practices pertaining to hazardous solids, liquids and gases. Includes review of chemistry of hazardous materials. Prerequisite: Fire Service Technology 50 (completed with a grade of "C" or higher). 3 hours.

FST 64B **2 UNITS**

HAZARDOUS MATERIALS II

Grading Option: GR Transfer: CSU
Knowledge of organic and inorganic materials, proper techniques to safeguard personnel and public. Emphasis on radioactive hazards. Prerequisite: Fire Service Technology 64A (completed with a grade of "C" or higher). 3 hours.

FST 65 **3 UNITS**

FIRST RESPONDER HAZARDOUS MATERIALS/INCIDENT COMMAND ICS200

Grading Option: GR Transfer: CSU
Hazard recognition and identification; incident response safety procedures. Response to hazardous materials emergencies. Emphasis on skills and knowledge necessary to protect lives, property, and the environment. Meets the California Specialized Training Institute's requirements for Hazardous Materials First Responder Operational and Hazmat First Responder "Decon" Certifications under California Government Code 1503. Principles of Incident Command System, basic ICS structure and common responsibilities. Meets the State Fire Marshall's Office ICS 200 Certification Requirement. Cultural diversity including discrimination and harassment laws and regulations. Course complies with State Board of Fire Services requirements (1999). Strongly recommended: Fire Service Technology 53. 3 hours lecture, 12 hours total laboratory.

FST 70A **2 UNITS**

BASIC RESCUE PRACTICES

Grading Option: GR Transfer: CSU
Fire incident search and evacuation principles. Implementation of auto incident safety, access, first aid, extrication and removal operations. Wildland incident search procedures, knot tying and slope evacuation skills. Simulated automobile incident rescue exercises. Strongly Recommended: Fire Service Technology 90A and 90B (Fire Fighter-1) or active member of paid or volunteer fire department. 2 hours.

FST 70B **2 UNITS**

ADVANCED RESCUE PRACTICES

Grading Option: GR Transfer: CSU
Continuation of skills and knowledge from Fire Service Technology 70A. Application of triage principles. Implementation of multi-casualty incident safety, access, first aid, extrication and removal operations. Advanced wildland incident vertical slope lowering and hoisting skills. Structure collapse shoring, debris tunneling and trench collapse patient recovery techniques. Includes simulated structure collapse rescue and incident command exercises. Prerequisite: Fire

Service Technology 70A (completed with a grade of "C" or higher). 1 hour lecture, 3 hours laboratory.

FST 71A **2 UNITS**

FIRE COMMAND 1A

Grading Option: GR Transfer: CSU
Provides fire company officers with information and experience in command and control techniques. Emphasis on decision making, the act of commanding, the authority of command. Satisfies part of the requirements for the State Fire Officer I Certification. 40 total hours.

FST 71B **2 UNITS**

FIRE COMMAND 1B

Grading Option: GR Transfer: CSU
Provides company officers with information and experience in command and control techniques. Emphasis on decision making and appropriate use of resources for the first arriving company officer at hazardous material incidents. Satisfies part of the requirements for the State Fire Officer I Certification. 40 total hours.

FST 72 **2 UNITS**

FIRE SERVICE MANAGEMENT

Grading Option: GR Transfer: CSU
Development of skills and knowledge necessary to make the transition from a specialist or supervisory role to a managerial role. Preparation for State Fire Officer I certification. 40 total hours.

FST 73A **2 UNITS**

FIRE PREVENTION OFFICER IA

Grading Option: GR Transfer: CSU
Principles of fire prevention. Preparation for Fire Prevention Officer I Certification. 40 total hours.

FST 73B **2 UNITS**

FIRE PREVENTION OFFICER IB

Grading Option: GR Transfer: CSU
Private fire protection systems; code requirements for access and egress; life safety factors. Preparation for the Fire Prevention Officer I Certification. Prerequisite: Fire Service Technology 73A (completed with a grade of "C" or higher). 40 total hours.

FST 74A **2 UNITS**

FIRE INVESTIGATION 1A

Grading Option: GR Transfer: CSU
Application of fire investigation techniques relating to different types of fires. 40 total hours.

FST 75A **2 UNITS**

FIRE INSTRUCTOR IA

Grading Option: GR Transfer: CSU
Methods and techniques to help fire service personnel select, develop, and organize materials for in-service programs. Designed for fire company officers who conduct in-service training programs. Prerequisite: Fire Service Technology 50 (completed with a grade

Fire Service Technology

of "C" or higher) or employment in the Fire Service. 32 total hours lecture, 8 total hours demonstration laboratory. 40 total hours.

FST 75B 2 UNITS

FIRE INSTRUCTOR IB

Grading Option: GR Transfer: CSU

A continuation of Fire Service Technology 75A. Practice in the development, implementation, and evaluation of inservice training programs. Prerequisite: Fire Service Technology 75A (completed with a grade of "C" or higher). 32 total hours lecture, 8 total hours demonstration laboratory. 40 total hours.

FST 86 2 UNITS

WILDLAND INTERFACE FIRE FIGHTING

Grading Option: GR

Factors affecting wild land fire, prevention, fire behavior, and control techniques. Emphasis on organization, weather patterns, and equipment usage, safety and wildland fire behavior. 2 hours lecture, 12 hours total laboratory.

FST 90A 2 UNITS

FIRE FIGHTER-1 CERTIFICATION PREPARATION

Grading Option: GR

Development of individual skills and basic knowledge necessary to perform the functions of a fire fighter. Practice in donning breathing apparatus, knot tying, placing ladders, pulling hose, making water supply connections and using the incident command system. Prerequisite: Fire Service Technology 50, 51, 52, and 53, 65, 86, Health 61 or proof of current completion of an Emergency Medical Technician Program (all courses completed with a grade of "C" or higher). 24 total lecture hours, 40 total hours laboratory.

FST 90B 2 UNITS

FIRE FIGHTER-1 CERTIFICATION PREPARATION

Grading Option: GR

Continuation of skills and basic knowledge necessary to perform the functions of a fire fighter, engineer and captain within a fire attack team. Practice in donning breathing apparatus, knot tying, placing ladders, pulling hose, making water supply connections and using the incident command system. Prerequisite: Fire Service Technology 90A (completed with a grade of "C" or higher). 24 total lecture hours, 40 total hours laboratory.

FST 90C 2 UNITS

FIRE FIGHTER-1 CERTIFICATION PREPARATION

Grading Option: GR

Continuation of skills and basic knowledge necessary to perform the functions of a fire attack team, in multiple company exercises, which include: hose and ladder evolutions; salvage and overhaul techniques; fire attack, control and extinguishment techniques for various situations. Fire fighter-1 Graduation Certificate awarded upon successful completion. Students with six months paid experience or 12 months volunteer/work experience may apply for the State Certificate, with proof of current completion of a valid Emergency Medical Technician Program. Prerequisite: Fire Service Technology

90B (completed with a grade of "C" or higher). 24 total hours lecture, 40 total hours laboratory.

FST 92

4 UNITS

FIRE FIGHTER-II CERTIFICATION PREPARATION

Grading Option: GR

Manipulative and technical training in fire protection water supply, self-contained breathing apparatus, fire service equipment inspection and maintenance, advanced hose and ladder operations, fire attack and control procedures, and radiological monitoring. Designed to develop the abilities of the employed or volunteer fire fighter to perform the objectives stated in the Fire Fighter II Certification guidelines. Academy Certificate, EMT Certificate. Prerequisite: Fire Service Technology 54, 55, 70B (all completed with grade of "C" or higher) and proof of eligibility for/or possession of a State of California Fire Fighter I Certificate. May substitute the State Heavy Rescue course and a Vehicle Extrication course for the 70A and 70B requirements. 3.5 hours lecture, 2 hours laboratory.

FST 95

1-3 UNITS

WORK EXPERIENCE

Grading Option: GR Transfer: CSU

(May be repeated 3 times; refer to page 192 for program requirements.)

College supervised on-the-job training while working in a fire service related occupation. Prerequisite: State Fire Fighter I Academy Certificate, EMT Certificate. Corequisite: Fire Service Technology 96. 5-15 hours each week.

FST 96

1 UNIT

WORK EXPERIENCE SEMINAR

Grading Option: GR Transfer: CSU

(May be repeated 3 times; refer to page 192 for program requirements.)

Coordination of curriculum with college supervised part-time or full-time employment, or volunteer work in the fire service field. Includes case studies, job related problems, cases and presentations, and material related to employment, organization and management; emphasis on building working relationships with supervisors, subordinates, and co-workers. Prerequisite: State Fire Fighter I Academy Certificate, EMT Certificate. Corequisite: Fire Service Technology 95. 1 hour.

Important Note

The following courses satisfy part of the requirements for the State Fire Officer I Certification:
FST 71A, 71B, 72, 73A, 73B, 74A, 75A, 75B

FST 73A and 73B Preparation for Level I
Fire Prevention Officer Certification

FST 74A Preparation for Level I
Fire Investigator Certification

FST 75A and 75B Preparation for Level I
Fire Instructor Certification

French (FREN)

FREN 1A 5 UNITS

BEGINNING FRENCH

Grading Option: OP Transfer: CSU, UC

This introductory level course will enable students to begin speaking, reading and writing elementary level French as well as understanding the spoken language. Students are introduced to concepts of grammar, vocabulary and verb tenses in a variety of auditory, visual and written contexts. Strongly Recommended: Eligibility for English 1A. 5 hours. (FREN 1A + 1B = CAN FREN SEQ A)

FREN 1B 5 UNITS

ELEMENTARY FRENCH

Grading Option: OP Transfer: CSU, UC

This is the second semester of the introductory level course and will enable students to continue to learn to speak, read and write elementary level French as well as to understand the spoken language. Students are introduced to concepts of grammar, vocabulary and verb tenses in a variety of auditory, visual and written contexts. Prerequisite: French 1A (completed with a grade of "C" or higher) or equivalent. 5 hours. (FREN 1A + 1B = CAN FREN SEQ A)

FREN 2A 4 UNITS

INTERMEDIATE FRENCH

Grading Option: OP Transfer: CSU, UC

Review of grammar; reading of works of modern authors; practice in conversation and composition. Prerequisite: French 1B (completed with grade of "C" or higher) or equivalent. 4 hours. (FREN 2A + 2B = CAN FREN SEQ B)

FREN 2B 4 UNITS

ADVANCED FRENCH

Grading Option: OP Transfer: CSU, UC

Reading of French authors; advanced review of grammar, emphasis on speaking and composition. Prerequisite: French 2A (completed with grade of "C" or higher) or equivalent. 4 hours. (FREN 2A + 2B = CAN FREN SEQ B)

FREN 50A 2 UNITS

CONVERSATIONAL FRENCH

Grading Option: OP

Development of a basic understanding of spoken French through a study of pronunciation, vocabulary, and applied grammar, and an introduction to the everyday culture of French-speaking people. 3 hours.

FREN 50B 2 UNITS

CONVERSATIONAL FRENCH

Grading Option: OP

Development of skills learned in French 50A. Understanding of spoken French through a study of pronunciation, vocabulary, and applied grammar. Introduction to everyday life of French-speaking people and the skills needed to successfully function in culture. Prerequisite: French 50A (completed with a grade of "C" or higher). 3 hours.

Italian (ITLN)

ITLN 1A 5 UNITS

BEGINNING ITALIAN

Grading Option: OP Transfer: CSU, UC

This introductory level course will enable students to begin speaking, reading and writing elementary level Italian as well as understanding the spoken language. Students are introduced to concepts of grammar, vocabulary and verb tenses in a variety of auditory, visual and written contexts. Strongly recommended: Eligibility for English 1A. 5 hours.

ITLN 1B 5 UNITS

ELEMENTARY ITALIAN

Grading Option: OP Transfer: CSU, UC

This is the second semester of the introductory level course and will enable students to continue learning to speak, read and write elementary level Italian as well as to understand the spoken language. Students are introduced to concepts of grammar, vocabulary and verb tenses in a variety of auditory, visual and written contexts. Prerequisite: Italian 1A (completed with a grade of "C" or higher) or equivalent. 5 hours.

ITLN 50A 2 UNITS

CONVERSATIONAL ITALIAN

Grading Option: OP

Development of a basic understanding of spoken Italian through pronunciation, vocabulary, and applied grammar, and an introduction to the everyday culture of Italian-speaking people. 3 hours.

ITLN 50B 2 UNITS

CONVERSATIONAL ITALIAN

Grading Option: OP

Development of skills learned in Italian 50A. Understanding of spoken Italian through pronunciation, vocabulary, and applied grammar. Introduction to everyday life of Italian-speaking people and the skills needed to successfully function in culture. Prerequisite: Italian 50A (completed with a grade of "C" or higher). 3 hours.



Spanish (SPAN)

SPAN 1A 5 UNITS

BEGINNING SPANISH

Grading Option: OP Transfer: CSU, UC

The introductory level course will enable students to begin speaking, reading and writing elementary level Spanish as well as understanding the spoken language. Students are introduced to concepts of grammar, vocabulary and verb tenses in a variety of auditory, visual and written contexts. Strongly Recommended: Eligibility for English 1A. 5 hours. (SPAN 1A + 1B = CAN SPAN SEQ A)

SPAN 1B 5 UNITS

ELEMENTARY SPANISH

Grading Option: OP Transfer: CSU, UC

This is the second semester of the introductory level course and will enable students to continue to learn to speak, read and write elementary level Spanish as well as to understand the spoken language. Students are introduced to concepts of grammar, vocabulary and verb tenses in a variety of auditory, visual and written contexts. Prerequisite: Spanish 1A (completed with a grade of "C" or higher) or equivalent. 5 hours. (SPAN 1A + 1B = CAN SPAN SEQA).

SPAN 2A 4 UNITS

INTERMEDIATE SPANISH

Grading Option: OP Transfer: CSU, UC

Review of grammar; reading of works of modern authors; practice in conversation and composition. Prerequisite: Spanish 1B (completed with grade of "C" or higher) or equivalent. 4 hours.

SPAN 2B 4 UNITS

ADVANCED SPANISH

Grading Option: OP Transfer: CSU, UC

Reading of Spanish authors; advanced review of grammar; emphasis on speaking and composition. Prerequisite: Spanish 2A (completed with grade of "C" or higher) or equivalent. 4 hours.

SPAN 50A 2 UNITS

CONVERSATIONAL SPANISH

Grading Option: OP

Development of a basic understanding of spoken Spanish through pronunciation, vocabulary, and applied grammar and an introduction to the everyday culture of Spanish-speaking people. 3 hours.

SPAN 50B 2 UNITS

CONVERSATIONAL SPANISH

Grading Option: OP

Development of skills learned in Spanish 50A. Understanding of spoken Spanish through pronunciation, vocabulary, and applied grammar. Introduction to everyday life of Spanish-speaking people and the skills needed to successfully function in culture. Prerequisite: Spanish 50A (completed with a grade of "C" or higher). 3 hours.

General Studies (GNST)

GNST 10 1-2 UNITS

FACULTY ASSISTANT EXPERIENCE FOR POTENTIAL TEACHERS

Grading Option: OP

(May be repeated 3 times)

Work as a faculty assistant to gain a variety of experiences related to teaching and learning tasks. May not assist in course sections in which enrolled. Prerequisite: Consent of instructor and Office of Academic Services. 2.5-5 hours.

GNST 25 1-2 UNITS

STUDENT LEADERSHIP

Grading Option: OP

Processes and methods of communication in group situations, including parliamentary procedure, preparation of agenda and minutes, and organization accounting. Introduction to student government procedures and policies. Recommended for members of the Student Government Assembly, club officers, members of college-wide committees and others interested in leadership. 1 hour lecture, 2-4 hours laboratory.

Geography (GEOG)

See **AA - Social Science**

GEOG 1 **3 UNITS**

INTRODUCTION TO PHYSICAL GEOGRAPHY

Grading Option: GR Transfer: CSU, UC

Earth's natural environments, with emphasis on spatial characteristics, change over time, interactions between environmental components, and human-environment interactions. Physical processes, techniques, and tools by which Earth's climates, soils, vegetation, water resources, and land forms are linked into integrated global patterns. Effect of natural environments on human activities and how humans modify environments. Field trips may be included. 3 hours. (CAN GEOG 2)

GEOG 1L **1 UNIT**

INTRODUCTION TO PHYSICAL GEOGRAPHY LABORATORY

Grading Option: GR Transfer: CSU, UC

Application of the concepts, techniques, tools, and materials of physical geography. Practical exercises, experiments, observations, data analyses, and computer applications/simulations which augment understanding of geographic processes, interrelationships, spatial patterns and distributions. Use of maps, remotely-sensed imagery, and geographic information systems. Includes locational reference systems, time-space relationships, weather, climate, soils, vegetation, and landforms. Field trips/field projects may be included. Prerequisite: Geography 1 (may be taken concurrently). 3 hours laboratory.

GEOG 2 **3 UNITS**

CULTURAL GEOGRAPHY

Grading Option: OP Transfer: CSU, UC

Spatial analysis of human populations, their cultural traits, and activities. Emphasis on how diverse peoples, through their interactions and through their perceptions and use of the physical environment, create distinctive cultural landscapes. Social, political, and economic elements of geography which contribute to the evolution of these global and regional cultural patterns. Field trips may be included. 3 hours. (CAN GEOG 4)

GEOG 3 **3 UNITS**

ECONOMIC GEOGRAPHY

Grading Option: OP Transfer: CSU, UC

An introduction to the world's major economic systems; their spatial distribution and characteristics; their relative contributions to regional development and global change; and related movements of people, goods, and ideas. Techniques and tools of spatial analysis applied to human-environment interactions, with emphasis on ecological problems associated with specific economic activities. Field trips may be included. 3 hours.

GEOG 5 **3 UNITS**

WORLD REGIONAL GEOGRAPHY

Grading Option: GR Transfer: CSU, UC

Regions of the world and the way humans live within those regions. Includes physical and cultural characteristics of world regions, how

they are similar and how they are different, economic patterns, agriculture, industrial development and population dynamics. Emphasis on today's world and major issues that impact on everyday life. 3 hours.

GEOG 8 **3 UNITS**

INTRODUCTION TO WEATHER AND CLIMATE

Grading Option: OP Transfer: CSU, UC

Introduction to weather and climate and their impact on and modification by human activities. Emphasis on weather elements, events, and processes; climate controls; and the techniques, tools, and instruments of atmospheric science. Includes atmospheric optics, weather prediction, severe storms, air pollution, global/regional warming/cooling, ozone depletion, acid rain, El Niño, deforestation, desertification, and other topics related to everyday experience and global climate change. Field trips and observational activities may be included. 3 hours.

GEOG 11 **3 UNITS**

GEOGRAPHY OF THE SAN FRANCISCO BAY AREA

Grading Option: OP Transfer: CSU

Natural geography of the San Francisco Bay Area in relation to the historical, cultural and environmental development of the Bay region. Highlights past and present geographical, historical and ecological issues. Field trips may be included. 3 hours.

GEOG 12 **3 UNITS**

GEOGRAPHY OF CALIFORNIA

Grading Option: OP Transfer: CSU, UC

California's physical, cultural, and regional elements. The physical geographic base includes: location; geological evolution; geomorphic provinces, natural hazards, and resources; climate, water resources, vegetation, and soils. Historically developed cultural themes include: Native American and Hispanic origins; migration patterns and settlements; population growth and ethnic diversity; land use and economic activities; and Pacific Rim connections. Human-environment interactions and issues are considered throughout. Field trips may be included. 3 hours.



GEOG 15 **3 UNITS**

INTRODUCTION TO GEOGRAPHIC INFORMATION SYSTEMS (GIS)

Grading Option: OP Transfer: CSU, UC

GIS is a geographically-based, computer-assisted information technology that captures, organizes, queries, and analyzes spatial relationships between locations and attributes of Earth's physical, cultural, and economic features. GIS facilitates visualization of spatial relationships and decision-making by interactively linking maps, databases, images, and charts. GIS is both a tool for learning across the curriculum and an integrated system and science for solving real-world spatial problems within and across every economic sector. This course introduces entry-level GIS theory, principles, concepts, applications, and operations through a combination of lectures, demonstration, interactive web sessions and tutorials, and active learning strategies. Students will acquire basic hands-on GIS experience with current industry-standard software. Field trips may be required. 3 hours.



Geology (GEOL)

GEOL 1A **4 UNITS**

PHYSICAL GEOLOGY

Grading Option: GR Transfer: CSU, UC

Introduction to the forces and materials that shape the Earth. Emphasis on plate tectonics, volcanoes, earthquakes, hydrology, erosion, beach systems, environmental geology, rocks, minerals and geologic maps. 3 hours lecture, 3 hours laboratory. (CAN GEOL 2)

GEOL 1B **4 UNITS**

HISTORICAL GEOLOGY

Grading Option: GR Transfer: CSU, UC

Evolutionary geology of earth. Emphasis on sedimentary processes, sedimentary rocks, their fossils and structures. Prerequisite: Geology 1A or 10. 3 hours lecture, 3 hours laboratory.

GEOL 10 **3 UNITS**

INTRODUCTION TO GEOLOGY

Grading Option: C/N Transfer: CSU, UC*

Earthquakes, volcanism, and plate tectonics as shapers of the earth's surface. Formation and use of energy and material resources. Origin and history of prehistoric life. May not be taken for credit if Geology 1A or 1B has been completed. 3 hours. * *Transfer unit limitations, see page 61*

GEOL 10L **1 UNIT**

INTRODUCTION TO GEOLOGY LABORATORY

Grading Option: C/N Transfer: CSU, UC*

Introduction to the materials and techniques of geology. Includes maps, minerals, rocks, and fossils. Prerequisite: Geology 10 (may be taken concurrently). 3 hours laboratory. * *Transfer unit limitations, see page 61*

GEOL 12 **3 UNITS**

INTRODUCTION TO OCEANOGRAPHY

Grading Option: C/N Transfer: CSU, UC

Introduction to the oceans, their history and topography; physical and chemical properties of sea water; causes and effects of currents, tides, and waves; distribution of marine resources; sea floor sediments; tectonics and paleomagnetism. 3 hours.

GEOL 12L **1 UNIT**

INTRODUCTION TO OCEANOGRAPHY LABORATORY

Grading Option: C/N Transfer: CSU, UC

Introduction to laboratory principles and techniques with emphasis on the physical marine environment. Prerequisite: Geology 12 (may be taken concurrently). 3 hours laboratory.

GEOL 15 **3 UNITS**

ENVIRONMENTAL GEOLOGY

Grading Option: C/N Transfer: CSU, UC

Modification of natural systems (e.g., rivers and drainages, dams, groundwater, slopes, deforestation, shoreline systems, etc.), water disposal (e.g., solid wastes, landfills, drinking water, smog, acid rain, radioactive wastes, mining wastes, etc.), and other environmental geohazards (e.g., as associated with earthquakes, volcanoes, flooding, landslides, etc.). 3 hours.

GEOL 21 **3 UNITS**

GEOLOGY OF THE WEST

Grading Option: GR Transfer: CSU, UC

Geological features of the West. Examples drawn from the Grand Canyon, Sierras, Rocky Mountains, and the western national parks to illustrate the processes of geology. Prerequisite: Geology 10 (completed with a grade of "C" or higher). 3 hours.

Graphic Design

See [Visual Communications](#)

Health (HLTH)

HLTH 1 3 UNITS

INTRODUCTION TO HEALTH

Grading Option: OP Transfer: CSU, UC*
 Physiological, psychological, and social perspectives of health. Emphasis on knowledge, attitudes, and behaviors that will contribute to a healthy individual. 3 hours. * *Transfer unit limitations, see page 61*

HLTH 2 2 UNITS

HEALTH ISSUES

Grading Option: OP Transfer: CSU, UC*
 Investigation, analysis, and evaluation of selected contemporary health and ethical issues with the intent of acquiring insight into the health care delivery systems, health attitudes and behavior. Concepts and issues in contemporary health. 2 hours. * *Transfer unit limitations, see page 61*

HLTH 50 2 UNITS

ORIENTATION TO HEALTH CARE DELIVERY SYSTEM

Grading Option: OP Transfer: CSU
 Overview of health professions and health care facilities, the roles of governmental agencies, professional associations, fiscal intermediaries and consumers. Provides a historical background of the health care delivery system and its contemporary practice. 2 hours.

HLTH 51A 4 UNITS

BASIC MEDICAL TERMINOLOGY

Grading Option: OP Transfer: CSU
 Terminology used typically by the medical profession; explanation of the history of terminology, prefixes, suffixes, and root words, emphasis on spelling, definitions, pronunciation, and an understanding of their meanings; includes medical abbreviations, pharmaceutical terms, terminology utilized in patient records management; introduction to anatomical terms, and terms related to disease processes. 4 hours.

HLTH 51B 4 UNITS

DISEASE PROCESS AND ADVANCED MEDICAL TERMINOLOGY

Grading Option: OP Transfer: CSU
 Introduction to the nature of disease and to the structural and functional changes of diseases as they affect the systems of the body; discussion of causes, symptoms and treatment of disease. Prerequisite: Health 51A. 4 hours.

HLTH 60 1 UNIT

RESPONDING TO EMERGENCIES

Grading Option: OP Transfer: CSU
 Development of knowledge and skills for recognizing and caring for emergency situations. Includes healthy lifestyles, and prevention of illness and injury. Designed to meet the needs of individuals in the community who frequently provide First Aid. Successful completion of the knowledge and skills tests qualifies for an American Red Cross Responding to Emergencies card and Adult CPR card. 1 hour lecture, 1 hour laboratory.



HLTH 61 2.5 UNITS

FIRST RESPONDER

Grading Option: GR Transfer: CSU
 Development of knowledge and skills necessary for recognizing and caring for emergency situations, including cardiopulmonary resuscitation, prevention of disease transmission, and automated external defibrillation. Designed for first responders in an emergency. Successful completion of the knowledge and skills tests qualifies for a National Safety Certificate and Professional Rescuer CPR card. 2 hours lecture and 2 hours laboratory.

HLTH 70A .5 UNIT

COMMUNITY CARDIOPULMONARY RESUSCITATION

Grading Option: C/N Transfer: CSU
(May be repeated 3 times)
 Development of the knowledge, skill and personal judgment necessary to initiate and perform basic life support techniques in cardiopulmonary resuscitation. Designed for citizens in the community. Successful completion of the knowledge and skills test qualifies for American Red Cross Community CPR or American Heart Association Adult and Pediatric Heart Saver Certificate. 6 total hours lecture, 6 total hours laboratory. 12 total hours.

HLTH 70B .5 UNITS

PROFESSIONAL CARDIOPULMONARY RESUSCITATION - CPR

Grading Option: C/N Transfer: CSU
 Development of knowledge, skills and personal judgment necessary to initiate and perform basic life support techniques as a health care professional. Successful completion of the knowledge and skills tests qualifies for an American Red Cross Professional Rescuer or an American heart Association Basic Life Support Health Care Provider Certificate. Prerequisite: Health 70A (completed with a grade of "C" or higher) or equivalent. 4 total hours lecture, 5 total hours laboratory.

HLTH 81 6.5 UNITS

EMT-1 (BASIC)

Grading Option: GR Transfer: CSU
 Provides training in the foundation skills and knowledge required of the EMT-1 scope of practice. The EMT-1 certification is the minimum requirement for ambulance attendants and most entry-level firefighter positions. EMT-1 certification is also required for entry into paramedic training. This training program is accredited by the Alameda County Emergency Medical Services District. Prerequisite: Health 61 (completed with a grade of "C" or higher). 5 hours lecture, 4.5 hours laboratory.



History (HIST)

See also: **AA - Humanities**
AA – Social Science

HIST 1 3 UNITS

HISTORY OF WESTERN CIVILIZATION TO 1600

Grading Option: GR Transfer: CSU, UC
Origin and development of civilization in the Mediterranean and its expansion into Europe - the Near East, Greece, Rome the Middle Ages, Renaissance and the Reformation. 3 hours. (CAN HIST 2; HIST 1 + HIST 2 = CAN HIST SEQ A)

HIST 2 3 UNITS

HISTORY OF WESTERN CIVILIZATION SINCE 1600

Grading Option: GR Transfer: CSU, UC
History of the Modern Western World; Romanticism and the Industrial Revolution to the present. 3 hours. (CAN HIST 4; HIST 1 + HIST 2 = CAN HIST SEQ A)

HIST 7 3 UNITS

U.S. HISTORY THROUGH RECONSTRUCTION

Grading Option: GR Transfer: CSU, UC
A survey of United States history from its pre-colonial, indigenous origins through the end of Reconstruction. Emphasis on (1) distinctively American patterns of political, economic, social, intellectual, and geographic developments, (2) the interaction amongst and the experiences of diverse racial, ethnic and socioeconomic groups in American History, and (3) the evolution of American institutions and ideals including the U.S. Constitution, representative democratic government, the framework of California state and local government, and the relationship between state/local government and the federal government. 3 hours. (CAN HIST 8; HIST 7 + HIST 8 = CAN HIST SEQ B)

HIST 8 3 UNITS

U.S. HISTORY SINCE RECONSTRUCTION

Grading Option: GR Transfer: CSU, UC
History of the United States from the post-Civil War period to the present. Emphasis on distinctively American patterns of political, economic, social, intellectual and geographic developments. 3 hours. (CAN HIST 10; HIST 7 + HIST 8 = CAN HIST SEQ B)

HIST 14 3 UNITS

HISTORY AND AMERICAN CULTURES OF CALIFORNIA

Grading Option: OP Transfer: CSU, UC
Historical development of California, including Spanish exploration and settlement, the Mexican Revolution and transformation, the American conquest, the Gold Rush and dynamic expansion to the present day. In addition to exploring the political, economic, cultural, and social factors affecting the development of California, the course will focus on the roles and interactions of the following groups within the context of California history: African Americans, Asian Americans, European Americans, Latino Americans, and Native Americans. 3 hours.

HIST 15 (Formerly HIST 20) 3 UNITS

AFRICAN-AMERICAN HISTORY THROUGH THE 19TH CENTURY

Grading Option: OP Transfer: CSU, UC
Social, historical, economic and political concepts in the African-American experience and the role of African descent in American society and culture. From antecedent 12th century West African culture through New World slavery and the experiences of Blacks in American society to the end of the 19th century. 3 hours.

HIST 16 (Formerly HIST 21) 3 UNITS

AFRICAN-AMERICAN HISTORY - 20TH CENTURY

Grading Option: OP Transfer: CSU, UC
Social, historical, economic and political concepts in the African-American experience and the role of African descent in American society and culture. From the late 19th century to the present. Emphasis on contemporary problems in recent historical context. 3 hours.

HIST 22 3 UNITS

INTRODUCTION TO MEXICAN-AMERICAN HISTORY AND CULTURE

Grading Option: OP Transfer: CSU, UC
Historical survey of Mexico, including the Indian civilization, Spanish conquest and settlement; Mexican independence and national development; American conquest and development of the United States southwest; analysis of Spanish, Mexican and American societies with emphasis on the cultural patterns that were transposed on United States southwestern societies of Texas, Arizona, New Mexico and California. Issues from the adaptation of these cultural patterns, particularly in California. Contemporary problems and contributions of Mexican-American peoples in relation to historical materials. 3 hours.

HIST 25**3 UNITS****AMERICAN INDIAN HISTORY AND CULTURE**

Grading Option: OP Transfer: CSU, UC

Historical survey of American Indians in the United States from earliest times to the present day. Emphasis on Indian societies and cultures, Indian relations with predominant cultures, Indian movement for self-preservation, and historical background necessary to understand contemporary problems of the Indians. Emphasis on the Indians of California and the West. 3 hours.

HIST 28**3 UNITS****HISTORY OF AMERICAN WEST**

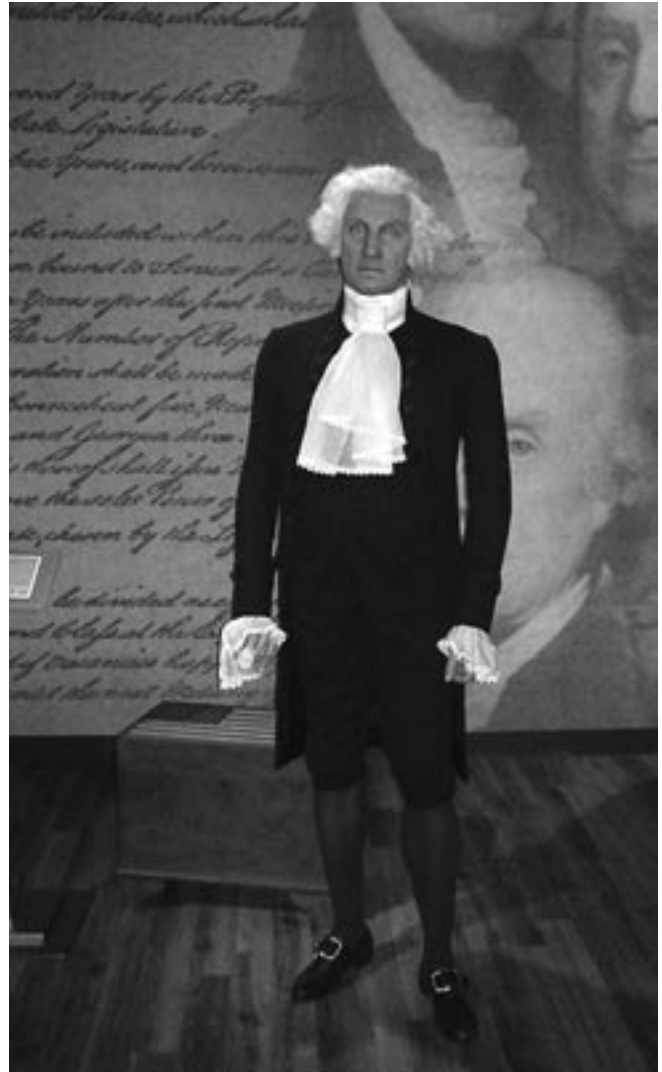
Grading Option: OP Transfer: CSU, UC

A history of the trans-Mississippi West of the United States. Emphasis will be placed on Native American history and cultures, European and Anglo-American frontiers, expansion of the United States in the 19th century, and the interaction of Native American, European American, Asian American, African American and Hispanic American peoples, and the significance of the West in American history. 3 hours.

HIST 32 (Formerly HIST 27)**3 UNITS****U.S. WOMEN'S HISTORY**

Grading Option: OP Transfer: CSU, UC

A survey of United States women's history from its indigenous origins through the present. This course emphasizes the interaction and experiences of diverse racial/ethnic groups that include at least three of the following groups: African-Americans, Chicana/Latina Americans, Asian Americans, European Americans, and Native Americans. Special areas of focus include women's role in the political, economic, social, and geographic development of the United States. 3 hours.



Horticulture

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Degree
AS – Horticulture

Certificate
Horticulture

About the Program

Horticulture provides a dynamic future for the career-oriented individual. The strong, private ownership base is a magnet for independent, motivated individuals. The horticulture curriculum is designed to meet the demand for trained personnel in a broad range of horticultural fields in one of the following concentration areas: landscape installation and maintenance, nursery management and operations, and floristry. Students can enter the program at the level most suited to their needs. This program is designed for direct job entry. While units in the program are transferable to many institutions, students should consult a counselor for information.

See also: [Viticulture and Winery Technology](#)



AS – Horticulture

Freshman Year

Horticulture 50 (Introduction to Ornamental Horticulture).....	3
Horticulture 51 (Plant Materials I)	3
Horticulture 52 (Plant Materials II)	3
Horticulture 53 (Plant Disease and Pest Control)	3
Horticulture Options*	6-7
General Education Courses: (See General Education Requirements, page 49)	
Physical Education	
English Composition (Language and Rationality)	
Mathematics	
Social and Behavioral Sciences	
Natural Sciences	

Sophomore Year

Horticulture 54 (Planting Media and Nutrition)	2
Horticulture 55 (Horticulture Management and Operations)	3
Horticulture 95 (Work Experience)	2
Horticulture 96 (Work Experience Seminar)	1
Horticulture Options*	6-7
General Education Courses: (See General Education Requirements, page 49)	
American Cultures	
American Institutions/Health Education	
Humanities	
Communications and Analytical Thinking	
Total units required	60

*Complete one of the 3 Horticulture Concentration Options

Horticulture Option #1

Landscape Installation and Maintenance -	13 units
Horticulture 56 (Arboriculture)	
Horticulture 57 (Landscape and Turfgrass Management)	
Horticulture 58 (Landscape Construction)	
Horticulture 59 (Landscape Design)	
Horticulture 60 (Landscape Irrigation Systems)	
Horticulture 69 (Advanced Landscape Design).	

