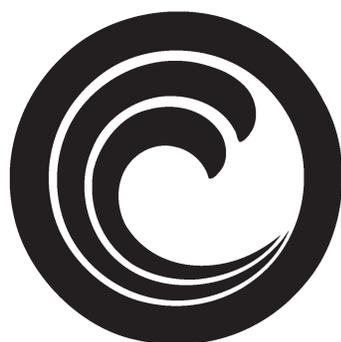


Orange Coast College



Catalog
2000-2001

Orange Coast College



Catalog 2000-2001

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The cover designed by Chauncey Bayes

College Administration

Margaret A. Gratton, President of the College

Robert Dees, Vice President, Instruction

Donald A. Ackley, Dean, Library and Media Services

Kevin T. Ballinger, Dean, Career Education and Consumer and Health Sciences

Jane A. Hilgendorf, Dean, Physical Education and Athletics

Sylvia J. Impert, Dean, Fine Arts

Stanley N. Johnson, Dean, Mathematics and Science

Dick E. Marsh, Dean, Social and Behavioral Sciences

Robert H. Mendoza Jr., Ed.D., Dean, Technology

Gloria J. Vogt, Dean, Business

TBA, Dean, Literature and Languages

Susan V. McClintic, Director, Early Childhood Lab School

Sharon K. Donoff, Vice President, Student Services

Jeffrey M. Dimsdale, Ph.D., Dean, Student Services

Nancy L. Kidder, Administrative Dean, Admissions & Records,
& International Center Programs

Kenneth K. Ortiz, Ph.D., Administrative Dean, Special Programs and Services
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Hue Pham, Ed.D., Dean, Counseling & Matriculation

Kristen Clark, Director, Admissions and Records

Marilyn M. Dickson, Director, Student Health Services

Lucy Groetsch, Director, Children's Center

Richard C. Hernandez, Director, EOPS

David K. Holcomb, Director, Student Auxiliary Bookstore Services

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Delores Pritchard, Director, Student Auxiliary Food Services

Steve Woodyard, Director, Financial Aid / Placement Services

James L. McIlwain, Vice President, Administrative Services

George L. Blanc, Admin. Dean, Economic Development & Community Education

William B. Avery, Director, Marine Programs, Facilities and Services

Marjorie J. Ball, Director, Community Education

Terry Craig, Director, Maintenance and Operations

Leo R. LaJeunesse, Director, College Support Services

Janet B. Neth, Director, Personnel Services

Douglas C. Bennett, Director, Foundation

James A. Carnett, Director, Marketing and Community Relations

Coast Community College District Board of Trustees

Paul G. Berger, George E. Brown, Walter G. Howald, Jerry Patterson,
Armando R. Ruiz, Student Trustee

Chancellor

William Vega, Ed.D.

Calendar

(All dates are subject to change)

FALL 2000

August 14	Class instruction begins
August 18	Last day to enroll in 18-week and 1st 9-week open classes
August 25	Last day to withdraw for a refund for 18-week classes
September 4	HOLIDAY — Labor Day
September 5	Late starting (15-week) classes begin
September 8	Last day to withdraw to avoid a "W" for 18-week classes
September 15	Last day to choose credit option for 18-week classes
October 1	Applications accepted for Spring Semester
October 9 & 12	Second nine-week registration
October 15	Last day to petition for graduation/certificate (mid-year graduation)
October 16	Start of second nine-week classes
November 10	HOLIDAY — Veterans' Day (No Saturday classes)
November 17	Last day to withdraw from 18-week classes
November 23-25	Thanksgiving vacation
December 8-15	Final exams
December 17	End of Semester
Dec 18-Jan 11	Winter vacation/Semester recess

SPRING 2001

January 15	HOLIDAY — Martin Luther King Birthday
January 17	Class instruction begins
January 30	Last day to withdraw for a refund for 18-week classes
February 2	Last day to enroll in 18-week and first 9-week classes
February 5	Late starting (15-week) classes begin
February 13	Last day to withdraw to avoid a "W" for 18-week classes
February 16	HOLIDAY — Lincoln's Birthday
February 19	HOLIDAY — Washington's Birthday
February 20	Last day to choose credit option for 18-week classes
March 1	Last day to petition for graduation/certificate
March 12 & 15	Second 9-week registration
March 19	Start of second 9-week classes
April 1	Applications accepted for Summer Session and Fall Semester
April 9 - 14	SPRING RECESS
April 27	Last day to withdraw from 18-week classes
May 18-25	Final Exams
May 25	Graduation
May 26	End of Semester
May 28	HOLIDAY — Memorial Day

General Information

Mission Statement

The mission of Orange Coast College is to enhance student success by providing quality instruction in basic skills, English as a Second Language, and programs leading to associate degrees, occupational certificates, employment opportunities, and transfer to other institutions of higher education. Additionally, Orange Coast College accepts responsibility for serving the community's diverse needs for lifelong enrichment opportunities.

Administrators, faculty, and staff are committed to the development of students as individuals and as citizens of the world. We value close teaching and learning relationships, support services, and a strong co-curricular program that contributes to meaningful personal growth in our students and to their ultimate success.

Orange Coast College

About the College

History and Location

Orange Coast College, Costa Mesa, California, was founded in 1947 on a 202-acre site which was granted to Orange Coast College by the federal government. The campus currently consists of 162 acres used for instructional facilities, athletic fields, and parking areas.

The Coast Community College District comprises three public community colleges: Orange Coast College, Golden West College and Coastline Community College. Each is a tax-supported community college.

Accreditation and Approvals

Orange Coast College is accredited by the Accrediting Commission for Community and Junior Colleges of the Western Association of Schools and Colleges, (3402 Mendocino Avenue, Santa Rosa, CA 95403; 707/569-9177), an institutional accrediting body recognized by the Commission on Recognition of Post-secondary Accreditation and the U. S. Department of Education. The college and its instructional programs are also approved by the Board of Governors of the California Community Colleges and by the State Department of Education for training veterans.

In addition, Orange Coast College offers programs which are accredited or approved by recognized accrediting agencies: the American Culinary Federation Educational Institute Accrediting Commission, the Commission on Dental Accreditation; The Commission on Accreditation/Approval for Dietetics Education of the American Dietetic Association; Commission on Accreditation of Allied Health Education Programs (CAAHEP); Joint Review Board on Education in Radiologic Technology; Committee on Accreditation for Respiratory Care (COARC); the California State Department of Health; and the Federal Aviation Agency.

Degrees and Certificates

By authorization of the Board of Governors of the California Community Colleges, Orange Coast College confers the Associate in Arts degree on students

who complete sixty (60) units with a grade of "C" or better in prescribed courses.