Horticulture Option #2

Nursery Management and Operations -	13 units
Horticulture 56 (Arboriculture)	
Horticulture 57 (Landscape and Turfgrass Management)	
Horticulture 59 (Landscape Design)	
Horticulture 60 (Landscape Irrigation Systems)	
Horticulture 67 (Interior Plantscapes)	
Horticulture 70 (Introduction to Viticulture) or Viticulture and Winery Technology10 (Introduction to Viticulture)	

Horticulture Option #3

Floristry	12 units
Horticulture 64 (Basic Floristry)	
Horticulture 65 (Intermediate Floristry)	
Horticulture 66 (Advanced Floristry)	
Horticulture 67 (Interior Plantscapes).	

Certificate of Achievement Horticulture

Horticulture 50 (Introduction to Ornamental Horticulture).....	3
Horticulture 51 (Plant Materials I)	3
Horticulture 52 (Plant Materials II)	3
Horticulture 53 (Plant Disease and Pest Control)	3
Horticulture 54 (Planting Media and Nutrition)	2
Horticulture 55 (Horticulture Management and Operations)	3
Horticulture Options*	5
Total units required	22

Options*

Students may select any two courses from the three Horticulture Concentration Options under the AS Degree in Horticulture listed on page 130.

Horticulture (HORT)

HORT 50 3 UNITS

INTRODUCTION TO HORTICULTURE

Grading Option: OP Transfer: CSU

Introduction to general horticulture, ornamental horticulture and landscape gardening. Includes vocational and hobby values of horticulture, history of horticulture, plant structure, function, growth, reproduction, and development. Plant classification, identification, propagation, and nutrition. Soils, water management, climate adaptation, ecology, pest and disease control, propagation, planting, and maintenance. 2.5 hours lecture, 1.5 hours laboratory.

HORT 51 3 UNITS

PLANT MATERIALS I

Grading Option: OP Transfer: CSU

Identification, landscape and garden use, growth habit, climatic adaptation, ornamental value, maintenance and care of trees, shrubs, vines and other plants adapted to the northern and coastal valleys of California. Prerequisite: Horticulture 50 (may be taken concurrently). 2 hours lecture, 3 hours laboratory.

HORT 52 3 UNITS

PLANT MATERIALS II

Grading Option: OP Transfer: CSU

Identification, landscape and garden use, growth habit, climatic adaptation, ornamental value, maintenance and care of vines, ground covers, flowers, shrublike plants and flowering trees, adapted to the northern and coastal valleys of California. Prerequisite: Horticulture 50 (completed with a grade of "C" or higher). 2 hours lecture, 3 hours laboratory.

HORT 53 3 UNITS

PLANT DISEASE AND PEST CONTROL

Grading Option: OP Transfer: CSU

Concepts of plant pathology, entomology, and weed science. Identification, symptoms, diagnosis, and control methods of plant diseases, insects, and weed pests. Methods and techniques of disease and pest management, chemical and non-chemical control related to garden, landscape, and other horticulture crops and plants. Disease and pest control materials with emphasis on safe handling, application, and environmental protection. 2 hours lecture, 3 hours laboratory.

HORT 54 2 UNITS

PLANTING MEDIA AND NUTRITION

Grading Option: OP Transfer: CSU

Soil classification, formation, and natural characteristics. Physical and chemical properties of soil and effect on plant growth and development. Propagating and planting media, soil substitutes and amendments to improve and promote plant growth. Methods and materials related to plant, soil, water, and nutrient relationships to enhance plant growth and development. Plant nutrition, essential nutrients required for plant growth and healthy development. Fertilizer materials, origin, use, and application. Strongly Recommended: Horticulture 50 or instructor's permission. 2 hours.

HORT 55 3 UNITS

HORTICULTURE MANAGEMENT AND OPERATIONS

Grading Option: OP Transfer: CSU

Explores many horticulture specializations including management and operations of retail and wholesale nurseries, greenhouse growers, specialized growers of trees, shrubs, flowers, hydroponics growers, vegetable growers, wholesale and retail floristry businesses, other related businesses, and botanical gardens. Emphasis on plant propagation, propagation structures, greenhouses, nursery and floral business management and operations. Employment opportunities in the horticulture industry. Prerequisite: Horticulture 50 (completed with a grade of "C" or higher). 2.5 hours lecture, 1.5 hours laboratory.

HORT 56 2 UNITS

ARBORICULTURE

Grading Option: OP Transfer: CSU

Care, maintenance, planting, and pruning of trees, shrubs, and vines. Specific pruning techniques for ornamental trees, fruit trees, shrubs, roses, and other woody plants. Tree preservation, health, growth characteristics, plant selection, planting, irrigation, fertilization, damage repair, cabling, and bracing. Methods and techniques of tree climbing, tree felling, tree removal, work hazards, and safety precautions. 1 hour lecture, 4 hours laboratory.

Horticulture

HORT 57 2 UNITS

LANDSCAPE AND TURFGRASS MANAGEMENT

Grading Option: OP Transfer: CSU

Principles and practices of landscape and turfgrass management as practiced by horticultural professionals, landscape contractors, and grounds keepers. Preparation, planting, irrigation, fertilization, pruning, and pest control of landscape developments for residential, commercial, public grounds, golf courses, and gardens. 1.5 hours lecture, 1.5 hours laboratory.

HORT 58 3 UNITS

LANDSCAPE CONSTRUCTION

Grading Option: OP Transfer: CSU

Design, engineering, construction techniques, and installation methods for landscape site development. Cost estimating, bidding, construction materials, methods, equipment, tools, and safety for landscape plan implementation. Contracts, specifications, and legal aspects regarding landscape installation and site development. 3 hours lecture, 1 hours laboratory.

HORT 59 3 UNITS

LANDSCAPE DESIGN

Grading Option: OP Transfer: CSU

Landscape site planning and landscape architectural design for residential properties, home gardens, and small-scale use areas. Procedures and methods required in the planning and design process; site inventory, site analysis, user group analysis, preparation of site study diagrams, preliminary designs, and master site plans. Theory and principles of design, site layout, landscape elements, and material selection. Sketching, drafting, delineation, reproduction, and coloring techniques for landscape architectural plans. Selection and use of drawing tools, materials and equipment. 2.5 hours lecture, 1.5 hours laboratory.

HORT 60 3 UNITS

LANDSCAPE IRRIGATION SYSTEMS

Grading Option: OP Transfer: CSU

Planning, design, engineering, construction, and maintenance of sprinkler and drip irrigation systems for landscape, garden, and turfgrass use. Principles of hydraulics, layout, and equipment application. Irrigation system equipment, components, methods of installation and repair. Principles and techniques of water conservation and plant-water-soil relations. 2.5 hours lecture, 1.5 hours laboratory.

HORT 61 3 UNITS

ANIMAL PEST CONTROL

Grading Option: OP Transfer: CSU

Concepts and practical applications of animal pest management and control. Identification, symptoms diagnosis, management, control methods, and materials for arthropods, mammals, and vertebrate pests. 2.5 hours lecture, 1.5 hours laboratory.

HORT 64 3 UNITS

BASIC FLORISTRY

Grading Option: OP Transfer: CSU

Overview of floral design history and theory. Construction of beginning level floral design styles. Care and conditioning of cut flowers appropriate to beginning designs. Materials, products, and containers used in the floral industry. Introduction to Japanese floral design. 2.5 hours lecture, 1.5 hours laboratory.

HORT 65 3 UNITS

INTERMEDIATE FLORISTRY

Grading Option: OP Transfer: CSU

An intermediate level course of study which explores the basic styles and variations of Western design. Continuation of study emphasizing modern marketability and European styles, techniques, and philosophy. Emphasis on speed and proficiency. Wiring and taping techniques used in corsages and hairpieces; marketability. Introduction of dried and everlasting designs and methodology. Prerequisite: Horticulture 64 (completed with grade "C" or higher) or equivalent. 2.5 hours lecture, 1.5 hours laboratory.

HORT 66 3 UNITS

ADVANCED FLORISTRY

Grading Option: OP Transfer: CSU

Continuation of knowledge and skills developed in Horticulture 65 in floral design styles covering a number of contemporary styles. Emphasis on holiday and seasonal designs, wedding designs and consultations, and funeral designs. Further study of retail aspects and customer relations. Development of personal style. Prerequisite: Horticulture 65 (completed with grade "C" or higher) or equivalent. 2.5 hours lecture, 1.5 hours laboratory.

HORT 67 3 UNITS

INTERIOR PLANTSCAPES

Grading Option: OP Transfer: CSU

Identification, use, propagation, growth, environmental adaptation, ornamental value, and care of container, indoor, and house plants. 2.5 hours lecture, 1.5 hours laboratory.

HORT 69 3 UNITS

ADVANCED LANDSCAPE DESIGN

Grading Option: OP Transfer: CSU

Advanced landscape architectural design and planning for residential and commercial properties, large- and small-scale public use areas and green belts. Techniques and procedures for planning and design; environmental and user-group site analysis. Planting design, plant material usage and planting plan drawing and presentation techniques. Architectural, engineering and energy conservation values of planting design. Project cost estimating; computer-aided landscape drafting. 2.5 hours lecture, 1.5 hours laboratory.

HORT 70 **3 UNITS**

INTRODUCTION TO VITICULTURE

Grading Option: OP Transfer: CSU

An introduction to viticulture; growing grapes, including historical aspects of grape cultivation for raisins, wine and table grapes, grape species and varieties; botany, anatomy, propagation, climate, cultivation, vineyard management, plant-soil-water relations, irrigation, fertilization, pruning, week insect pest and disease control; establishment, training and pruning grape vines, harvest and post harvest operations. Brief overview of wine making. 3 hours lecture.

HORT 72 **3 UNITS**

VITICULTURE FIELD MANAGEMENT AND PRACTICE

Grading Option: OP Transfer: CSU

Management and field practices in grape production for growing and harvesting wine grapes, table grapes and raisins. Vineyard planning, installation, establishment, and crop management. Field practices for layout, soil preparation, propagation, planting, establishment, vine training, cultivation, irrigation, fertilization, pruning, disease and pest control. Harvest operations, grape preparation and overview of wine making. Strongly recommended: Horticulture 70. 2 hours lecture, 3 hours laboratory.

HORT 80 **2 UNITS**

FUNDAMENTALS OF HORTICULTURE

Grading Option: OP Transfer: CSU

Introduction to basic horticulture, landscaping, and gardening. Principles, practices, and applications of propagating, growing, and maintaining plants. Basic botany, soils, landscape and garden preparation, planting, and care; irrigation, fertilization, pruning, and pest control. 2 hours.

HORT 81 **2 UNITS**

HOME LANDSCAPE DESIGN

Grading Option: OP Transfer: CSU

Planning and design of residential landscape and garden areas. Considerations and techniques for designing outdoor areas around the home. Landscape planning techniques and concepts of design. Use area design, layout, plant selection, and drawing plans. 2 hours.

HORT 95 **1-3 UNITS**

WORK EXPERIENCE

Grading Option: OP Transfer: CSU*

(Refer to page 211 for program requirements.)

Application of principles and skills through participation in on-the-job training. Prerequisite: Horticulture 50. Corequisite: Horticulture 96 and 5-15 hours of work experience per week. *Limited to 6 semester units

HORT 96 **1 UNIT**

WORK EXPERIENCE SEMINAR

Grading Option: OP Transfer: CSU*

(Refer to page 211 for program requirements.)

Discussion and analysis of work-experience related problems. Discussion of job opportunities in horticulture. Corequisite: Horticulture 95. 1 hour. *Limited to 6 semester units

HORT 99 **.3-3 UNITS**

SPECIAL TOPICS IN HORTICULTURE

Grading Option: OP Transfer: CSU

Designed to explore special interest subjects drawn from the field of horticulture. Emphasis will be on topics of practical use to home gardeners as well as for persons employed in horticultural industries. Typical subjects include pruning; vegetable gardening; irrigation and pest disease control .3-9 hours.

Human Growth and Development

See: [Early Childhood Development](#)

Humanities

Degree AA – Humanities (General)

About the Program

Humanities is an interdisciplinary academic field which encourages its scholar/practitioners to interpret the world and their active role in it through a philosophical, creative and artistic immersion in a number of different but overlapping and connected fields of study. Work in the Humanities also suggests a practical professional methodology combining hermeneutics and a “dialogue-reflection-action change” process that allows students to create new or expanded world-view paradigms resulting in personal and systemic growth and change.

This degree prepares those interested in Interdisciplinary Studies, Humanities or Classical Studies/Philosophy majors for successful transfer to four-year institutions. Some variation in requirements may exist at a particular four-year transfer institution; therefore, it is essential that students refer to the catalog of the prospective transfer institution and consult a counselor. General Education courses should be carefully selected to meet the requirements of the intended transfer institution; some transfer institutions require more General Education units than required by this AA degree.



AA – Humanities (General)

Freshman Year

Humanities 1 (Philosophy, The Sciences, Epic Poetry	3
Humanities 3 (Film, , Drama, Music, Visual Arts, Lyric Poetry).....	3
Anthropology 5 (Cultural Pluralism: Anthropological Perspectives of Race, Class, Gender and Ethnicity).....	3
Philosophy 4 (Introduction to Philosophy: Theory of Knowledge) ...	3
Humanities 10 (The American Style).....	3
Religious Studies 1 (Religions of the World).....	3
Art 4 (Art History: Ancient)	3
General Education Courses: (See General Education Requirements, page 48)	
Physical Education	
English Composition (Language and Rationality)	
Mathematics	
Social and Behavioral Sciences	
Natural Sciences	
Health Education	

Sophomore Year

Humanities 28 (The Classic Myths)	3
Humanities 35 (Greek Tragedy)	3
Philosophy 2 (Introduction to Philosophy: Ethics)	3
History 1 (History of Western Civilization to 1600)	3
History 2 (History of Western Civilization since 1600)	3
Art 5 (Art History: Renaissance to Modern)	3
General Education Courses: (See General Education Requirements, page 48)	
Physical Education	
American Cultures	
American Institutions	
Humanities	
Communications and Analytical Thinking	
Total units required	60

Humanities (HUMN)**HUMN 1** 3 UNITS**PHILOSOPHY, THE SCIENCES, EPIC POETRY**

Grading Option: OP Transfer: CSU, UC
 Studies in epic literature, the novel, moral-social philosophy and a variety of writings in science, religion and mythology. Emphasizes critical analysis and philosophical inquiry. 3 hours.

HUMN 3 3 UNITS**FILM, DRAMA, MUSIC, VISUAL ART, LYRIC POETRY**

Grading Option: OP Transfer: CSU, uc
 Dramatic literature, the theater including filmic art, an introduction into the experience and appreciation of works of musical and visual art and lyric poetry. 3 hours.

HUMN 7 3 UNITS**CONTEMPORARY HUMANITIES**

Grading Option: OP Transfer: CSU
 Visual, literary, and/or musical works or art that reflect the issues and concepts of their time. A perspective through exploration of chosen works. 3 hours.

HUMN 10 3 UNITS**THE AMERICAN STYLE**

Grading Option: OP Transfer: CSU, UC
 Humanities of the United States. Major works of literature, painting, sculpture, architecture, films, music, philosophy, science, religion and political and social institutions. Particular attention to values and meanings that reflect the American cultural experience. 3 hours.

HUMN 28 3 UNITS**THE CLASSIC MYTHS**

Grading Option: OP Transfer: CSU, UC
 Introduction to mythic themes recurring in literature, the visual arts, and music; gods, humans, heroes; their origins, variations, historical development, and full expression in classical times and continued presence in the arts. 3 hours.

HUMN 35 3 UNITS**GREEK TRAGEDY**

Grading Option: OP Transfer: CSU, UC
 Selected tragedies of Aeschylus, Sophocles, and Euripides; particular attention given to values and meanings characteristic of aesthetic perception, philosophic content, and historic perspective; recovery and integration of these values as a humanistic approach to Greek tragedy. 3 hours.

**HUMN 40** 1-3 UNITS**INTRODUCTION TO OPERA**

Grading Option: OP Transfer: CSU, UC
 A general introduction to opera that corresponds to current local productions including the San Francisco International Opera season. Analysis of selected major operatic masterpieces with emphasis on how the libretto, the music, and the theatrical presentation contribute to the total dramatic experience. Opera attendance will be encouraged. Technical knowledge of music is not required. 1-3 hours.

HUMN 44 3 UNITS**NARRATIVE FILM MUSIC**

Grading Option: OP Transfer: CSU, UC
 An examination of the function of music in cinema. A discovery of the contributions of classical, popular, and folk composers to the art of film-making and the influence of film music on the general culture of our time. 3 hours.

Independent Study**INDEPENDENT STUDY** .5-.2 UNITS

Grading Option: OP Transfer: CSU, UC*
 Independent Study courses are open to all students and employ many combinations of media and educational techniques to create individualized, self-pacing education. Up to 18 units may be counted toward graduation. Check with the Counseling Center, Building 700, concerning transferability of Independent Study courses to 4-year institutions. Independent Study may also be contracted through an instructor for research, field experience, or skill development. Independent Study may be offered under any subject area contained in the Catalog using the number 29.

* Transfer unit limitations, see page 61

Industrial Technology

Degree AS – Industrial Technology

About the Program

The Industrial Technology curriculum prepares individuals for entry-level mechanical technician positions or technical support positions in the industrial and technology environment. The program is designed to provide students with a broad background and with basic skills in business, computing, drafting, electronics, mathematics, manufacturing processes, and welding. Rapidly changing technology requires individuals with flexible skills and the ability to learn and adapt rather than those equipped with particular technical skills; the Industrial Technology program prepares students for this changing environment. While units in this program are transferable to many institutions, students should consult a counselor for information.



AS – Industrial Technology

Freshman Year

Business 40 (Business Concepts).....	3
Computer Information Systems 50 (Introduction to Computer Information Systems)	3
Drafting Technology 50 (Mechanical Drafting for Non-Majors).....	2
Industrial Technology 61 (Manufacturing Process)	2
Mathematics 36 (Trigonometry) or Mathematics 38 (Trigonometry with Geometry)	3-5
Welding Technology 70 (Introduction to Welding)	2
General Education Courses: (See General Education Requirements, page 49)	
English Composition (Language and Rationality)	
Mathematics	
Social and Behavioral Sciences	
Natural Sciences	
Physical Education	

Sophomore Year

Business 1A (Principles of Accounting I).....	3
Business 1B (Principles of Accounting II).....	3
Business 18 (Business Law)	4
Computer Science 32 (Visual Basic Programming).....	4
Electronics Technology 70 (Basic Electricity)	2
General Education Courses: (See General Education Requirements, page 49)	
American Cultures	
American Institutions/Health Education	
Humanities	
Communications and Analytical Thinking	
Total units required	60

General Education suggestions: Economics 1, Mathematics 1, Physics 2A/2B

Industrial Technology (INDT)

INDT 61 2 UNITS

MANUFACTURING PROCESSES

Grading Option: OP Transfer: CSU
Examination of machine shop, welding and general manufacturing processes; practice in the use of hand tools, basic machine tools and welding equipment; understanding the relationship between manufacturing processes and design. 1 hour lecture, 3 hours laboratory.

INDT 74 3 UNITS

MEASUREMENTS AND CALCULATIONS

Grading Option: OP Transfer: CSU
Calculator techniques for whole number and decimal arithmetic problem solving, fraction-decimal conversion, percentages, ratio and proportion, algebra, geometry, areas and volumes, English metric conversion, and numerical trigonometry as applied in the industry. 3 hours.

Interior Design

Degree AS – Interior Design

Certificate Interior Design

About the Program

The Interior Design program prepares individuals for entry-level positions in the field of Interior Design. Most employment opportunities are in technical positions working for established interior designers and design firms, or in the retail or wholesale areas in sales of interior furnishings and accessories. Designed for direct job entry, courses in the program provide knowledge in the specifics of interior design, as well as general education to provide a breadth of knowledge suitable for living in today's society. Work experience or internships are required. While units in the program are transferable to many institutions, students should consult a counselor for information.

AS – Interior Design

Freshman Year

Interior Design 50 (Residential Space Planning).....	3
Interior Design 52 (History of Interiors and Furnishings)	3
Interior Design 54 (Principles of Interior Design).....	3
Interior Design 55 (Introduction to Textiles)	3
Art 10 (Design and Materials).....	3
Art 11 (Design and Materials-Color).....	3
General Education Courses: (See General Education Requirements, page 49)	
English Composition (Language and Rationality)	
Mathematics	
Social and Behavioral Sciences	
Natural Sciences	
Physical Education	

Sophomore Year

Interior Design 56 (Professional Practices)	3
Interior Design 58 (Fundamentals of Lighting)	3
Interior Design 60 (Materials and Resources).....	3
Interior Design 62 (Kitchen and Bath Design)	3
Interior Design 66 (Special Needs Design).....	3
Architecture 62 (Home Design and Construction Technology)	2
Marketing 61 (Professional Selling)	3
General Education Courses: (See General Education Requirements, page 49)	
American Cultures	
American Institutions/Health Education	
Humanities	
Communications and Analytical Thinking	
Total units required	60



Certificate of Achievement Interior Design

Interior Design 50 (Residential Space Planning).....	3
Interior Design 52 (History of Interiors and Furnishings)	3
Interior Design 54 (Principles of Interior Design).....	3
Interior Design 55 (Introduction to Textiles)	3
Interior Design 56 (Professional Practices)	3
Interior Design 58 (Fundamentals of Lighting)	3
Interior Design 60 (Materials and Resources)	3
Art 10 (Design and Materials).....	3
Art 11 (Design and Materials-Color).....	3
Marketing 61 (Professional Selling)	3
Electives*	3
Total units required	33

*Electives

Select from the following for a minimum of 3 units:

- Interior Design 62
- Interior Design 64
- Interior Design 66

Interior Design

Interior Design (INTD)

INTD 50 3 UNITS

RESIDENTIAL SPACE PLANNING

Grading Option: OP Transfer: CSU
Basic techniques in planning space for interiors. Private and group living spaces, support systems, functional planning of interior space, and color in space planning. 2 hours lecture, 3 hours laboratory.

INTD 52 3 UNITS

HISTORY OF INTERIORS AND FURNISHINGS

Grading Option: OP Transfer: CSU
A survey of the history of interiors and furnishings from Egyptian period to the present. Emphasis on furniture styles and ornamentation. 3 hours.

INTD 54 3 UNITS

PRINCIPLES OF INTERIOR DESIGN

Grading Option: OP Transfer: CSU
Elements and principles of design as they apply to interior design. Emphasis on the use of color and texture in the selection of home furnishings. 2 hours lecture, 3 hours laboratory.

INTD 55 3 UNITS

INTRODUCTION TO TEXTILES

Grading Option: GR Transfer: CSU
Introduction to textiles in the apparel and home furnishing market. Includes identification structure, and properties of fibers and yarns. Consideration of fabric design, both structural and decorative, fabric performance, laboratory testing, and legal regulations covering textiles and apparel. 3 hours.

INTD 56 3 UNITS

PROFESSIONAL PRACTICES

Grading Option: OP Transfer: CSU
Interior design practices including business and marketing aspects, wholesale resource development, design presentation and career preparation, contractual obligations. 3 hours.

INTD 58 3 UNITS

FUNDAMENTALS OF LIGHTING

Grading Option: OP Transfer: CSU
Residential and commercial lighting systems as they apply to what constitutes a well-lit interior space. Includes an investigation of current lighting fixtures and lighting resources. 3 hours.

INTD 60 3 UNITS

MATERIALS AND RESOURCES

Grading Option: OP Transfer: CSU
Survey of residential and commercial interior furnishings with attention to product knowledge of furniture, textiles, ceramics, glass, metals, plastics and composite materials. Skills needed to perform related activities. Strongly Recommended: Interior Design 55. 3 hours.

INTD 62 3 UNITS

KITCHEN AND BATHROOM DESIGN

Grading Option: OP Transfer: CSU
Survey of the field of kitchen and bathroom designs. Includes resources, materials, trends, costs and needs, both functional and aesthetic. Strongly Recommended: Interior Design 50. 2 hours lecture, 3 hours laboratory.

INTD 66 3 UNITS

SPECIAL NEEDS DESIGN

Grading Option: OP Transfer: CSU
Design of interior space which encourages self-esteem and independence for the elderly or physically impaired. American Disabilities Act and its requirements for commercial buildings. Residential housing that satisfies the special needs of its inhabitants and improvement of existing interiors through barrier-free retrofitting. 3 hours.

INTD 95 1-3 UNITS

INTERIOR DESIGN WORK EXPERIENCE

Grading Option: GR Transfer: CSU*
(May be repeated 3 times; refer to page 192 for program requirements.)
College supervised on-the-job work experience and training in an interior design related business. Students, through the cooperation of an on-the-job supervisor, contract to accomplish new learning objectives or broaden experiences in the work place. Corequisite: Interior Design 96. 5-15 hours of paid employment per week or 4-12 hours of volunteer work per week. * Limited to 6 semester units

INTD 96 1 UNIT

INTERIOR DESIGN WORK EXPERIENCE SEMINAR

Grading Option: GR Transfer: CSU*
(May be repeated 3 times; refer to page 192 for program requirements.)
Focal point for the coordination of curriculum with college-supervised part-time or full-time employment in the interior design field. Case studies, job-related problems, student cases and presentations, and material related to employment organizations and management; emphasis on building strong working relationships with supervisors, subordinates, and co-workers. Corequisite: Interior Design 95. 1 hour. * Limited to 6 semester units

International Studies

Degree AA – International Studies

About the Program

The International Studies major is based upon the idea that the past 20 years have seen a series of significant changes in some of the fundamental ways in which nations have traditionally dealt with one another. There has been a shift away from the older politics of conflict and competition toward the recognition that economic and developmental strategies require international planning and management. Nations are beginning to realize that their destinies are mingled in a way and to a degree that is unprecedented. The major is designed to expose students to this new environment.

This curriculum consists of four options: (1) Business Studies, (2) Asian Studies, (3) Latin American Studies, and (4) General Studies. This degree prepares students for transfer to four-year institutions for continued studies. This program fulfills typical lower-division requirements at four-year transfer institutions. Some variation in requirements may exist at a particular four-year college or university; therefore, it is essential that the student also refer to the catalog of the prospective transfer institution and consult a counselor.

AA – International Studies

Freshman Year

Foreign Language**	5
Anthropology 3 (Social and Cultural Anthropology)	3
Options*	0-18
General Education Courses: <i>(See General Education Requirements, page 48)</i>	
English Composition (Language and Rationality)	
Mathematics	
Social and Behavioral Sciences	
Natural Sciences	
Health Education	
Physical Education	

Sophomore Year

Foreign Language**	5
Geography 2 (Cultural Geography).....	3
Political Science 30 (International Relations)	3
Options*	0-18
General Education Courses: <i>(See General Education Requirements, page 48)</i>	
American Cultures	
American Institutions	
Humanities	
Communications and Analytical Thinking	
Physical Education	

Total units required 60

**Complete one of the 4 International Studies Options for a total of 18 units:*

Business Option:

- Business 1A/1B (Principles of Accounting)
- Business 18 (Business Law)
- CIS 50 (Introduction to Computer Information Systems)
- Business 20 (International Business)
- Business 30 (Business and Society)
- Business 40 (Business Concepts)
- Economics 1 (Principles of Economics: Microeconomics) and/or
Economics 2 (Principles of Economics: Macroeconomics)
- Speech 1 (Fundamentals of Speech).

***Select from foreign languages listed on pages 139-140.*

Asian Studies Option:

- Anthropology 5 (Cultural Pluralism: Anthropological Perspectives
of Race, Class, Gender and Ethnicity)
- Political Science 20 (Comparative Government)
- Religious Studies (Religions of the World)
- Economics 1 (Principles of Microeconomics) or
Economics 2 (Principles of Macroeconomics)
- Speech 1 (Fundamentals of Speech)

Latin American Studies Option:

- History 22 (Introduction to Mexican-American History and Culture)
- Spanish 2AB (Intermediate and Advanced Spanish)
- Anthropology 5 (Cultural Pluralism: Anthropological Perspectives
of Race, Class, Gender and Ethnicity)
- Economics 1 (Principles of Microeconomics) or
Economics 2 (Principles of Macroeconomics)
- Political Science 20 (Comparative Government)

- Speech 1 (Fundamentals of Speech)
- General Studies Option:
- 2nd Year of Foreign Language
- Anthropology 5 (Cultural Pluralism: Anthropological Perspectives of Race, Class, Gender and Ethnicity)
- Economics 1 (Principles of Microeconomics) or
- Economics 2 (Principles of Macroeconomics)
- Business 20 (International Business)
- Business 40 (Business Concepts)
- Political Science 20 (Comparative Government)
- Speech 1 (Fundamentals of Speech)

International Studies (INTS)

INTS 7 1-5 UNITS
TRAVEL STUDY: (SITE)
Grading Option: Transfer: CSU
(May be repeated 3 times)
Study and research of the culture, mores, history and unique characteristics of selected locales. Visits to specific sites nationally or internationally. May be offered under any Catalog heading. 1-15 hours.

Italian (ITLN)

See **Foreign Languages**

Internship (INTN)

About the Program

Internship opportunities are available through Las Positas College. Interested students who meet qualifications are placed in carefully structured work environments with local employers. Internships provide opportunities to apply knowledge gained in the classroom in a real world setting and can be an important part of career development for students. Students must concurrently enroll in the Internship Seminar course. Placements are contingent upon the availability of an appropriate internship site, employer criterion and student qualifications, and are at the discretion of the employer. Students and employers should contact the Work-Based Learning Coordinator at 925.373.5856.

INTN 1 1 UNIT

INTERNSHIP SEMINAR

Grading Option: OP Transfer: CSU
Taken in conjunction with an Internship Field Placement, this seminar examines issues related to work and professional development. The seminar provides the context to reflect on concrete experiences at the internship site and link these experiences to previously acquired, discipline specific, classroom based knowledge. Prerequisite: Successful completion (with a grade of "C" or higher) of 5-15 units (varies by discipline) in major field related to internship placement. 1 hour.

INTN 2 1 - 3 UNITS

INTERNSHIP FIELD PLACEMENT

Grading Option: OP Transfer: CSU
(May be repeated 1 time)
The student is placed in a carefully structured work environment in their planned career field. The placement allows for the application of discipline specific knowledge, skills and abilities gained in the classroom. Most internships are paid (rates will vary). Enrollment contingent upon the availability of internship sites and concurrent enrollment in the Internship Seminar course 1. Prerequisite: Successful completion (with a grade of "C" or higher) of 5-15 units (varies by discipline) in major field related to Internship Placement. 5-15 hours per week at the worksite.

Journalism

See **Mass Communication**

Laser Technology

Degree
AS – Laser Technology

Certificate
Laser Technology

About the Program

Laser Electro-Optic Technicians develop skills in laser science and electro-optics technology for a wide range of applications. Laser Electro-Optic Technicians are at home in a research and development laboratory designing and maintaining state-of-the-art lasers, as well as working in the fields of communications, computers (entertainment, consumer devices), medicine, defense, aerospace, and in many areas of scientific research. In addition to laser science and optics courses, there is a strong emphasis on electronics. The Laser Technology program is designed to prepare the student for job entry in this fast-growing field or to broaden the skills and knowledge of those technicians already working in related fields.



AS – Laser Technology

Freshman Year

Laser Technology 50 (Introduction to Laser Technology)	3
Laser Technology 51 (Fundamentals of Optics)	3
Electronics Technology 50 (Fundamentals of Electronics) or FACET Electronics Technology 85.1 (DC Fundamentals) FACET Electronics Technology 85.2 (AC1 Fundamentals) FACET Electronics Technology 85.3 (AC2 Fundamentals) and FACET Electronics Technology 85.4 (Semi-Conductor Devices) (1.5 units each)	6
Electronics Technology 52 (Circuits and Systems) or FACET Electronics Technology 86.1 (Operational Amplifier Fundamentals) FACET Electronics Technology 86.2 (Operational Amplifier Applications), and FACET Electronics Technology 86.3 (Power Supply Regulation) (1.5 units each)	4-4.5
Computer Information Systems 50 (Introduction to CIS).	3
Mathematics 36 (Trigonometry) or Mathematics 38 (Trigonometry with Geometry)	3-5
General Education Courses: (See General Education Requirements) Physical Education English Composition (Language and Rationality) Social and Behavioral Sciences	

Sophomore Year

Laser Technology 52A (Laser Components, Devices and Measurements)	3
Laser Technology 52B (High Power Lasers/Laser Components, Devices & Measurements)	3
*Laser Technology 53 (Physics and Optical Application) or ENGR 15 (Introduction to Optical Science and Engineering)	3-4
Vacuum Technology 60A (Introduction to Vacuum Concepts I)	3
Physics 2A (Introduction to Physics I)	4
Speech 1 (Fundamentals of Speech Communications) or Speech 10 (Interpersonal Communication).....	3
Electives*	2-4.5
General Education Courses: (See General Education Requirements) American Cultures American Institutions/Health Education Humanities	
Total units required	60

*Electives

Select from the following for a minimum of 2 units:

CNT 51 (A+ Computer Fundamentals) or FACET Electronics Technology 85.5 (Digital Logic Fundamentals) FACET Electronics Technology 85.6 (Digital Circuits I), and FACET Electronics Technology 85.7 (Digital Circuits II) Electronics Technology 59 (Optical Electronics)	
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Laser Technology

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Certificate of Achievement Laser Technology

Laser Technology 50 (Introduction to Laser Technology).....	3
Laser Technology 51 (Fundamentals of Optics)	3
Electronics Technology 50 (Fundamentals of Electronics) or FACET Electronics Technology 85.1 (DC Fundamentals) and FACET Electronics Technology 85.2 (AC1 Fundamentals) and FACET Electronics Technology 85.3 (AC2 Fundamentals) and FACET Electronics Technology 85.4 (Semi-Conductor Devices) ..	6
Laser Technology 52A (Laser Components, Devices, and Measurements)	3
Electronics Technology 52 (Circuits and Systems) or FACET Electronics Technology 86.1 (Operational Amplifier Fundamentals) and FACET Electronics Technology 86.2 (Operational Amplifier Applications) and FACET Electronics Technology 86.3 (Power Supply Regulation) ...	4-4.5
Laser Technology 52B (High Power Lasers/Laser Components, Devices and Measurements).....	3
Vacuum Technology 60A (Introduction to Vacuum Concepts I)	3
Speech 1 (Fundamentals of Speech Communications) or Speech 10 (Interpersonal Communication).....	3
Electives*	2-4.5
Total units required	30-33

*Electives

Select from the following for a minimum of 2 units:

- CNT 51 (A+ Computer Fundamentals) or
FACET Electronics Technology 85.5 (Digital Logic Fundamentals)
- FACET Electronics Technology 85.6 (Digital Circuits I), and
FACET Electronics Technology 85.7 (Digital Circuits II)
- Electronics Technology 59 (Optical Electronics)

Laser Technology (LASR)

LASR 50 3 UNITS

INTRODUCTION TO LASER TECHNOLOGY

Grading Option: OP Transfer: CSU

An introductory study of the elements and operation of lasers, optical power meters, and laser systems. The properties of light, emission and absorption of light, lasing action, and temporal and spatial characteristics of lasers with emphasis throughout the course on safe operating practices. Strongly Recommended: Mathematics 65, 71, or appropriate skill level demonstrated through the Mathematics assessment process. 2 hours lecture, 3 hours laboratory.

LASR 51 3 UNITS

FUNDAMENTALS OF OPTICS

Grading Option: OP Transfer: CSU

The course is a comprehensive study of geometrical and wave optics, using experiments, projects and theory to provide an in-depth introduction to surface interactions (reflection, refraction, absorption, transmission, and scattering; thin and thick lenses; mirrors; interference; and polarization. Strongly Recommended: Mathematics 65, 71, or appropriate skill level demonstrated through the Mathematics assessment process. 2 hours lecture, 3 hours laboratory.

LASR 52A 3 UNITS

LASER COMPONENTS, DEVICES AND MEASUREMENTS

Grading Option: GR Transfer: CSU

An in-depth study into the properties, applications and commercial sources of optical and mechanical components commonly used in industry; state-of-the-art optical measurement devices and techniques, including monochromators, spectrometers and interferometers. Laboratories will stress accuracy of measurement and analysis of data. Prerequisites: Laser Technology 50 and Laser Technology 51 (both completed with a grade of "C" or higher). 2 hours lecture, 3 hours laboratory.

LASR 52B 3 UNITS

HIGH POWER LASERS/ LASER COMPONENTS, DEVICES AND MEASUREMENTS

Grading Option: GR Transfer: CSU

An in-depth study into the properties, applications and commercial sources of optical and mechanical components and devices commonly used in High Average Power laser systems; state-of-the-art optical measurement devices and techniques, including monochromators, spectrometers and interferometers as they relate to high power lasers. Laboratories will stress accuracy of measurement and analysis of data. Prerequisite: Laser Technology 52A (completed with a grade of "C" or higher). 2 hours lecture, 3 hours.

LASR 53 3 UNITS

PHYSICAL OPTICS AND APPLICATIONS

Grading Option: OP Transfer: CSU

The wave properties of light with an emphasis on the application to modern photonics and laser technology. Interference theory and application to optical testing and metrology. Diffraction and its application to holography and optical processing. Gaussian beam propagation. Polarization, interference of polarized light and applications to laser electro-optic devices. Sources of light, blackbody radiation, propagation of light, absorption and scattering. Light propagation in optical fibers with an introduction to optical telecommunications. An introduction to light as a particle; photons. Prerequisites: Laser Technology 50 and Laser Technology 51 and Physics 2A (all completed with a grade of "C" or higher). 2 hours lecture, 3 hours laboratory.

Learning Skills (LRNS)

LRNS 116

1 UNIT

DIAGNOSTIC CLINIC AND STUDY SKILLS

Grading Option: C/N

(May be repeated 1 time)

Determination of eligibility for learning skills services through diagnostic testing. Includes state mandated tests. Focus on compensatory methods as derived from test results. 1 hour lecture, 1 hour laboratory.

LRNS 117

3 UNITS

LEARNING SKILLS - READING

Grading Option: OP

(May be repeated 1 time)

Preparation for reading success in college level English. Emphasis on learning skills in reading comprehension, decoding, and vocabulary through extensive reading and practice exercises. Prerequisite: Learning Skills 116 (may be taken concurrently) and recommendation of Learning Skills 116 instructor. 2 hours lecture, 3 hours laboratory.

LRNS 118

3 UNITS

LEARNING SKILLS - WRITING

Grading Option: C/N

(May be repeated 1 time)

Preparation for writing success in college-level English. Emphasis on learning skills in sentence parts, paragraph construction, and essay writing assignments. Prerequisite: Learning Skills 116 (may be taken concurrently) and recommendation of Learning Skills 116 instructor. 3 hours.

LRNS 119

3 UNITS

LEARNING SKILLS - PROBLEM SOLVING

Grading Option: C/N

(May be repeated 1 time)

Preparation for problem solving success in college. Emphasis on learning skills in quantitative reasoning abilities needed to process and integrate work problems and related problem solving tasks. Prerequisite: Learning Skills 116 (may be taken concurrently) and recommendation of Learning Skills 116 instructor. 3 hours.

LRNS 120

1 UNIT

COMPUTER ACCESS

Grading Option: C/N

(May be repeated 1 time)

This course offers specialized computer instruction for students with disabilities. There will be an emphasis on individual learning styles, keyboarding skills, and software mastery. Strongly recommended: Learning Skills 116. 1 hour lecture, 1 hour laboratory.



Liberal Arts and Sciences

Degree AA – Liberal Arts and Sciences (General)

About the Program

The Associate in Arts Degree in Liberal Arts and Sciences (General) is designed for students who wish a broad knowledge of liberal arts and sciences. This flexible major can be taken by students who wish to earn a general associate degree or by those who plan to transfer.

Important Note:

Since there are important differences among the three options, students are encouraged to meet with a counselor to determine the option which best satisfies their academic goals.



Option 1 (Selected Studies)

This option is designed especially for those students who desire the benefits of a general college education and the opportunity to pursue a “major” of 18 units that is designed to meet personal, vocational or other academic needs. Students who choose this degree option will meet with a counselor to develop a Student Educational Plan (SEP).

For Option 1 complete the following requirements:

LPC AA Degree General Education Requirements (see page 48)..	29
Courses for the Major*	18
*(To be selected from at least two Areas of Concentration)	
Electives	
Total Units Required.....	60

Option 1 - Areas of Concentration:

Students who choose Option 1 must complete 18 units selected from at least two of the seven Areas of Concentration listed below:

1. Business

- Business
- Computer Information Systems
- Marketing
- Supervision

2. Humanities

- Art
- Creative Arts
- Foreign Language
- Humanities
- Library Studies
- Music
- Philosophy
- Photography
- Religious Studies
- Theater Arts
- Visual Communications

3. Language Arts

- English
- Mass Communications
- Sign Language
- Speech

4. Mathematics, Science

- Astronomy
- Biology
- Biotechnology
- Botany
- Chemistry
- Computer Science
- Ecology
- Geography (1, 1L, 8)
- Geology
- Mathematics
- Microbiology
- Physical Science
- Physics
- Zoology

5. Physical Education and Health Science

- Dance
- Health
- Nutrition
- Physical Education
- Recreation and Leisure

6. Social Science

- Administration of Justice
- Anthropology
- Early Childhood Education
- Economics
- Geography (2, 3, 5, 11, 12)
- History
- Political Science
- Psychology
- Psychology-Counseling
- Sociology

7. Technology and Engineering

- Automotive Technology
- Computer Networking Technology
- Design Technology
- Electronics Technology
- Engineering
- Fire Science Technology
- Horticulture
- Industrial Technology
- Interior Design
- Laser Technology
- Occupational Safety and Health
- Radiation Safety
- Vacuum Technology
- Viticulture and Winery Technology
- Welding Technology

Option 2 (CSU Transfer)

This option is designed for students who plan to transfer to the California State University system and who want to complete and have certified the CSU General Education Breadth Requirements. Students will select courses that fulfill the CSU General Education Breadth Requirements and any additional LPC Graduation Requirements plus elective units to total 60 semester units.

For Option 2 complete the following requirements:

CSU General Education Breadth Requirements (See page 56)..... 39
 Additional LPC Graduation Requirements:
 American Cultures Requirement (this course can be double-counted where appropriate)
 Health 1 (this course can be double-counted in Area E)
 Physical Education
Total Units Required..... 60

Option 3 (UC or CSU Transfer)

This option is designed for transfer students to fulfill lower-division general education requirements in either the CSU or UC system by completing the Intersegmental General Education Transfer Curriculum (IGETC). Students will select courses that fulfill the IGETC requirements and any additional LPC Graduation Requirements plus elective units to total 60 semester units.

For Option 3 complete the following requirements:

IGETC (Areas 1 - 5) (See page 57)..... 34-37
 Foreign Language Requirement for IGETC certification (UC Transfer Students only)
 Additional LPC Graduation Requirements:
 American Institutions
 American Cultures Requirement (this course can be double-counted where appropriate)
 Health 1
 Physical Education
Total Units Required..... 60

Library Studies

Library Studies (LIBR)

LIBR 1

1 UNIT

LIBRARY SKILLS

Grading Option: C/N

Transfer: CSU, UC

Introduces techniques of research in a college library including development of a search strategy, location and evaluation of material in a variety of sources and formats, and preparation of a written bibliography of sources. Strongly recommended: Eligibility for English 1A. 3 hours laboratory.



Mass Communications

About the Program

The Mass Communications program is designed to provide students with a broad understanding of the principles of mass communications as well as experience in the application of these principles to the campus newspaper, the Express. Classes can be applied to meet transfer requirements at four-year institutions and for entry into careers in the media, such as reporting, public relations, print production, copy editing, and editing.

The Express is produced by students and published approximately twice per month. Students learn various aspects of newspaper production, including research, reporting, writing, editing, proofreading, meeting deadlines, electronic typesetting, graphic design, ad design, and photo scanning and sizing. To join the team, call 925.371.3840, or e-mail LPCEXpress@laspositascollege.edu, or drop by room 305.



Certificate of Achievement Mass Communications: Journalism

Mass Communications 1 (Journalism: Newswriting and Information Gathering)	3
Mass Communications 5 (Introduction to Mass Communications)...	3
English 1A** (Critical Reading and Composition) or English 52A (Essentials of Communication).....	3
Mass Communications 72 (Beginning Photojournalism) or Photography 72 (Documentary Photography)	2
Electives*	12
Total Units Required.....	23 units

*Electives

Select from the following Groups, A and/or B, for a minimum of 12 units:

Group A

MCOM 14 (Writing and Photography for a College Newspaper)

MCOM 15 (Publications-Editorial Leadership and Production)

MCOM 16 (Newspaper Production)

INTN I (Seminar) and

INTN 2 (Field Placement)..... 9-12

Group B

MCOM 2 (Journalism: Investigative Newswriting)

MCOM 3 (Journalism: Magazine and Newspaper Feature Writing).. 0-3

**Students preparing for transfer should take English 1A.

The courses in this certificate program fulfill some of the typical lower-division requirements at four-year transfer institutions. Some variation in requirements may exist at a particular four-year college or university; therefore, it is essential that the student refer to the catalog of the prospective transfer institution and consult with a counselor.

Mass Communications

Mass Communications (MCOM)

MCOM 1 3 UNITS

JOURNALISM: NEWSWRITING AND INFORMATION GATHERING

Grading Option: GR Transfer: CSU
Fundamentals of reporting and newswriting to develop ability to investigate, organize, write, and rewrite according to professional standards of print journalism. Analysis of exemplary journalistic models. Conceive, research, and write stories, using traditional news values. Requires source interviews or original research. Strongly recommended: Eligibility for English 1A or 52A. 3 hours.

MCOM 2 3 UNITS

JOURNALISM: INVESTIGATIVE NEWSWRITING

Grading Option: GR Transfer: CSU
News and feature writing, emphasizing investigative reporting, research techniques, and story presentation. Strongly recommended: Eligibility for English 1A or 52A. 3 hours.

MCOM 3 3 UNITS

JOURNALISM: MAGAZINE AND NEWSPAPER FEATURE WRITING

Grading Option: GR Transfer: CSU
Feature writing, freelance journalism and how to get published in newspapers and magazines. Strongly Recommended: Eligibility for English 1A or 52A. 3 hours.

MCOM 5 3 UNITS

INTRODUCTION TO MASS COMMUNICATIONS

Grading Option: GR Transfer: CSU, UC
History of the press and mass media; the political, social and economic impact of the press on government and public opinion. Strongly Recommended: Eligibility for English 1A or 52A. 3 hours. (CAN JOUR 4)

MCOM 14 1 UNIT

WRITING AND PHOTOGRAPHY FOR A WEEKLY PUBLICATION

Grading Option: OP
(May be repeated 4 times)
Journalism and photojournalism, content development/production for the weekly college newspaper. 3 hours laboratory.



MCOM 15 3 UNITS

PUBLICATIONS-EDITORIAL LEADERSHIP AND PRODUCTION

Grading Option: GR Transfer: CSU

(May be repeated 4 times)

Journalism, photojournalism, content development, and production for the college newspaper. Production of the College newspaper, including writing, business management, graphic arts, leadership, and editing. Strongly recommended: Eligibility for English 1A or 52A. 1 hour lecture, 6 hours laboratory.

MCOM 16 3 UNITS

NEWSPAPER PRODUCTION

Grading Option: GR Transfer: CSU

(May be taken 4 times)

Production of the College newspaper, including: using graphic design principles, preparing copy for input, preparing and manipulating photographs, typesetting, designing pages, laying out pages, proofreading, and pre-flighting. 1 hour lecture, 6 hours laboratory.

MCOM 31 3 UNITS

INTRODUCTION TO BROADCASTING

Grading Option: OP Transfer: CSU

Radio and television from the earliest years to the present as well as the public's role in broadcasting. Social, regulatory, and economic facets of the industry. 3 hours.

MCOM 33A 2 UNITS

INTRODUCTION TO TELEVISION STUDIO TECHNIQUES

Grading Option: OP Transfer: CSU

An introduction to studio practices, offering a cursory experience in television studio operations, control room procedures, and basic program production. 1 hour lecture, 3 hours laboratory.

MCOM 33B 2 UNITS

INTERMEDIATE TELEVISION STUDIO TECHNIQUES

Grading Option: OP Transfer: CSU

(May be repeated 1 time)

Further experience in television studio operations, control room procedures, and basic program production. Designed to improve skills in operating television equipment, and producing and directing TV programs. Prerequisite: Mass Communications 33A (completed with a grade of "C" or higher). 1 hour lecture, 3 hours laboratory.

MCOM 72 2 UNITS

BEGINNING PHOTOJOURNALISM (Replaces MCOM 71)

Grading Option: GR Transfer: CSU

(May be taken 4 times)

Photography exploring the documentary approach. Survey of photojournalism as a medium of mass communications. Understanding and applying photojournalistic and basic technical and visual skills in the making of successful reportage photographs. Consideration of the work of major 20th century photojournalists. Strongly recommended: Photography 50 or Mass Communications 14. 1 hour lecture, 4 hours laboratory.

Mathematics (MATH)**MATH X** 1- 5 UNITS**SUPERVISED PROGRAMMED LEARNING**

Grading Option: GR

Self-paced learning in mathematics using programmed materials under instructor supervision. Credit may be earned in Mathematics 36, 55, 55A, 55B, 65, 65A, 65B, 71, and 107, according to the level of achievement. 3-5 hours. (See course descriptions for transferability.)

MATH 1 5 UNITS**ANALYTIC GEOMETRY AND CALCULUS I**

Grading Option: GR Transfer: CSU, UC*

Introduction to differential and integral calculus; functions, limits, and continuity; techniques and applications of differentiation and integration; the Fundamental Theorem of Calculus. Prerequisite: Mathematics 20 (completed with a grade of "C" or higher) or an appropriate skill level demonstrated through the Mathematics assessment process. 5 hours, 0-1 laboratory hour. (CAN MATH 18; MATH 1 + 2 = CAN MATH SEQ B, MATH 1 + 2 + 3 = CAN MATH SEQ C * Transfer unit limitations, see page 61

MATH 2 5 UNITS**ANALYTIC GEOMETRY AND CALCULUS II**

Grading Option: GR Transfer: CSU, UC*

Continuation of differential and integral calculus, including transcendental, inverse, and hyperbolic functions. Techniques of integration, parametric equations, polar coordinates, sequences, series, power series and Taylor series. Introduction to three dimensional coordinate system and operations with vectors. Primarily for mathematics, physical science, and engineering majors. Prerequisite: Mathematics 1 (completed with a grade of "C" or higher) or an appropriate skill level demonstrated through the Mathematics assessment process. 5 hours lecture, 0-1 laboratory hours. (CAN MATH 20; MATH 1 + 2 = CAN MATH SEQ B; MATH 1 + 2 + 3 = CAN MATH SEQ C) * Transfer unit limitations, see page 61

MATH 3 5 UNITS**MULTIVARIABLE CALCULUS**

Grading Option: GR Transfer: CSU, UC

Vector valued functions, functions of several variables, partial differentiation, multiple integration, change of variables theorem, scalar and vector fields, gradient, divergence, curl, line integral, surface integral, theorems of Green, Stokes and Gauss, applications. Prerequisite: Mathematics 2 (completed with a grade of "C" or higher). 5 hours. (CAN MATH 22; MATH 1 + 2 + 3 = CAN MATH SEQ C)

MATH 5 (Formerly MATH 4) 3.5 UNITS**DIFFERENTIAL EQUATIONS WITH COMPUTER APPLICATIONS**

Grading Option: GR Transfer: CSU, UC

Introduction to differential equations, including first and second order equations, series solutions. Laplace transforms, applications. Computing symbolic and graphical solutions using MATLAB.

Prerequisite: Mathematics 2 (completed with a grade of "C" or higher). 3 hours lecture, 2 hours laboratory. (CAN MATH 24)

MATH 7 (Formerly MATH 6) 3.5 UNITS**ELEMENTARY LINEAR ALGEBRA WITH COMPUTER APPLICATIONS**

Grading Option: GR Transfer: CSU, UC

Introduction to linear algebra: matrices, determinants, systems of equations, vector spaces, linear transformations, eigenvalues, eigenvectors, applications. Computing symbolic and graphical solutions using MATLAB. Prerequisite: Mathematics 2 (completed with a grade of "C" or higher). 3 hours lecture, 2 hours laboratory.

MATH 10 (Formerly MATH 8) 4 UNITS**DISCRETE MATHEMATICS**

Grading Option: GR Transfer: CSU, UC

Sets and logic, methods of proof, induction, combinatorics, analysis of algorithms, relations, recursive definitions, recurrence relations, graph theory, trees. Applications include Boolean algebra, logic circuits and automata. Designed for majors in mathematics and computer science. Prerequisite: Mathematics 1 (completed with a grade of "C" or higher). 4 hours. (CAN CSCI 26)

MATH 20 5 UNITS**PRE-CALCULUS MATHEMATICS**

Grading Option: GR Transfer: CSU, UC*

Rational functions and relations with emphasis on logical development and graphing. Solution of polynomial equations and inequalities, graphing conic sections, mathematical induction, binomial theorem; strengthening of skills in working with exponential, logarithmic, and trigonometric functions, equations, graphs, and applications. Prerequisite: Mathematics 36 or 36Y or Mathematics 38 (completed with a grade of "C" or higher) or an appropriate skill level demonstrated through the Mathematics assessment process. 5 hours, 0-1 laboratory hour. * Transfer unit limitations, see page 61

MATH 33 4 UNITS**FINITE MATHEMATICS**

Grading Option: GR Transfer: CSU, UC*

Straight lines, systems of linear equations, matrices, systems of linear inequalities, linear programming, mathematics of finance, sets and Venn diagrams, combinatorial techniques and an introduction to probability. Applications in business, economics and social sciences. Prerequisite: Mathematics 55 or 55B or 55Y (completed with a grade of "C" or higher) or an appropriate skill level as demonstrated through the Mathematics assessment process. 4 hours. (CAN MATH 12) * Transfer unit limitations, see page 61

MATH 34 5 UNITS**CALCULUS FOR BUSINESS AND SOCIAL SCIENCES**

Grading Option: GR Transfer: CSU, UC*

Functions and their graphs; differential and integral calculus of polynomial, exponential and logarithmic functions. Applications in business, economics, and social sciences. Prerequisite: Mathematics 55, 55B, or 55Y (completed with a grade of "C" or higher) or an

Mathematics

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appropriate skill level demonstrated through the Mathematics Assessment process. 5 hours. (CAN MATH 34) * *Transfer unit limitations, see page 61*

MATH 36 3 UNITS

TRIGONOMETRY

Grading Option: GR Transfer: CSU

Topics Include trigonometric functions, trigonometric equations, graphs, triangle solutions, identities, De Moivre's Theorem. Prerequisite: Mathematics 55 or 55B or 55Y and Mathematics 57 (both completed with a grade of "C" or higher), or two years of high school algebra and one year of plane geometry and appropriate skill level demonstrated through the Mathematics assessment process. 3 hours. (CAN MATH 8)

MATH 38 5 UNITS

TRIGONOMETRY WITH GEOMETRY

Grading Option: GR Transfer: CSU

Plane trigonometry with topics from plane geometry. Geometry includes congruence, properties of polygons, parallel and perpendicular lines, similarity, area, volumes, and coordinate geometry. Trigonometry includes trigonometric functions, trigonometric equations, graphs, triangle solution, identities, polar coordinates and complex numbers. Prerequisite: Mathematics 55 or 55B or 55Y (complete with a grade of "C" or higher) or an appropriate skill level demonstrated through the Mathematics assessment process. 5 hours lecture, 0-1 hours laboratory.

MATH 41 5 UNITS

STATISTICS FOR BUSINESS MAJORS

Grading Option: GR Transfer: CSU, UC*

Descriptive Statistics, measure of central tendency, dispersion and position, elements of probability; confidence intervals; hypothesis tests for one and two populations; probability distributions; analysis of variance; correlation and regression; non-parametric tests; applications in various fields. Introduction to the use of a computer software package to complete both descriptive and inferential statistics problems. Prerequisite: Mathematics 34 or Mathematics 1 (completed with a grade of "C" or higher) or equivalent. 5 hours lecture, 1 hour laboratory. * *Transfer unit limitations, see page 61*

MATH 42A 3 UNITS

INTRODUCTION TO PROBABILITY AND STATISTICS

Grading Option: GR Transfer: CSU, UC*

Descriptive statistics, including measures of central tendency and dispersion; elements of probability; tests of statistical hypotheses; correlation and regression; applications in various fields. Introduction to the use of a computer software package to complete both descriptive and inferential statistics problems. Prerequisite: Mathematics 55 or 55B or 55Y (completed with a grade of "C" or higher) or an appropriate skill level demonstrated through the Mathematics assessment process. 3 hours lecture, 1 hour laboratory. (CAN STAT 2) * *Transfer unit limitations, see page 61*

MATH 42B 3 UNITS

STATISTICAL ANALYSIS

Grading Option: GR Transfer: CSU, UC*

Statistical analysis, including comparisons of two populations, chi-square applications, analysis of variance, non-parametric, regression and correlation. Use of a computer software package to complete statistics problems. Prerequisite: Mathematics 42A (completed with a grade of "C" or higher). 3 hours lecture, 1 hour laboratory. * *Transfer unit limitations, see page 61*

MATH 44 5 UNITS

STATISTICS AND PROBABILITY

Grading Option: GR Transfer: CSU, UC*

Descriptive Statistics, measures of central tendency, dispersion and position; elements of probability; confidence intervals; hypothesis tests; two-population comparisons; correlation and regression; goodness of fit, analysis of variance, non-parametric tests; and application in various fields. Introduction to the use of a computer software package to complete both descriptive and inferential statistics problems. Prerequisite: Mathematics 55 or 55B or 55Y (completed with a grade of "C" or higher) or 2 years of high school algebra and an appropriate skill level demonstrated through the Mathematics assessment process. 5 hours lecture, 1 hour laboratory. * *Transfer unit limitations, see page 61*

MATH 45 3 UNITS

COLLEGE ALGEBRA

Grading Option: GR Transfer: CSU, UC*

Polynomial, rational, exponential, and logarithmic functions; theory of equations; matrices and determinants; analytic geometric sequences, series and the binomial theorem; mathematical induction. Prerequisite: Mathematics 55 or 55B or 55Y (completed with a grade of "C" or higher) or an appropriate skill level demonstrated through the Mathematics assessment process. 3 hours, 0-1 laboratory hours. * *Transfer unit limitations, see page 61*

MATH 55 5 UNITS

INTERMEDIATE ALGEBRA

Grading Option: OP

Concepts involving complex numbers, quadratic equations, parabolas and circles, functions and their graphs, systems of equations, rational exponents, radical equations, absolute value equations and inequalities, exponential and logarithmic functions and equations. Prerequisite: Mathematics 65, 65B or 65Y (completed with a grade of "C" or higher) or an appropriate skill level demonstrated through the Mathematics assessment process. Equivalent to Mathematics 55X and Mathematics 55Y. May not receive credit if Mathematics 55B or 55Y have been completed. 5 hours, 0-1 laboratory hour.

MATH 55A 3 UNITS

INTERMEDIATE ALGEBRA A

Grading Option: OP

Concepts covered in the first half of Mathematics 55 including complex numbers, quadratic equations, radical expressions, radical equations, rational exponents, absolute value equations and inequalities, and

functions and their graphs. Prerequisite: Mathematics 65 or 65B or 65Y (completed with a grade of "C" or higher) or an appropriate skill level demonstrated through the Mathematics assessment process. May not receive credit if Mathematics 55 or Mathematics 55X has been completed. 3 lecture hours, 0-1 laboratory hour.

MATH 55B 3 UNITS

INTERMEDIATE ALGEBRA B

Grading Option: OP

Concepts covered in the second half of Mathematics 55 including parabolas and circles, function composition, inverse functions and their graphs, systems of equations, and exponential and logarithmic functions and equations. Prerequisite: Mathematics 55A or 55X (completed with a grade of "C" or higher). May not receive credit if Mathematics 55 or 55Y has been completed. 3 lecture hours, 0-1 laboratory hour.

MATH 57 3 UNITS

PLANE GEOMETRY

Grading Option: OP

Topics in plane geometry include: congruence, similarity, parallel lines, and properties of polygons and circles. Prerequisite: Mathematics 65 or Mathematics 65B or Mathematics 65Y (completed with a grade of "C" or higher) or an appropriate skill level demonstrated through the Mathematics assessment process. 3 hours.

MATH 60 1 UNIT

MATH STUDY SKILLS

Grading Option: C/N

(May be repeated 1 time)

This course is designed to assist students in learning mathematics through the development of successful study skills and exam taking methods. Designed primarily for students in beginning or intermediate algebra, this course addresses learning styles, how to read a math book, completing homework assignments, how to take notes and exams, basics of calculator operations and techniques for overcoming math anxiety. 1 hour.

MATH 65 5 UNITS

ELEMENTARY ALGEBRA

Grading Option: OP

Elementary concepts, including signed numbers, integral exponents, polynomials and rational expressions, linear, quadratic and rational equations; linear inequalities; introduction to graphs and set theory; systems of equations. Prerequisite: Mathematics 106, 107Y or 105 (completed with a grade of "C" or higher) or an appropriate skill level demonstrated through the Mathematics assessment process. Equivalent to Mathematics 65X and 65Y. May not receive credit if Mathematics 65B or 65Y has been completed. 5 hours, 0-1 laboratory hour.

MATH 65A 3 UNITS

ELEMENTARY ALGEBRA A

Grading Option: OP

Concepts covered in the first half of Mathematics 65, including signed numbers, polynomials and integer exponents; linear equations and inequalities; introduction to graphs; set theory. Designed for those with no previous algebra background. Prerequisite: Mathematics 106 or 107Y (completed with a grade of "C" or higher) or an appropriate skill level demonstrated through the Mathematics assessment process. May not receive credit if Mathematics 65 or 65X has been completed. 3 lecture hours, 0-1 laboratory hour.

MATH 65B 3 UNITS

ELEMENTARY ALGEBRA B

Grading Option: OP

Concepts covered in the second half on Mathematics 65, including factoring, rational expressions and complex fractions; system of linear equations, quadratic and rational graphing. Prerequisite: Mathematics 65A or 65X (completed with a grade of "C" or higher). May not receive credit if Mathematics 65 or 65Y has been completed. 3 lecture hours, 0-1 laboratory hour.

MATH 71 3 UNITS

APPLIED MATHEMATICS FOR TECHNICIANS

Grading Option: GR

Calculator techniques for whole number and decimal arithmetic problem-solving, fraction-decimal conversions, geometry, numerical trigonometry; conversions between the U.S. and metric systems; emphasis on application from technical fields. 3 hours.

MATH 106 3.5 UNITS

BASIC MATHEMATICS

Grading Option: OP

Review and practice in fundamental computational skills including operations with whole numbers, common fractions, decimals, percents, ratios, and proportions. Metric and English systems of measurement geometric formulas. Introduction to algebra including signed numbers and simple linear equations. (May not receive credit if Mathematics 107 has been completed.) 3 hours lecture, 2 hours laboratory.

MATH 107 4 UNITS

PRE-ALGEBRA

Grading Option: GR

Review and practice in fundamental computational skills including operations with whole numbers, common fractions, decimals, percents, ratios, and proportions. Metric and English systems of measurement and geometric formulas. Introduction to algebra including signed numbers and simple linear equations. Basic Statistics and consumer mathematics. May not receive credit if Mathematics 106 has been completed. 4 hours.

Microbiology (MICR)

See **Biological Sciences**

Music

Degree
AA - Music

Certificate
Beginning Piano Pedagogy
Intermediate Piano Pedagogy

About the Program

The Music major offers a secure foundation for further study in music. Courses in the Music Department are designed to fulfill the needs of music majors, professional musicians, and those whose interest is avocational or recreational. Students are encouraged to contact a counselor and consult the Catalog for guidance when planning to transfer to a four-year institution in this major.



AA - Music

Freshman Year

Music 8A (Harmony and Musicianship I).....	4
Music 8B (Harmony and Musicianship II).....	4
Music 21A (Beginning Piano).....	1
Music 21B (Beginning Piano-Intermediate).....	1
Music Electives*.....	2
Performance Electives**.....	4-5

General Education Courses: (See General Education Requirements, page 48)

- English Composition (Language and Rationality)
- Mathematics
- Social and Behavioral Sciences
- Natural Sciences
- Health Education
- Physical Education

Sophomore Year

Music 10A (Chromatic Harmony and Musicianship).....	4
Music 10B (Post-Romantic and Twentieth Century Harmony).....	4
Music Electives*.....	2
Performance Electives**.....	4-5

General Education Courses: (See General Education Requirements, page 48)

- Physical Education
- American Cultures
- American Institutions
- Humanities
- Communications and Analytical Thinking

Total units required 60

Music Electives*:

Select course(s) from the following, for a minimum of 4 units:

- Music 23A (Elementary Voice I)
- Music 23B (Elementary Voice II)
- Music 30 (Study of Guitar)
- Music 31 (Study of Piano)
- Music 33 (Study of Voice)
- Music 38 (Individual Study)

Performance Electives**:

Select course(s) from the following, for a minimum of 8 units:

- Music 12 (College Band)
- Music 14 (Jazz Ensemble)
- Music 15 (Jazz Band)
- Music 44 (Concert Choir) or
- Music 45 (Chamber Choir)

**Certificate of Completion
Beginning Piano Pedagogy**

Music 25 (Teaching Beginning Piano)	2
Music 26 (Methods and Materials for Piano Teachers)	2
Music 8A (Harmony and Musicianship I).....	4
Music 8B (Harmony and Musicianship II)	4
Music 38* (Individual Study)	2
Total units required	14

*Two semesters required

**Certificate of Completion
Intermediate Piano Pedagogy**

Music 27 (Teaching Intermediate Piano)	2
Music 28 (Keyboard Skills)	1
Music 10A (Chromatic Harmony and Musicianship)	4
Music 10B (Post-Romantic and 20th Century Harmony)	4
Music 1 (Introduction to Music)	3
Music 38* (Individual Study)	2
Total units required	16

*Two semesters required for a total of 4 units

Music (MUS)

Literature, Theory and Musicianship

MUS 1 **3 UNITS**

INTRODUCTION TO MUSIC

Grading Option: GR Transfer: CSU, UC
 Music for enjoyment and understanding through informed listening, analysis, evaluation and discernment of musical elements, forms, and repertoire. Attendance at concerts and listening to a variety of music may be required. 3 hours.

MUS 2 **3 UNITS**

WORLD MUSIC AND CULTURES

Grading Option: OP Transfer: CSU, UC
 A survey of the dominant musical cultures of the world with influences and comparisons to Western thought and music. Explore the music literature and traditions of Asia, India, Indonesia and Australia, Africa, the Middle East, Europe, Latin and Indigenous America. Examine the historical as well as the cultural, philosophical and social conditions in which the music developed and how music is used for inner awareness and aesthetic experiences. 3 hours.

MUS 4 **3 UNITS**

JAZZ STYLES

Grading Option: GR Transfer: CSU, UC
 History, trends, and influences of the phenomenon of jazz beginning with pre-Dixieland early 1900's covering the various eras including Swing, Be-Bop and post Be-Bop to present day. 3 hours.

MUS 5 **3 UNITS**

AMERICAN CULTURES IN MUSIC

Grading Option: OP Transfer: CSU, UC
 Music in twentieth century United States through the study of contributions of three selected groups from the following: African-Americans, Latin-Americans, Asian-Americans, European-Americans, and Native Americans. Emphasis on understanding diverse styles, and on integrating these styles into American music. Concert, religious, and folk-pop music will be included. 3 hours.

MUS 6 **2 UNITS**

BASIC MUSIC SKILLS

Grading Option: OP Transfer: CSU, UC
 Essentials of music through notation, time elements, melody, harmony, and tonality, texture, dynamics and knowledge of the keyboard. Sight singing and ear training. 2 hours.

MUS 7 **2 UNITS**

ELECTRONIC MUSIC

Grading Option: GR Transfer: CSU, UC
(May be repeated 1 time)
 Electronic music production techniques and performance practices; survey of electronic instruments and their development; fundamentals of acoustics and synthesizer programming, digital control, and recording. Prerequisite: Music 6 (completed with a grade of "C" or higher) or equivalent. 2 hours lecture, 1 hour laboratory.

MUS 8A **4 UNITS**

HARMONY AND MUSICIANSHIP I

Grading Option: GR Transfer: CSU, UC
 Elements of diatonic harmony through part writing and ear training exercises as typified by musical practice from 1600 to the present. Includes keys, modes, scales, tonality, intervals, solfeggio, consonance/dissonance, rhythmic organization, chord structure, chord and interval recognition, melodic and rhythmic dictation, voice leading principles, non-chord tones, four-part voice leading with selected primary and secondary chords, and figured bass realization. Strongly recommended: Music 6 or equivalent skills. 3 hours lecture, 2 hours laboratory.

MUS 8B 4 UNITS

HARMONY AND MUSICIANSHIP II

Grading Option: GR Transfer: CSU, UC

Continues diatonic harmony through part writing and ear training exercises as typified by musical practice from 1600 to the present, continues solfeggio, chord recognition, melodic and rhythmic dictation, diatonic four-part voice leading, and figured bass realization. Introduces harmonic dictation, cadential elaboration, non-dominant seventh chords, and tonicization/modulation to the dominant. Prerequisite: Music 8A (completed with a grade of "C" or higher). 3 hours lecture, 2 hours laboratory.

MUS 10A 4 UNITS

CHROMATIC HARMONY AND MUSICIANSHIP

Grading Option: GR Transfer: CSU, UC

Elements of both diatonic and chromatic harmony through part writing and ear training exercises as typified by musical practice from 1600 to the present. Continues solfeggio; chord recognition; melodic, rhythmic, and harmonic dictation; and figured bass realization. Introduces chorale dictation, chromatic four-part voice leading, chord progression and succession techniques, non-chord tones using figuration and rhythmic displacement, and mode mixture. Prerequisite: Music 8B (completed with a grade of "C" or higher). 3 hours lecture, 2 hours laboratory.

MUS 10B 4 UNITS

POST ROMANTIC AND 20TH CENTURY HARMONY

Grading Option: GR Transfer: CSU, UC

Continues chromatic harmony through part writing and ear training exercises as typified by musical practice from 1600 to the present. Furthers study in solfeggio; melodic, rhythmic, and chorale dictation; chromatic four-part voice leading; figured bass realization; and chord succession and progression techniques. Introduces secondary dominants; diatonic modulation, extended chords; Neapolitan, augmented sixth, augmented, and altered dominant chords; chromatic embellishing chords; and chromaticism in larger contexts. Prerequisite: Music 10A (completed with a grade of "C" or higher). 3 hours lecture, 2 hours laboratory.

MUS 11A 2 UNITS

INTRODUCTION TO JAZZ IMPROVISATION

Grading Option: GR Transfer: CSU, UC

Major scales, chord construction, and development of melodic lines used in contemporary styles of Jazz Improvisation. Jazz literature for small groups of the post Bop era. Corequisite: Music 12, 14, 15, or 45 (or equivalent). 3 hours.

MUS 11B 2 UNITS

JAZZ IMPROVISATION AND ARRANGING FOR SMALL GROUPS

Grading Option: GR Transfer: CSU, UC

(May be repeated 2 times)

Exotic scales, altered chord construction, and development of modal and intervallic concepts used in avant garde jazz improvisation. Techniques used in composing and arranging for the small Jazz Combo. Musical scores written by professional composers and arrangers. Prerequisite: Music 11A (completed with a grade of "C" or higher). 3 hours.

MUS 24 3 UNITS

JAZZ IN AMERICA

Grading Option: GR Transfer: CSU, UC

History, trends and influences of the phenomenon of jazz through integration of the cultures of (but not limited to) Africa, Western Europe and the Latin communities. Required listening, reading and concert attendance will guide the student to value jazz as a form of self expression and improve the ability to listen and understand the various eras in jazz from pre-Dixieland to present day. 3 hours.

Performance

MUS 12 2-2.5 UNITS

COLLEGE BAND

Grading Option: GR Transfer: CSU, UC

(May be repeated 3 times; limit 10 units)

Band repertoire of all styles and periods. Emphasis on group participation and public performance. Attendance at all scheduled performances required. 4-5 hours.

MUS 14 2 UNITS

JAZZ ENSEMBLE

Grading Option: GR Transfer: CSU, UC

Reading, preparation and performance of contemporary Jazz music. Opportunity to apply improvisation techniques in a group setting. 4 hours.

MUS 15 2 UNITS

JAZZ BAND

Grading Option: GR Transfer: CSU, UC

(May be repeated 3 times)

Reading, preparation and performance of contemporary Jazz music, arranged for Jazz band. Opportunity to arrange and compose for the band as well as to conduct. 4 hours.

MUS 43 1 UNIT

VOCAL ENSEMBLE

Grading Option: GR Transfer: CSU, UC

(May be repeated 3 times)

Instruction for the advanced singer; an opportunity to explore and perform vocal chamber music. 2 hours.

MUS 44 .5-2.5 UNITS

CONCERT CHOIR

Grading Option: GR Transfer: CSU, UC

(May be repeated 3 times)

Development of vocal and musical ability to interpret and perform the highest calibre of choral literature. Designed for those with experience and/or ability in choral singing. 1-5 hours.