Orange Coast College awards the Certificate of Achievement to students who successfully complete the required courses of a certificate program including a minimum of 18 units. Orange Coast College also grants the Certificate of Completion to students who complete a specially designed or intensive learning activity.

Memberships and Affiliations

Orange Coast College maintains membership with the following organizations:

- Academic Senate for California Community Colleges
- Accrediting Commission for Community and Junior Colleges, Western Association of Schools and Colleges
- American Association of Community Colleges
- Pacific Association of Collegiate Registrars and Admissions Officers
- National Institute for Staff and Organizational Development
- American Association of Collegiate Registrars & Admissions Officers
- Association of College Administration Professionals
- Honors Transfer Council
- National Alliance of Business
- National Collegiate Honors Council
- National Council of Instructional Administrators
- National Council of Resource Development
- National Human Resources Association

Objectives

Orange Coast College constantly strives to serve the best interests of its community.

Orange Coast College maintains instructional excellence by providing the following:

- Instructional opportunities so that students can fulfill their lower division requirements leading to baccalaureate and advanced degrees.
- Instructional opportunities so that students can develop positive attitudes while acquiring skills and knowledge for their chosen careers, for entry-level positions, for advancing within a career, or for changing careers.
- Lifetime access to general education and to educational opportunities for those who want more knowledge about our ever changing world.
- Opportunities to expand learning and living skills through programs that increase intellectual, occupational and physical development.
- Opportunities to resolve problems due to an inadequate education.
- Resources to develop the strongest selection of teaching and learning experiences for our community including classroom and laboratory instruction, library and reader services, independent study, field studies, telecommunications, outreach programs, computer-assisted learning, learning by experience and tutorial assistance.

Orange Coast College proudly welcomes everyone who seeks intellectual, cultural and personal enrichment.

Orange Coast College presents opportunities for individual and group awareness through counseling and guidance offered by academic and career counselors who evaluate skills and aptitudes. The college also offers credit through assessment of prior learning and by learning through experience and personal counseling.

Our college has diverse programs designed to identify and satisfy student needs, such as the following:

- Programs that support traditional instruction, which are developed in the library, the Media Center and the Tutorial Center.
- Health programs in the Student Health Center, the Sports Medicine Center and the Speech and Lan-

General Information

guage Center.

- Programs for special groups which are developed in the Disabled Students' Center, the Extended Opportunities Programs and Services Office and in the Learning Center.
- Economic programs available in the Financial Aid Office, the Career Development Center and Placement Office and the Children's Center.
- Student government programs including the Associated Students of Orange Coast College, clubs and co-curricular activities.

Orange Coast College sanctions community service activities for professional and personal improvement, other educational opportunities and entertainment and recreational events.

Our college contracts educational services and programs which the school develops at the request of business and public agencies. These services and programs take place on campus, at work sites and other locations.

Orange Coast College has programs that support the quality of service offered to its community, which in turn supports the college administration, faculty and staff in their personal development.

The Orange Coast College Foundation

The Orange Coast College Foundation serves as a community and financial support organization to help Orange Coast College achieve its mission. The goals of the Orange Coast College Foundation include providing financial support for the college, involvement opportunities for board and community members, advocacy to help the college meet its goals, and advisement to the college's administration.

The OCC Foundation accepts donations of cash, securities, real property, insurance and personal property from individuals, businesses and other foundations. The foundation strengthens the educational objectives of the college by providing funds for faculty development, student scholarships, library acquisitions, and capital improvements and repairs to the campus of Orange Coast College.

Members of the Orange Coast College Foundation Board of Directors are volunteers. They generally serve three year renewable terms. Members are appointed from the community and can include alumni, business leaders, community leaders, parents, donors, and members of the college's current and retired faculty and staff who are interested in supporting the missions of the college and the Foundation. For additional information on the Foundation, please call (714) 432-5126.

Equal Opportunity Policy

Orange Coast College is committed to providing equal opportunities in its activities and in its educational programs. Therefore, neither an Orange Coast College student nor a Coast Community College District employee nor any applicant for enrollment or for employment shall be unlawfully denied the benefits of, or be unlawfully subjected to discrimination under any programs or activity on the basis of race, color, gender, sexual orientation, national origin, religion, age, disability, or marital and Vietnam-era status.

Orange Coast College's policies and procedures strengthen and guarantee equal opportunity. Specifically, the college does the following:

- Systematically reviews its policies and procedures to preclude the possibility of discrimination against women, minorities, disabled individuals and others.
- Makes every effort to provide leadership for the communities it serves, protect human rights, and assure equal opportunity.
- Maintains the policy that every course, course section, and class—wherever offered, shall be open to enrollment and participation by any person who has been admitted to the college and who meets such prerequisites as may be established pursuant to Chapter II, Division 2, Part VI, Title 5 of the California Code of Regulations, commencing with Section 51820. This policy is maintained unless specifically exempted by statute.

The college Affirmative Action Officer, whose office is in the Administrative Building, is the person charged with ensuring that these policies and procedures are enforced and with investigating complaints about noncompliance.

Upon request, the college Affirmative Action Officer will provide information about how Orange Coast College complies with federal and state laws and with executive orders and regulations. This person also provides information on how to register a complaint for non-compliance with the college's equal opportunity policy.

Disabled Students' Rights

Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990 prohibit discrimination on the basis of disability against persons in programs or activities receiving or benefiting from federal assistance. Thus, in post-secondary education settings, Section 504 mandates "reasonable accommodation" for adults with professionally documented physical or learning disabilities. Inquiries regarding the college's non-discrimination policy relative to Section 504 or the Americans with Disabilities Act should be directed to the 504/ADA Coordinator, at (714) 432-5042.

College Programs

Career Programs

One of the primary missions of Orange Coast College is to help all students with career development.

To qualify for positions in their chosen fields many students require study in a career program for two years or less. The college cooperates with secondary schools to provide articulation of vocational programs that avoid duplication of occupational skills and knowledge, and builds on student's career competencies.

A variety of artistic, scientific, professional and technical programs are available for students. These programs, combining theory, practical training and experience, were established as a result of surveys of employment opportunities throughout the community. A program advisory committee, comprised of local

Orange Coast College

employers and workers, helps plan and offers on-going advice and supervision for career programs. An extensive description of each program is listed in the section of this catalog entitled "Career and Certificate Programs."

A student who completes one of these programs may be able to transfer to a four-year college or university to complete a bachelor's degree. Employers who hire students from many of the career programs are provided guarantees that students possess the skills needed on the job. If students are found deficient by employers, they can return for additional training at no cost.