MUS 45 .5-2.5 UNITS

CHAMBER CHOIR

Grading Option: GR Transfer: CSU, UC

(May be repeated 3 times)

Development of sufficient vocal and music ability to interpret and perform a variety of vocal chamber music. Designed for the advanced singer. 1-5 hours.

MUS 46A 2 UNITS

BEGINNING JAZZ CHOIR

Grading Option: GR Transfer: CSU, UC

The various aspects of performing in a vocal jazz ensemble. Emphasis on developing the rudiments of vocal jazz technique. Strongly recommended: Music 6. 4 hours.

MUS 46B 2 UNITS

ADVANCED JAZZ CHOIR

Grading Option: GR Transfer: CSU, UC

The various aspects of performing in a vocal jazz ensemble. Emphasis on developing advanced vocal jazz technique. Prerequisite: Music 46A. 4 hours.

MUS 47 1-5 UNITS

COLLEGE PRODUCTIONS - MUSIC

Grading Option: OP Transfer: CSU, UC

(May be repeated 3 times)

Participation in scheduled music productions. Includes music support for drama productions, college musicals, and other major performances. Enrollment is for the duration of the production. 3-15 laboratory hours.

Applied

MUS 20 1 UNIT

ELEMENTARY GUITAR

Grading Option: OP Transfer: CSU, UC

Beginning guitar using a combination of folk and classic approaches to playing technique, utilizing basic scales and chords in first position, and music notation. Strongly Recommended: Music 6. 2 hours.

MUS 21A 1 UNIT

BEGINNING PIANO

Grading Option: GR Transfer: CSU, UC

Class piano with emphasis on developing technique, reading music, and performing. Strongly Recommended: Music 6. 2 hours.

MUS 21B 1 UNIT

BEGINNING PIANO: INTERMEDIATE

Grading Option: GR Transfer: CSU, UC

Development of skills learned in Music 21A. Emphasis on further development of technique and performance. Prerequisite: Music 21A (completed with a grade of "C" or higher). 2 hours.

MUS 22 2 UNITS

JAZZ PIANO: BEGINNING TO INTERMEDIATE

Grading Option: GR Transfer: CSU, UC

Voicings, chords, and guidelines in improvisation in the contemporary styles of the jazz pianist. Post Bop era, through modern to avant garde piano playing in the jazz idiom. Requires basic knowledge of notation and keyboard performance. 3 hours.

MUS 23A 1 UNIT

ELEMENTARY VOICE I

Grading Option: GR Transfer: CSU, UC

Group singing with emphasis on solo performance. Tone production, breathing, diction, and interpretation in regard to song literature. Strongly Recommended: Music 6. 2 hours.

MUS 23B 1 UNIT

ELEMENTARY VOICE II

Grading Option: GR Transfer: CSU, UC

Development of skills learned in Music 23A. Emphasis on further development of vocal production and performance. Prerequisite: Music 23A (completed with a grade of "C" or higher). 2 hours.

MUS 25 2 UNITS

TEACHING BEGINNING PIANO

Grading Option: OP Transfer: CSU

Principles of successful piano teaching with emphasis upon development of technique and reading ability in beginner level students; private and group piano teaching methods; personal development as teacher and musician. Observation of piano lessons or classes and supervised practice teaching of private or class piano students may be required. Intended for pianists with intermediate or advanced skills. Strongly recommended: Music 21B 2 hours.

MUS 26 2 UNITS

METHODS AND MATERIALS FOR PIANO TEACHERS

Grading Option: OP Transfer: CSU

Examination of various methods in print for use in teaching piano; setting up a teaching studio and maintaining the business; finding and selecting supplementary literature; preparing for recitals and other special events. Intended for pianists with intermediate or advanced skills who are engaged in the teaching of piano or who would like to prepare to teach. Strongly recommended: Music 21B. 2 hours.

Music

MUS 27 2 UNITS

TEACHING INTERMEDIATE PIANO TEACHING INTERMEDIATE PIANO

Grading Option: OP Transfer: CSU

Principles of successful piano teaching with emphasis upon continued development of technique and reading ability in intermediate level students; private and group piano teaching methods; selection of intermediate literature; Baroque, Classical, Romantic and 20th Century styles: studio organization and personal development as teacher and musician. Observation of piano lessons or classes and supervised practice teaching of private or class piano students may be required. Strongly recommended: Music 21B. 2 hours.

MUS 28 1 UNIT

KEYBOARD SKILLS

Grading Option: OP Transfer: CSU

(May be taken 2 times)

Emphasis on correct harmonization of melodies and various styles of piano accompaniments; transposition; improvisation; modulation; sight reading; principles of accompanying soloists and groups; playing by ear. Frequent solo and ensemble performances in class. Intended for piano teachers or classroom music teachers. Strongly recommended: Music 21B. 2 hours.

MUS 30 1 UNIT

STUDY OF GUITAR

Grading Option: OP Transfer: CSU, UC

(May be repeated 4 times)

Development of skills and knowledge from Music 20. Emphasis on playing techniques and performance. Designed for the intermediate and advanced performer. Prerequisite: Music 20 (completed with a grade of "C" or higher) or equivalent. 2 hours.

MUS 31 1 UNIT

STUDY OF PIANO

Grading Option: GR Transfer: CSU, UC

(May be repeated 3 times)

Development of functional piano skills. Designed for knowledge and skill of intermediate or advanced level. Prerequisite: Music 21B (completed with a grade of "C" or higher). 2 hours.

MUS 32 2 UNITS

STUDY OF JAZZ PIANO

Grading Option: GR Transfer: CSU, UC

(May be repeated 3 times)

Techniques, patterns, and modal concepts used by avant-garde jazz performers in the field today. Includes "comping" techniques in jazz and Latin jazz performance. Development of self-style through in-depth research of modern jazz performers and literature of same. Designed for knowledge and skill of intermediate or advanced level. Prerequisite: Music 22 (completed with a grade of "C" or higher). 3 hours.

MUS 33 1 UNIT

STUDY OF VOICE

Grading Option: GR Transfer: CSU, UC

(May be repeated 3 times)

Individual improvement of the technical facility, tone quality, and range of the singing voice in solo performances; designed to extend knowledge of the literature in general and help acquire a basic repertory. Required for voice majors. Prerequisite: Music 23B (completed with a grade of "C" or higher) or equivalent. 2 hours.

MUS 38 1 UNIT

INDIVIDUAL STUDY

Grading Option: OP Transfer: CSU

(May be repeated 3 times)

Specialized study of voice or instrument. Designed for music major or minor to increase opportunities in individualized study of voice or instrument. 2 hours.

MUS 39 1 UNIT

MUSICAL THEATER WORKSHOP

Grading Option: OP Transfer: CSU, UC

Training in performance skills for musical theater, with emphasis on vocal technique. Corequisite: Theater Arts 39. 2 hours.

MUS 40 1-3 UNITS

PASSPORT TO MUSIC

Grading Option: OP Transfer: CSU

Supervised participation in scheduled performances of the music department in performer, accompanist, and or/ or technical assistant capacity. Hour value to be determined by the instructor, after audition, based upon the scope of the performance or technical assignment. Enrollment is for the duration of one particular performance, workshop, or concert tour. 1-6 hours.

MUS 42 1 UNIT

VOCAL REPERTOIRE

Grading Option: GR Transfer: CSU, UC

(May be repeated 3 times)

Vocal repertoire with emphasis on solo performance. Includes vocal solo literature of the Baroque, Classical, Romantic, and Contemporary periods in French, German, English, Italian, and Spanish. Prerequisite: Music 23B or Music 33 (may be taken concurrently). 2 hours.

Nutrition (NUTR)**NUTR 1** 3 UNITS**NUTRITION**

Grading Option: OP Transfer: CSU, UC

The basics of nutrition, including nutrients, nutritional needs, digestion/absorption, and the role of nutrition in the maintenance of health. Designed to meet the needs of students majoring in the science and/or health fields. Strongly recommended: Chemistry 30A. 3 hours. (CAN FCS 2)

NUTR 3 3 UNITS**NUTRITION FOR HEALTH AND WELLNESS**

Grading Option: OP Transfer: CSU

Optimal diet and food choices to promote health, and prevent disease. Role of nutrition and fitness in health. Impact of harmful eating patterns. Evaluation of diets and nutrition information. Issues of current interest. 3 hours.

NUTR 5 3 UNITS**NUTRITION FOR PERFORMANCE AND SPORT**

Grading Option: OP Transfer: CSU

Students will study the role of nutrition in sports, performance and physical fitness. Optimal food, nutrient, and activity choices to maximize athletic performance and support health will be addressed. 3 hours.



Occupational Safety and Health

Degree AS - Occupational Safety and Health

Certificate Occupational Safety and Health

About the Program

The Occupational Safety and Health worker implements mandated health and safety regulations in an effort to control occupational accidents and diseases, property losses and injuries due to unsafe working conditions. The scope of this position includes the identification of physical hazards and the design and implementation of remediation, the evaluation of potential toxic agent risk to the employer, the development of safety management and employee training/management programs. The safety and health worker may specialize in fire and property, chemical and radiological safety, emergency response, general workplace safety, transportation, construction, systems or product design.

The Associate in Science degree and the Certificate of Completion in Occupational Safety and Health are designed for direct job entry and/or career enhancement. Completion of the degree or the certificate may be used to provide work experience credit toward OHST (Occupational Health and Safety Technician) certification requirements. Completion of the degree may be used to provide work experience credit toward CSP (Certified Safety Professional) certification requirements. Continuing Education Units for Registered Nurses and Licensed Vocational Nurses may be awarded for certain coursework upon application. Students interested in work experience credit toward OHST or CSP certification or in C.E.Units for RNs and LVNs should consult their instructor, the Class Schedule, or the Office of Academic Services (925.373.5804) for information.

While units in the program are transferable to many institutions, students should consult a counselor for information.



AS – Occupational Safety and Health

Freshman Year

Occupational Safety and Health 50 (Introduction to Occupational Safety and Health).....	3
Occupational Safety and Health 67 (Comprehensive Regulatory Requirements and Human Factors).....	3
Chemistry 1A (General College Chemistry) or Chemistry 30A (Introductory and Applied Chemistry).....	4-5
Computer Information Systems 50 (Introduction to CIS)	3
Ecology 10 (Humans and the Environment)	3
Electives*	3-5
General Education Courses: (See General Education Requirements, page 49)	
English Composition (Language and Rationality)	
Mathematics	
Social and Behavioral Sciences	
Natural Sciences	
Physical Education	

Sophomore Year

Occupational Safety and Health 60 (Elements of Industrial Hygiene).....	3
Occupational Safety and Health 62 (Physical Hazards)	3
Physics 2A (Introduction to Physics) or Physics 10 (Descriptive Physics)	3-4
Radiation Safety 40ABC (Radiation Safety)	4
Psychology 1 (General Psychology) or Psychology 50 (Psychology in Practice)	3
Electives*	3-5
General Education Courses: (See General Education Requirements, page 49)	
American Cultures	
American Institutions/Health Education	
Humanities	
Communications and Analytical Thinking	
Total units required	60

*Electives

Select one course from Group A and one course from Group B, for a minimum of 6 units:

Group A

- Chemistry 1B (General College Chemistry)
- Chemistry 30B (Introductory and Applied Chemistry)
- Mathematics 42A (Introduction to Probability and Statistics)

Group B

- Anatomy 1 (General Human Anatomy)
- Biology 50 (Anatomy and Physiology)
- English 70 (Report Writing)
- Fire Service Technology 52 (Fire Fighter Safety and Public Education)
- Physiology 1 (Introduction to Human Physiology)

Certificate of Completion

Occupational Safety and Health	
Occupational Safety and Health 50 (Introduction to Occupational Safety and Health).....	3
Occupational Safety and Health 60 (Elements of Industrial Hygiene) ...	3
Occupational Safety and Health 62 (Physical Hazards)	3
Occupational Safety and Health 67 (Comprehensive Regulatory Requirements and Human Factors).....	3
Electives*	3-4
Total units required	15-16

*Electives

Select from the following for a minimum of 3 units:

- Chemistry 30A (Introductory and Applied Chemistry) or equivalent
- Fire Service Technology 52 (Fire Fighter Safety and Public Education)
- Fire Service Technology 64A (Hazardous Materials I)
- Fire Service Technology 64B (Hazardous Materials II)
- Physics 10 (Descriptive Physics) or equivalent
- Radiation Safety 40ABC (Radiation Safety)



Occupational Safety and Health (OSH)

OSH 50 **3 UNITS**

INTRODUCTION TO OCCUPATIONAL SAFETY AND HEALTH

Grading Option: GR Transfer: CSU

Introduction to the principles and techniques of occupational safety and health. Includes historical evolution, professional make-up of the occupational and safety specialist, and analysis and implementation of a typical safety program. 3 hours.

OSH 60 **3 UNITS**

ELEMENTS OF INDUSTRIAL HYGIENE

Grading Option: GR Transfer: CSU

Introduction to the major subject areas of Industrial Hygiene. This includes anticipation, recognition, evaluation, and control of workplace hazards; effects of toxic agents on the body; measurement of these agents; general methods for their control; as well as State and Federal regulatory requirements. 3 hours.

OSH 62

3 UNITS

PHYSICAL HAZARDS

Grading Option: GR Transfer: CSU

Examination of physical hazards in the work environment and methods of control. Includes hazards associated with human factors, layout and planning, machine guarding, electrical safety, materials handling, rigging, conveyors, power tools, personal protective equipment, compressed gases, illumination, and working surfaces. Emphasis on methods for safety observation and inspection. 3 hours.

OSH 67

3 UNITS

COMPREHENSIVE REGULATORY REQUIREMENTS AND HUMAN FACTORS

Grading Option: GR Transfer: CSU

State and federal Occupational Safety and Health Acts, awareness of life safety, fire safety and building codes and standards, Workers' Compensation laws, and other regulations as they relate to occupational safety and health. Includes human factors in accident causation, behavioral stereotypes, human engineering, and man-machine trades and functional significance. 3 hours.

Oceanography

See **Geology**



Philosophy (PHIL)

See **AA - Humanities (General)**

PHIL 1 3 UNITS

GOD, NATURE, HUMAN NATURE

Grading Option: GR Transfer: CSU, UC
Nature and range of philosophical inquiry in relation to everyday problems of humans as individuals, as citizens, as existing in nature, and as creators of works of the arts and of the spirit. Analysis of primary philosophical documents that concentrate on these broad areas of human concern. Introduction to philosophy by the philosophers' own works, their methods of procedure and inquiry; attention given to the development of skills for reading, analyzing, and pursuing philosophical argument. NOTE: Philosophy 2, 4 and 25 are also introductory courses and may be taken before Philosophy 1 if a more detailed examination of ethical problems, the theory of knowledge, or political philosophy is desired. 3 hours. (CAN PHIL 2)

PHIL 2 3 UNITS

INTRODUCTION TO PHILOSOPHY: ETHICS

Grading Option: GR Transfer: CSU, UC
Problems of good and evil, right and wrong, individual and/or social action; the principles, criteria or starting points for these issues and decisions as discussed and developed in great writings of the philosophical-literary tradition. 3 hours.

PHIL 4 3 UNITS

INTRODUCTION TO PHILOSOPHY: THEORY OF KNOWLEDGE

Grading Option: GR Transfer: CSU, UC
Primary works in the areas of Knowledge, Truth, and Thought. Systematic analysis of documents that constitute the major statements in the Theory of Knowledge; the functions of reasoning, intuition, and sense experience. 3 hours.

PHIL 7 3 UNITS

CONTEMPORARY PROBLEMS

Grading Option: GR Transfer: CSU, UC
Perspective on contemporary issues. Defined using contemporary documents as source material and re-defined and evaluated in light of philosophical documents. 3 hours.

PHIL 25 3 UNITS

INTRODUCTION TO POLITICAL AND SOCIAL PHILOSOPHY

Grading Option: GR Transfer: CSU, UC
Philosophical-political analysis of value conflicts in the area of political thought and theory. Philosophical investigation of political principles which affect our lives as well as the role of theory in regard to the nature of the individual in a modern technological democracy. 3 hours.

Certificate Photography

About the Program

The Las Positas College Photography program offers a broad array of course opportunities crossing a full spectrum of the imaging field. The Certificate assures a solid grounding in photography fundamentals upon which to build one's further photographic field experiences.

Students become familiar with traditional film-based and digital (electronic) imaging technologies for making artistically rendered, captivating photographic images (both black & white and color) used in all areas of visual communications and media. Students do hands-on work in the College's well-equipped studio, darkroom and computer laboratory. They master digital imaging in preparation for print and web distribution, create short programs in videography, and work with artificial lighting for portrait and commercial applications.

Most students will take a history of photography class and a course concentrating on doing documentary work. Short-term courses on special photographic topics, each focusing on a unique aspect of photography or tutorial study with well-known professionals, are also offered on a regular basis.

See also: **Art
Visual Communications**



Certificate of Completion Photography

Photography 50 (Introduction to Photography)	3
Photography 51 (Individual Projects).....	1
Photography 56 (Introduction to Digital Photography).....	2
Photography 60 (Black & White Materials and Processes)	3
Photography 64 (Artificial Light Photography)	3
Electives*	4
Total units required	16

*Electives:

Select from the following for a minimum of 4 units.

Photo 58 (Introduction to Videography)	2
Photography 66 (Digital Imaging).....	3
Photography 67 (History of Photography) or	
Photo 68 (Color Slide Photography)	2
Photography 72 (Documentary Photography)	2
Photography 99 (Photographic Topics).....	.5 - 2

Photography (PHOT)

PHOT 50 3 UNITS
INTRODUCTION TO PHOTOGRAPHY

Grading Option: OP Transfer: CSU, UC
Introduction to the history and development of photography, basic process, various types of cameras, materials, basic shooting, processing developing, and printing of photographs. 2 hours lecture, 4 hours laboratory.

Photography

PHOT 51 1 UNIT

INDIVIDUAL PROJECTS

Grading Option: C/N Transfer: CSU

(May be repeated 3 times)

Individual projects in photography or graphic communications at the intermediate to advanced level. Development of knowledge and skills acquired in previous or current photography work with emphasis on current projects. Prerequisite: Photography 50 (completed with a grade of "C" or higher). 4 hours laboratory.

PHOT 52 2 UNITS

BEGINNING CAMERA USE

Grading Option: C/N Transfer: CSU

Camera handling techniques, basic exposure principles, camera accessories, photographic composition, and slide presentation. 2 hours.

PHOT 56 2 UNITS

INTRODUCTION TO DIGITAL PHOTOGRAPHY

Grading Option: OP Transfer: CSU

(May be repeated 1 time)

Basics for the beginner's use of digital cameras, film scanners. Exploration of digital photography compared and processes. Use of Adobe digital imaging software in preparing images for web and print output. 1 hour lecture, 4 hours laboratory.

PHOT 58 2 UNITS

INTRODUCTION TO VIDEOGRAPHY

Grading Option: OP Transfer: CSU

(May be repeated 1 time)

Introduction to the theory and practice of video production and desktop video editing: project production phases, time-based visual and sound design, digitizing footage, video output issues, working creatively in a collaborative environment, industry standards. 1 hour lecture, 4 hours laboratory.

PHOT 60 3 UNITS

BLACK AND WHITE MATERIALS AND PROCESSES

Grading Option: GR Transfer: CSU, UC

(May be repeated 1 time)

Using exposure/development controls related to black and white negative materials. Development of intermediate/ advanced print making skills. Emphasis on visual and critical problems related to black and white photography. Prerequisite: Photography 50 (completed with a grade of "C" or higher). 2 hours lecture, 4 hours laboratory.

PHOT 64A 3 UNITS

ARTIFICIAL LIGHT PHOTOGRAPHY

Grading Option: GR Transfer: CSU

(May be repeated 1 time)

Photography using light sources selected and manipulated by the photographer. Use of light sources in a controlled situation to achieve technically accurate renditions of subject matter and to make successful visual statements. Lighting techniques for product,

still life and portrait photography. Prerequisite: Photography 50 (completed with a grade of "C" or higher). 2 hours lecture, 4 hours studio/laboratory.

PHOT 66 3 UNITS

DIGITAL IMAGING

Grading Option: OP Transfer: CSU

(May be repeated 1 time)

Desktop digital imaging systems: scanning, camera and software. Methods and devices for image input, storage and output. Use of traditional photographic controls to enhance image quality in the digital medium. Designing an image for digital manipulation using software such as Photoshop and Live Picture. Strongly recommended: camera/photography and Macintosh computer experience, or Visual Communications 50. 2 hours lecture, 4 hours laboratory.

PHOT 67 3 UNITS

HISTORY OF PHOTOGRAPHY

Grading Option: GR Transfer: CSU

A broad chronological survey of photography from its invention to the present. Considers the medium's dual role as technology and art. Addresses a multiplicity of photographic themes and purposes. Considers the intersections of photography and technology, history, art, and everyday life. 3 hours.

PHOT 68 2 UNITS

COLOR FIELD PHOTOGRAPHY

Grading Option: GR Transfer: CSU

(May be repeated 1 time)

Use of either digital photography or color slide film to explore the solution of special technical and visual problems encountered in location shooting. 2 hours.

PHOT 72 2 UNITS

DOCUMENTARY PHOTOGRAPHY

Grading Option: OP Transfer: CSU

Photography exploring the documentary approach. Survey of photojournalism as a medium of mass communications. Understanding and applying photojournalistic and basic technical and visual skills in the making of successful reportage photographs. Consideration of the work of major 20th century photojournalists. Strongly recommended: Camera/photography experience. 1 hour lecture, 4 hours laboratory.

PHOT 99 0.5-3 UNITS

TOPICS IN PHOTOGRAPHY

Grading Option: C/N Transfer: CSU

(May be repeated 3 times)

Workshops on a variety of specialized topics in photography or visual communications, which are relevant to a general audience and/or those working at the intermediate to advanced level. Development of knowledge and skills acquired in previous or current photography work with emphasis on professional approach, specific topic, media, or technique. Strongly recommended: Photography 60. 9 to 54 total hours.

Physical Education

Degree
AA – Physical Education
 (TRANSFER PREPARATION)

Certificate
Sports Medicine
Coaching

About the Program

The AA degree program is designed to satisfy core requirements for many physical education transfer majors. Some variation in requirements may exist at a particular four-year college or university; therefore, it is essential that students refer to the catalog of the prospective transfer institution and consult a counselor. General Education courses should be carefully selected to meet the requirements of the intended transfer institution; some transfer institutions require more General Education units than required by this AA degree.



AA – Physical Education
 (TRANSFER PREPARATION)

Freshman Year

Chemistry 30A (Introductory and applied Chemistry)	4
Biology 31 (Introduction to College Biology)	4
Physical Education 17 (Introduction to Athletic Training)	3
Physical Education 20 (Introduction to Physical Education)	3
Physical Education 24 (Sport Psychology)	3
Physical Education* 1, 2 or 3 (Physical Education Activity)	0-4
General Education Courses: (See General Education Requirements, page 48)	
English Composition (Language and Rationality)	
Mathematics	
Social and Behavioral Sciences	
Natural Sciences	
Health Education	
Physical Education	

Sophomore Year

Anatomy 1 (General Human Anatomy)	4
Physiology 1 (Human Physiology).....	5
Nutrition 1 (Nutrition) or	
Nutrition 3 (Nutrition for Health and Wellness)	3
Health 1 (Introduction to Health).....	3
Physical Education 27 (Principles of Coaching Interscholastic Sports)....	2
Physical Education 28 (Components of Physical Fitness-	
The Human Body)	3
Physical Education* 1, 2 or 3 (Physical Education Activity)	0-4
General Education Courses: (See General Education Requirements, page 48)	
American Cultures	
American Institutions	
Humanities	
Communications and Analytical Thinking	
Physical Education	
Total Units	60

*Select courses from the following categories for a total of 4 units:

- Team Sports
- Individual Sport
- Fitness Activity (e.g. Weight Training, Step Aerobics)



Certificate of Completion Sports Medicine

Biology 50 (Anatomy and Physiology) or Physiology 1 (Human Physiology)	4-5
Nutrition 1 (Nutrition) or Nutrition 3 (Nutrition for Health and Wellness)	3
Physical Education 17 (Introduction to Athletic Training).....	3
Physical Education 28 (Components of Physical Fitness—The Human Body) or Physical Education 24 (Sport Psychology)	3
Physical Education 1, 2 or 3 (Physical Education Activity)	2
Total Units Required.....	15-16

Certificate of Completion Coaching

Physical Education 23 (Sports Officiating)	2
Physical Education 24 (Sport Psychology)	3
Physical Education 27 (Principles of Coaching Interscholastic Sports)....	2
Physical Education 28 (Components of Physical Fitness—The Human Body).....	3
Physical Education 20 (Introduction to Physical Education)	2
Work Experience 95 (Occupational Work Experience Education)....	1
Work Experience 96 (Occupational Work Experience Seminar).....	1
Total Units Required.....	17

Physical Education (PE)

PE 1 .5 UNIT

PHYSICAL EDUCATION ACTIVITY

Grading Option: OP Transfer: CSU, UC*

(Any Physical Education 1, 2 or 3 course may be repeated 3 times.)

The physical education program offers a variety of activity sections that provide exercise for improvement of health and physical fitness, training in sports and dance, and movement awareness. All activities teach life-long physical education skills that promote wellness, physical and emotional fitness, and the importance of a healthy lifestyle. Each activity can be found under its specific section title, i.e., basketball, golf, jazz dance, or yoga. Each section meets 1.5 hours per week, or 27 hours laboratory per semester. * *Transfer unit limitations, see page 61*

PE 2 1 UNIT

PHYSICAL EDUCATION ACTIVITY

Grading Option: OP Transfer: CSU, UC*

(Any Physical Education 1, 2 or 3 may be repeated 3 times.)

The physical education program offers a variety of activity sections that provide exercise for improvement of health and physical fitness, training in sports and dance, and movement awareness. All activities teach life-long physical education skills that promote wellness, physical and emotional fitness, and the importance of a healthy lifestyle. Each activity can be found under its specific section title, i.e., basketball, golf, jazz dance, or yoga. Each section meets 3 hours per week, or 54 hours laboratory per semester. * *Transfer unit limitations, see page 61*

PE 3 2 UNITS

PHYSICAL EDUCATION ACTIVITY

Grading Option: OP Transfer: CSU, UC*

(Any Physical Education 1, 2 or 3 course may be repeated 3 times.)

The physical education program offers a variety of activity sections that provide exercise for improvement of health and physical fitness, training in sports and dance, and movement awareness. All activities teach life-long physical education skills that promote wellness, physical and emotional fitness, and the importance of a healthy lifestyle. Each activity can be found under its specific section title, i.e., basketball, golf, jazz dance, or yoga. Each section meets 6 hours per week, or 108 hours laboratory per semester. * *Transfer unit limitations, see page 61*

PE 17 3 UNITS

INTRODUCTION TO ATHLETIC TRAINING

Grading Option: OP Transfer: CSU

Basic taping skills, introduction to modality usage, and basic rehabilitation principles of athletic training. Includes work with intercollegiate sports programs. Designed to be preparatory for further education and a career in athletic training. 2 hours lecture, 3 hours laboratory.

PE 20 3 UNITS**INTRODUCTION TO PHYSICAL EDUCATION**

Grading Option: OP Transfer: CSU, UC

Survey of Physical Education with emphasis on basic elements, foundations, specialty areas of further study, career opportunities and the relationship of Physical Education to other fields. This course will broaden student's understanding of how the philosophies and programs of physical education, exercise and sport have evolved to their current status. 3 hours.

PE 21 2 UNITS**THEORY OF SOCCER**

Grading Option: OP Transfer: CSU, UC*

(May be repeated 1 time)

The examination and analysis of theories and strategies in international soccer. This course includes examination of offensive and defensive strategies, and playing styles used at all levels of soccer play (club, amateur, collegiate, and professional). Students will study current and historic trends in international soccer strategy and play. Proper care of facilities and equipment, and proper safety procedures will also be covered. Students will apply principles and theories through videotape analysis of various team play and their own play on the field. 1 hour lecture, 3 hours laboratory.

PE 23 2 UNITS**SPORTS OFFICIATING**

Grading Option: OP Transfer: CSU, UC*

(May be repeated 3 times)

Theory and practical applications of sports officiating. Discussion, study, and implementation of rule enforcement, mechanics, and techniques used by officials in officiating athletic contests. 1 hour lecture, 3 hours laboratory.

PE 24 3 UNITS**SPORT PSYCHOLOGY**

Grading Option: OP Transfer: CSU

A formal introduction to the study of sport psychology focusing upon both the psychological factors that influence participation in sport and exercise and the psychological effects derived from that participation. Emphasis on understanding the psychological processes involved in human performance, models of intervention that can enhance and improve learning and performance conditions, and the strategies which can elicit and influence favorable psychological perceptions and outcomes. Students who have completed or are enrolled in Psychology 24 may not receive credit. 3 hours.

PE 27 2 UNITS**PRINCIPLES OF COACHING**

Grading Option: OP Transfer: CSU, UC*

Theory, principles, and ethics of coaching sports with emphasis on the fundamentals and techniques of coaching. Course completion certificate available upon completion (with grade of "C" or higher). 2 hours lecture, 1 hour laboratory.

PE 28 3 UNITS**COMPONENTS OF PHYSICAL FITNESS—THE HUMAN BODY**

Grading Option: OP Transfer: CSU

Introduction to the science of exercise including basic anatomy, exercise physiology, kinesiology, body mechanics, and nutrition. Applied principles of exercise science including physical fitness assessment, exercise program design, body composition assessment, and professionalism in the fitness field. 3 hours.

PE 36 2 UNITS**INTERCOLLEGIATE ATHLETICS: CROSS COUNTRY**

Grading Option: OP Transfer: CSU, UC*

(May be repeated 2 times)

Training for intercollegiate competition. Daily practice. 10 hours laboratory weekly.

PE 38 2 UNITS**INTERCOLLEGIATE ATHLETICS: SOCCER**

Grading Option: OP Transfer: CSU, UC*

(May be repeated 2 times)

Training for intercollegiate competition. Daily practice. 10 hours laboratory weekly.

PE 46 2 UNITS**INTERCOLLEGIATE ATHLETICS: WOMEN'S CROSS COUNTRY**

Grading Option: OP Transfer: CSU, UC*

(May be repeated 2 times)

Training for intercollegiate competition. Daily practice. 10 hours laboratory weekly.

PE 48 2 UNITS**INTERCOLLEGIATE ATHLETICS: WOMEN'S SOCCER**

Grading Option: OP Transfer: CSU, UC*

(May be repeated 2 times)

Training for intercollegiate competition. Daily practice. 10 hours laboratory weekly.

Physics

Degree AS - Physics

About the Program

The study of physics involves trying to understand the most fundamental level of observation of natural phenomena. The Physics AS degree prepares students for transfer to four-year institutions for continued study in the field of physics, mathematics, engineering and other related physical science fields. The physics program includes the lower-division requirements typical of four-year transfer institutions. General Education courses should be selected carefully to meet the requirements of the intended transfer institution. Some transfer institutions require more general education units than are required by the AS degree. Some variation in requirements may exist at a particular four-year college or university; therefore, it is essential that the student also refer to the catalog of the prospective transfer institution and consult a counselor.

AS - Physics

Freshman Year

Physics 8A (General Physics I).....	5
Physics 8B (General Physics II).....	5
Mathematics 1 (Analytic Geometry and Calculus I).....	5
Mathematics 2 (Analytic Geometry and Calculus II).....	5
General Education Courses: (See General Education Requirements, page 49)	
English Composition (Language and Rationality)	
Mathematics	
Social and Behavioral Sciences	
Natural Sciences	
Physical Education	

Sophomore Year

Physics 8C (General Physics III).....	5
Physics 8D (General Physics IV).....	3
Mathematics 3 (Multivariable Calculus).....	5
Mathematics 5 (Differential Equations with Computer Applications).....	3.5
General Education Courses: (See General Education Requirements, page 49)	
American Cultures	
American Institutions/Health Education	
Humanities	
Communications and Analytical Thinking	
Total units required	60



Physics (PHYS)

PHYS 2A **4 UNITS**

INTRODUCTION TO PHYSICS I

Grading Option: GR Transfer: CSU, UC*

Introduction to the major principles of classical mechanics and electricity using pre-calculus mathematics. Includes Newtonian mechanics, energy, gravitation, fluids, thermodynamics, vibration waves, and electrostatics. Prerequisite: Mathematics 20, 36, or 38 (completed with a grade of "C" or higher). 3 hours lecture, 3 hours laboratory. (CAN PHYS 2; CAN PHYS SEQ A = PHYS 2A + 2B)

* Transfer unit limitations, see page 61

PHYS 2B **4 UNITS**

INTRODUCTION TO PHYSICS II

Grading Option: GR Transfer: CSU, UC*

Electro-circuits, electromagnetic waves, optics and modern physics. Prerequisite: Physics 2A (completed with a grade of "C" or higher). 3 hours lecture, 3 hours laboratory. (CAN PHYS 4; CAN PHYS SEQ A = PHYS 2A + 2B) * Transfer unit limitations, see page 61

PHYS 8A **5 UNITS**

GENERAL PHYSICS I

Grading Option: GR Transfer: CSU, UC*

Introduction to the principles of Newtonian Mechanics and analytical methods of physics using calculus as needed. Vectors, kinematics, dynamics, energy, momentum, rotation, gravitation and fluid mechanics. Prerequisite: Mathematics 1 (completed with a grade of "C" or higher). 4 hours lecture, 3 hours laboratory. * Transfer unit limitations, see page 61

PHYS 8B **5 UNITS**

GENERAL PHYSICS II

Grading Option: GR Transfer: CSU, UC*

Introduction to electricity and magnetism, circuits, Maxwell's equations and electromagnetic waves. Prerequisites: Physics 8A (completed with grade of "C" or higher) and Mathematics 3 (may be taken concurrently). 4 hours lecture, 3 hours laboratory. * Transfer unit limitations, see page 61

PHYS 8C 5 UNITS

GENERAL PHYSICS III

Grading Option: GR Transfer: CSU, UC*
Introduction to oscillations, mechanical waves, thermodynamics, light and optics. Prerequisites: Physics 8A and Mathematics 2 (both completed with a grade of "C" or higher). Strongly recommended: Physics 8B. 4 hours lecture, 3 hours laboratory. * *Transfer unit limitations, see page 61*

PHYS 8D 3 UNITS

GENERAL PHYSICS IV

Grading Option: GR Transfer: CSU, UC*
Introduction to relativity and modern physics, including: introduction to quantum theory; atomic, molecular, nuclear and particle physics; condensed matter physics; astrophysics and cosmology. Prerequisite: Physics 8B (completed with a grade of "C" or higher). 2 hours lecture, 3 hours laboratory. * *Transfer unit limitations, see page 61*

PHYS 10 3 UNITS

DESCRIPTIVE PHYSICS

Grading Option: GR Transfer: CSU, UC*
Motion, gravitation, heat, light, sound, electricity, magnetism, atoms, and nuclei. Understanding present day scientific problems and developments such as alternative energy sources, solar energy, nuclear power, lasers, relativity and black holes. Designed for non-majors in physical science. Strongly Recommended: Mathematics 105, 105M, or 107. 3 hours. * *Transfer unit limitations, see page 61*

PHYS 10L 1 UNIT

DESCRIPTIVE PHYSICS LABORATORY

Grading Option: OP Transfer: CSU, UC*
Introduction to laboratory principles and techniques with emphasis on the basic concepts of physics such as mechanics, thermodynamics, energy, electricity, magnetism, and optics. Prerequisite: Physics 10 (may be taken concurrently). 3 hours laboratory. * *Transfer unit limitations, see page 61*

Physiology (PHSI)
See **Biological Sciences**

Political Science (POLI)

POLI 7 4 UNITS

INTRODUCTION TO AMERICAN GOVERNMENT

Grading Option: OP Transfer: CSU, UC
Introduction to the principles, problems and basic issues of government with particular emphasis on the national government in the United States, including discussion of the American Constitution, and California state and local government. Strongly recommended: Eligibility for English 1A. 4 hours. (CAN GOVT 2)

POLI 12 3 UNITS

INTRODUCTION TO CALIFORNIA STATE AND LOCAL GOVERNMENT

Grading Option: OP Transfer: CSU
Organization and operation of government and politics at the state, county and municipal level; emphasis on current issues and the influences of historical, geographical, political, economic and social factors on public policy. 3 hours.

POLI 20 3 UNITS

COMPARATIVE GOVERNMENT

Grading Option: OP Transfer: CSU, UC
Contemporary forms of government, institutions and political problems of selected national governments. Strongly Recommended: Political Science 7. 3 hours.