College Transfer Programs

Many students choose careers that require four or more years of college. Orange Coast College has a comprehensive transfer program that satisfies lower division requirements for most majors. A student, working with a counselor, may plan a two-year program at Orange Coast College then transfer to a college or university to complete a four-year degree.

Courses numbered 100 or higher are transferable to the California State University. A list of courses which transfer to the University of California is available in the Counseling Center and Transfer Center. These courses are also marked "UC" in the Courses section of this catalog. Counselors can help determine which courses transfer to other colleges and universities.

The Transfer Programs section of this catalog contains additional information about transfer.

Counseling and Guidance

The counseling program at Orange Coast College is in place to help students identify and clarify personal, career and educational goals. The intent is to help students choose options that will improve the quality of their lives.

The counseling process encourages the building of a strong self-concept by helping students identify their needs and motivations and by guiding them in learning and applying effective decision-making skills. Personal, career and academic choices are not viewed as separate and disconnected entities but as interrelated

issues, the combination and interaction of which determine the present and future quality of each individual's life experience.

Cultural and Community Education Programs

Our Community Education Office sponsors cultural and performing arts events, continuing education, recreational programs, business seminars, contract education and tours.

This community education program, which is self-supporting and open to the public, offers lectures, workshops and activities to meet our community's interests and needs.

Developmental Programs

Many special programs are offered to students who are not prepared for the demands of college-level courses. We offer special programs and courses in developmental reading, vocabulary building, spelling, oral communication, basic mathematics and English as a Second Language.

Career Education

As never before in its history, America needs people who are trained in artistic, scientific, professional and technical fields. Orange Coast College can provide that training.

Thousands of students enroll annually in OCC's highly acclaimed career programs. We offer more than 50 programs which lead to exciting, well-paying careers within two years or less.

Our comprehensive programs, which grant certificates of achievement and/or associate in arts degrees, prepare students to become qualified employees as well as educated citizens. A number of programs offer transfer options to four-year colleges and universities. Our career courses are both professional and high tech. They are fully accredited and feature industry advisory committees which meet annually to ensure the course curriculum accurately reflects current industry standards.

Reserve Officers Training Corps

Orange Coast College students can participate in the Army and Air Force Reserve Officers Training Corps.

Army ROTC classes are conducted two hours each week at UCLA and CSULB. Two- and four-year programs lead to a commission as a second lieutenant in the Army or in the National Guard. Participants must be physically qualified full-time students at the undergraduate or graduate level. During their last two years, students receive \$100 monthly, throughout the regular school year. Students with ROTC scholarships receive full tuition and have their required fees and books paid for. Veterans ordinarily qualify for advanced placement. For more Army ROTC information, call California State University, Long Beach, or University of California, Los Angeles.

Through arrangements with Loyola Marymount University (LMU) in west Los Angeles, student may participate in the Air Force Reserve Officer Training Corps (AFROTC) program. AFROTC offers a variety of two, three and four year scholarships, many of which pay the full cost of tuition, books, and fees. Successful completion of as little as four semesters of AFROTC academic classes and leadership laboratories can lead to a commission as a second lieutenant in the United States Air Force.

Classes consist of one hour of academics and two hours of laboratory for freshmen and sophomores and three hours of academics and two hours of laboratory for juniors and seniors. The academic hours earned can normally be counted as elective credit toward graduation. All AFROTC classes and laboratories are held on Fridays to better accommodate students commuting from other colleges and universities. Currently, LMU does not charge for the courses and offers cross-town students free parking while attending AFROTC activities. Additionally, AFROTC cadet under scholarship and all juniors and seniors receive a \$150 per month tax-free stipend.

For more information, contact the Loyola Marymount University Department of Aerospace Studies (AFROTC) at (310) 338-2770.

Student Services and Co-Curricular Programs

The primary mission of all educational institutions is learning. Orange Coast College recognizes that there are many activities and programs, outside of the classroom which enhance the learning process. Consequently, numerous student services have been established to help students move toward the attainment of their goals.

Students at Orange Coast College come from a diversity of backgrounds, ages, and lifestyles. The personal circumstances of many often include financial, physical and/or learning constraints that make attending college difficult. The variety and comprehensive nature of student services at Orange Coast College is intended to support a multitude of concerns for a large student population. All students are encouraged to explore the services available and to obtain a copy of the CHART, the handbook for students at OCC. This publication, available in the Student Services Office, provides valuable information for all students.

Memorable college experiences often include more than classroom instruction. To this end student activities and co-curricular programs are an integral part of Orange Coast College. These activities expand learning and living skills. The Student Services Staff, the Associated Students and the College Life office coordinate these programs. Examples of activities offered throughout the year are lecture series, Awareness Days, clubs, Coast Days, athletics, forensics, homecoming and many more.

A current schedule of student activities is available at the College Life office.

Orange Coast College

Adapted P.E. Program

Adapted Physical Education classes are designed for physically disabled persons who can benefit from individualized exercise programs. A variety of courses are offered for improvement in strength, flexibility, and cardiovascular endurance. Additional courses in Bowling, Aquatics and Exercises for Persons with Neck & Back Problems are offered. Students must register with the Disabled Students Center and complete a necessary medical verification form in order to participate. For more information, phone (714) 432-5528.

OCC Alumni Association

The reputation of every distinguished college grows as a result of the benefits it bestows on its students, faculty and staff. The Orange Coast College Alumni Association enables our college not only to maintain its distinctive standing among community colleges but also to strengthen that standing by preserving close ties with all former OCC students.

Any student who has taken one or more classes at Orange Coast College is considered an alumnus. Voluntary membership in the Alumni Association is available for an annual fee of \$20, or \$25 for couples. Lifetime membership is available for \$150, or \$200 for couples.

Membership in the Alumni Association entitles you to a membership card, library privileges, an alumni decal, invitations to alumni events and the alumni newsletter "Post Coaster."

For more information, phone (714) 432-5749.

Assessment Center

The Assessment Center, located in the Special Services Building, administers aptitude, interest, and personality tests to students who have a counselor's referral. It also administers the English and mathematics placement tests and the English as a Second Language program tests for students who are not native speakers of English.

Applications are available for SAT, ACT and TOEFL tests. For more information, phone (714) 432-5789.

The Associated Students

The Associated Students are responsible for student government and participation in college planning, policy-making, and governance. They manage a large college-life program that includes a wide variety of clubs, social activities, and informal learning experiences. They also oversee a large budget to insure that many needs of students are met on campus.

This program is organized in three "wings." The Governance-and-Leadership wing includes elected and appointed student leaders and includes both informal leadership training and formal coursework in IDST 150AD and IDST 140. For more information, visit the ASOCC Office in the Student Center. The College-Life wing, located in the Student Center, includes the InterClub Council and many social programs. To start a club or become involved in campus activities visit the College Life Office. The Fiscal-Affairs wing oversees the ASOCC budget and related matters. It is located in the Student Center.

We invite you to participate in our many programs and to become involved as a student leader.

Jurisdiction of the Associated Students of Orange Coast College is established in the Manual of Board Policies and Administrative Procedures of the Coast Community College District.

Athletics

OCC has one of the best Athletic programs in the state.

The Pirates field twelve men's athletic teams, and eleven women's teams. Men's sports include baseball, basketball, crew, cross country, football, golf, soccer, swimming and diving, tennis, track and field, volleyball, and water polo. Women's sports include basketball, crew, cross country, golf, soccer, softball, swimming and diving, tennis, track and field, volleyball and water polo. Cheerleading is a co-ed sport.

Intercollegiate Athletics

Orange Coast College participates as a member of the Orange Empire Conference for most of its sports sponsored by the

Community College League of California - Commission on Athletics. The Orange Empire Conference includes the following schools: Orange Coast, Cypress, Santa Ana, Riverside, Saddleback, Fullerton, Golden West, Irvine Valley and Santiago Canyon.

For football, Orange Coast College is a member of the Mission Conference which includes the following schools: Orange Coast, Palomar, Pasadena, Santa Ana, Riverside, Saddleback, Golden West, Long Beach, Mt. San Antonio, Cerritos, El Camino, Fullerton and Palomar.

Non-Conference Athletics (*)

The men's and women's crew compete in individual sports associations.

OCC crew joins the Pacific Coast Rowing Association including the Western Intercollegiate Rowing Association and the PAC-10. Other colleges competing in this association include: CSU Long Beach, Loyola Marymount, CSU Sacramento, St. Mary's College, CSU San Diego, Santa Clara University, UC Irvine, UC Davis, UC San Diego, UC Santa Barbara, UC San Diego, Stanford University, UC Berkeley, University of Washington, Oregon State University, UCLA, USC and Washington State University.

The Children's Center

The Harry and Grace Steele Children's Center is located on Merrimac Way, just west of Fairview Road. Comprehensive child development services are available to student parents enrolled at OCC.

The Children's Center is funded by the California State Department of Education and the Associated Students of Orange Coast College. The Children's center serves children ages 6 months through 12 years during fall, spring and summer semesters while the college is in session, as follows: Children between the ages of 2 1/2 to 12 years are offered care in the evening, Monday through Thursday. School age children (6 - 12 years of age) are offered care during the day in the summer semester only.

Orange Coast College

The hours of operation are:

DAYTIME

Monday-Friday: 7:30am-5pm
(6 months - 6 years of age)

EVENING

Monday - Thursday: 4pm-10pm
(2 1/2 - 12 years of age)

SUMMER

Specific summer semester hours will be posted each year. We offer all day and evening care to children as old as 12 years of age. The evening program continues to limit the minimum age to 2 1/2 years.

Parents must be enrolled at OCC in a minimum of six units for fall and spring semesters, and three units for summer term. The units must apply to their established academic goals. Enrollment implies active participation and attendance in coursework at OCC.

Wait List Registration dates are set before the beginning of each semester, and parents must pay the college service charge before registering their children. Fees are set by the State Department of Education. Subsidized child development services are available for those who qualify under the Office of Child Development Guidelines. Full cost openings are also available. Priority is given to continuing and low-income students. For more information, phone (714) 432-5569.

Counseling Services

Counseling Appointments

Appointments are available Monday through Thursday from 8 a.m. to 7:00 p.m. and Friday from 8 a.m. to 3 p.m. Appointments serve the needs of students seeking academic, career and / or personal counseling and may be made in person at the Counseling counter in the Counseling Building or by phone, (714) 432-5078. For further counseling information call (714) 432-5700.

Resource and Information Desk

A resource and information desk is located in the Counseling Center and is staffed by a credentialed counselor during most day and evening hours. The resource counselor cannot respond to questions that require student records, but is oth-

erwise available to provide information and assistance. You may come in person to the resource / information desk, or phone (714) 432-5699.

Career Library

A full service career library is located in the Counseling Center. Assistance is available Monday through Thursday from 8 a.m. to 7:30 p.m. and Friday from 8 a.m. to 3 p.m.

Career Lab

The career lab offers students access to a variety of computerized guidance programs, as well as audio and video tapes for listening and viewing. Hours are posted and a technician is available to offer assistance.

Re-Entry Center

The Re-Entry Center provides individual and group counseling, workshops and special programs designed for students who have been out of school for one or more years. Appointments may be made in person or by phone, (714) 432-5162.

Transfer Center

The Transfer Center provides information and assistance to students who are preparing to transfer to four-year colleges and universities. The center provides information on transfer programs, general education requirements and schedules appointments with representatives from four-year colleges and universities. Applications for admission to CSU and UC are available in the center. The center also sponsors a "Transfer Day" in the fall semester with representatives on campus from more than forty colleges and universities from throughout California. Transfer planning workshops are offered throughout the academic year. The Transfer Center is located in the Counseling Annex, between the Social Science classroom building and the Computing Center. For more information, phone (714) 432-5894.

Workshops

Workshops, offered on an on-going basis, focus on topics of interest to both new and returning students. Workshop schedules are available in the Counseling Center.

Instruction

The Counseling Division provides instruction in career and personal development, offering a variety of credit courses that support the developmental needs of both new and returning students. Counseling courses are offered both day and evening and are articulated for transfer the same as courses offered in other divisions. Courses are listed under "Counseling" in the college catalog and class schedule.

Assessment of Prior Learning

This program is designed to help students apply the knowledge gained outside the formal classroom setting toward a college degree. Questions about the program may be directed to the APL instructor. For more information, phone (714) 432-5959 or e-mail to apl@mail.occ.cccd.edu.

Matriculation Services

Counseling-related components of matriculation are orientation, counseling/advising and follow-up of student progress. Programs are in place to respond to issues in these areas. Matriculation is coordinated through the Counseling Center.

Outreach

Outreach consists of a variety of liaison activities with area high schools, including participation in college nights, classroom presentations and meetings with counseling and administrative personnel. Outreach counselors work closely with Assessment Center personnel, the director of the Transfer Center and the coordinator of matriculation. For information about Outreach activities, phone (714) 432-5815.

Orange Coast College

Cumulative Records

The students' cumulative records are developed and maintained in the Counseling Center. Counselors refer to these records in preparation for and during student appointments. Students, through a counselor, may also access their own cumulative records.

Petition Processing

A petition is a request for special action and is processed through the Counseling Center. Petitions for Credit by Examination, Waiver of Requirements, Excessive Units and Academic Renewal are available in the Counseling Center.