POLI 25 3 UNITS

INTRODUCTION TO POLITICAL THEORY

Grading Option: OP Transfer: CSU, UC
Various theoretical approaches to politics including selected aspects of political thought from ancient times to the present with application to current political thought. Strongly Recommended: Political Science 7 and Eligibility for English 1A. 3 hours.

POLI 30 3 UNITS

INTERNATIONAL RELATIONS

Grading Option: OP Transfer: CSU, UC
Introduction to international relations, politics, theories and institutions with an emphasis on contemporary practices. Strongly Recommended: Political Science 7 and Eligibility for English 1A. 3 hours.

POLI 45 2-3 UNITS

SELECTED TOPICS IN POLITICAL SCIENCE

Grading Option: OP Transfer: CSU, UC*
An examination of a current topic/issue in Political Science, including such areas as international relations, economic/social policy issues, comparative government, elections and political parties, political theory and American foreign affairs, with emphasis on an examination of public policy alternatives. Topics/areas of study will vary with class offering, designed to meet the interests of students. Strongly Recommended: A college course in political science and/or American History. 2-3 hours. * *Transfer unit limitations, see page 61*

Psychology

Degree AA – Psychology (TRANSFER PREPARATION)

About the Program

Psychology is the science of behavior and mental experiences. Psychology includes a variety of subfields including biological, developmental, clinical, counseling, school, and experimental psychology. The Las Positas Psychology program offers an A.A. degree that provides students with a basic understanding of behavior and motivation that is valuable in many careers in business, government, and education. To become a “psychologist,” however, requires graduate-level training. The program provides preparation for transfer, fulfilling the typical lower-division requirements at four-year institutions. Some variation in requirements may exist at a particular four-year college or university; therefore, it is essential that the student also refers to the catalog of the prospective transfer institution and consults a counselor.



AA – Psychology (TRANSFER PREPARATION)

Freshman Year

Psychology 1 (General Psychology).....	3
Psychology 4 (Brain, Mind, and Behavior).....	3
Biology 10 (Introduction to the Science of Biology) or Biology 31 (Introduction to College Biology)	4
Sociology 4 (Marriage and Family Relations) or Early Childhood Development 62 (Child, Family and Community) ...	3
Electives*	0-3
General Education Courses: (See General Education Requirements, page 48)	
English Composition (Language and Rationality)	
Mathematics	
Social and Behavioral Sciences	
Natural Sciences	
Health Education	
Physical Education	

Sophomore Year

Psychology 6 (Abnormal Psychology).....	3
Psychology 12 (Life-span Psychology).....	3
Psychology 15 (Problems of Childhood)	3
Mathematics 42A (Introduction to Probability and Statistics) or Mathematics 44 (Statistics and Probability)	3-5
Psychology 3 (Social Psychology) or Anthropology 3 (Social and Cultural Anthropology).....	3
Electives*	0-3
General Education Courses: (See General Education Requirements, page 48)	
American Cultures	
American Institutions	
Humanities	
Communications and Analytical Thinking	
Physical Education	
Total Units Required.....	60

*Electives

Select from the following for a minimum of 63 units:

- Psychology 24 (Sport Psychology)
- Psychology 10 (Human Sexuality)
- Psychology/Counseling 11 (Interpersonal Relationships)
- Sociology 3 (American Cultural and Racial Minorities)
- Business 48 (Human Relations in the Work Place)

Psychology (psyc)**PSYC 1 3 UNITS****GENERAL PSYCHOLOGY**

Grading Option: OP Transfer: CSU, UC
 Basic psychological concepts underlying human and animal behavior in such areas as learning, motivation, perception, personality and social behavior. Strongly Recommended: Eligibility for English 1A. 3 hours. (CAN PSY 2)

PSYC 2 3 UNITS**INTRODUCTION TO PSYCHOLOGICAL METHODOLOGY**

Grading Option: OP Transfer: CSU
 Introduction to scientific method in the study of human and animal behavior. Experience in designing, performing, and reporting behavioral science experiments and surveys. Includes fundamentals of research design, hypothesis testing, and reasoning in inferential statistics. Strongly recommended: Psychology 1.

PSYC 3 3 UNITS**PROBLEMS AND METHODS IN INDIVIDUAL AND SOCIAL PSYCHOLOGY**

Grading Option: OP Transfer: CSU, UC
 Research and theory regarding psychological processes within individuals such as attitudes, perception, cognition that influence or are influenced by the physical setting in which they occur and the social groups to which individuals belong. Strongly recommended: Psychology 1 or Sociology 1 or Anthropology 3. 3 hours.

PSYC 4 3 UNITS**BRAIN, MIND, AND BEHAVIOR**

Grading Option: OP Transfer: CSU, UC
 Introduction to the field of biopsychology. The biopsychology of cognitive, perceptual, emotional, developmental, and social processes. Includes the biopsychology of personality, gender, emotions, learning, learning disabilities, drugs, neurological and developmental disorders, and mental health. Examination of information and theory for practical application. 3 hours.

PSYC 6 3 UNITS**ABNORMAL PSYCHOLOGY**

Grading Option: OP Transfer: CSU, UC
 Introduction to abnormal psychology. Mental health and mental health disorders in adults and children. Includes disorders of anxiety, mood, personality, sexuality, substance abuse, psychosis and other disorders. Major psychological, biological, and sociocultural models of mental health disorders and their treatment. 3 hours.

PSYC 10 (Formerly PSYC 8) 3 UNITS**HUMAN SEXUALITY**

Grading Option: OP Transfer: CSU, UC
 Physiological and psycho-social aspects of sexual health in our contemporary society. Understanding the interrelationship of attitude and behavior as it relates to sexual well-being and sexual integrity. 3 hours.

PSYC 12 3 UNITS**LIFE-SPAN PSYCHOLOGY**

Grading Option: OP Transfer: CSU
 Introduction to the psychological, physiological, and socio-cultural factors influencing development from conception through death. Emphasis on the process of normal development and its variations. Examination of theoretical models and research for practical application. 3 hours.

PSYC 15 3 UNITS**PROBLEMS OF CHILDHOOD**

Grading Option: OP Transfer: CSU
 An exploration of the emotional, cognitive, developmental, and behavioral problems of childhood and adolescence. Topics include: common stresses and problems of adjustment; the effects of stress, abuse, and traumas on development; mental retardation, autism and other developmental disabilities; normal and abnormal problems of attention, conduct, mood anxiety, sleep, eating, sex, learning and speech. Examination of theories of cause of mental health problems in children and adolescents and approaches to treatment. Examination of information and theory for practical application. Students who have completed or are enrolled in Early Childhood Development 15 may not receive credit. 3 hours.

PSYC 24 3 UNITS**SPORT PSYCHOLOGY**

Grading Option: OP Transfer: CSU
 A formal introduction to the study of sport psychology focusing upon both the psychological factors that influence participation in sport and exercise and the psychological effects derived from that participation. Emphasis on understanding the psychological processes involved in human performance, models of intervention that can enhance and improve learning and performance conditions, and the strategies which can elicit and influence favorable psychological perceptions and outcomes. Students who have completed or are enrolled in Physical Education 24 may not receive credit. 3 hours.

Psychology/Counseling (PSCN)

PSCN 3 3 UNITS

INTRODUCTION TO COUNSELING THEORY AND SKILLS

Grading Option: OP Transfer: CSU
Introduction to counseling theory and practice with emphasis on fundamental principles of counseling process including diagnostic methodologies, behavioral assessment, goal setting, multicultural sensitivity and need to understand client reality and to facilitate change. Focus on essential counseling theories, major diagnostic categories, problems and solutions of recovery, cultural diversity, and ethical issues. 3 hours.

PSCN 5 3 UNITS

INTRODUCTION TO HUMAN SERVICES

Grading Option: OP Transfer: CSU
Course examines the history, theory, ethics, values and principles at work in the Human Services field. Emphasis is placed on modern theory, methods, and critical skills that lead to effective human service work. Students will examine theoretical systems, agency and community resources, a multicultural approach to diverse populations, personal motivation and professional characteristics needed to succeed in Human Services. 3 hours.

PSCN 6 3 UNITS

INTRODUCTION TO COUNSELING CASE MANAGEMENT FOR HUMAN SERVICES

Grading Option: OP Transfer: CSU
Introduction to case management theory, models and techniques, multicultural issues affecting case management theory. Emphasis placed on case management philosophy, ethical issues, concepts and practices. Analysis of needs, documentation and confidentiality, and individualized consumer plan development. Strongly recommended: Psychology-Counseling 5. 3 hours.

PSCN 7 1-3 UNITS

CONTEMPORARY ISSUES

Grading Option: OP Transfer: CSU
(May be repeated 3 times)
Contemporary life issues related to social effectiveness, and educational and career development. Explores issues through an examination of current counseling related research findings and resource materials. Limit of 6 units. 1-3 hours.

PSCN 10 2 UNITS

CAREER AND EDUCATIONAL PLANNING

Grading Option: OP Transfer: CSU
Exploration of the concept of educational/career planning focusing on personal career development through self-assessment, psychological testing, and individual counseling. Emphasis on clarification of individual interests, values, needs, and abilities and investigation of occupational opportunities in the world of work. Designed for those undecided or uncertain about their career and educational plans. May not receive credit if Psychology-Counseling 10A or 10B have been completed. 2 hours.

PSCN 10A 1 UNIT

SELF-ASSESSMENT THROUGH TESTING

Grading Option: OP Transfer: CSU
This course will assist students to assess themselves for a career through the taking of tests. A battery of tests will be administered, interpreted, and analyzed for the purpose of helping students to assess abilities, values, personalities, and interests. The tests will also be used toward the setting of realistic personal and career goals and objectives. May not be taken for credit if Psychology-Counseling 10 has been completed. 1 hour.

PSCN 10B 1 UNIT

WORLD OF WORK/JOB SEARCH TECHNIQUES

Grading Option: OP Transfer: CSU
This course provides a forum for the investigation of occupational opportunities in the world of work. This includes career trends for the 21st century and practical step-by-step techniques and strategies for planning and organizing an effective job search. Emphasis will be placed upon developing strategies to deal with job market research, employer contact, résumés and applications, and job interviews. May not be taken for credit if Psychology-Counseling 10 has been completed. 1 hour.

PSCN 11 2 UNITS

INTERPERSONAL RELATIONSHIPS

Grading Option: C/N Transfer: CSU
(May be repeated 2 times)
Exploration of behavior in interactions with others. Designed to improve interpersonal relationships for the benefit of academic, career, and personal development. 2 hours.

PSCN 12 2 UNITS

SELF-ESTEEM FOR SUCCESS

Grading Option: GR
Exploration of causes of low self-esteem, methods for building self-esteem and habits for success. Designed to improve self-esteem to ensure academic success. 2 hours.

PSCN 13 3 UNITS

MULTICULTURAL ISSUES IN CONTEMPORARY AMERICA

Grading Option: OP Transfer: CSU, UC
Exploration of issues relating to the multicultural community in which we live today. Interpersonal relations and communication. Focus on improving the individual's understanding of other cultures and how those cultures impact the American lifestyle. Includes exploration of myths and misunderstandings. Discussion of four specific cultures or sub-cultures from the following groups: (1) African-American, (2) Asian-American, (3) Hispanic American, (4) Native-American, (5) Middle Eastern-American, (6) European-American, (7) Gay/Lesbian American and (8) Disabled American. 3 hours.

PSCN 14 **2 UNITS**

PEER SUPPORT AND HEALTH EDUCATION

Grading Option: OP Transfer: CSU

(May be repeated 2 times)

Students learn basic peer listening and referral skills, how to organize and conduct health education outreach activities, and content in health areas of their choice: 1) sexuality and birth control; 2) AIDS and STDs; 3) drug abuse education and prevention; 4) mental health promotion and stress management; 5) nutrition, exercise, and weight management; and other topics to be selected. Students develop skills that help them understand themselves, their relationships, and the health of their communities. Students can use their peer helping experiences as preparation for a career in a health profession. Psychology 14, Health 14, Sociology 14 or Psychology-Counseling 14 combined, maximum credit 6 units. 2 hours.

PSCN 14L **1 UNIT**

PEER SUPPORT AND HEALTH EDUCATION - LABORATORY

Grading Option: OP Transfer: CSU

(May be repeated 2 times)

Students serve as Peer Listeners in the Campus Health and Wellness Center, conduct campus health education outreach programs, and train new peer listeners and health educators. Students develop skills that help them understand themselves, their relationships, and the health of their communities. Students can use their peer helping experience as preparation for a career in a health profession. Psychology-Counseling 14L, Health 14L, Sociology 14L or Psychology 14L combined, maximum credit 3 units. 3 hours laboratory.

PSCN 15 **2 UNITS**

COLLEGE STUDY SKILLS

Grading Option: OP Transfer: CSU

Review of study skill techniques for success in college. Emphasis on time management, personal learning style, active listening, note-taking and test-taking strategies. Includes modeling, practice, and evaluation of study skill techniques. 2 hours.

PSCN 16 **3 UNITS**

COLLEGE AND THE RE-ENTRY WOMAN

Grading Option: C/N Transfer: CSU

Exploration of educational opportunities, career possibilities, and personal goals in relation to the re-entry woman, her family responsibilities, and relationships. Designed for the re-entry woman who is beginning or returning to college. 3 hours.

PSCN 17 **2 UNITS**

INTERCULTURAL STUDIES

Grading Option: OP Transfer: CSU, UC

Exploration of the complexities of intercultural and intracultural relationships in this pluralistic society. Includes opportunities to share cultural experiences, as well as differences and commonalities. Explores issues of self-identify, values, cultural differences, and socialization practices. 2 hours.

PSCN 20 **2 UNITS**

THE COLLEGE EXPERIENCE

Grading Option: OP Transfer: CSU

Explores academic programs, college policies, student rights and responsibilities, graduation and transfer requirements, student services, campus resources and activities. Designed for freshmen, returning, and re-entry students to ease transition into college and maximize successful matriculation through college towards academic goals. May not be taken for credit if General Studies 20 has been completed. 2 hours.

PSCN 21 **1 UNIT**

STRATEGIES FOR COLLEGE SUCCESS

Grading Option: OP

This course will provide students with an opportunity to assess their attitudes towards learning and college life. Students will be introduced to practical strategies for success in college. Topics for discussion will include student academic programs, college policies, student rights and responsibilities, graduation and transfer requirements, and campus resources and activities. Designed for freshmen, returning and re-entry students to ease transition into college and maximize success towards their academic goals. May not be taken for credit if Psychology-Counseling 20 or General Studies 20 has been completed. 1 hour.

PSCN 24 **.5 UNIT**

COLLEGE ORIENTATION/EXPO LPC

Grading Option: C/N

Introduction to strategies for college success through an exploration of college programs and services and introduction to College faculty, staff and students. This orientation process includes assessment and its interpretation and program planning based upon the student's assessed skills and stated interests. 9 total hours.

PSCN 26 **1 UNIT**

CHICANO STUDIES

Grading Option: OP Transfer: CSU

Vocational and educational planning in relation to issues specific to Chicano culture. Designed for Chicanos entering college for the first time. 1 hour.

PSCN 28 **2 UNITS**

ORIENTATION FOR INTERNATIONAL STUDENTS

Grading Option: C/N Transfer: CSU

Introduction to American culture and society and orientation to the American educational system for the foreign-visa student. Introduction to idiomatic use of English and development of basic study skills. Required for all foreign-visa students. 2 hours.

Religious Studies

PSCN 36

1 UNIT

WOMEN IN TRANSITION

Grading Option: C/N

A first step back to school for women facing career, personal, or academic decisions following divorce, widowhood, and other life changes. Includes clarifying values and goals, increasing self-esteem, and identification of college resources to effect success. Designed for women returning to the job market. 1 hour.

Radiation Safety (RADS)

RADS 40ABC 2-4 UNITS

RADIATION SAFETY

Grading Option: OP

Transfer: CSU

A modularized course designed to provide basic radiation safety instruction. Includes identification of the sources of radiation and radioactive materials, the nature of ionization radiation, biological effects, risk assessment, protection strategies, environmental impacts, and waste handling. RADS 40A, Radiation Safety Basics, 2 units. Strongly Recommended: Mathematics 65, 71, or appropriate skill level demonstrated through the Mathematics assessment process. RADS 40B, Emergency Response and Monitoring. 1 unit. Prerequisite: Radiation Safety 40A (completed with a grade of "C" or higher). RADS 40C, Safety Controls and Regulation, 1 unit. Prerequisite: Radiation Safety 40B (completed with a grade of "C" or higher). 18 total hours per unit.

Recreation and Leisure Services (RECL)

RECL 71L

2 UNITS

FUNDAMENTALS OF BACKPACKING

Grading Option: OP

Transfer: CSU

Introduction to concepts and techniques associated with backpacking. Skills emphasized in this course are designed to increase recreation leadership potential in outdoor recreation and education careers. 1.5 hours lecture, 2 hours laboratory.



Religious Studies (RELS)

RELS 1

3 UNITS

RELIGIONS OF THE WORLD

Grading Option: GR

Transfer: CSU, UC

Introduction to religion by examining several religions; basic principles of each shown by fundamental scriptures and works in the visual and musical arts. 3 hours.

RELS 11

3 UNITS

THE NATURE OF ISLAM

Grading Option: OP

Transfer: CSU

Introduction to the nature of Islam as a religion or system for life, its culture and its impact on Muslim individuals and groups. Includes a brief history of Islam and Muslims in relation to the basic sources of Islam. 3 hours.

Science Technology

Degree AS – Science Technology

About the Program

A science technician is an individual trained to work in a variety of laboratory settings, generally as a member of a team under the supervision and guidance of a scientist. The Science Technology program provides core knowledge in both science and technology. Students specialize in either a Physical Science or Biological Science emphasis area. This broad background should prepare students for entry-level career positions as laboratory technicians. Employment opportunities vary in research and development in science, medicine, or industry. The technician may be involved in observation, experimentation, computation, instrumentation, and communication.



AS – Science Technology

Freshman Year

Computer Information Systems 50 (Introduction to Computer Information Systems) or
Computer Science 1 (Computing Fundamentals I)..... 3-5
Mathematics 65 (Elementary Algebra) or
Mathematics 71 (Applied Mathematics for Technicians) or
Industrial Technology 74 (Measurements and Calculation) 3-5
Chemistry 30A (Introductory and Applied Chemistry) or
Chemistry 31 (Introduction to College Chemistry) 3-4
Options* 6-7
General Education Courses: (See General Education Requirements, page 49)
English Composition (Language and Rationality)
Mathematics+
Social and Behavioral Sciences
Natural Sciences+
Physical Education

Sophomore Year

Speech 1 (Fundamentals of Speech Communications) or
Speech 10 (Interpersonal Communications) 3
Electronics Technology 70 (Introduction to Electronics) or
Electronics Technology 50**(Fundamentals of Electronics) ... 2 or 6
Physics 2A (Introduction to Physics I) or
Physics 10 (Descriptive Physics) and
Physics 10L (Descriptive Physics Lab) 4
Options* 6-7
General Education Courses: (See General Education Requirements, page 49)
American Cultures
American Institutions/Health Education
Humanities
Communications and Analytical Thinking
Electives (Work Experience or Internship suggested)
Total units required 60

*Complete 1 of the 2 Science Technology Concentration Options

Science Technology Option #1

Physical Science Emphasis Concentration.....13 units
Design Technology 52 (Technical Graphics)
Vacuum Technology 60A (Vacuum Concepts I)
Design Technology 75 (Design Materials Technology)
Industrial Technology 61 (Manufacturing Processes) or
Machine Tool Technology 70 (Introduction to Machine Shop)
Laser Technology 50 (Introduction to Laser Technology)

Science Technology Option #2

Biological Sciences Emphasis Concentration13 units
Biology 31 (Introduction to College Biology)
Chemistry 30B (Introductory and Applied Chemistry)
Biotechnology 1 (Introductory Biotechnology Methods)

+May be used to meet General Education requirements as well as degree major requirements

**Required for students pursuing the Certificate of Achievement in Laser Technology

Social Science

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Degree

AA – Social Science (GENERAL)

About the Program

Social Science is designed to provide a broad interdisciplinary foundation for further study. It can also serve as a foundation from which students continue study in specialized fields. This is a general field that includes courses in Anthropology, Economics, Cultural Geography, History, Political Science, Psychology and Sociology. Students may complete lower division requirements for transfer in general in individual social science disciplines. Some variation in requirements may exist at a particular four-year college or university; therefore, it is essential that students refer to the catalog of the prospective transfer institution and consult a counselor. General Education courses should be carefully selected to meet the requirements of the intended transfer institution; some transfer institutions require more General Education units than required by this AA degree.

AA – Social Science (GENERAL)

Freshman Year

Anthropology 1 (Physical Anthropology)..... 3
 Geography 2 (Cultural Geography) or
 Geography 3 (Economic Geography) 3
 Complete one of the following combinations for a total of 6 units:
 History 1 (History of Western Civilization to 1600) and
 History 2 (History of Western Civilization since 1600) or
 History 7 (U.S. History through Reconstruction) and
 History 8 (U.S. History Since Reconstruction) or
 History 15 (African-American History through 19th Century) and
 History 16 (African-American History - 20th Century)..... 6
 Electives* 0-9
 General Education Courses: (See General Education Requirements, page 48)
 English Composition (Language and Rationality)
 Mathematics
 Social and Behavioral Sciences
 Natural Sciences
 Health Education
 Physical Education

Sophomore Year

Economics 1 (Principles of Microeconomics) or
 Economics 2 (Principles of Macroeconomics)..... 3
 Political Science 7 (Introduction to American Government)..... 4
 Psychology 1 (General Psychology)..... 3
 Sociology 1 (Principles of Sociology)..... 3
 Electives* 0-9
 General Education Courses: (See General Education Requirements, page 48)
 American Cultures
 American Institutions
 Humanities
 Communications and Analytical Thinking
 Physical Education
Total units required 60

*Electives

Select 3 courses the following for a minimum of 9 units.
 Courses selected from those listed above cannot also be counted to fulfill the Option requirement.
 Anthropology 2 (Introduction to Archaeology: Prehistory and Culture Growth)
 Anthropology 3 (Social and Cultural Anthropology)
 Anthropology 5 (Cultural Pluralism: Anthropological Perspectives of Race, Class, Gender and Ethnicity)
 Geography 2 (Cultural Geography)
 Geography 3 (Economic Geography)
 Geography 5 (World Regional Geography)
 Geography 11 (Geography of the San Francisco Bay Area)
 Geography 12 (Geography of California)
 History 14 (History and American Cultures of California)
 History 22 (Introduction to Mexican-American History and Culture)
 History 25 (American Indian History and Culture)
 History 28 (History of American West)
 Political Science 20 (Comparative Government)
 Political Science 30 (International Relations)
 Psychology 3 (Problems and Methods in Individual and Social Psychology)
 Psychology 4 (Brain, Mind, and Behavior)
 Psychology 6 (Abnormal Psychology)
 Psychology 10 (Human Sexuality)
 Psychology 23 (Personal and Social Adjustment)
 Psychology 24 (Sport Psychology)
 Sociology 3 (American Cultural and Racial Minorities)
 Sociology 4 (Marriage and Family Relations)
 Sociology 6 (Social Problems)
 Sociology 7 (Human Sexuality)
 Sociology 11 (Femininity and Masculinity)

Sociology (soc)**SOC 1 3 UNITS****PRINCIPLES OF SOCIOLOGY**

Grading Option: OP Transfer: CSU, UC

The sociological perspective: scientific study of human interaction and society as a whole with emphasis on impact of groups on social behavior; systematic examination of culture and social organization, and methodology. 3 hours. (CAN SOC 2)

SOC 3 3 UNITS**AMERICAN CULTURAL AND RACIAL MINORITIES**

Grading Option: OP Transfer: CSU, UC

Analysis of racial and ethnic relations in the United States. Includes race, ethnicity, prejudice, discrimination and stereotyping, as well as theories and patterns of intergroup relations. Focus on contemporary minorities; African Americans, Chicano/Latinos, Asian Americans, and Native Americans. Strongly recommended: Sociology 1 or Anthropology 3 or Psychology 1 or Psychology 50. 3 hours.

SOC 4 3 UNITS**MARRIAGE AND FAMILY RELATIONS**

Grading Option: OP Transfer: CSU, UC

Sociological perspective of the family including mate selection, marital roles, marital adjustment, sexual adjustment, reproduction, child rearing, marital dissolution, and problems associated with the family in modern industrial society. Emphasis on methodology of family investigation. 3 hours.

SOC 6 (Formerly SOC 2) 3 UNITS**SOCIAL PROBLEMS**

Grading Option: OP Transfer: CSU, UC

This course takes an in-depth look at selected social problems from a sociological perspective. Topics will vary from semester to semester. Each class will cover at least one of each of the following: a social problem dealing with social inequality, a social problem of national concern, and a social problem of global concern. Current topics include: issues of accessibility for disabled Americans, the controversy over gay and lesbian rights, the growth of inner cities, and the social consequences of the globalization of labor. (CAN SOC 4) 3 hours.

SOC 7 (Formerly SOC 8) 3 UNITS**HUMAN SEXUALITY**

Grading Option: OP Transfer: CSU, UC

This course looks at the social forces that influence, and are influenced by, our construction of sexuality. Topics covered include: the social construction of the erotic, the creation of sexual identities, gender and sexuality, religion and sexuality, sexual commerce, and global issues such as birth control and STDs. 3 hours.

SOC 11 3 UNITS**FEMININITY AND MASCULINITY**

Grading Option: OP Transfer: CSU, UC

Biological, psychological, sociological, and anthropological overview of the assignment of behaviors to males and females. Identification of physiological and cultural influences on gender identity with emphasis on the historical sex role definition and socialization process in American culture, constraints of those definitions, and issues related to possible future changes. 3 hours.

Spanish (SPAN)

See Foreign Languages

Special Studies**99 0.3-19.25 UNITS****SPECIAL STUDIES**

Grading Option: Transfer: CSU

Special studies in a specialized technical-vocational major. Typically offered for a particular occupation or skill. Course may be offered under any course title contained in the Catalog, using the number 99. 0.3-1050 hours.

Speech

Degree AA - Speech

About the Program

The Speech program is designed to provide students with fundamental understanding of the principles of speech communication as well as experience in the application of these principles. Classes prepare students for transfer to four-year institutions and entry into careers in which effective communication skills are important, such as teaching, public relations and law. This program fulfills typical lower-division requirements at four-year transfer institutions. Some variation in requirements may exist at a particular four-year college or university; therefore, it is essential that the student also refer to the catalog of the prospective transfer institution and consult a counselor.



AA - Speech

Freshman Year

Speech 1 (Fundamentals of Speech Communication).....	3
Speech 48* (Activities in Forensics).....	2-8
Speech 2A (Oral Interpretation of Literature).....	3
Speech 10 (Interpersonal Communication).....	3
Electives*	

General Education Courses: (See General Education Requirements, page 48)

- English Composition (Language and Rationality)
- Mathematics
- Social and Behavioral Sciences
- Natural Sciences
- Health Education
- Physical Education

Sophomore Year

Speech 46 (Argumentation and Debate).....	3
Speech 48* (Activities in Forensics).....	2-8
Option (Speech/Related Discipline)**.....	3
Electives*	

General Education Courses: (See General Education Requirements, page 48)

- American Cultures
- American Institutions
- Humanities
- Communications and Analytical Thinking
- Physical Education

Total units required 60

*Electives

Select from the following for a minimum of 3 units:

- Speech 2B (Interpretation of Literature II)
- Speech 3 (Group Communication)
- Speech 5 (Readers Theater)
- Theater Arts 25 (Fundamentals of Stage Speech)

**Speech 48 should be taken for a minimum of 4 units and a maximum of 16 units.

Speech (SPCH)

SPCH 1 3 UNITS

FUNDAMENTALS OF SPEECH COMMUNICATION

Grading Option: OP Transfer: CSU, UC
 Fundamentals of speech communication; emphasis on developing, stating, organizing, and researching ideas, and presenting to an audience; includes developing the faculties of critical listening and problem-solving. Strongly Recommended: Eligibility for English 1A. 3 hours. (CAN SPCH 4)

SPCH 2A 3 UNITS

ORAL INTERPRETATION OF LITERATURE I

Grading Option: OP Transfer: CSU, UC
 Development of skill in reading quality literature aloud; practice in writing scholarly criticism of the literature presented orally. 3 hours.

SPCH 2B 3 UNITS

ORAL INTERPRETATION OF LITERATURE II

Grading Option: OP Transfer: CSU, UC
 Further development of skills and knowledge of individual oral interpretation from more difficult and specialized literary sources. Explores other forms of performance such as duet reading and chamber theater. Development of dialect and further vocal characterization. Prerequisite: Speech 2A (completed with a grade of "C" or higher). 3 hours.

SPCH 3 3 UNITS

GROUP COMMUNICATION

Grading Option: OP Transfer: CSU, UC
 Communication in small group situations. Role of communication in various group processes, including norms, roles, leadership and decision-making, with application to modern concepts of organizational communication. Includes participation in simulation exercises and group activities. 3 hours.

SPCH 5 3 UNITS

READERS THEATER

Grading Option: OP Transfer: CSU, UC
 Introduction to various media and techniques used in readers theater and the arrangement and programming of literature. Performance and/or arrangement of programs for specific audiences; children, young adults, and adults by using live theater presentation, television, and/or radio. 3 hours.

SPCH 10 3 UNITS

INTERPERSONAL COMMUNICATION

Grading Option: OP Transfer: CSU
 Exploration, discussion, and evaluation of the components of the verbal and non-verbal communication process. 3 hours. (CAN SPCH 8)

SPCH 11 3 UNITS

INTERCULTURAL COMMUNICATION

Grading Option: GR Transfer: CSU, UC
 Intercultural communication with a focus on the analysis and comparisons of message perception and transmission in interactions between people from different cultures. Emphasis on practical application of skills for effective communication between people of different domestic and international cultures. 3 hours.

SPCH 43 4 UNITS

PROFESSIONAL COMMUNICATIONS

Grading Option: OP Transfer: CSU
 This course is designed to help students develop and refine the written and oral communication skills necessary to communicate effectively in a business environment. This will be accomplished through the planning, composing, and evaluating of written communication; report writing; and oral presentations. Additional focus will be placed on developing interpersonal skills, team participation skills, and professionalism. Students who have completed or are enrolled in Business 43, Computer Networking Technology 43, Computer Information Systems 43, Computer Science 43, or English 43 may not receive credit. Strongly recommended: Eligibility for English 1A. 4 hours.

SPCH 46 3 UNITS

ARGUMENTATION AND DEBATE

Grading Option: OP Transfer: CSU, UC
 Analysis of contemporary questions through written and spoken discourse. Analysis, criticism, and synthesis of contemporary moral, political, economic and philosophical issues of a diverse, multicultural society, using traditional and modern models of argumentation. Strongly Recommended: English 1A. 3 hours. (CAN SPEECH 8)

SPCH 48 1-4 UNITS

ACTIVITIES IN FORENSICS

Grading Option: OP Transfer: CSU
(May be repeated 3 times)
 Intercollegiate competition in the areas of public speaking and oral interpretation. Other activities include performance in workshops, festivals, concert readings, and the community. 4-12 hours.

Supervision (SUPV)
 See **Business Studies**

Theater Arts

Degree AA – Theater Arts

About the Program

The Theater Arts major is designed to provide knowledge, training, and practical experience in all aspects of theater arts. The curriculum provides the essential lower-division courses necessary for transfer to similar programs at four-year institutions, as well as assisting students towards employment in professional, academic and community theater. This program fulfills typical lower-division requirements at four-year transfer institutions. Some variation in requirements may exist at a particular four-year college or university; therefore, it is essential that the student also refer to the catalog of the prospective transfer institution and consult a counselor.



AA – Theater Arts

Freshman Year

Theater Arts 1A (Theory and Practice of Acting) 3
Theater Arts 1B (Theory and Practice of Acting) 3

Select from the following courses for a total of 6 units:

Theater Arts 5 (Children's Theater) or
Theater Arts 30 (Drama Workshop) or
Theater Arts 46 (College Theater Management) or
Theater Arts 47 (College Theater Acting) or
Theater Arts 48 (College Theater Technical) 6
Theater Arts 10 (Introduction to Dramatic Arts) 3

General Education Courses: (See General Education Requirements, page 48)

English Composition (Language and Rationality)
Mathematics
Social and Behavioral Sciences
Natural Sciences
Health Education
Physical Education

Sophomore Year

Theater Arts 40 (Introduction to Technical Theater)** 2

Select from the following courses for a total of 6 units:

Theater Arts 5 (Children's Theater) or
Theater Arts 30 (Drama Workshop) or
Theater Arts 46 (College Theater Management) or
Theater Arts 47 (College Theater Acting) or
Theater Arts 48 (College Theater Technical) 6
Related Discipline Electives** 3
Theater Arts Electives* 3

General Education Courses: (See General Education Requirements, page 48)

American Cultures
American Institutions
Humanities
Communications and Analytical Thinking
Physical Education

Total units required 60

*Theater Arts Electives

Select from the following for a minimum of 3 units:

Theater Arts 3 (Improvisation)
Theater Arts 11 (Stage to Film)
Theater Arts 12 (Film as Art and Communication)
Theater Arts 14 (Bay Area Theater)
Theater Arts 25 (Fundamentals of Stage Speech)
Theater Arts 39 (Musical Theater Workshop)

**Related Discipline Electives

Select course(s) from any of the following 4 disciplines for a minimum of 3 units:

Dance

Dance 1 (Dance Technique)
Dance 5 (Dance Workshop)
Dance 6 (Dance Production)

Mass Communications

Mass Communications: 33A (Television Studio Techniques)
 Mass Communications 33B (Television Studio Techniques)

Music

Music: 7 (Basic Music Skills)
 Music 23A (Elementary Voice I)
 Music 23B (Elementary Voice II)
 Music 33 (Study of Voice)
 Music 39 (Musical Theater Workshop)
 Music 42 (Vocal Repertoire)
 Music 43 (Vocal Ensemble)
 Music 44 (Concert Choir)
 Music 45 (Chamber Choir)
 Music 46 (Jazz Choir)

Speech

Speech: 2 (Oral Interpretation Of Literature)
 Speech 5 (Reader's Theater)

****6 units of Arts 48 (College Technical Theater) should be selected if Theater Arts 40 is not offered.*



Theater Arts (THEA)

THEA 1A 3 UNITS THEORY AND PRACTICE OF ACTING I

Grading Option: GR Transfer: CSU, UC
 An introduction to the techniques and theories of acting, explored through improvisation, exercises and scene study. Students should be able to demonstrate the following skills: development of the physical and psychological resources for acting including relaxation, concentration, creativity, believability, and commitment. Strongly recommended: Eligibility for English 1A. 3 hours.

THEA 1B 3 UNITS

THEORY AND PRACTICE OF ACTING II

Grading Option: GR Transfer: CSU, UC
 Continued exploration of the theory and practice of acting, focusing on more complex characterization and character analysis. Introduction to theatrical styles and period acting with emphasis on monologues and scenes. Prerequisite: Theater Arts 1A (completed with a grade of "C" or higher) or equivalent. 3 hours.

THEA 3 1-3 UNITS

THEATER IMPROVISATION: A WORKSHOP IN SPONTANEITY

Grading Option: OP Transfer: CSU, UC
(May be repeated 3 times)
 Introduction to Improvisation. Workshop exercises in theater experience through the operational structure of the game. Mimes, characterizations, scene setting, mood and material for extended ensemble improvisation. Recommended for non-drama as well as drama majors. Credit for more than 1 unit requires completion of special projects. 1-3 hours.

THEA 5 1-3 UNITS

CHILDREN'S THEATER

Grading Option: OP Transfer: CSU
(May be repeated 3 times)
 Introduction to the techniques of formal children's theater. Creation and performance of a theatrical production designed for children. Casting subject to audition. 1-3 hours.

THEA 10 3 UNITS

INTRODUCTION TO DRAMATIC ARTS

Grading Option: OP Transfer: CSU, UC
 The dramatic arts, including the history, values, and theatrical techniques that have shaped them. 3 hours.

THEA 11 3 UNITS

STAGE TO FILM

Grading Option: GR Transfer: CSU, UC
 Major plays which subsequently have been made into films. Analysis of each playscript augmented by a viewing and analysis of the film adaptation. Major areas of concentration will vary from semester to semester. 3 hours.

THEA 12 4 UNITS

FILM AS ART AND COMMUNICATION

Grading Option: OP Transfer: CSU, UC
 Introduction to film as art and communication. Analysis of film expression including narrative, documentary, and experimental. 4 hours.

Tutoring

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THEA 14 1-3 UNITS

BAY AREA THEATER

Grading Option: GR Transfer: CSU, UC*

(May be repeated 1 time)

Appreciation of currently available theater performance by reading, evaluating, and having the option of attending as many as eight plays concurrently in performance in the area. Credit for more than 1 unit requires completion of special projects. 1-3 hours.