Disabled Students' Center

The Disabled Students' Center (DSC) provides support services to students with disabilities in an effort to ensure equal opportunity and participation at the college.

To receive services from the DSC, each student is responsible for the following:

- **Verification of Disability** Submit verification of disability by a physician or other qualified professional.
- **Personal Care** Take care of personal bodily needs, such as feeding and restroom care and, if necessary, to provide a personal attendant while on campus, including the classroom.
- **Seizure Policy** Because of the college's concern for the well-being of all students, OCC has a policy governing a student who has a seizure on campus. When a physician indicates that seizures possibly endanger the student or others, the student may be denied continued enrollment. This may range from a particular class deemed hazardous to exclusion from campus. Reinstatement may occur when there is evidence that seizures are controlled. For more information, contact the Administrative Dean, Admissions and Records.

Specialized equipment, disability resource information and referrals are available through the DSC. Assistance is also available for registration, test proctoring, tutoring, note takers, campus orientation and readers (based on the specific disability).

Only those students with a DMV plate or placard may park in designated blue curbed areas in all campus lots free of charge. All other disabled students must purchase a campus parking permit and use student parking spaces.

The Disabled Students' Center is located in the Special Services Building. Hours are 8:00am to 4pm, Monday through Friday. Phone 432-5807 or 432-5604 (TDD).

Disabled Students' High Tech Center

The High Tech Center is specifically designed for students with disabilities at Orange Coast College. Its primary purpose is to allow students with disabilities to use computers through various adaptives. The facility is located in the Literature and Language building, Room 241. Our IBM PCs and Macintosh computers are equipped with both adapted computer software and major computer programs that can be combined to accommodate and help students with their schoolwork and educational goals. Software packages include word processing, spreadsheets and accounting programs.

Extended Opportunities Programs and Services (EOPS)

EOPS is a state-funded comprehensive support system that assists low-income disadvantaged students. The goal of the program is to help students meet their educational objectives. Services include academic and personal counseling and/or assistance, career planning and transfer information, book grants and academic tutoring.

To determine eligibility, the student should visit the EOPS office located in Counseling and Admissions 114. For more information, phone (714) 432-5817.

Financial Aid

The Financial Aid Office is temporarily located in the Art Village. The hours are 8am to 5pm Monday and Thursday, 8am to 7pm Tuesday and Wednesdays; and 8am to 2pm on Fridays.

The Financial Aid Office seeks to ensure access to all students requiring financial support while attending college. Aid programs include the following: Pell Grant, Supplemental Educational Opportunity Grant, Cal Grant, Perkins Loan, FFEL Stafford Loan, and College Work Study. There is also a state tuition fee waiver for qualifying California residents.

Interest-free, short-term emergency and book loans are available to students who meet eligibility criteria. More information and applications may be obtained at the Financial Aid Office. The phone number is (714) 432-5508.

CARE

Cooperative Agencies Resources for Education

CARE is an additional support program for EOPS students who meet the following qualifications:

- a. Be 18 years of age or older
- b. Be a single parent of a child or children under 14 years of age
- c. Receive AFDC/TANF/CalWORKS

Support services for CARE students include Book Grants, Material Fees, OCC Parking Permits, Bus Passes, Prepaid Gas Cards, School Supplies, Child Care Assistance, Tutoring and Counseling and Educational Support.

Please call (714) 432-5817 or visit the EOPS Office, Counseling and Admissions 113.

Housing

The International Center is responsible for housing information and services and seeks to provide the widest range of housing options for all students. Students may request an annually updated apartment listing for the surrounding community. All students have access to

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a housing board, on which students and the community may advertise, free of charge, who have rooms to rent or who need roommates to share housing costs. The housing board, which is on an outdoor display case located on the South wall of the Admissions and Counseling Building is updated daily. The Homestay program is a housing option for International students. Through this program, students are put in contact with interested host families in the area. The goal of the programs is to provide both guest and host with the opportunity to learn about each others country and culture, see one's own country in a new light and make new friends. For further information, contact the International Center at (714) 432-5940 or visit the International Center in the Counseling and Admissions Annex.

Job Placement Center

The Job Placement Center, located on the bottom floor of the library, is one of the busiest community college placement offices in the nation, with up to 1,000 diverse job listings in fields such as business, technical, allied health and many more. Job information is provided Monday through Friday.

In addition to job listings, the Job Placement Center hosts on-campus recruitments, an annual Career Day, and regularly conducted workshops dealing with job search issues and skills.

For more information, phone (714) 432-5576.

Non-students may receive job placement services by paying a minimal fee.

The Learning Center

The Learning Center is in the Special Services Building. In addition to providing support services for learning disabled students in regular classes, the Learning Center offers individual instruction for students with learning disabilities in reading, writing, spelling and arithmetic. The Learning Center staff evaluates the learning difficulties of each student and then develops a program which includes a number of teaching techniques and materials. A student may earn one to three units of credit each semester by enrolling in a

Learning Center program. The center's phone number is (714) 432-5535.

Library Services

Comprised of over 100,000 titles of books, periodicals, and audio-visual programs, the Norman E. Watson Library supports and enriches the quality of our educational program.

Temporarily located at the north end of the Adams parking lot, the library provides a relaxed atmosphere in which to study.

Reserve materials will be found at the circulation desk and may be checked out for a limited time, usually two hours. Fines are charged for reserve materials returned late at the rate of 25 cents per hour up to \$10.00. Materials not found in our library may, in some cases, be ordered via inter-library loan. Inquire at the reference desk. Our reference librarians are here to teach and guide you in using the numerous print and computer based indexes found in the library which aid you in your research needs. The library offers a transferable one-unit class (ENG 108, Introduction to Library Resources) which will help you better understand the library maze.

Our circulating books may be checked out for a three week period and renewed once if not overdue. Fines are 25 cents per day per book up to a maximum of \$10.00.

Our Media Department, provides instructional video and audio programs as well as the campus Macintosh computer lab, complete with laser printer, to turn out professional looking assignments for a small charge. Audio cassettes of designated large group instruction lectures may be purchased for study and review.

The library is open Monday through Thursday from 8 a.m. to 9 p.m., and Friday from 8 a.m. to 3 p.m. We are closed all school holidays. Home computer access to the library's on-line catalog is available during regular library hours. Ask for our free brochure for detailed instructions.

Lost and Found

Lost and Found is in the Student Center. It is open during the following

times: 8am to 7pm Monday through Thursday and 8am - 2pm on Friday. For more information, phone (714) 432-5731.

Recycling Center

The Associated Students of Orange Coast College sponsors an on-campus Recycling Center located on Adams Avenue, between Harbor Boulevard and Fairview Road. The center has a 24-hour drop-off service for materials that can be recycled, such as newspapers, magazines, pamphlets, office paper, computer paper and tab cards, glass, aluminum and plastic soda pop bottles.

The center will pay the current market price for "CA Redemptive Value" containers of glass, plastic and aluminum Monday through Friday, 8 a.m. to 5 p.m. and Saturday 9 a.m. to 5 p.m. Profits from the center go to scholarships for OCC students.

Scholarships

Students who complete OCC scholarship applications will be considered for a wide variety of scholarships awarded through the generosity of the citizens and civic groups in the Coast Community College District.

Application requirements vary, depending on the scholarship programs for which the student applies. For further information, pick up a scholarship brochure or applications from the Scholarship Office in the Student Center or visit our web site: www.occ.cccd.edu/departments/studentsvcs/scholarshipoffice. For more information, phone (714) 432-5730.

Student Health Service

The Orange Coast College Student Health Service was initiated by students for students unable to obtain affordable health care. It is financed by a student health fee of \$11. Students must be currently enrolled and attend classes to use the service. Please bring your student ID card when visiting the health center.

The Student Health Center is located between the library and gymnasium on Fairview Road. It is open when classes

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are in session at the following times: 8 a.m. to 9 p.m., Monday through Thursday, and 8 a.m. to 4 p.m. on Friday. The phone number is (714) 432-5808.

Registered nurses consult with students concerning their health needs and schedule appointments with physicians and members of the mental health team. Physicians diagnose and treat acute short-term health problems. The mental health team provides brief individual and group counseling. Referrals to community resources are given for long-term treatment.

Students are covered by accident insurance for injuries that occur on campus or at a college-sponsored event. This coverage is secondary to any primary coverage by which students are covered and is subject to certain exclusions and limitations. An injury must be reported immediately to the appropriate instructor or to the Student Health Center if claim benefits are to be paid. All claims have a \$50 deductible.

Student Center Lounge

The Student Center Lounge is open for public use Monday through Thursday, 8:00 a.m. - 7:00 p.m. and Friday, 8:00 a.m. - 2:00 p.m. It serves as a quiet study area as well as a place to relax. Several conference rooms are also available for use in the lounge. The conference rooms may be reserved by calling (714) 432-5507.

Tutorial Center

Trained tutors assist students in improving study skills as well as course content areas. Students may receive one free hour of tutoring in two subjects weekly. OCC's Tutorial Center is located in the west wing of the Special Services Building.

Center hours are 9:00am -7:00pm Mondays and Tuesdays, 9:00am - 4:00pm Wednesdays and Thursdays, and 9:00 am-3:00pm on Fridays.

For more information, phone (714) 432-5559 or 432-5538.

Vocational Rehabilitation Services

Students having physical, emotional, or other disabilities may be eligible for State Department of Rehabilitation services if their disabilities affect their vocations. These services include vocational counseling and guidance, reimbursed training and job placement. Under certain circumstances, students may also qualify for assistance with medical needs, living expenses and transportation.

Interested students should visit or write the State Department of Rehabilitation Office, 3822 Campus Drive, Newport Beach, California 92660. The phone number is (714) 756-1999.

Policies and Regulations

Orange Coast College

In accordance with requirements of DVB Circular 20-76-84, Appendix P, this is to certify this school catalog is true and correct in policy at the time of printing.

Academic Honesty

Orange Coast College has the responsibility to ensure that grades assigned are indicative of the knowledge and skill level of each student. Acts of academic dishonesty make it impossible to fulfill this responsibility and weaken our society. Faculty have a responsibility to ensure that academic honesty is maintained in their classroom. Students share that responsibility and are expected to refrain from all acts of academic dishonesty. Procedures for dealing with any violation of academic honesty will be followed. Additionally, the Student Code of Conduct and Disciplinary Procedure shall be applied to incidents of academic dishonesty.

Disruptive Behavior

A student who is uncontrollably disruptive of the educational process or a danger to her- or himself or students and staff may be subject to dismissal from the college. In lieu of dismissal, such students may be required to provide an attendant when on campus or at any college-sponsored event. Cost of providing an attendant shall be the responsibility of the student. The decision to dismiss or require the presence of an attendant shall be the responsibility of the College President upon recommendation of the Student Services Council. The student shall have the right to appeal any decision to the Vice Chancellor of Human Resources of the Coast Community College District. No decision shall be made without providing the student with adequate opportunity to provide evidence in his or her behalf.

Family Rights and Privacy Act of 1974 Policy

Orange Coast College may release student directory information upon request, provided such release is approved by the college president or a designee. Students may request in writing to the college president that directory information not be released. The president or a

designee may limit or deny the release of specific categories of directory information based upon a determination of the best interests of the student.

Directory information is defined to mean one or more of the following: student's name, city of residence, date and place of birth, major field of study, participation in officially recognized activities and sports, weight and height of members of athletic teams, dates of attendance, degrees and awards received, and the most recent previous public or private school attended.

Any currently enrolled or former students shall have access to any and all of their records on file at the college. Such access shall be granted within 15 working days of a written request and shall be subject to procedures established by the Administrative Dean of Admissions and Records for academic records, Dean of Counseling Services for counseling files, Vice President of Student Services for other records.

Students, by written request to the above administrator, may challenge the content of their records pursuant to Education Code section 76232. Such challenges will be processed according to procedures established by those responsible administrators.

Privacy of and Access to Student Records

The Information Practices Act of 1977, California Civil Code, Sections 1798 et. seq., guarantee certain rights:

The Right to Privacy. Only information about you that is relevant and necessary to carry out the purpose of the college will be collected. This information will be used only in the administration of specific college programs.

The Right to Access. You may request access to any records about you that are maintained by the college. The college shall promptly let you or your chosen representative inspect or shall provide you copies of any document or item of information in your case record, within 15 working days of a written request. In a few cases, medical or psychological information will be released only to an appropriate licensed professional chosen by the student.

Protection Against Redislosure. All persons who are allowed access to your records are prohibited from disclosing this information to anyone else without your specific, informed, written consent. There are specific instances where information may be released without your informed, written consent, such as in the case of a medical emergency.

Grievances

The student who believes himself or herself to have been mistreated, or that the policies or procedures of the college have not been carried out, or that some campus issue has not been properly addressed may petition for a review of the complaint. A grievance is a complaint that is formally written. Before filing a grievance, a student must make every effort to resolve the complaint with the college representative against whom the complaint is made. These efforts must be made within twenty (20) days after the date the student knows, or should reasonably know, about the problem.

If the student cannot resolve the complaint, the student must go to the immediate supervisor of the college representative being complained of in a continuing effort to resolve the complaint.