THEA 25 3 UNITS

FUNDAMENTALS OF STAGE SPEECH

Grading Option: GR Transfer: CSU, UC

Theory and practice of speech improvement for acting with emphasis on development of the voice, articulation, and pronunciation for theater production. 3 hours.

THEA 30 1-3 UNITS

DRAMA WORKSHOP

Grading Option: GR Transfer: CSU, UC

(May be repeated 3 times)

Participation in experimental workshop plays, original student scripts, and other projects, possibly leading to scheduled performances. Casting subject to audition. 3-9 hours laboratory.

THEA 39 3 UNITS

MUSICAL THEATER WORKSHOP

Grading Option: GR Transfer: CSU, UC

Training in performance skills for the musical theater, with emphasis on acting and stage movement. Corequisite: Music 39. 3 hours.

THEA 40 2 UNITS

INTRODUCTION TO TECHNICAL THEATER

Grading Option: GR Transfer: CSU, UC

Introduction to technical production of theater; scene construction and painting, and organization for production, laboratory experience in preparing plays for public performance. 1 hour lecture, 3 hours laboratory.

THEA 41 1-6 UNITS

PASSPORT TO THEATER

Grading Option: OP Transfer: CSU

Supervised participation in scheduled performances of the theater department as an actor or backstage worker. Hour value to be determined by the instructor, after audition, based upon the scope of the performance or technical assignment. Enrollment is for the duration of the rehearsals and performances. 3-18 hours.

THEA 46 1-2 UNITS

COLLEGE THEATER MANAGEMENT

Grading Option: OP Transfer: CSU

(May be repeated; limit 8 units)

Participation in the business operation of scheduled productions in theater. Enrollment is for the duration of the production. 3-6 hours laboratory each.

THEA 47 1-6 UNITS

COLLEGE THEATER ACTING

Grading Option: OP Transfer: CSU, UC

(May be repeated; limit 24 units)

Participation in cast of scheduled major production. Enrollment is for the duration of the production. Enrollment by audition only. 3-18 hours laboratory.

THEA 48 1-6 UNITS

COLLEGE THEATER TECHNICAL

Grading Option: OP Transfer: CSU, UC

(May be repeated; limit 24 units)

Participation in scheduled productions as crew members and/or constructing its technical elements. Enrollment is for the duration of the production. 3-18 hours laboratory.

Tutoring (TUTR)

TUTR 15 2 UNITS

TRAINING FOR TUTORS

Grading Option: C/N

Training for college tutors to acquire specific skills and techniques for tutoring in academic and vocational subject matter areas and basic skills. Required course for tutors participating in the College's Tutorials Instructional Program. 2 hours.

TUTR 17 .5 UNITS

TUTOR TRAINING

Grading Option: C/N Transfer: CSU

An introduction to tutoring and tutoring skills. The course will provide a conceptual frame work of tutoring to guide student's work in leading effective tutoring sessions. Total of 3 lecture hours and 25 laboratory hours per semester.

TUTR 29 .5-2 UNITS

INDEPENDENT STUDY-TUTORING

Grading Option: C/N Transfer: CSU*

(May be repeated 3 times)

A practical experience to help other students learn and succeed in school-related activities. Provides opportunities to gain experience in the field of education in preparation for making career choices. For .5 unit, .5 lecture hour, 1 hour tutoring; for 1 unit, 1 hour lecture, 2 hours tutoring; for 2 units, 1 hour lecture, 4 hours tutoring.

*Limited to 4 semester units

Vacuum Technology

Degree AS – Vacuum Technology

Certificate Vacuum Technology

About the Program

Vacuum technology is the process of creating a controlled environment that is exclusive of atmospheric effects. Vacuum technicians design, develop, construct or fabricate, operate, and maintain vacuum systems and devices. These devices are required in diverse fields, particularly in manufacture of microelectronic devices, outer space simulation, solar energy, magnetic and inertial fusion energy, physics and cryogenics. Most high-tech manufacturing now entails vacuum processes. The skills necessary include knowledge of the physics of vacuum, equipment for developing vacuum, types of pumps, gauges, containers and materials. Also required is a knowledge of physics, drafting, machining or manufacturing practices.

The Associate in Science degree program offers three areas of concentration: Electronics, Mechanics or Process Technology. This program is designed for direct job entry. While units in the program are transferable to many institutions, students should consult a counselor for information.



AS – Vacuum Technology

Freshman Year

Vacuum Technology 60A (Introduction to Vacuum Concepts I)	3
Vacuum Technology 60B (Introduction to Vacuum Concepts II)	4
Mathematics 65 (Elementary Algebra) or	
Mathematics 65A (Elementary Algebra A) and	
Mathematics 65B (Elementary Algebra B)	5-6
Physics 10 (Descriptive Physics)	3
Welding Technology 70 (Introduction to Welding)	2
General Education Courses: (See General Education Requirements, page 49)	
English Composition (Language and Rationality)	
Mathematics	
Social and Behavioral Sciences	
Natural Sciences	
Physical Education	

Sophomore Year

Design Technology 50 (Mechanical Drafting for Non-Majors) or	
Design Technology 52 (Technical Graphics)	2-3
Machine Tool Technology 70 (Introduction to Machine Shop) or	
Industrial Technology 61 (Manufacturing Processes) or	
equivalent	2
Options*	11
General Education Courses: (See General Education Requirements, page 49)	
American Cultures	
American Institutions/Health Education	
Humanities	
Communications and Analytical Thinking	
Total units required	60

*Complete one of the 3 Vacuum Technology Concentration Options

Option 1 (Electronics)	11 units
Electronics Technology 50 (Fundamentals of Electronics) or	
Electronics Technology 60 (Fundamentals of Electronics) and	
Electronics Technology 65 (Circuit Analysis);	
Electronics Technology 53 (Fabrication and Repair Techniques) or	
Electronics Technology 61 (Fabrication Techniques)	
Design Technology 61 (Electronic Design)	
Vacuum Technology 99 (Selected Topics in Vacuum Technology)	
Option 2 (Mechanical)	11 units
Electronics Technology 70 (Introduction to Electronics)	
Machine Tool Technology 60A (Machine Tool Technology I)	
Design Technology 75 (Design Materials Technology)	
Welding Technology 62A and 62AL (Beginning T.I.G. Welding)	
Vacuum Technology 99 (Selected Topics in Vacuum Technology)	
Option 3 (Process Technology)	11 units
Chemistry 30A (Introductory and Applied Chemistry)	
Design Technology 62A (Computer Aided Design)	
Design Technology 75 (Design Materials Technology)	
Mathematics 71 (Applied Mathematics for Technicians)	
Vacuum Technology 99 (Selected Topics in Vacuum Technology)	



Certificate of Completion Vacuum Technology

Vacuum Technology 60A (Introduction to Vacuum Concepts I)	3
Vacuum Technology 60B (Introduction to Vacuum Concepts II)	4
Physics 10 (Descriptive Physics).....	3
Mathematics 65 (Elementary Algebra) or Mathematics 65A (Elementary Algebra A) and Mathematics 65B (Elementary Algebra B)	5-6
Total units required	15-16

Vacuum Technology (VACT)

VACT 60A 3 UNITS

INTRODUCTION TO VACUUM CONCEPTS I

Grading Option: GR Transfer: CSU

Introduction to the concept of vacuum, review of mathematics, introduction to Gas Laws, sub-atmospheric pressure measurement, roughing pumps, booster pumps, diffusion pumps, turbo pumps, cryogenic pumps, ion pumps, getter pumps, leak detection fundamentals, and partial pressure analysis. Strongly Recommended: Mathematics 65. 3 hours.

VACT 60B 4 UNITS

INTRODUCTION TO VACUUM CONCEPTS II

Grading Option: GR Transfer: CSU

Interpretation of partial pressure data, kinetic theory of gases, flow of gases in tubes, vacuum system design calculations, cleaning of materials for use in a vacuum, vacuum hardware, vacuum sealing techniques, attaining ultra-high vacuum, vacuum processes. Prerequisite: Vacuum Technology 60A (completed with a grade of "C" or higher). 3 hours lecture, 3 hours laboratory.

VACT 99 0.3 - 3 UNITS

SELECTED TOPICS IN VACUUM TECHNOLOGY

Grading Option: OP Transfer: CSU*

Designed to explore special interest subjects drawn from the field of Vacuum Technology. Emphasis will be on topics of practical use for persons employed in the vacuum technology field as well as for the person interested in learning about this technology. Prerequisites may vary for specific topics. 0.3-9 hours. * *Transfer units limited to 4 semester units*

Visual Communications

Degree
AA – Visual Communications

Certificate
Visual Communications

About the Program

The Visual Communications program encompasses all the visual arts—drawing, painting, photography, typography—but instead of traditional tools and media students use computers and specialized software to produce their work. The program offers one AA and two certificate degrees. In both certificate programs advanced students learn production techniques and create client-based work in print or web while interning in the Las Positas College Design Shop, a work-based, entrepreneurial program. Development of a visual style and completion of a professional-level portfolio is required for graduation for AA and certificate students. All tracks share fundamental classes but requirements vary significantly on the advanced level. The program is flexible and will be expanded or changed as necessary to meet the needs of students and the community.

See also: **Art**
Photography



AA – Visual Communications

Freshman Year

Art 2A (Introduction to Drawing) or Photography 50 (Introduction to Photography).....	3
Visual Communications 50 (Visual Communications Applications) .	1.5
Visual Communications 51 (Communicating with Color)	1.5
Visual Communications 52 (Communicating with Type).....	1.5
Visual Communications 53 (Digital Image Creation and Manipulation).....	2
Visual Communications 54 (Digital Drawing and Illustration).....	2
Visual Communications 55 (Introduction to Web Design).....	2
Visual Communications 56 (Digital Design Concepts I)	3
General Education Courses: (See General Education Requirements, page 48)	
English Composition (Language and Rationality)	
Mathematics	
Social and Behavioral Sciences	
Natural Sciences	
Health Education	
Physical Education	

Sophomore Year

Art 5 (Art History-Renaissance to Modern).....	3
Visual Communications 57 (Digital Design Concepts II)	3
Visual Communications 58 (Advanced Techniques in Digital Image Creation and Manipulation) or Visual Communications 59 (Advanced Techniques in Digital Drawing and Illustration)	3
Visual Communications 60 (Creative Portfolio and Self-Promotion) or Visual Communications 61 (Independent Studies Leading to Advanced Portfolio Work).....	3
Visual Communications 62 (Advanced Multimedia Design Techniques) or Visual Communications 64 (Advanced Design and Layout Techniques for Electronic Publishing)	3
General Education Courses: (See General Education Requirements, page 48)	
American Cultures	
American Institutions	
Humanities	
Communications and Analytical Thinking	
Physical Education	
Total units required	60

Certificate of Achievement Visual Communications

Visual Communications 50 (Visual Communications Applications) .	1.5
Visual Communications 51 (Communicating with Color)	1.5
Visual Communications 52 (Communicating with Type).....	1.5
Visual Communications 53 (Digital Image Creation and Manipulation).....	2
Visual Communications 54 (Digital Drawing and Illustration).....	2
Visual Communications 55 (Introduction to Web Design).....	2
Visual Communications 56 (Digital Design Concepts I)	3
Visual Communications 57 (Digital Design Concepts II)	3
Visual Communications 58 (Advanced Techniques in Digital Image Creation and Manipulation)	
Visual Communications 59 (Advanced Techniques in Digital Drawing and Illustration).....	3
Visual Communications 60 (Creative Portfolio and Self-Promotion) or	
Visual Communications 61 (Independent Studies Leading to Advanced Portfolio Work).....	3
Option*.....	8-16
Total Units Required.....	33.5-41.5

*Complete one of the 2 Visual Communications Options for a minimum of 8 units

Option #1 - Emphasis in Multimedia

- Visual Communications 62 (Advanced Multimedia Design Techniques)
- Visual Communications 63 (Web Site and Multimedia Production)
- Visual Communications 66 (Internship)

Option 2 - Emphasis in Print

- Visual Communications 64 (Advanced Design and Layout Techniques for Electronic Publishing)
- Visual Communications 65 (Electronic Pre-Press and Print Production)
- Visual Communications 66 (Internship)

Note: Students may complete one or both options. Visual Communications 66 must be taken concurrently with Visual Communications 63 and Visual Communications 65 and must be repeated if both emphasis options are chosen.

See also: **Art Photography**

Visual Communications (VCOM)

Formerly Graphic Design

VCOM 50 1.5 UNITS

VISUAL COMMUNICATIONS APPLICATIONS

Grading Option: OP Transfer: CSU

(May be repeated 1 time)

Introduction to industry standard hardware and software, and the vocational opportunities available in the visual communications industry. This course introduces the fundamental technical skills necessary to create, layout, and/or manipulate images and text. Emphasis is placed on mastering basic computer skills and fundamental concepts and techniques used across industry-standard software, cross-platform operating systems, and hardware. 1 hour lecture, 2 hours laboratory.

VCOM 51 1.5 UNITS

COMMUNICATING WITH COLOR

Grading Option: OP Transfer: CSU

(May be repeated 1 time)

Applied color theory highlighting color as an element for communication and expression as applied to digital design in the visual communications field. This fundamental course includes color expression, color theory, color interaction, color psychology, color perception in an ethnically diverse, international audience, color trends, color reproduction, on-screen viewing and pre-press considerations. Covers creative and technical aspects of color design issues using digital illustration, digital manipulation, paint and photo manipulation software. Prerequisite: VCOM 50 (completed with a grade of "C" or higher), or may be taken concurrently. 1 hour lecture, 2 hours laboratory.

VCOM 52 1.5 UNITS

COMMUNICATING WITH TYPE

Grading Option: OP Transfer: CSU

(May be repeated 1 time)

Applied typographic history and theory highlighting type as an element for communication and expression as applied to digital design in the visual communications field. Application of digital type styles and fonts for various print and multimedia materials and on-screen viewing. Exploration of appropriate use of type families, type trends and typographic design in visual communication products as it relates to an ethnically diverse, international audience. Covers creative and technical aspects of type design issues using digital illustration, digital manipulation, paint and photo manipulation industry-standard software. Prerequisite: VCOM 50 (completed with a grade of "C" or higher) or may be taken concurrently. 1 hour lecture, 2 hours laboratory.

VCOM 53 **2 UNITS**

DIGITAL IMAGE CREATION AND MANIPULATION

Grading Option: OP Transfer: CSU

(May be repeated 1 time)

A visual communications approach to the creation and/or manipulation of digital paintings, photographs and screen images. In-depth exploration of basic feature and techniques in bitmap-based industry-standard software such as Photoshop. Fundamental techniques required to create and manipulate bitmap-based imagery. Prerequisites: VCOM 50, VCOM 51, VCOM 52 (completed with a grade of "C" or higher), or may be taken concurrently. 1.5 hours lecture, 3 hours laboratory.

VCOM 54 **2 UNITS**

DIGITAL DRAWING AND ILLUSTRATION

Grading Option: OP Transfer: CSU

(May be repeated 1 time)

A visual communications approach to the creation of digital drawings, illustrations and images. In-depth exploration of basic features and techniques in vector-based illustration industry-standard software such as Adobe Illustrator or Macromedia Freehand. Fundamental techniques required to create vector-based art. Prerequisites: VCOM 50, VCOM 51, VCOM 52 (completed with a grade of "C" or higher), or may be taken concurrently. 1.5 hours lecture, 3 hours laboratory.

VCOM 55 **2 UNITS**

INTRODUCTION TO WEB DESIGN

Grading Option: OP Transfer: CSU

(May be repeated 1 time)

In-depth exploration of basic features and techniques in the application of the principles of design used to build Web sites using industry-standard software such as Macromedia Dreamweaver or Adobe GoLive. A visual communications approach to the creation of attractive, optimally functional web pages. Fundamental techniques required to format graphics, tables, frames and images using industry-standard software. Prerequisites: VCOM 50, VCOM 51, VCOM 52 (completed with a grade of "C" or higher), or may be taken concurrently. 1.5 hours lecture, 3 hours laboratory.

VCOM 56 (Formerly ART 40) **3 UNITS**

DIGITAL DESIGN CONCEPTS 1

Grading Option: OP Transfer: CSU

A fundamental course on the nature of the elements and principles of digital design used in visual communications for application in all subsequent visual communications courses. Emphasis is placed upon line, color, texture, shape, and composition. Survey of elementary design principles and basic electronic techniques used to create effective visual communication output with emphasis on practical computer-based compositions. Prerequisites: VCOM 50, VCOM 51, VCOM 52, VCOM 53, VCOM 54 (completed with a grade of "C" or higher), or may be taken concurrently. 2 hours lecture, 5 hours laboratory.

VCOM 57 (Formerly ART 41) **3 UNITS**

DIGITAL DESIGN CONCEPTS II

Grading Option: OP Transfer: CSU

A fundamental course on the nature of visual communication as it relates to the design of various commercial products solving visual design problems through creative digital techniques. Design principles applied to specific exercises in creation of corporate signage, collateral materials and packaging for print, web and other multimedia. Practical studio work in creating prototypes for print and multimedia and exploration of the interrelationship between illustration, design elements, type, format and color, and the designer/client relationship. Emphasis placed on historical, philosophical, theoretical, cultural and practical aspects of commercial art, design, and multimedia. Prerequisites: VCOM 55, VCOM 56, VCOM 58, VCOM 59 (completed with a grade of "C" or higher); VCOM 55, VCOM 58, VCOM 59 may be taken concurrently. 2 hours lecture, 5 hours laboratory.

VCOM 58 (Formerly ART 46) **3 UNITS**

ADVANCED TECHNIQUES IN DIGITAL IMAGE CREATION AND MANIPULATION

Grading Option: OP Transfer: CSU

(May be repeated 1 time)

In-depth exploration of advanced features and techniques in an industry-standard application such as Photoshop. Use software to generate original digital bitmap-painted images and to manipulate digital photographs suitable for print, web and other multimedia. Design principles emphasized to create effective output through computer-based composition. Prerequisites: VCOM 51, VCOM 52, VCOM 53 (all completed with a grade of "C" or higher). 2 hours lecture, 5 hours lab.

VCOM 59 (Formerly ART 44) **3 UNITS**

ADVANCED TECHNIQUES IN DIGITAL DRAWING AND ILLUSTRATION

Grading Option: OP Transfer: CSU

(May be repeated 1 time)

In-depth exploration of advanced features and techniques in vector-based illustration industry-standard application such as Illustrator or Freehand. Use software to generate original digital imagery for print and screen/online use. Design principles emphasized to create effective visual imagery through computer-based drawing and illustration. Prerequisites: VCOM 51, VCOM 52, VCOM 54 (all completed with a grade of "C" or higher). 2 hours lecture, 5 hours laboratory.

VCOM 60 (Formerly ART 45) **3 UNITS**

CREATIVE PORTFOLIO AND SELF-PROMOTION

Grading Option: OP Transfer: CSU

Individual projects, development and refinement of the creative portfolio and strategies for effective self-promotion of ideas and skills in the working visual communications world. Includes use of effective techniques of oral and visual presentation. Selecting, updating, and highlighting of individual skills to best present individual and their

Visual Communications

portfolio. Prerequisites: VCOM 55, VCOM 57, VCOM 58, VCOM 59 (all completed with a grade of "C" or higher). 1 hour lecture, 8 hours laboratory.

VCOM 61 3 UNITS

INDEPENDENT STUDIES LEADING TO ADVANCED PORTFOLIO WORK

Grading Option: OP Transfer: CSU

This course is designed for students who are ready to create advanced individual portfolio work in print and/or multimedia prior to seeking employment and/or applying for transfer to a 4-year institution. This course is available only during semesters when VCOM 60 is not offered. Students will work one-on-one with a mentor instructor to develop and refine a creative portfolio, and research and adapt strategies for effective self-promotion of ideas and skills in the working visual communications world. Advanced creative work will be highlighted to best present the individual and their portfolio. Prerequisites: VCOM 55, VCOM 57, VCOM 58, VCOM 59 (all completed with a grade of "C" or higher). 1 hour lecture, 8 hours laboratory.

VCOM 62 3 UNITS

ADVANCED MULTIMEDIA DESIGN TECHNIQUES

Grading Option: OP Transfer: CSU

A visual communications approach to the creation of aesthetically pleasing, optimally functional multimedia products. In-depth exploration of principles of design and structural techniques used to build industry-standard multimedia products. Advanced technical techniques required to create multimedia graphics products using industry-standard software. Prerequisites: VCOM 55, VCOM 57, VCOM 58, VCOM 59 (all completed with a grade of "C" or higher); VCOM 57, VCOM 58, VCOM 59 may be taken concurrently. 2 hours lecture, 5 hours laboratory.

VCOM 63 3 UNITS

WEBSITE AND MULTIMEDIA PRODUCTION

Grading Option: OP Transfer: CSU

Culminating class in study of technical and creative design techniques necessary to build industry-standard interactive multimedia products. Course includes individual and team-based projects; role play; visual and oral presentation; field trips; and work experience internship. Upon completion, students should be able to show mastery of creative process and technology use in producing individual and team-based work to client and industry specifications. Prerequisites: VCOM 60, VCOM 62 (completed with a grade of "C" or higher), VCOM 60 may be taken concurrently; Corequisite: VCOM 66. 2 hours lecture, 5 hours laboratory.

VCOM 64 (Formerly ART 42) 3 UNITS

ADVANCED DESIGN AND LAYOUT TECHNIQUES FOR ELECTRONIC PUBLISHING

Grading Option: OP Transfer: CSU

In-depth exploration of principles of design and layout techniques used to create print materials to industry standard. A visual communications approach to the creation of aesthetically pleasing, effective documents and publications. Study of advanced technology techniques and typographical content required to create layouts, specify type, and/or import images and text using industry-standard software. Prerequisites: VCOM 57, VCOM 58, VCOM 59 (completed with a grade of "C" or higher), may be taken concurrently. 2 hours lecture, 5 hours laboratory.

VCOM 65 (Formerly ART 47) 3 UNITS

ELECTRONIC PRE-PRESS AND PRINT PRODUCTION

Grading Option: OP Transfer: CSU

Culminating class in study of technical and creative design techniques necessary to develop industry-standard printed materials. Course includes individual and team-based projects; role play; visual and oral presentation; field trips; and required concurrent work experience internship class. Upon completion, students should be able to show mastery of creative process and technology use in producing individual and team-based work to client and industry specifications. Prerequisites: VCOM 60, VCOM 64 (completed with a grade of "C" or higher); VCOM 60 may be taken concurrently; Corequisite: VCOM 66. 2 hours lecture, 5 hours laboratory.

VCOM 66 2 UNITS

INTERNSHIP

Grading Option: OP Transfer: CSU

(Must be repeated once if both emphasis options are chosen)

This course provides students a professional design work experience through a directed and evaluated internship within the community. On-the-job training will allow students to learn first hand responsibilities including deadlines, employer demands, bidding, pricing, working with a client, and becoming familiar with advertising agencies, design studios, service bureaus, print or multimedia production houses. Prerequisites: VCOM 62 and/or VCOM 64 (both completed with a grade of "C" or higher). Corequisites: VCOM 63 and/or VCOM 65. 1 hour lecture, 4 hours laboratory.

150

TECHNICAL SKILLS COURSES FOR PROFESSIONALS

Visual Communications has several courses denoted 150 and above for professionals who wish to learn new technical skills, or ramp up skills in the latest versions of Adobe™ and Macromedia™ design applications such as Photoshop, Illustrator, InDesign, Dreamweaver and Flash. These credit/no credit courses have identical content, and are scheduled simultaneously with corresponding VCOM courses. Prerequisites have been relaxed to facilitate online registration access. Refer to the Class Schedule for semester course offerings and descriptions of skills necessary for success.

Viticulture and Winery Technology

DEGREE
AS – Viticulture
AS – Enology

CERTIFICATE
Viticulture
Enology

Transfer preparation
Viticulture and Enology

ABOUT THE PROGRAM

California’s wine industry, the second largest agricultural industry in the state, encompasses aspects of agriculture, science and business and enjoys an international reputation. Viticulture—grape growing, enology—wine making, marketing, sales, distribution, and consumption are a multi-billion dollar industry and are continuing to grow.

Las Positas College is situated in the heart of Livermore’s historic wine growing region which makes it an ideal home for a viticulture and enology program. All of the courses in this program are designed for direct entry, so students can pick from any of the course offerings to suit their needs.

Degrees and certificates are offered in either of two tracks—Viticulture and Enology. These programs are designed to prepare students for careers in the wine industry and to provide an opportunity for those currently employed in the wine industry to upgrade their skills and knowledge. In addition, individuals can further their knowledge in the study of wine and food pairing, viticulture and wine making. A track is also available for students interested in transferring to a four-year university to pursue a Bachelor’s Degree. Most VWT courses are not transferable in this major, so students seeking to transfer should consult a counselor for specific information.

See also: **Horticulture**



AS – Viticulture

Approval by the State Chancellor’s Office is pending.

Freshman Year

Viticulture and Winery Technology 10 (Introduction to Viticulture) or Horticulture 70 (Introduction to Viticulture)	3
Viticulture and Winery Technology 12 (Vineyard Soils, Fertilizers and Irrigation)	3
Viticulture and Winery Technology 14 (Applied Viticultural Practices)	3
Biology 10** (Introduction to the Science of Biology) or Biology 31** (Introduction to College Biology) or Botany 1** (General Botany).....	4-5
Chemistry 30A** (Introduction and Applied Chemistry) or Geology 10** (Introduction to Geology) and Geology 10L (Introduction to Geology Lab) or Geography 1** (Introduction to Physical Geography and Geography 1L** (Introduction to Physical Geography Lab) or Geography 15** (Introduction to Geographic Information Systems).....	3-4
Electives*	2-3
General Education Courses: (See General Education Requirements, page 49)	
English Composition (Language and Rationality)	
Mathematics	
Social and Behavioral Sciences	
Physical Education	

Sophomore Year

Viticulture and Winery Technology 20 (Introduction to Enology).....	3
Viticulture and Winery Technology 31 (Vineyard Operations I).....	3
Viticulture and Winery Technology 32 (Vineyard Operations II).....	3
Viticulture and Winery Technology 35 (Vineyard Pest and Disease Management).....	3
Viticulture and Winery Technology 29 (Independent Study) or Work Experience 95 (Occup’l Work Experience Education) and Work Experience 96 (Work Experience Seminar).....	2-4
Electives*	2-3
General Education Courses: (See General Education Requirements, page 49)	
American Cultures	
American Institutions/Health Education	
Humanities	
Communications and Analytical Thinking	
Total Units Required.....	60

*Electives

Select from the following for a minimum of 4 units:

- Viticulture and Winery Technology 38 (Vineyard Management)
- Viticulture and Winery Technology 47 (Wine Regions and Wines of California)
- Viticulture and Winery Technology 48 (Winery Management)
- Viticulture and Winery Technology 50 (Wine Marketing and Sales)

**Meets General Education Requirements

Viticulture and Winery Technology

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Certificate of Achievement Viticulture

Approval by the State Chancellor's Office is pending.

Viticulture and Winery Technology 10 (Introduction to Viticulture) or Horticulture 70 (Introduction to Viticulture)	3
Viticulture and Winery Technology 12 (Vineyard Soils, Fertilizers and Irrigation)	3
Viticulture and Winery Technology 14 (Applied Viticultural Practices)	3
Viticulture and Winery Technology 20 (Introduction to Enology).....	3
Viticulture and Winery Technology 31 (Vineyard Operations I).....	3
Viticulture and Winery Technology 32 (Vineyard Operations II).....	3
Viticulture and Winery Technology 35 (Vineyard Pest and Disease Management).....	3
Biology 10 (Introduction to the Science of Biology) or Biology 31 (Introduction to College Biology) or Botany 1 (General Botany).....	4-5
Chemistry 30A (Introductory and Applied Chemistry) or Geology 10 (Introduction to Geology) and Geology 10L (Introduction to Geology Laboratory) or Geography 1 (Introduction to Physical Geography) and Geography 1L (Introduction to Physical Geography Lab) or Geography 15 ((Introduction to Geographic Information Systems)	3-4
Viticulture and Winery Technology 29 (Independent Study) or Work Experience 95 (Occup'l Work Experience Education) and Work Experience 96 (Work Experience Seminar).....	2-4
Electives*	2-3
Total Units Required.....	32-37 Units

*Electives

Select from the following for a minimum of 2 units:

- Viticulture and Winery Technology 38 (Vineyard Management)
- Viticulture and Winery Technology 47 (Wine Regions and Wines of California)
- Viticulture and Winery Technology 48 (Winery Management)
- Viticulture and Winery Technology 50 (Wine Marketing and Sales)



AS – Enology

Approval by the State Chancellor's Office is pending.

Freshman Year

Viticulture and Winery Technology 20 (Introduction to Enology).....	3
Viticulture and Winery Technology 25 (Sensory Analysis of Wine) ..	3
Chemistry 30A** (Introductory and Applied Chemistry)	4
Chemistry 30B (Introductory and Applied Chemistry)	4
Biology 10** (Introduction to the Science of Biology) or Biology 31**	4
Electives*	2-3
General Education Courses: (See General Education Requirements, page 49)	
English Composition (Language and Rationality)	
Mathematics	
Social and Behavioral Sciences	
Physical Education	

Sophomore Year

Viticulture and Winery Technology 10 (Introduction to Viticulture) or Horticulture 70 (Introduction to Viticulture)	3
Viticulture and Winery Technology 41 (Winery Operations I).....	3
Viticulture and Winery Technology 42 (Winery Operations II).....	3
Viticulture and Winery Technology 44 (World Viticulture and Wines).....	3
Viticulture and Winery Technology 45 (Food and Wine Pairing).....	1
Viticulture and Winery Technology 29 (Independent Study) or Work Experience 95 (Occup'l Work Experience Education) and Work Experience 96 (Work Experience Seminar).....	2-4
Electives*	2-3
General Education Courses: (See General Education Requirements, page 49)	
American Cultures	
American Institutions/Health Education	
Humanities	
Communications and Analytical Thinking	
Total Units Required.....	60

*Electives

Select from the following for a minimum of 4 units:

- Viticulture and Winery Technology 38 (Vineyard Management)
- Viticulture and Winery Technology 47 (Wine Regions and Wines of California)
- Viticulture and Winery Technology 48 (Winery Management)
- Viticulture and Winery Technology 50 (Wine Marketing and Sales)

**Meets General Education Requirements

Certificate of Achievement Enology

Approval by the State Chancellor's Office is pending

Viticulture and Winery Technology 10 (Introduction to Viticulture) or Horticulture 70 (Introduction to Viticulture)	3
Viticulture and Winery Technology 20 (Introduction to Enology).....	3
Viticulture and Winery Technology 25 (Sensory Analysis of Wine) ..	3
Viticulture and Winery Technology 41 (Winery Operations I).....	3
Viticulture and Winery Technology 42 (Winery Operations II).....	3
Viticulture and Winery Technology 44 (World Viticulture and Wines)	3
Viticulture and Winery Technology 45 (Food and Wine Pairing).....	1
Biology 10 (Introduction to the Science of Biology) or Biology 31(Introduction to College Biology)	4
Chemistry 30A (Introductory and Applied Chemistry)	4
Chemistry 30B (Introductory and Applied Chemistry)	4
Viticulture and Winery Technology 29 (Independent Study) or Work Experience 95 (Occup'1 Work Experience Education) and Work Experience 96 (Work Experience Seminar).....	2-4
Electives*	2-3
Total Units Required.....	35-38 Units

*Electives

Select from the following for a minimum of 2 units:

Viticulture and Winery Technology 38 (Vineyard Management)	
Viticulture and Winery Technology 47 (Wine Regions and Wines of California)	
Viticulture and Winery Technology 48 (Winery Management)	
Viticulture and Winery Technology 50 (Wine Marketing and Sales)	

Viticulture and Enology

Preparation for students transferring to UC Davis

First Year

Chemistry 1A (General College Chemistry).....	5
Chemistry 1B (General College Chemistry).....	5
Viticulture and Winery Technology 10 (Introduction to Viticulture)..	3
Viticulture and Winery Technology 20 (Introduction to Enology).....	3
English 1A (Critical Reading and Composition)	3
Mathematics 1 (Analytic Geometry and Calculus.....)	5
Mathematics 2 (Analytic Geometry and Calculus II)	5
General Education Requirements*	

Second Year

Physics 2A (Introduction to Physics I)	4
Physics 2B (Introduction to Physics II).....	4
Biology 1 (Introduction to Cell Biology)	5
Botany 1 (General Botany).....	5
Chemistry 12A (Organic Chemistry)	5
Chemistry 12B (Organic Chemistry)	5
Speech 1 (Fundamentals of Speech Communication).....	3
General Education Requirements*	

Viticulture and Enology

Preparation for students transferring to CSU Fresno

First Year

Chemistry 1A** (General College Chemistry)	5
Chemistry 1B (General College Chemistry).....	5
Viticulture and Winery Technology 10 (Introduction to Viticulture)..	3
Viticulture and Winery Technology 20 (Introduction to Enology).....	3
English 1A (Critical Reading and Composition)	3
Biology 31** (Introduction to College Biology.....)	4
Mathematics 45 (College Algebra) or Mathematics 42A (Introduction to Probability and Statistics)**	3
General Education Requirements*	

Second Year

Physics 10 (Descriptive Physics).....	3
Physics 10L (Descriptive Physics Laboratory).....	1
Botany 1 (General Botany).....	5
Chemistry 12A (Organic Chemistry)	5
Chemistry 12B (Organic Chemistry)	5
Speech 1 (Fundamentals of Speech Communication).....	3
General Education Requirements*	

**Note: Students are advised to consult with a counselor for advice about the appropriate General Education pattern of courses.*

Viticulture and Winery Technology (VWT)

VWT 10 3 UNITS

INTRODUCTION TO VITICULTURE

Grading Option: OP Transfer: CSU

An introduction to viticulture; growing grapes, including historical aspects of grape cultivation for raisins, wine and table grapes, grape species and varieties; botany, anatomy, propagation, climate, cultivation, vineyard management, plant-soil-water relations, irrigation, fertilization, pruning, weed, insect, pest and disease control; establishment, training and pruning grape vines, harvest and post harvest operations. Brief overview of wine making. Students who have completed or are enrolled in Horticulture 70 may not receive credit. 3 hours.

VWT 12 3 UNITS

VINEYARD SOILS, FERTILIZERS AND IRRIGATION

Grading Option: OP Transfer: CSU

Introduction to the basic principles of soil science, mineral nutrition, components installation, and plant/water relationships for grape production. Planning, design and maintenance of sprinklers and drip irrigation systems for winery vineyards. 3 hours.

VWT 14 3 UNITS

APPLIED VITICULTURAL PRACTICES: GRAPEVINE CULTIVARS, CLONES, AND ROOTSTOCKS, GRAPEVINE PROPAGATION, PRUNING, AND TRELLISING AND CANOPY MANAGEMENT

Grading Option: OP Transfer: CSU

Introduction and evaluation of vitis vinifera cultivars and clones, and the rootstocks suitable to this area. Introduction to the theory and practices of grapevine propagation, including field budding, T-budding, side-whip grafting, root cutting, and cuttings to change varieties. Introduction to trellising options for vinegrape production including principles and practices of canopy management which focus on the improvement of winegrape quality. Introduction to the theory and practice of pruning grapevines. 2.5 hours lecture, 1 hour laboratory.

VWT 20 3 UNITS

INTRO TO ENOLOGY

Grading Option: OP Transfer: CSU

Introduction to the science of winemaking, including history and geographical distribution; grape varieties and wine types; influence of climate and soil; wine fermentation, handling, storage and bottling methods; wine disorders; winery sanitation; legal compliance. Students must be 21 years of age or older to participate in wine

tasting. 3 hours.

VWT 25 3 UNITS

SENSORY ANALYSIS OF WINES

Grading Option: OP Transfer: CSU

A sensory course designed for individuals to learn organoleptic tasting techniques, characteristics and styles of wine varieties, wine sensory evaluation methods including statistical analysis of trials, philosophy of wine styles, and the common evaluation methods used in sensory testing. Students must be 21 years of age or older, and this class has a materials fee above regular enrollment fee. 3 hours.

VWT 31 3 UNITS

VINEYARD OPERATIONS I

Grading Option: OP Transfer: CSU

Viticulture practices for the fall and winter seasons including harvesting, pruning, varietal selection, erosion control, fertilization, weed control, propagation, and vineyard development. Emphasis on practical applications of viticulture. 2 hours lecture, 3 hours laboratory.