For more information, see the College Grievance Officer or phone (714) 432-5941.

Non-Discrimination Policy

It is the policy of the Coast Community College District to provide all persons with equal employment and educational opportunities regardless of race, color, gender, sexual orientation, national origin, religion, age, disability, or marital and Vietnam-era status.

The lack of English language skills will not be a barrier to admission to vocational education programs. Kevin Ballinger, Administrative Dean, Career Education, (714) 432-5628, handles all gender equity questions and situations. Dr. Ken Ortiz, Dean, Special Programs & Services (714) 432-5042, the Section 504 and Americans with Disabilities Act (ADA) coordinator is responsible for handicapped accessibility.

Policies and Regulations

Plan de No-Discriminación

La póliza del Distrito de Coast Community College es de proveer a todas las personas igualdad de oportunidades de empleo y educación sin tener en cuenta su raza, color, sexo, país de origen, religión, edad, impedimento físico, estado civil o que hayan servido o no durante la era del Vietnam.

Si la persona no habla inglés, no será obstáculo para ser admitida en los programas de educación vocacional. Kevin Ballinger, Decano Career Education, (714) 432-5628, responderá a todas las preguntas de igualdad de los sexos, El Dr. Ken Ortiz, Decano Administrativo, Servicios Especiales, (714) 432-5042, es el coordinador a cargo de la Sección 504 y es responsable de proveer accesibilidad a las facilidades para las personas con impedimentos físicos.

Chính Sách Bất Kỳ Thi

Chính sách của Coast Community College District là cung cấp cơ hội đồng đều cho tất cả mọi người trong các lãnh vực giáo dục và công ăn việc làm, bất kể các khác biệt về chủng tộc, màu da, giới tính, khuynh hướng tình dục, nguồn gốc quốc gia, tôn giáo, tuổi tác, sự tật nguyền, tình trạng gia cảnh, hay vai trò của mình trong thời kỳ chiến tranh Việt Nam.

Việc thiếu khả năng Anh ngữ không phải là một trở ngại để được tham nhận vào các chương trình huấn nghệ. Ông Kevin Ballinger, Khoa trưởng, Giáo dục Chuyên ngành, số điện thoại (714) 432-5628, sẽ giải đáp tất cả mọi thắc mắc về các trường hợp liên quan đến việc đối xử bình đẳng cho cả hai giới. Tiến sĩ Ken Ortiz, Khoa trưởng đặc trách các Chương trình và Dịch vụ Đặc biệt, số điện thoại (714) 432-5042, là người điều hợp việc thi hành Phân mục 504 và Điều luật về Người Mỹ Tật Nguyền, chịu trách nhiệm về những vấn đề liên quan đến tiện nghi cho những người này.

Parking Permits

A registered student may purchase a parking permit for \$20 each semester and \$10 for summer session. The permit is valid at Orange Coast College and Golden West College. Alternatives to the parking

permit are metered parking, which costs 25 cents for one hour, at most meters, and temporary parking permits available at the ticket dispensers.

Parking spaces are available on a first-come, first-served basis. The Coast Community College District and Orange Coast College accept no liability for vandalism, theft, or accidents; students use the parking facilities at their own risk.

For more information, complete parking rules and regulations are available at the campus safety building in the theatre parking lot. (714) 432-5017.

Sexual Harassment

Sexual harassment is offensive, unwelcome sexual attention. It may be pressure for dates or sexual favors, suggestive gestures or remarks, touching, or even actual or attempted rape or assault. Sexual harassment is a form of sex discrimination which violates Title VII of the Federal Civil Rights Act of 1964 as amended; Title IX of the Education Amendments of 1972; California state law; and the Coast Community College District Board policies. If you feel you are being sexually harassed and would like clarification, please contact the Student Services Office for an informational brochure on the options available to you. If you would like to discuss your concern with an Administrator, please contact either the Vice President for Student Services or the College Grievance Officer. If contacted, either Administrator is required by law to conduct an investigation of the alleged charges.

Student Due Process Procedure

If charges are brought against a student by another student or by a representative of the college, that student should get information about the college's due process procedure from the Student Services Office. The due process procedure guarantees fair and reasonable treatment of all concerned parties. Our college is bound by the laws of State of California, the California Education Code, and the policies and procedures of the Coast Community College District.

Student Code of Conduct

Students enrolled at Orange Coast College assume an obligation to conduct themselves in accordance with the laws of the State of California, the California Education Code, and the policies and procedures of the Coast Community College District. The Code of Conduct has been established by the Coast Community College District Board of Trustees to provide notice to students of the type of conduct that is expected of each student. Being under the influence of drugs and/or alcohol or the existence of other mental impairment does not diminish or excuse a violation of the Code of Conduct.

An Orange Coast College student found to have violated any of the following regulations that are District or campus related will be subject to the maximum sanction of expulsion.

- Aiding, abetting or inciting. (3.1)
- False report of emergency. (3.2)
- Any action which results in serious injury or death. (3.3, 3.10)
- Infliction of mental harm upon any member of the District community. (3.4)
- Possession of weapons. (3.5)
- Rape/sexual assault. (3.6)
- Sale of Alcohol or Narcotics. (3.7, 3.8)
- Repeat Suspension. (3.9)

An Orange Coast College student found to have violated any of the following regulations which are District or campus related may be expelled, placed on probation, or given a lesser sanction.

- Abusive behavior. (4.1)
- Assault/battery. (4.3)
- Cheating/plagiarism. (4.4)
- Continued misconduct. (4.6)
- Damaging or stealing library materials. (4.22)
- Destruction of property. (4.7)
- Discrimination. (4.8)
- Disruption of the educational process. (4.9)
- Disruptive behavior. (4.10)

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- Disturbing the peace. (4.11)
- Failure to appear before a district official when directed to do so. (4.12)
- Failure to comply or identify. (4.13)
- Failure to obtain permits before participation in an organized protest. (4.14)
- Failure to repay debt or return district property. (4.15)
- Fighting. (4.16)
- Forgery. (4.17)
- Gambling. (4.18)
- Harassment. (4.19)
- Hateful behavior. (4.20)
- Lewd conduct. (4.21)
- Misrepresentation. (4.23)
- Misuse of college identification. (4.24)
- Possession of alcohol or narcotics. (4.25, 4.26)
- Sexual harassment or the threat of sexual assault. (4.27, 4.30)
- Smoking where prohibited. (4.28)
- Theft. (4.29)
- Unauthorized entry or trespass. (4.31)
- Unauthorized possession of property. (4.32)
- Unauthorized tape recording or use of electronic devices. (4.33, 4.36)
- Unauthorized use of alcoholic beverages. (4.34)
- Unauthorized use of District keys. (4.35)
- Unauthorized use of property or services. (4.37)
- Unreasonable demands. (4.38)
- Violation of District computer usage policy, computer theft, or other computer crime. (4.5)
- Violation of driving regulations. (4.39)
- Violation of health and safety regulations. (4.40)
- Violation of local, state, or federal law, or violation of posted District rules. (4.41, 4.42)

Please Note

This publication must be prepared well in advance of the time period it covers; therefore, changes in some programs and policies may occur. Courses as described are subject to change without notice and some listed courses are not offered each year. In addition, some courses or programs that are offered may have to be cancelled because of insufficient enrollment, elimination or reduction in programs or for any other reason considered sufficient by the College President or designee. Any questions about courses or programs listed in this catalog should be directed to the Counseling office.