VWT 32 3 UNITS

VINEYARD OPERATIONS II

Grading Option: OP Transfer: CSU

Viticulture practices for the spring and summer seasons including cultivation, planting and training a new vineyard, pest and disease control, soils, frost control, irrigation practices, quality control measures and vineyard equipment use. Emphasis on practical applications of viticulture. 2 hours lecture, 3 hours laboratory.

VWT 35 3 UNITS

VINEYARD PEST AND DISEASE MANAGEMENT

Grading Option: OP Transfer: CSU

A study of the identification and the biology of common vineyard pests and diseases. Techniques and strategies for sampling and monitoring and effective control measures. Pest management strategies for insects, weeds and diseases, including bio-control and sustainable agriculture practices in addition to pesticide use, safety and compliance. 3 hours.

VWT 38 3 UNITS

VINEYARD MANAGEMENT

Grading Option: OP Transfer: CSU

Responsibilities of vineyard management including: diagnosis and correction of problems, vineyard development, financial projections, and budgeting, labor contracting and supervision, and crop sale contracts. 3 hours.

VWT 41 3 UNITS

WINERY OPERATIONS 1

Grading Option: OP Transfer: CSU

Winery operations for the summer and fall seasons, including grape maturity monitoring; grape harvesting; fermentation, handling and storage of new wines; maintenance of wines from previous vintages;

general cellar practices. Student must be 21 years of age or older to participate in wine tasting. 2 hours lecture, 3 hours laboratory.

VWT 42 **3 UNITS**

WINERY OPERATIONS II

Grading Option: OP Transfer: CSU

Winery operations for the winter and spring seasons, including handling and storage of new wines; maintenance of wines from previous vintages; general cellar practices. Student must be 21 years of age or older to participate in wine tasting. 2 hours lecture, 3 hours laboratory.

VWT 44 **3 UNITS**

WORLD VITICULTURE AND WINES

Grading Option: OP Transfer: CSU

A survey of world viticulture wine industries, and wine producing regions and their wines. History of viticulture, worldwide grape growing and wine production and consumption, and world wine regions and wine styles, includes sensory evaluation of representative wines. Student must be 21 years of age or older. There is a materials fee associated with this class. 3 hours.

VWT 45 **1 UNIT**

FOOD AND WINE PAIRING

Grading Option: OP

An introduction to the concepts involved in food and wine pairing through formal tasting, cooking, and lectures. Introduction to the use of sensory abilities to identify those ingredients in both food and wine that complement each other. Participation in palate exercises in which food and wines are paired. Student must be 21 years of age or older. 1 hour lecture, 1 hour laboratory.

VWT 47 **2 UNITS**

WINE REGIONS AND WINES OF CALIFORNIA

Grading Option: OP Transfer: CSU

Introduction to wines produced in California by region, including history, viticultural practices and wine making styles. Sensory evaluation of representative California wines. Laboratory Fee. Students must be 21 years of age or older. 2 hours.

VWT 48 **3 UNITS**

WINERY MANAGEMENT

Grading Option: OP Transfer: CSU

An introductory level course on winery management, including annual plans and budgets, labor management and supervision, legal compliance, and record keeping. 3 hours.

VWT 50 **3 UNITS**

WINE MARKETING AND SALES

Grading Option: OP Transfer: CSU

An introductory overview of the wine industry: production, planning,



Welding Technology

Degree
AS - Welding Technology

Certificate
Welding Technology

About the Program

This program is designed to prepare students for positions as shielded arc, flux core or MIG and TIG welders in research laboratories, in structural fabrication shops or in general welding shops. Completion of the certificate/AS degree requirements prepares students to take the welding certification tests. Students may begin this program any semester and enter with either Welding Technology 61 or Welding Technology 62 as the starting series.

This program is designed to teach theoretical concepts in one course and skills in a companion course. It is recommended that these companion courses be taken concurrently.

While units in the program are transferable to many institutions, students should consult a counselor for information.



AS -- Welding Technology

Freshman Year

Welding Technology 61A and 61AL (Beginning Arc, Flux-Core Welding, Blueprint Theory and Welding Skills)	3
Welding Technology 61B and 61BL (Advanced Arc, Flux-Core Welding, Blueprint Theory and Welding Skills)	3
Welding Technology 62A and 62AL (Beginning TIG, MIG, Blueprint Theory and Welding Skills)	3
Welding Technology 62B and 62BL (Advanced TIG, MIG, Blueprint Theory and Welding Skills)	3
Welding Technology 63 (Welding Layout and Fitting)	2
Welding Technology 67A (Welding Skills Laboratory).....	2
Welding Technology 67B (Advanced Welding Skills Laboratory).....	2
Drafting Technology 55 (Blueprint Reading and Sketching)	2
Industrial Technology 61 (Manufacturing Processes).....	2
Industrial Technology 74 *(Measurements and Calculations) or Mathematics 71* (Applied Mathematics for Technicians)	3
General Education Courses: (See General Education Requirements, page 49)	
English Composition (Language and Rationality)	
Mathematics	
Social and Behavioral Sciences	
Physical Education	
Natural Sciences	
Physical Education	

Sophomore Year

Welding Technology 66** (Welding Inspection and Testing).....	3
Welding Technology 69A** (Fabrication and Installing Piping Systems).....	3
Welding Technology 69B** (Advanced Pipe Welding)	3
General Education Courses: (See General Education Requirements, page 49)	
American Cultures	
American Institutions/Health Education	
Humanities	
Communications and Analytical Thinking	
Total units required	60

* Satisfies Mathematics requirement for graduation

** Offered alternating years

Certificate of Achievement Welding Technology

Welding Technology 61A and 61AL (Beginning Arc, Flux-Core Welding, Blueprint Theory and Welding Skills)	3
Welding Technology 61B and 61BL (Advanced Arc, Flux-Core Welding, Blueprint Theory and Welding Skills)	3
Welding Technology 62A and 62AL (Beginning TIG, MIG, Blueprint Theory and Welding Skills)	3
Welding Technology 62B and 62BL (Advanced TIG, MIG, Blueprint Theory and Welding Skills)	3
Welding Technology 63 (Welding Layout and Fitting)	2
Welding Technology 67A (Welding Skills Laboratory).....	2
Welding Technology 67B (Advanced Welding Skills Laboratory).....	2
Drafting Technology 55 (Blueprint Reading and Sketching)	2
Industrial Technology 74 (Measurements and Calculations) or Mathematics 71 (Applied Mathematics for Technicians).....	3
Total units required	23

Welding Technology (WELD)

WELD 61A 1 UNIT

BEGINNING ARC, FLUX-CORE WELDING, AND BLUEPRINT THEORY

Grading Option: GR Transfer: CSU

(May be repeated 3 times)

Theory and safety of Arc (SMAW) and Flux-core (FCAW) welding of steel, flame cutting, plasma and carbon arc cutting. American Welding Society nomenclature; electrode and wire selection; examination of job opportunities. Blueprint reading and welding symbols for welders and Hazardous Material Regulations. 1 hour.

WELD 61AL 2 UNITS

BEGINNING ARC AND FLUX-CORE WELDING SKILLS

Grading Option: GR Transfer: CSU

(May be repeated 3 times)

Skills of Arc (SMAW) and Flux-core (FCAW) welding in the flat, horizontal, and vertical positions to code specifications. Flame and plasma cutting. Corequisite: Welding Technology 61A or 61B. 6 hours laboratory.

WELD 61B 1 UNIT

ADVANCED ARC, FLUX-CORE WELDING, AND BLUEPRINT THEORY

Grading Option: GR Transfer: CSU

(May be repeated 3 times)

Advanced theory and safety of Arc (SMAW) and Flux-core (FCAW) welding in the vertical and overhead positions; cutting; certification and code interpretation. Advanced blueprint work metallurgy, and Hazardous Material Regulations. 1 hour.

WELD 61BL

ADVANCED ARC AND FLUX-CORE WELDING SKILLS 2 UNITS

Grading Option: GR Transfer: CSU

(May be repeated 3 times)

Skills of Arc (SMAW) and Flux-core (FCAW) welding in the vertical and overhead positions to code specifications. Fuel gas and plasma cutting. Blueprint takeoffs. Corequisite: Welding Technology 61AL or employment in the metals industry and Welding Technology 61A or 61B. 6 hours laboratory.

WELD 62A 1 UNIT

BEGINNING TIG, MIG, AND BLUEPRINT THEORY

Grading Option: GR Transfer: CSU

(May be repeated 3 times)

Theory of fuel and inert gas welding steel and aluminum alloys; oxyacetylene brazing, flame cutting, and plasma cutting. TIG (GTAW) and MIG (GMAW) equipment and supplies. Nomenclature and metallurgy of steel and aluminum alloys. Introduction to blueprint reading, Hazardous Material Regulations and Material Safety Data Sheets. 1 hour.

WELD 62AL 2 UNITS

BEGINNING TIG AND MIG WELDING SKILLS

Grading Option: GR Transfer: CSU

(May be repeated 3 times)

Skills of TIG (GTAW) and MIG (GMAW) welding steel and aluminum alloys in the flat, horizontal, and vertical positions to A.W.S. codes. Safety and proper use of TIG and MIG equipment. Use of blueprints to lay out and fit steel and aluminum. Corequisite: Welding Technology 62A or 62B. 6 hours laboratory.

WELD 62B 1 UNIT

ADVANCED TIG, MIG, AND BLUEPRINT THEORY

Grading Option: GR Transfer: CSU

(May be repeated 3 times)

TIG (GTAW) and MIG (GMAW) welding of steel and aluminum alloys, pipe, and tubing to A.W.S. codes/standards. Blueprint interpretation and drawing concerning TIG and MIG weldments. 1 hour.

WELD 62BL 2 UNITS

ADVANCED TIG, MIG, AND BLUEPRINT SKILLS

Grading Option: GR Transfer: CSU

(May be repeated 3 times)

Skills of advanced TIG (GTAW) and MIG (GMAW) welding of steel alloys and aluminum alloys in the vertical and overhead positions to A.W.S. codes. Safety and proper use of TIG and MIG equipment. Advanced blueprint, layout, and fitting of steel and non-ferrous alloys. Prerequisites: Welding Technology 62AL or employment in the metals industry. Corequisite: Welding Technology 62A or 62B. 6 hours laboratory.

Welding Technology



WELD 63 **2 UNITS**
WELDING LAYOUT AND FITTING

Grading Option: GR Transfer: CSU

(May be repeated 3 times)

Interpretation of welding blueprints by making welding layouts and fitups. Current methods, practices, and recommended procedures. Use of jigs, fixtures, holding devices, and welding sequences. Methods of straightening and restoring dimensions to finished product. Laboratory includes Arc, MIG, TIG, and Fluxcore welding, plasma and fuel cutting. Prerequisites: Welding Technology 62BL (may be taken concurrently) and Industrial Technology 74 or Mathematics 71. 1 hour lecture, 3 hours laboratory.

WELD 66 **2 UNITS**
WELDING INSPECTION AND TESTING

Grading Option: GR Transfer: CSU

(May be repeated 3 times)

Theory and skills in performing inspections and tests using destructive and nondestructive methods. Tensile and hardness testing; dye penetrant, magnetic particle, radiographic, ultrasonic, and metallographic inspection. Prerequisite: Welding Technology 62BL. Industrial Technology 74, or Math 71. 1 hour lecture, 3 hours laboratory.

WELD 67A **2 UNITS**
WELDING SKILLS LABORATORY

Grading Option: GR

(May be repeated 3 times)

Development and improvement of skills in Arc (SMAW), Flux-core (FCAW), MIG (GMAW), and TIG (GTAW) welding. Prerequisite: Welding Technology 61AL or experience in the metals industry. 6 hours laboratory.

WELD 67B **2 UNITS**

ADVANCED WELDING SKILLS LABORATORY

Grading Option: GR

(May be repeated 3 times)

Advanced development and improvement of skills in Arc (SMAW), Flux-core (FCAW), MIG (GMAW), and TIG (GTAW) welding. 6 hours laboratory.

WELD 68 **.5 UNIT**

CERTIFICATION PREPARATION

Grading Option:

(May be repeated 3 times)

Welding processes preparation for certification exams. Theory of American Welding Society D1.1, American Society of Mechanical Engineers Section IX, American Petroleum Institute 1104. Includes laboratory practice in skills needed to take these exams. Prerequisite: Welding experience. 1.5 to 6 hours laboratory.

WELD 69A **3 UNITS**

FABRICATION AND INSTALLING PIPING SYSTEMS

Grading Option: GR

(May be repeated 3 times)

Theory and skills of pipe joint fabrication and code welding of pipe. Analysis of joint configuration, plasma and flame cutting and welding of pipe. Prerequisite: Welding Technology 62BL (completed with a grade of "C" or higher) or certification. 1 hour lecture, 6 hours laboratory.

WELD 69B **3 UNITS**

ADVANCED PIPE WELDING

Grading Option: GR

(May be repeated 3 times)

Theory and skills of code pipe welding utilizing SMAW, GMAW, and GTAW welding processes. Prerequisite: Welding Technology 69A (completed with a grade of "C" or higher) or certification. 1 hour lecture, 6 hours laboratory.

WELD 70 **2 UNITS**

INTRODUCTION TO WELDING

Grading Option: GR

Transfer: CSU

(May be repeated 3 times)

Arc, TIG, MIG, Flux-core, gas and braze welding, plasma and fuel gas welding and cutting. Theory and care of welders equipment with emphasis on safe practices. 1 hour lecture, 3 hours laboratory.

WELD 71 **1 UNIT**

ART WELDING

Grading Option: GR

Transfer: CSU

(May be repeated 3 times)

Introduction to Arc, MIG, TIG, oxyacetylene welding, brazing, soldering, plasma and flame cutting as applied to metalworking. Emphasis on safety and skill development. 3 hours laboratory.

Work Experience (WEXP)

WEXP 95

1-3 UNITS

OCCUPATIONAL WORK EXPERIENCE EDUCATION

Grading Option: OP Transfer: CSU*

(May be repeated 3 times; refer to program requirements, this page.)

College-supervised on-the-job training for students working in an occupation related to their major or educational and occupational goals. The training may be either paid or volunteer work experience, including an internship. Students through the cooperation of their supervisor contract to accomplish new learning objectives or broadening experiences for each semester enrolled. Corequisite: Work Experience 96. 5-15 hours or more of paid employment per week or 4-12 hours of volunteer work each week. May be repeated to a total of 16 units, including the Work Experience 96 class.

**95 and 96 combined, maximum transfer credit 6 units.*

WEXP 96

1 UNIT

OCCUPATIONAL WORK EXPERIENCE SEMINAR

Grading Option: OP Transfer: CSU*

(May be repeated 3 times; refer to program requirements, this page.)

Focal point for the coordination of the student's curriculum with college supervised part-time or full-time employment in the student's major field. Case studies, job related problems, student cases and presentations, and material related to employment, organizations and management are discussed; emphasis on building strong working relationships with supervisors, subordinates, and co-workers. Corequisite: Work Experience Education 95. 1 hour.

**95 and 96 combined, maximum transfer credit 6 units.*

WEXP 98

4-8 UNITS

OCCUPATIONAL WORK EXPERIENCE: ALTERNATE PLAN

Grading Option: OP

(May be repeated 3 times)

College-supervised on-the-job training enabling students to attend college full-time one semester and work full-time the following semester. The on-the-job experience must be related to the student's educational and occupational goals or college major. The training may be paid or volunteer, like an internship. 20-40 hours of work experience each week is required. May be repeated to a total of 16 units.

See also: **Business Studies**
Early Childhood Development
Fire Science Technology
Interior Design
Horticulture
Viticulture and Winery Technology

**Work Experience Requirements**

To participate in Work Experience Education programs, students must:

- ▶ Pursue a planned program of Work Experience that includes new or expanded responsibilities or learning opportunities beyond those experienced during periods of previous employment;
- ▶ Have paid or volunteer employment in a field directly related to the college major;
- ▶ Have the approval of the instructor/coordinator.

Additionally, students must meet the requirements of either of the following plans.

- I. Parallel Plan
 - A. Be enrolled in a minimum of 7 units including Work Experience;
 - B. Be currently enrolled in a course in their major or planned academic program which is related to the Work Experience.

Under the Parallel Plan, one unit of credit is granted for 5 hours of work each week to a maximum of 3 units for 15 or more hours each week. Students must also attend a one hour weekly seminar class.

- II. Alternate Plan
 - A. May not be enrolled in more than one additional course;
 - B. May not transfer from the alternative plan to the parallel plan, or vice versa, without having completed 7 units in between plans.

Under the Alternate Plan, students may earn four to eight units of credit for working 20 to 40 hours each week. Regularly scheduled meetings with the instructor are required throughout the semester.

For either plan a cumulative total of 16 units may be earned (including the seminar units).

Administration, Faculty and Staff

A D M I N I S T R A T I O N , F A C U L T Y A N D S T A F F

A D M I N I S T R A T I O N , F A C U L T Y A N D S T A F F



District

ACADEMIC ADMINISTRATORS

Chancellor
 SUSAN A. COTA (1996)
 B.A., Immaculate Heart College; M.S.,
 San Francisco State University; Ed.D., University of San Francisco

Vice Chancellor of Educational Services and Planning
 JOEL L. KINNAMON (2003)
 B.S., Oklahoma State University; MBA, Oklahoma City University;
 Ed.D., Nova Southeastern University

Vice Chancellor of Business Services
 ROY STUTZMAN (1999)
 B.A., University of Wyoming; M.A., University of Colorado

NON-ACADEMIC ADMINISTRATORS

JENNIFER L. ARIES	District Director, Public Information and Marketing
MAZIE L. BREWINGTON	Controller
STAN R. DOBBS	District Director, Facilities Planning and Management
JULIA A. DOZIER	Contract Education Program Development Manager
THOMAS L. GERRITS	Assistant Manager, Management Information Services
PAUL HERMIS, Ed.D.	Contract Education Program Account Manager
CHIANG H. JANDRO	Assistant Controller
JEANNINE P. METHE	Chief Technology Officer
ANITA L. MORRIS	Director of Human Resources
TIM C. NELSON	Director, Maintenance and Operations
SUZANNE E. PFEIFFER	Manager, Employee Benefit Programs
GREG PUSTELNIK	Director of Purchasing and Warehouse Services
LESLIE J. ROE	District Dean, Economic Development and Contract Education

Las Positas College

ACADEMIC ADMINISTRATORS

President, Las Positas College
 KAREN E. HALLIDAY (2002)
 B.A., University of California, Santa Barbara;
 M.S. Purdue University

Vice President Of Academic Services
 DONALD R. MILANESE (1970)
 A. B., M.A., University of California, Davis

Vice President of Student Services
 PAMELA T. LUSTER (2000)
 B.A., M.A. San Jose State University

Dean of Academic Services, Division I
 PHILIP MANWELL
 B.M., Juilliard School; M.S., Juilliard School;
 Ed.D., University of San Francisco

Dean of Academic Services,
 Vocational Education and Economic Development, Division II
 BIRGITTE RYSLINGE
 B.S., University of the Pacific; M.B.A., UC Berkely;
 M.A. University of the Pacific; M.A. Alliant University

Dean of Academic Services, Division III
 NEAL M. ELY (1998)
 B.S., Ph.D., Texas A&M University

Dean of Technology and Dean of Academic Services, Division V
 RALPH E. KINDRED
 J.D., University of the Pacific, McGeorge School of Law

Dean of Student Services and Matriculation, Division IV
 VACANT

NON-ACADEMIC ADMINISTRATORS

ROBERT S. KRATOCHVIL	Vice President, Business Services
SYLVIA R. RODRIGUEZ	Assistant Dean, Director of Admissions and Records/Registrar
ANN MARIE "AMBER" MACHAMER, Ph.D.	Director of Research and Planning
RICHARD J. BUTLER	Director of Safety and Security

FACULTY SENATE

SOPHIE C. RHEINHEIMER PRESIDENT, ACADEMIC SENATE

CLASSIFIED SENATE

ELIZABETH L. NOYES PRESIDENT, CLASSIFIED SENATE

Las Positas College Faculty

- ACACIO, CHRISTINE S. (2001); A.A., Chabot College; B.A., California State University, Hayward; M.S., California State University, Hayward; Counselor
- AGUIAR, LAWRENCE F. (1977); B.S., California State University, Hayward; M.A., Stanford University; Physical Education
- ANKOVIK, KEVIN M. (2000); B.S., University of Michigan; M.S., UCLA; Ph.D., UCLA; Physics
- ANSELL, MICHAEL A. (2002); B.S., California State University, Chico; M.S., University of Oregon; Ph.D., University of Oregon; Chemistry
- AUGUST, ROBERT H., Jr. (2001); B.S., Armstrong Atlantic State University; M.S., Western Kentucky University; Mathematics
- BARANOUSKAS, CAROLYN S. (1990); A.A., Chabot College; B.A., DePauw University; Design/Drafting Technology
- BENGEVINO, TERIANN (2001); B.A., San Jose State University; M.A., San Jose State University; Ph.D., University of Hawaii; History
- BIELAWSKI, R. TOBY (1999); B.A., Smith College; M.A., Mills College; English
- BOERCKER, DALE P. (1988); B. S., Austin Peay State University; M.S., California State University, Hayward; M. Ed., University of Florida; Mathematics/Computer Science
- BREHE JOHNSON, JANET A. (1986); B.A., San Diego State University; M.A., San Francisco State University; Speech Communication
- BREUER, ROBERT F. (1990); B.A., California State University, Northridge; M.A., University of California, Los Angeles; M.A., University of California, Berkeley; Art/Graphic Art
- BRUCE, LINDELL R. (1985); B.A., Southern Illinois University; M.A., Southern Illinois University; English
- BUNDY, STEVEN E. (1976); B.S., University of Washington; M.S., San Jose State University; Counselor
- CAMPBELL, MARY E. (1990); B.S., Illinois State University; M.A., California State University, Hayward; Music
- CARTER, PEGGY C. (1989); B.A., California State University, Hayward; M.L.S., University of California, Berkeley; Librarian
- CASSIDY, FREDDA K. (2002); B.A., City College of New York; M.A., University of Michigan; Visual Communications
- CLOUGH, CAROL E. (1977); B.S., University of California, Berkeley; M.B.A., University of California, Berkeley; Ed.D., Nova University; Business, Economics
- COLE, ELENA C. (1997); A.A., Ohlone College; B.A., University of California, Berkeley; M.A., San Francisco State University; English
- CRUZ, GILBERT E. (2000); B.S., California Polytechnic State University; M.S., Santa Clara University; Licensed Professional Mechanical Engineer; Engineering
- DAUBENMIRE, GREGORY T. (2000); A.S., College of San Mateo; B.S., San Jose State University; B.A., San Jose State University; M.S., San Jose State University; Mathematics
- DAOUD, MOH (2002); A.S., College of San Mateo; B.S., Ecole Nationale D'Electronique, Paris, France; Computer Information Systems
- DOBSON, JAMES L. (2001); A.A., College of DuPage, Illinois; B.S., Northern Arizona University, M. A., California State University, Chico; Speech
- DRY, RICHARD J. (1999); B.A., University of California, Berkeley; M.A., San Francisco State University; English
- DUNN, WILLIAM R. (1987); A.A., Palomar College; B.S., University of California, Los Angeles; M.S., California State University, Hayward; Mathematics
- EAGAN, CATHERINE M. (2003); B.A., University of California, Berkeley; Ph.D., Boston College; English
- EDENS, ALEXANDER S. (2001); B.Sc., San Jose State University; Ph.D., University of California, Santa Cruz; Biology
- EVERETT, LISA R. (2000); B.S., University of California, San Diego; M.S., San Francisco State University; Physical Education/Health
- FIELDS, DEBBIE J. (1990); A.A., Penn State University; B.S., Virginia Commonwealth University; M.B.A., Golden Gate University; Computer Information Systems
- FITZGERALD, GALE "JACKIE" (1997), B.A., San Jose State University; M.A., San Francisco State University; Early Childhood Education
- FORCIER, JAMES A. R. (1976); B.S., San Jose State University; C.P.A., University of Santa Clara; M.B.A. University of Santa Clara; Business
- GIOIA, JAMES J. (2001) A.A., Miami Dade College; B.S. University of California, Berkeley; M.S., California State University, Hayward; Ph.D., California School of Professional Psychology, DSPS Counselor
- GOLANTY, ERIC (1993); M.S., University of California, San Francisco; Ph.D., University of California, Davis; Health
- GONDER, JOHN S. (2002); Cisco Certification; Computer Networking Technology
- GUERRA, ESTELA L. (2002); A.A., Fresno City College; B.S., California Polytechnic Institute, San Luis, Obispo; M.S., California State University, Hayward; Mathematics
- HAMILTON, ALENE H. (1980); A.A., Contra Costa College; B.A., University of California, Berkeley; M.S., California State University, Hayward; Ed.D., University of San Francisco; Counselor
- HANNA, RUTH L. (1991); A.A., Hartnell Community College; B.S., University of California, Davis; M.S., University of California, Davis; Geology
- HARDY, BARBARA W. (1988); B.A., Stanford University; M.L.S., San Jose State University; Librarian
- HARPELL, ERIC W. (1988); B.A., University of California, San Diego; M.S., University of California, Los Angeles; Physics
- HART, LAVAUGHN M. (2000); CSF Coord., Business Information Technology; Computing Studies
- HASTEN, LAUREN W. (2004); B.A., Brooklyn College; M.A., Columbia University; Anthropology
- HEINER, JAMES B. (1981); B.A., San Jose State University; M.A., San Jose State University; Music
- HEISLER, TIMOTHY D. (1995); A.A., Chabot College, Hayward; B.A., California State University, Hayward; M.A., California State University, Hayward; Speech

- HENSON, TERESA D. (2000); B.A., University of Colorado; M.S., University of Colorado; Mathematics
- HIRAKI, SUSAN K. (1990); B.A., University of California, Berkeley; M.A., John F. Kennedy University; Psy.D., John F. Kennedy University; Counselor/Coordinator, Extended Opportunity Programs and Services
- HO, NAN (1995); B.S., Stanford University; M.S., Stanford University; Biology
- HUI, FRANCES M. (2000); B.A., San Diego State University; M.L.S., UCLA; Librarian
- JOHNSON, TERRY K. (1999); Automotive Certification, College of Alameda; Automotive Technician Program, Chabot/Las Positas Colleges; ASE Master Technician; Automotive Technology
- JOLLY, KEITH E. (1984); A.A., Ventura College; B.A., M.A., Arizona State University; M.S., University of California, Santa Barbara; Computer Science
- JONES, ERNEST D. (1991); A.A., Contra Costa Community College; B.A., San Francisco State University; M.S., San Francisco State University; Psychology
- KENNERLY, CECELIA J. (1989); B.S., California State University, Hayward; M.S., California State University, Hayward; M.S., University of Laverne; Learning Disabilities
- KORBER, MELISSA A. (1999); B.A., Montana State University; J.D., University of Pacific-McGeorge School of Law; English/Mass Communications
- LANDRE, JAMES L. (1982); B.A., M.A., Northern Michigan University; M.S., Michigan State University; Computer Science, Mathematics
- LILJEDAHL, RONALD E. (1980); A.A., Bakersfield College; B.A., Fresno State University; M.S., California State University, Fresno; Horticulture
- MANWELL, PHILIP (1997); B.M., Juilliard School; M.S., Juilliard School; Ed.D., University of San Francisco; Humanities
- MARQUIS, MARILYN M. (1991); A.A., Pierce College; B.A., California State University, Northridge; M.A., California State University, Dominguez Hills; English/English as a Second Language
- MCCANN, ABIGAIL (1990); B.A., Dominican College; M.A., Dominican College; Ph.D. University of Wisconsin; English
- MCCOY, JANE C. (1994); B.A. Loyola University, Chicago; M.A., California State University, Hayward; History
- MCELDERRY, STUART J. (2000); B.A., University of California, Berkeley; M.A., San Francisco State University; Ph.D., University of Oregon; History
- MCGUIRE, MICHAEL F. (1991); B.A., State University of New York; M.A., San Jose State University; Economics
- MORRIS, JASON M. (2001); B.A., University of Texas; M.A., University of New Mexico; Mathematics
- MORRISSEY, BARBARA J. (1991); B.S., University of Hawaii; M.S., University of California, Davis; M.S., California State University, Hayward; Counselor
- NAVARRO, STEVEN J. (1995); B.A., Chapman University; M.A., California State University, Long Beach; Physical Education
- NIELSEN, SARAH E. (2000); B.A., University of California, Santa Cruz; M.A., Ph.D., University of California, Davis; English as a Second Language
- O'HERIN, MAUREEN P. (2003); B.A., St. Mary's College; M.A., San Francisco State University; English
- OWYOUNG, BRIAN H. (1997); B.A., California State University, Hayward; M.A. University of San Francisco; ThM. Dallas Theological Seminary; Psy.D. California School of Professional Psychology; Counselor, Disabled Students Programs and Services
- PASKEWITZ, BILL (1988); B.F.A., Cooper Union; M.F.A, Queens College; Art
- PELLINEN, MARIA E. (1975); B.A., San Jose State University; M.A., San Jose State University; Philosophy, Spanish
- PIHL, KAREN B. (1976); B.A., Randolph Macon Woman's College; Ph.D., University of Delaware; Biology
- POHL, PATRICK L. (1971); A.A., Orange Coast Junior College; B.A., California State University, Long Beach; M.A., California State University, Long Beach; Ed.D., University of Utah; Physical Education
- RHEINHEIMER, SOPHIE C. (1975); B.A. University of California, Berkeley; M.A., University of California, Berkeley; Physical Education
- RILEY, MARGARET E. (1985); B.A., University of California, Berkeley; M.A. University of California, Berkeley; M.A. Montana State University; English, History
- ROSEN-SIMON, ZINA L. (2001); B.S., Michigan State University; M.A.T. Oakland University; AD ED, San Jose State University; Early Childhood Development
- ROSS, CYNTHIA W. (2001); B.S., Baylor University, M.S., California State University, Hayward; Psychology
- ROSS, KEN (1990); B.A. Elmhurst College; M.A., San Francisco State University; M.F.A., United States International University; Drama
- SATO, MICHAEL R. (2002); B.A., University of California, Santa Cruz; M.A., California State University, Sacramento; English
- SMYTH, GEOFFREY C. (1990); B.A., University of the Pacific, Stockton; M.A., University of the Pacific, Stockton; Physical Education/Soccer Coach
- SOLOMON, RICHARD I. (1991); A.B., San Diego State University; M.A., San Diego State University; Geography
- SPONSLE, LUCY A. (1991); B.A., Barnard College; M.H.A., Tulane University of Public Health; Ph.D., Yale University Graduate School; Spanish/French
- SVIHULA, GARY F. (1982); B.S., University of California, Berkeley; M.S., Northeastern University; Electronics
- TARTE, MARK S. (2002); B.A., St. Mary's College; Administration of Justice
- TAYLOR, RANDOLPH J. (1990); B.A., California State University, Sacramento; M.S., California Polytechnic State University, San Luis Obispo; M.S., California Polytechnic State University, San Luis Obispo; M.S., University of California, Berkeley; Computer Science, Mathematics

Faculty

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TENBRINK, ART S. (1980); B.A., California State University; Hayward; M.S., California State University; Hayward; Counselor

THOMPSON, SARAH K. (1997); B.A., Hamilton College; M.A. Rutgers University; Sociology

THOMAS, MAX H. (2001); Cert. Auto, LPC; A.S. Automotive Electrics, LPC; A.S. Automotive Technology, LPC; Automotive Technology

TORRES, PAUL S. (2001); A.A., DeAnza College; B.A., San Jose State University; M.A., University of California, Riverside; Political Science

VAN HORN-LANDRE, DENISE (1995); B.A., California State University, Hayward; M.P.A., California State University, Hayward; Articulation Officer

VEN JOHN, ANGELLA (1999); B.S., University of Iowa; M.A., California State University, Sacramento; Student Interventions Developer

VICTORIA, GILBERTO N. (1995); A.A., Chabot College; B.A., University of California, Irvine; M.S., California State University, Hayward; Counselor

WARREN, CHERYL L. (2004); B.A., Georgia Southern University; M.S.L.S., University of North Carolina; Librarian

WEAVER, LISA T. (2004); B.S., Minor State University, ND; M.B.A., Concordia University; Ph.D., Concordia University; Business/Economic Development

WRIGHT, NANCY A. (2000); B.A., Polytechnic University, Pomona; M.S., California State University, Hayward; Counselor

ZINGG, BARBARA C. (1997); B.S. AKAD Zurich, Switzerland; D.V.M., University of Berne, Switzerland; Ph.D., University of California, Davis; Biology

Faculty Emeriti

BYFORD H. SCOTT, Instructor 1962-1979

STUART J. INGLIS, Instructor 1965-1984

GEORGIA E. OWENS, Instructor 1964-1985

HAL LUBIN, Instructor 1961-1988

GEORGE ANNA TOW, Instructor-Counselor 1975-1989

GERALD D. FRIEDEL, Instructor 1967-1991

IRVING BATZ, Dean of Student Services 1968-1991

DONALD V. NILSEN, Instructor 1974-1991

JOHN T. HEALEY, Instructor 1966-1992

MARGARET C. EMERY, Instructor 1975-1993

MASON C. LAYMAN, Instructor-Counselor 1975-1994

JUANITA R. FOCHA, Instructor 1967-1995

EDWARD G. CATES, Instructor 1970-1995

JERALD T. BALL, Instructor 1964-1996

ROBERT E. DAHL, Instructor 1967-1996

JANICE M. ALBERT, Instructor 1962-1997

JOAN H. LONG, Instructor 1980-1997

LOLA BERMUDEZ, Acting Dean, Academic Services 1981-1997

ROBERT P. DICKINSON, Jr., Instructor 1977-1998

LINDA L. LUCAS, Dean of Academic Services 1969-1999

RUTH S. FELDMAN, Instructor 1969-1999

DAVID A. WRIGHT, Instructor 1965-1999

LAVERE ADAMS, Instructor 1980-2000

ARTHUR S. DELERAY, Instructor 1970-2002

ESTHER S. GOLDBERG, Instructor 1970-2001

ROBERT J. WOOD, Instructor 1970-2002

VICTOR G. WILLITS, Instructor 1986-2001

DEE D. ROSHONG, Dean of Student Services 1965-2003

AILEEN T. FURUYAMA, Librarian 1992-2003

ANNE M. POWELL, Instructor 1974-2004

WALTER T. MARA, Instructor 1984-2004

Classified Staff

CHABOT-LAS POSITAS COMMUNITY COLLEGE DISTRICT

7011 Koll Center Parkway, Suite 200 and 260
Pleasanton, CA 94566-3100

BARNES, STANLEY E.	Grounds Supervisor
BRUSSTAR, ROBERT C.	Custodian II
CHAMBERLAND, GARY R.	Maintenance Supervisor
GONZALES, PETE	Grounds Worker I
HALLECK, MICHAEL J.	Custodian II
KEICK, SHARON	Custodial Supervisor
LAURELLA, MARIETTA	Custodian I
PIMENTAL, JOSEPH	Lead Custodian
RIOS, SONIA A.	Custodian II
ROCHA, GILBERT L.	Custodian II
SALAS, ELIZABETH	Custodian I
SAUGAR, DONALD A.	Lead Custodian
SWARTZELL, INEKE	Custodian I
WELLS, MICHAEL	Grounds Worker II

LAS POSITAS COLLEGE

ABERT, CAROL L.	Instructional Assistant II
ADAMS, JAMES H.	Science Education Technician
ADKINS, JAMES E.	Security Officer
AHRE, CYNTHIA A.	Instructional Assistant Iii
ARMSTRONG, JOHN M.	Student Records Evaluator/ Outreach Specialist
ASHBURN, SAUNDRA L.	Telephone Operator/Receptionist
BALERO, CYNTHIA J.	International Student Program Coordinator
BEAIRD, HAYWOOD	Computer/Network Support Specialist
BENHAM, JANE E.	Instructional Assistant II
BISH, CONNIE A.	Instructional Assistant II
CADWALADER, SHARON A.	Executive Assistant to the President
CALZADA, FERNANDO G.	Instructional Assistant II
CAMINO, LILIA	Staff Assistant
CAMP, LETTIE J.	Career/Transfer/Employment Coordinator
CANTUA, JANICE A.	Admissions and Records Assistant III
CARRINGTON, KENNETH A.	Security Officer
CIRERA-PEREZ, BEGONIA	Instructional Assistant II
COSTA, THERESA M.	Student Counseling Assistant I
CROSETTI, ALEXANDRA C.	Instructional Assistant II
DAVIDSON, SHARON A.	College Administrative Assistant
DE NISCO, FRANCES M.	Staff Assistant
DUFFY, DIANNE M.	Instructional Assistant II
DUPREE, SHARRON L.	International Admissions Specialist
EARNEY, DEBORAH G.	Admissions and Records Assistant II
EHRHORN, GAIL H.	Staff Assistant
ENGELKE, FRAN M.	Learning Resources Assistant II
FRANKS, LAWRENCE	Security Officer
GIBSON, LINUS C.	Technical Mentor
GRAVINO, LESLIE D.	Work Based Learning Program Coordinator
GUNDERSON, STEPHEN J.	Computer/Network Support Specialist
HANSON, JUDITH K.	Academic Services Specialist II
HAWKINSON, DONNA S.	Student Counseling Assistant II
HEE, EDMUND W.S.	Laboratory Technician II
HELLER, COLLEEN M.	Administrative Assistant II
HILDEBRAND, CONSTANCE	Receptionist, Special Programs
IMPEY, DONNA J.	Instructional Assistant II
JENNINGS, VERONICA J.	Administrative Assistant II/Student Staff Liaison Office Specialist
JOHNS, GREGORY S.	Instructional Computer Laboratory Specialist
JOHNSON, SIMONE L.	Administrative Assistant II
JONES, ANN A.	Student Services Specialist II
JUDD, WILLIAM C.	Workability III Employment

KARPYLOVYCH, LARYSA V.	Developer
KASHIWAMURA, MITSUKO	Instructional Assistant II
KILUN, MICHAEL M.	Library Technician I
KIT, KAREN A.	Counselor Assistant I
	Executive Assistant to the Vice President of Student Services
KLEINSCHMIDT, DIANA N.	Library Technician III
KONRAD, MARTHA K.	Executive Assistant to the Vice President of Academic Services
	Admissions and Records Assistant II
KWAN, ALICE Y.	Security Officer
LAVINE, JAMES A.	Admissions & Records Assistant II
LAWES, JEFFREY T.	Telephone Operator/Receptionist
LEE-FORBES, JADIN	Instructional Systems Technician
LINDSEY, SHERMAN	Instructional Assistant II
MCCALLISTER, KIM	Security Officer
MCCARTHY, WILLIAM G.	Administrative Assistant II
MCCAULEY, CARMEN L.	Admissions & Records Assistant I
MARASIGAN, JOCELYN N.	Staff Assistant
MARTINEZ, JUDITH D.	College Business Office Supervisor
MAXEDON, MARY "MINDY"	Security Officer
MONTANEZ, LUIS M.	Instructional Assistant II
MOYER, ALICE M.	Instructional Assistant II
NHONG, SOPHON	Web Master
NOYES, ELIZABETH L.	Laboratory Technician II
ORTIZ, GIOVANNI	Instructional Assistant II
ORTIZ, JENNIFER I.	Administrative Assistant II
PEIFER, LINDA L.	Accompanist
PETERSON, MARTHA L.	Financial Aid/Veterans Benefits Specialist
QUIROS, VIVIAN M.	Staff Assistant
	Technical Theater/Performing Arts Instructional Specialist
REDING, CONNIE L.	Staff Assistant
RINALDI, MICHAEL J.	Bookstore Operations Clerk
	Financial Aid Officer
ROMERO, CENOVIA	Counselor Assistant I
SANCHEZ, BAUDELLIA L.	Staff Assistant
SCHREIBMAN, ANDRA P.	Assessment/Tutorials Specialist
SCOTT, DORIS	Counselor Assistant I
SMUTNY, CAROLYN I.	Senior Instructional Network Systems Specialist
STRAIGHT, MARY A.	College Communications Specialist
STUART, BARBARA M.	Instructional Technology/ Learning Coordinator
TRIPPE, THOMAS J.	Laboratory Technician IV
	ECD Professional Development Coordinator
ULRECH, HEIDI	Laboratory Technician II
VIGALLON, SCOTT A.	Computer Network Support Specialist
VIGIL, DAVID B.	
VIRGILIO, JEANNE M.	
WHALEN, JENNIFER L.	
WU, JAMES	

LAS POSITAS BOOKSTORE

HOWE, NOLAN	Bookstore Manager
MADEIRA, JEANNE	Customer Service Manager
CAREY, HEIDI	Shipping and Receiving Clerk

CLASSIFIED STAFF EMERITI

VIRGINIA I. MACCROSSEN	1973-1986	Admissions and Records Clerk II
MARJORIE R. O'LEARY	1971-1989	Executive Secretary
FAYE L. GLEASON	1980-1991	Secretary I
LOUIE C. ABAITUA	1972-1992	Ass't. Maintenance Supervisor
JOHN R. RODRIGUEZ	1965-1993	Grounds Technician
JOAN M. CAMPANILE	1966-1993	Secretary to the President
ELIZABETH E. INGLIS	1976-1993	Instructional Assistant II
WILLIAM H. COX	1984-1994	Lead Custodian
PATRICIA J. RICHMOND	1979-1997	Counselor Assistant I
JOAN D. NEWSOM	1981-1997	Cashier/Buyer Bookstore
BARRY J. DEADDER	1982-1998	Security Supervisor
PHILLIP "BABE" M. CASTILLO	1962-1998	Ass't Custodial Supervisor
KAREN O. ALBERTSON	1981-1999	Instruct'I Computer Lab Spec'lst.
WINEGARNER, JANICE E.	1990-2001	Student/Staff Liaison Office Specialist/Secretary II

The Chabot-Las Positas Colleges Foundation

The mission of the Chabot-Las Positas Colleges Foundation is to promote the welfare of the Colleges in the following ways:

1. By communicating the value of the Colleges to the communities of which they are a part; and
2. By providing scholarships for students, and assisting in the funding of the Colleges' programs, equipment and educational projects by obtaining funds and other support from the community.

Gifts to the Foundation may include cash and property; donations of equipment and materials may be made directly to the College. These donations are critical to the success of the College and are tax-deductible.

Officers

Perry Carter	President
Dorothy Hudgins	Vice-President
Clyde Allen	Secretary/Treasurer
Fred Sullivan	Past President

Board of Directors

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 Isobel Dvorsky

LAS POSITAS COLLEGE Foundation

The mission of the Las Positas College Foundation is to support and advance the College and its students through active resource development and effective community partnerships.

Officers

David Mertes	President
Jim Ott	Vice-President
Karen Halliday	Secretary

Board of Directors

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 Jerry Deschler
 Susan Houghton
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Kathleen M. Alameda	Sallman, Yang & Alameda
Carol Clough	Las Positas College
Suzanne Busch	California State University, Hayward
Jim Forcier	Las Positas College
Steve Kau	CPA
Annie Mergens	Accountemps
Libby Mihalka	Altamont Capital Management
James Owen	Dublin High School
Birgitte Ryslinge	Las Positas College
Carolyn Strickler	Ohlone College
Lisa Weaver	Las Positas College

Administration of Justice

Brian Ballard	Regional Training Center
Neal Christensen	Regional Training Center
Neal Ely	Las Positas College
Joe Fabiny	Las Positas College
Floyd Gill	Dublin Police Department
Bruce Harter	Las Positas College
Robert Kreitz	Tri-Valley ROP
Steve Krull	Livermore Police Department
Dave Lang	Livermore Police Department
Michele McKay-McCoy	Las Positas College
Mike McQuiston	Albany Police Department
Timothy Neal	Pleasanton Police Department
Scott Rohovit	Pleasanton Police Department
Jim Rose	Chief, Pinole Police Department
Gary Schellenberg	Regional Training Center
Ronald Scott	Chief, Livermore Police Department
Mark Tarte	Las Positas College
Gary Thuman	Chief, Dublin Police Department

Applied Technology (Automotive & Welding)

Max Thomas	Las Positas College
Brian Hagopian	Las Positas College
Terry Johnson	Las Positas College
Don Minor	Dublin High School
Ray Newbury	Livermore High School
Don Danner	Granada High School
Ernest Holm	Snap-On Tools
Del Vasquez	Tri-Valley ROP/Auto Collision
Bob Middleton	Tri-Valley ROP
Don Nilson	Las Positas College-Retired
Birgitte Ryslinge	Las Positas College
Dave Vigil	Las Positas College
Larry Nobriga	Las Positas College
Karl Cortese	Alameda/Contra Costa/San Francisco Automotive Committee
Rick Maynard	Chrysler Training Facility
Stewart Thomas	Retired-Independent Consultant
Lisa Weaver	Las Positas College

Business/Computer Information Systems

Karen Albertson	Las Positas College
Vicki Austin	Las Positas College
Janet Barnes	Las Positas College
Carol Clough	Las Positas College
Moh Daoud	Las Positas College
Teri Donat	Las Positas College
Diane Dorr	Las Positas College
Neal Ely	Las Positas College
Robert Farrell	Las Positas College
Debbie Fields	Las Positas College
Sean Fitzgerald	Visual Numerics, Inc.
James Forcier	Las Positas College
Leslie Gravino	Las Positas College
LaVaughn Hart	Las Positas College
Gary Hawthorne	Las Positas College
Tim Hern	Tri-Valley ROP
Schareen Holland	Las Positas College
Marta Holm	Lawrence Livermore National Laboratory
Jorja Ivie	Amador High School
Robert Main	Las Positas College
Andy McClure	Visual Numerics, Inc.
Elvet Moore	Las Positas College
Jim Owen	Dublin High School
Gail Vardanega	Las Positas College
Lisa Weaver	Las Positas College
Wanda Wong	Chabot College

Business & Work Based Learning

Steve Kau	CPA
Carol Clough	Las Positas College
Carolyn Strickler	Ohlone College
Jim Forcier	Las Positas College
William Meyer	Las Positas College
Ian Myles	Independent Business Consultant
Charlene Abendroth	California State University Hayward
Carolyn Meagher	Las Positas College
Bob Middleton	Tri-Valley ROP
Max Eckert	Clorox
Alene Hamilton	Las Positas College
Leslie Gravino	Las Positas College
LaVaughn Hart	Las Positas College
Lorrie Hern	Amador Valley High School
Birgitte Ryslinge	Las Positas College
Lisa Weaver	Las Positas College

Design Technology

Carolyn Baranouskas	Las Positas College
Ron Batchelor	Las Positas College
Robert Bowman	Tracy HS (Drafting)
Ted Brownlee	ATS Systems California
Gill Cruz	Las Positas College
Don Danner	Granada High School Drafting Program
Patrick Duffy	Lawrence Livermore National Laboratory
Neal Ely	Las Positas College
Arlen Lee	The Plus Group at Sandia
Tony McCants	National Laboratories
Ray Ng	Kier & Wright Civil Engineers & Surveyors, Inc.
Stan Rudloff	Sandia National Laboratories
Dennis Ryder	Livermore High School Drafting Program
Winston J. Wong	Lawrence Livermore National Laboratory
	Las Positas College

Advisory Boards

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Disabled Students Programs and Services

Toby Bielawski	Las Positas College
Dale Boercker	Las Positas College
John Carter	Granada High School
Sandy Cline	California High School
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Gina Gourley	Pleasanton Unified School District
Karen Halliday	Las Positas College
Susan Hiraki	Las Positas College
Linda Hoover	Livermore Unified School District
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Kim Kerrigan	Las Positas College
Jennifer Mosel	
Alice Moyer	Las Positas College
Nora Mukai-Rosenbaum	Department of Rehabilitation
Brian Owyong	Las Positas College
Zina Rosen-Simon	Las Positas College
Theresa Woo	CVE, Department of Rehabilitation

Early Childhood Development

Pam Campion	Dublin High School
Susan Canfield	Rancho Las Positas Elementary
Sheryl Common-Vranek	Early Years Children's Center
Barbara Correia	Foothill High School
Diana Curl	Chabot College
Judy Del Tredici	Livermore High School/Tri-Valley ROP
Jackie Fitzgerald	Las Positas College
Susan Gohs	Hacienda Child Care Center
Linda Guthrie	LARPD
Kathie Hammer	John Knox Co-op Preschool
Debbie Harvey	Amador High School
Leonard Heid	Kids Country
Pat Keegan	Foothill High School/ROP
Barbara Kraybill	LARPD
Philip Manwell	Las Positas College
Diana McGregor	Chabot College
Bob Middleton	Tri-Valley ROP
George Philipp	Every Child Counts
Laura Reno	LLNL Children's Center
Edna Rodriggus	Chabot College
Zina Rosen-Simon	Las Positas College
Rosnina Ruggieri	Child Care Links
Andrea Scheib	Family Child Care Provider
Becky Silva	CAPE, Inc.
Sondra Simpson	Extended Day Child Care
Penna Steele	Sonshine Enrichment Center
Christine Tibbetts	Pleasanton Unified School District
Jeanne Vigilio	Las Positas College
Catherine Wolfe	Granada High School
Nancey Wright	Las Positas College

Engineering/Engineering Technology

David Anderson	Kvaerner Engineering
Carolyn Baranouskas	Las Positas College
Gilbert Cruz	Las Positas College
Mo Deghani	Lawrence Livermore National Laboratory
Gary Dreifuerst	Las Positas College
Neal Ely	Las Positas College
Wil Jorgenson	Las Positas College
Saeid Moltavalli	California State University, Hayward
Ken Petersen	LPZA
Tim Sammons	Bechtel Nevada
Billy Sanders	University of California
Bill Thompson	Aker Kvaener E & C
Craig Wendland	Lawrence Livermore National Laboratory; Las Positas College
Alec Willis	Consultant, Sandia National Laboratories

Environment/Safety and Health Advisory Board

Jon R. H. Anacker	ABM Janitorial Services
Larry Bakken	Lawrence Livermore National Laboratory
Patrick E. Barry	Lawrence Livermore National Laboratory
Darlene Belmonte	Medical Physics Services
Brooke Buddemeier	Lawrence Livermore National Laboratory
Loretta Cochrane	Lawrence Livermore National Laboratory
Jeffrey Cromwell	Alternative Waste Technology
William Cromwell	Waste Containment Systems
Arlynn R. Grimm	Occupational Health Nurse, Livermore
Peter Huddleston	Lawrence Livermore National Laboratory
James S. Johnson	Lawrence Livermore National Laboratory
Gregory Jones	Lawrence Livermore National Laboratory
Robert Jasinski	Lifsafe
Harold Juhala	Las Positas College
Robert Kreitz	Tri-Valley ROP
Steve McConnell	Lawrence Livermore National Laboratory
James Mecozzi	Lawrence Livermore National Laboratory
Gordon Miller	Lawrence Livermore National Laboratory
Stephen Motzko	Solectron Corporation
Sarah Palmer	Tri-Valley ROP
John Pickering	San Jose State University
Neil Riley	Las Positas College
Sharon Schumacher	Lawrence Livermore National Laboratory
Kathleen Shingleton	Lawrence Livermore National Laboratory
Danielle Stefani	Livermore-Pleasanton Fire Department
William Vance	Livermore National Laboratory
Mark Williams	Clayton Group Services
Annamarie Wood-Zika	Lawrence Livermore National Laboratory

Extended Opportunities Programs and Services

Christine Acacio	Las Positas College
Steven Bundy	Las Positas College
David Conrad	Lawrence Livermore National Laboratory
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Alene Hamilton	Las Positas College
Cecelia Kennerly	Las Positas College
Patience Allen	Alameda County
Melissa Korber	Las Positas College
Lardi Mbah	ITT Technical Institute
Sylvia Rodriguez	Las Positas College
Andi Schreiber	Las Positas College
Nancy Purcille	University of California, Berkeley
Kimberly Tomlinson	Las Positas College
Dave Vasquez	California State University, Hayward

Fire Service Technology/EMT

Lori Adkins	Las Positas College
Craig Bowen	San Ramon Valley Fire Protection District
Randy Bradley	Lawrence Livermore National Laboratory Fire Department
Gordon Dakin	Lawrence Livermore National Laboratory Fire Department
Neal Ely	Las Positas College
Josh Gatkin	Livermore-Pleasanton Fire Department
Terry Givens	Alameda County Fire Department
Steve Hart	San Ramon Valley Fire Protection District
Zel Helstrom	Las Positas College
Ronald Johansen	Las Positas College
Tim Kordes	Livermore-Pleasanton Fire Department
Derek Krause	Las Positas College
Gary Linney	Lawrence Livermore National Laboratory Fire Department
Mike Litvinchuk	Alameda County Fire Department
William McCammon	Alameda County Fire Department
John McPartland	Chabot College
Steve Prziborowski	Chabot College
Edward Silveira	Alameda County Fire Department
Tim Simpkins	San Ramon Valley Fire Protection District

John Torres
Bob Young
Jeff Zolfarelli

Las Positas College
Berkeley Fire Department
Livermore-Pleasanton Fire Department

Horticulture

Earl Ault
Linda E. Ault
Solomon Dobrowski
Neal Ely
Sandra Fowler-Elliott
Ron Furtado
Mike Gatzman
Patrick Kirkendall
Robert Kreitz
Ron Liljedahl
Robert B. Luehrs
Tom O'Malley
Lanny Replogle
Ralph Riva
Robert Rumberger
Dean Schenone
John Silva,
Splend Splendorio
J.R.Williams-Courtright

Cedar Mountain Winery
Cedar Mountain Winery
Las Positas College
Las Positas College
JPA Landscape
Livermore High School
Wente Vineyards
Livermore High School
Tri-Valley ROP
Las Positas College
Helping Hand Landscape Design
Tri-Valley Business Council
Fenestra Winery
Wente Vineyards
Knodts Florist
Flora Tech
Caltrans
Hoge, Fenton, Jones, and Appel
Alden Lane Nursery

Interior Design

Judith Clark Janofsky
Barbara Daher
Veronica Fenchel
Nancy Hill-Sapp
Jo Ann Hirsch
Jill Hornbeck
Joan Long, FIFDA

Judith Clark Design
Chabot College
The Design Place
Sroban & Associates
Kaleidoscope Interior Design
Las Positas College
Porceus Program Development,
Las Positas College
Las Positas College
J.C. Penney's
Ohlone College
Home Depot
Tinucci Interiors
Kitchen & Bath Design Consultant
Lion Interiors
ASID, NCIDQ, CIC
Shea Homes

Philip Manwell
Marilyn Nauertz
Denise Owen
Susie Sayad
Terri Tinucci
Vada Ulrech
Jennifer Upper
Nancy Wallrath
Michele Wittkop

Marketing

Laurie Andrews
Bill Andrews
Rina Austin
Beckee Breadon
Kimberly Brenner-Lorton
Sarah Burns
Carol Clough
Steve Davis
Kristin Fiser
Lorrie Hern
Emily Herndon
Heidi Kenniston
Karen Meeks
Kim Melton
Bob Middleton
Krystal Murray
Debbie Nelson
Tami Raaker
Art Ragland
Birgitte Ryslinge
Kim Ruef
Dave Rojas
Richie Salazar
Curtis Young

Livermore High School
Penzoil
Tri-Valley ROP
Office Team
Heald Business College
Tri-Valley ROP
Las Positas College
Ross Dress for Success
Office Team
Amador Valley High School
Stoneridge Mall
PeopleSoft
Parent
Gloria Jean's
Tri-Valley ROP
Foothill DECA
Granada High School
Foothill High School
Storytellers
Las Positas College
Office Team
Lisa's Beauty Salon
Noah's Bagels
Kimball and Young

Mass Communications/Journalism

Sandra Caulder	Las Positas College
Ed Diokno	Ledger Dispatch
Kelly Gust	Valley Times
William Johnson	Chabot College
Sarah Jones	Las Positas College
David Lowell	The Independent
Les Mahler	San Francisco Examiner
Christine Mixan	Lawrence Livermore National Laboratory
Al Pacciorini	Tri-Valley Herald
Birgitte Ryslinge	Las Positas College

Quest Advisory Board

Lyle Allen,	Quest Student
Ella Baird	Quest Student
Chilli Barlow	Quest Student
Jaunita Bjorklund	Quest Student
Pam Deaton	Director Pleasanton Senior Center
Barbara Fink	Quest Student
Maureen G. Swinbank	Director Livermore Senior Center
Candace Gruger	PE Instructor
Mary Harrison	Retired Instructor
Nancy Hawtrey	PE Instructor
Anna Hudson	Director Dublin Senior Center
Clare Kalantar	Assistant Director Pleasanton Senior Center
	LARPD
Rich Lang	Retired Instructor, Quest Student
Myra Latkin	PE Instructor
Nona McCaleb	PE Instructor
Nancy O'Connell	English Instructor
Naomi Puro	PE Instructor
Vera Reinstein	Quest Student
Shirley Roehl	Quest Student
Monica Satterthwait	Art Instructor
Neil Thomas	PE Instructor
Roberta Wilson	Yoga Instructor

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William Graham	Lawrence Livermore National Laboratory
Robert Kreitz	Tri-Valley ROP
Gabe Meeker	Lockheed-Martin
William Molander	Lawrence Livermore National Laboratory
Gary Svihula	Las Positas College
Michael Thelen	Lawrence Livermore National Laboratory
Barbara Zingg	Las Positas College

Advisory Boards

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Vacuum Technology

Michael Ansell	Las Positas College
Michael A. Benapfl	Lawrence Livermore National Laboratory
Peter J. Biltoft	Lawrence Livermore National Laboratory
Peter Dusza	Process Physics, Inc.
David Fraser	Consultant
Matthew Hughes	Semicore Equipment, Inc.
Dwight D. Lang	Lawrence Livermore National Laboratory
Richard Miller	SureBeam Corporation
Richard Osburn	Retired
Donald Pellinen	Bechtel Nevada
Thomas E. Stec	BOC Edwards
Thomas L. Swain	VAT, Inc.
David Webb, Manager	Vacua Techniques Co.

Visual Communications

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Stacey Blaney	Denali Data Systems
Fredda Cassidy	Las Positas College
C. Colmenares, CEO	Jack Frost Design
Alex Dourov, CEO	Utkaduck Design
Bruce Engle	AV Images
Loni Frankland	Arts Unlimited Advertising
K.C. "Casey" Hansen	Pleasanton Unified School District
Tim Hern	Tri-Valley ROP
Dave Hopkins	Image Setters
Jorja Ivie	Dublin High School
Jeff Main	AMP Printing
Philip Manwell	Las Positas College
Terry McIntosh	Cutting Edge Computing, Inc.
Grant Opperman	Opperman Empire Communications, LLC
Bud Pelletier	Las Positas College
Mark Shawver	Shawver Associates
Tony Silveira	Vistatrak
Jason Tempestini	AMP Printing, Color Services Mgr.
Karen Tosoni	3D Exchange
Suzy Wear	Cal State Hayward

2004-2006 Catalog Team

The **2004-2006 LPC Catalog** was produced by advanced students in the Las Positas College Visual Communications' print certificate program as part of their Design Shop internship. Under the supervision of the program coordinator, students worked in teams and individually to plan, shoot, select and prepare four-color cover, duotone and black & white images for the Catalog. They also designed the cover and inside page layout templates and text style sheets; prepared and flowed text; worked with edited content; preflighted electronic files to industry standards; and sent the Catalog to press, all under time and budget contract guidelines. In addition, each intern designed and submitted a cover concept for review by a College committee, one of which was selected for the cover. View the Catalog in a full-color version at www.laspositascollege.edu/designshop. Learn more about the Visual Communications program at www.laspositascollege.edu/vcom.



The **Design Shop** is a unique entrepreneurial venture that provides students essential professional development skills and hands-on experience that is integrated into both Visual Communications certificate programs—print and multimedia.



Large photo, from left standing: Justin Fish, Jim Schnitter, Kristen Chapman, Angela Bowman, Fredda Cassidy (Instructor)

From left seated: Nataliya Gavrilova, Gina Wasserman, Erica Andreski—Cover Designer, Yuliya Plastinkina-O'Connor, Noel Villamor

Small photo, top left of page, from left: Ezekiel Flores, Arthur Barinque; Not pictured: Nancy James, Gurjit Singh

Catalog Coordinator and Editor: Denise VanHorn-Landre, Articulation Officer

Design and Production Supervisor: Fredda Cassidy, Visual Communications/Design Shop Coordinator

Project Manager: Judy Deliramich, LaPTechS Intern

Academic Renewal

A means whereby a student may petition to have previous college work excluded from current grade point average in order to pursue an educational objective which may lead to a Certificate or AA/AS Degree.

Academic Year

Fall and Spring semesters.

Add

Students are allowed to add classes to their semester schedule during the add period, normally the first 2-3 weeks of each semester. Refer to deadline dates in Class Schedule.

ASLPC

Associated Students of Las Positas College. All Las Positas College students are members of ASLPC and are represented by an elected and appointed student government called the ASLPC.

ASSIST

Articulation System Stimulating Interinstitutional Student Transfer. A source for California articulation and student transfer information. Available on the web at www.assist.org

Articulation Agreement

An agreement with a four-year institution that specifies which Las Positas College classes may be transferred to meet general education, elective, or major requirements.

Assessment/Placement Tests

Tests given prior to registration to determine appropriate skill level in English and mathematics.

Associate Degree

A degree awarded upon completion of 60 semester units in a prescribed program, including the major and general education requirements. The Associate of Arts (AA) and Associate of Science (AS) are degrees that may be earned at Las Positas College.

Auditing

allows student to attend class as a listener receiving no credits. Las Positas permits Auditing on a limited basis, refer to Catalog.

Baccalaureate/Bachelor's Degree (BA, AB, or BS)

A baccalaureate degree granted by a four-year college or university which is usually acquired after four years of undergraduate college study. Las Positas College offers the first two years in many fields of study.

California Articulation Number (CAN)

Identifies comparable lower division courses within the three public post-secondary systems, University of California, California State Universities, and the California Community Colleges. CAN courses can be cross-referenced by using their assigned CAN numbers. For example, CAN BIOL 2 taken at Las Positas College can be used in lieu of a course that is designated as CAN BIOL 2 at another campus.

Certificate of Achievement/Completion

The certificate is awarded for satisfactory completion of a specific occupational program of study.

Concurrent Enrollment

When a student is simultaneously enrolled at both Las Positas College and a high school or another college.

Continuing Student

A student who was enrolled at Las Positas College during the most recent previous semester (not including summer session).

Credit/No Credit

A grading system by which units of credit may be earned but no letter grade is assigned. Such units are not used in computing the grade point average.

CSU

California State University system.

Dismissal

A situation caused by low academic or progress performance in which the dismissed student may not continue at Las Positas College without approval for readmission.

DSP&S

Disabled Student Programs and Services

District

The area served by The Chabot/Las Positas Community College. Las Positas College is part of a two-campus district; the other campus is Chabot College in Hayward.

Drop

NGR (No Grade of Record)

Selectively withdrawing from a course, but remaining enrolled in college. Student is allowed to drop classes during the first 2-3 weeks of each semester. Refer to deadline dates in Class Schedule.

Elective

Courses which are not required for the major or general education but are acceptable for credit.

Previous/Former Student

A student who attended Las Positas College at some time but did not enroll during the most recent previous semester.

EOP&S

Extended Opportunity Programs and Services.

Full-Time Student

A student enrolled in twelve or more course units in a regular semester or six or more in summer session.

General Education Certification

Certification that a student has completed transfer courses which meet the lower division general education requirements of the California State University.

General Education or "Breadth" Requirements

Courses covering a broad area of thought and experience. There are two types of general education or breadth requirements, one for the Associate Degree and one for a Baccalaureate Degree.

G.P.A. (Grade Point Average)

Indicates an overall level of academic achievement. It is an important measure used in making decisions on probation and disqualification, eligibility for graduation, and transfer to four-year institutions. The grade point average is derived from the following unit system:

A=4 grade points per unit

B=3 grade points per unit

C=2 grade points per unit

D=1 grade point per unit

F=0 grade points per unit

The G.P.A. is calculated by dividing the total number of grade points received by the number of units attempted. Credit (CR), No Credit (NC), Withdraw (W), or Incomplete (I) grades are not computed in the grade point average.

IGETC

Intersegmental General Education Transfer Curriculum. Common lower-division general education transfer curriculum to both public four-year institutions, California State Universities and the University of California.

Lower Division Courses

Freshman and Sophomore level courses typically taken during the freshman and sophomore years.

Major

An organized program of courses within a discipline leading to an Associate Degree or Occupational Certificate.

Matriculation

A process which brings a college and a student who enrolls for credit into an agreement for the purpose of realizing the student's educational objective.

Non-credit Course

Courses numbered 100 or above are not AA/AS degree applicable nor transferrable to four-year colleges/universities.

Nonresident

A person who has not lived continuously in California for one full year prior to the first day of attendance at Las Positas College.

Part-time Student

Any student enrolled for less than twelve units of coursework per semester.

Prerequisite

A course or courses that must be completed before the desired course can be taken.

Probation

An indication that performance is below standard because of academic or progress deficiencies; student is conditionally enrolled contingent upon either improvement of academic achievement or improvement of course completion.

Resident

A person who has resided in California for one full year prior to the first day of the semester.

Semester

The academic year is divided into two terms, fall and spring semesters. Each lasts approximately 18 weeks.

Student Educational Plan (SEP)

A program of study and services needed by the student to enable the student to reach his/her educational objective. The SEP is developed by the student and counselor.

Transcript

An official academic record listing all courses taken at Las Positas College showing final grades and cumulative grade point average. Official transcripts bear a seal of the college and signature of the designated college official.

Transfer

To transfer your community college credits to a four-year university.

Units

The measure of college credit given a course, usually on the basis of one unit for each lecture hour per week or for every two to three laboratory hours per week.

UC

University of California. There are nine UC campuses.

Upper Division

Courses or classes intended for the junior and senior years of college.

Withdrawal (W)

Withdrawing from a course after the "drop" deadline. Grade will show as a "W" on the transcript but does not impact grade point average.

Key to Building Numbers

<p>100 Administration</p> <p>200 Classrooms</p> <p>300 Visual Communications Photography LPC Express</p> <p>400 English Center Classrooms</p> <p>500 Mathematics Laboratory Classrooms</p> <p>600 Multi-Purpose Activities Center</p> <p>700 Admissions and Records Counseling Center Classrooms</p> <p>800 Computer Center Little Theater Technical-Vocational Center</p>	<p>900 Career/Transfer/Employment Center</p> <p>1000 Assessment/Tutorial Center</p> <p>1200 Fitness Center</p> <p>1300 Bookstore</p> <p>1310 Faculty Offices</p> <p>1320 Faculty Offices</p> <p>1400 Classrooms</p> <p>1500 Disabled Students Programs and Services Extended Opportunity Programs and Services (EOPS) Financial Aid/Veterans</p> <p>1502 International Student Office</p>	<p>1600 Security Office Lost & Found Staff Lounge</p> <p>1700 Student Center Cafeteria Health Center Student Government</p> <p>1800 Science/Technology Center Faculty Offices</p> <p>2000 Learning Resources Center (Library)</p> <p>2100 Faculty Offices</p> <p>2200 Computer Laboratory Classrooms</p>
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Location of Programs, Services and Divisions

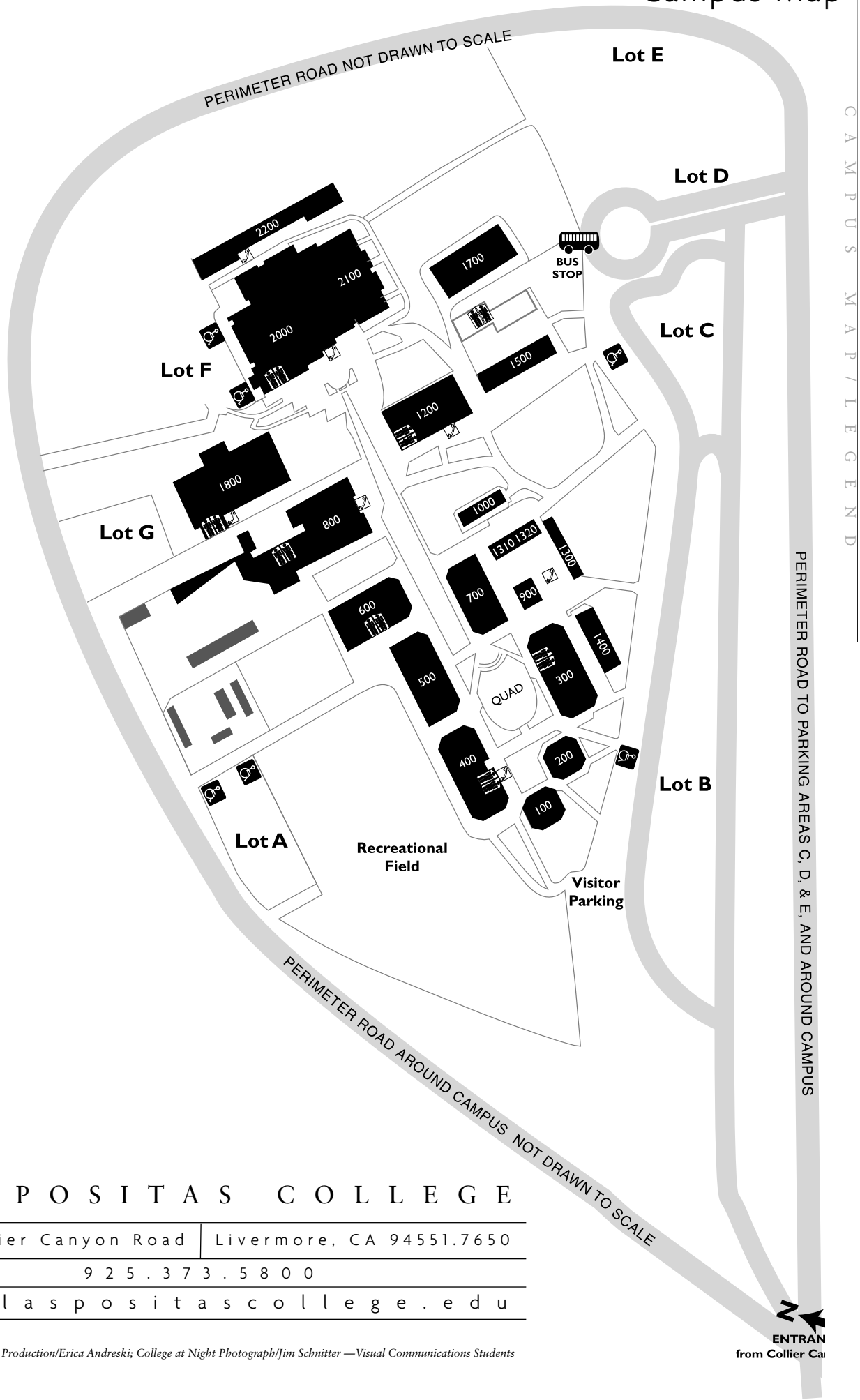
PROGRAM/DIVISION.....BUILDING/ROOM

Academic Deans and Division Offices	
Dean, Division I.....	2174
Dean, Division II.....	2120
Dean, Division III.....	2137
Dean, Division IV.....	718
Dean, Division V.....	2146
Academic Senate.....	2100
Academic Services.....	100
Academic Services, Vice President.....	109
Administration.....	100
Admissions & Records.....	700
Art Studio.....	501
Articulation.....	707
Assessment/Tutorial Center.....	1000
Athletics.....	2100
Automotive.....	800
Bookstore.....	1300
Business Office.....	100
Cafeteria.....	1700
CalWORKs.....	901
Campus Safety & Security.....	1600
Career Center.....	900
Classified Senate.....	2100
College Police & Safety.....	1600
Community Education.....	1310
Computer Center.....	800
Counseling.....	700
Disability Resource Center.....	1500
Duplicating Center.....	1320
English Writing Center.....	400
Extended Opportunity Program/Services.....	1500
Faculty Association.....	2100
Financial Aid.....	1500
Health Center.....	1701
Honors.....	700
Horticulture.....	800

PROGRAM/DIVISION.....BUILDING/ROOM

Instruction & Administrative Services.....	100
Institutional Research.....	100
International Student Office.....	1502
Intramural Programs.....	1200
LaPTechS.....	804
LPC Express.....	300
Learning Resource Center (Library).....	2000
Learning Skills Services.....	1500
Lost & Found.....	1600
Mailroom.....	100
Math Center.....	503/505
Matriculation.....	700
Older Adult Program (QUEST).....	700
PACE.....	700
Photography Lab.....	300
President's Office.....	100
Professional Development Center.....	2012
Records Evaluator.....	700
Re-entry Program.....	700
Science/Technology Center.....	1800
Staff Lounge.....	1600
Student Activities.....	1709
Student Center.....	1700
Student Government.....	1709
Student Services.....	700
Student Services, Vice President.....	716
Switchboard.....	100
Theater.....	800
Transfer Center.....	900
Tutorial Center.....	1000
Visual Communications Laboratory.....	300
Weather Station.....	1800
Weight Room.....	1200
Welding.....	800
Writing Center.....	400

Campus Map



CAMPUS MAP / LEGEND

L A S P O S I T A S C O L L E G E

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w w w . l a s p o s i t a s c o l l e g e . e d u



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