Copies of the Coast Community College District Student Code of Conduct and Disciplinary Procedures which includes complete definitions of the above violations are available in the Office of the Dean of Student Services.

Admission and Academic Information

We want to make your enrollment at Orange Coast College as easy as possible. It begins when you complete and file an application form in the Admissions Office, either in person, by mail or by our internet web site.

New students will then take placement tests in English, reading and math. These tests are designed to help the student select courses which will lead to academic success.

Placement testing is followed by an orientation and counseling session. At this time counselors will help with the selection of appropriate courses and you will receive your permit to register.

These activities are followed by the actual registration process: signing up for classes and paying fees.

If a choice of a major is any one of the many allied health career programs, students must go through a special admission process in addition to the activities described above. Additional information may be found in this section.

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Entrance Requirements

Admission to Orange Coast College is granted to any resident meeting one of the following requirements:

- Is a high school graduate.
- Has a Certificate of Proficiency or a G.E.D. from the State of California.
- Is at least 18 years old and who, in the judgment of college officials, is capable of profiting from instruction at our college.
- Students who are enrolled in the 11th or 12th grade and are recommended for advanced academic or vocational college level study.

Specific criteria exist for student financial aid under Title IV of the Higher Education Act. Students who are not high school graduates or do not possess equivalent certification and who are students seeking degrees or certificates and taking six (6) or more units of credit must be assessed and counseled before they are admitted.

District residents enrolled as 11th or 12th grade students may enroll for courses at Orange Coast College under provisions of the Education Code, sections 76001 or 76001.5, and in accordance with the district's policy. Following are the guidelines for registering these students for our regular sessions:

- Students must be at least minimum day 11th or 12th grade students at their schools.
- The course is an advanced academic or vocational experience for the student and not available at their regular school.
- Students must have letters of permission, signed by the principal or the designee of their school, recommending the specific course or courses.
- Students who have not completed the tenth grade may inquire through the appropriate Division office. If approved, the student and their parent(s) must obtain the permission of the respective Division Dean and faculty and attend an orientation appointment scheduled through the Office of the Dean of Admissions and Records.

Application

Anyone who wants to enroll at Orange Coast College must fill out an application for admission form. Application forms may be picked up in person or obtained by writing to this address:

Orange Coast College
Admissions Office, Room 109
2701 Fairview Road, Box 5005
Costa Mesa, California 92628-5005
<http://www.occ.cccd.edu>

Transcripts

If you have completed English or mathematics course work at another college or university, you *must* submit those transcripts for evaluation to the Admissions or Matriculation Office before enrolling in any course with an English or mathematics prerequisite. College transcripts may also be required for graduation, certificate of achievement, transfer certification and advisement purposes. Orange Coast reserves the right to evaluate work completed at other colleges. Official student transcripts of records from other institutions become the property of Orange Coast College.

Priority Registration Policy

The Coast Community College District is committed to the philosophy that all students should have fair and equitable access to courses and programs within the resources of each college and in accordance with State Education Code, Title 5 provisions and guidelines adopted by the Board of Governors. Further, the District believes that students should be able to progress toward their stated educational objective in a timely manner.

The primary mission of the District colleges is to provide transfer and vocational courses and programs. Therefore, priority is extended to matriculated students who have demonstrated progress toward their declared educational objectives, the completion of their transfer requirements, and/or the completion of a degree or vocational certificate.

Enrollment priority is the process used to determine the order in which students will have the opportunity to register for classes. Recognizing that each college serves a unique student population that

may have differing needs, the development of specific registration priorities will be done at the college level in accordance with District procedures.

Contact the Administrative Dean, Admissions and Records for additional information.

Matriculation

The purpose of matriculation is to ensure access to programs and courses for all students who can benefit, and to facilitate successful completion of each student's educational objectives.

On the college's part, the matriculation agreement includes providing an admissions process; orientation to college programs, services and procedures; pre-enrollment assessment and counseling; advisement and counseling for course selection; a suitable curriculum or program of courses, and continuous follow-up of student progress with referral to appropriate support services when needed.

On the student's part, the agreement calls for an expression of at least a broad educational intent at entrance and the willingness to declare a specific educational objective within a reasonable period of enrollment. Diligence in class attendance, completion of assigned coursework and maintenance of progress toward an educational goal is expected.

Course Prerequisite, Corequisite and Advisory on Recommended Preparation

A "prerequisite" is a course you are required to complete with a "C" or better, or a skill you are required to have before you enroll in another course. A "corequisite" is a course you are required to take at the same time you are enrolled in another course. All prerequisites and corequisites are designed to ensure you have the skills or information you need to succeed in the course. These requirements are established in such a way that without meeting them you are not likely to receive a passing grade in the course. A prerequisite or corequisite may also be necessary to protect your health and safety or the health safety of others.

Admission and Academic Information

An "Advisory on recommended preparation" (listed as "Recommended Preparation") is a course or skill you should have before you enroll in another course. This is advice offered to you by the faculty who teach these courses, and it should be followed if you want to do well. However, unlike a prerequisite or corequisite, "Recommended Preparation" is not required.

Course Prerequisite and Corequisite Challenge Process

A prerequisite and corequisite challenge requires the student to provide written explanation and documentation of alternative course work, professional or educational background, or demonstrated abilities which adequately prepare the student for the course. A Prerequisite Challenge Form can be obtained from the appropriate Division office. Students must follow the directions on the challenge form.

The student must file the prerequisite/corequisite challenge form not less than two weeks prior to the first day of instruction. The college will respond within five working days to the student's challenge. If the college fails to do so, the student must be admitted to the class that has the prerequisite and/or corequisite by the first day of the semester, providing that the course section was open on the date the student filed the challenge.

Reasons for seeking a prerequisite/corequisite challenge form may include one or more of the following:

- 1) A prerequisite/corequisite course has not been reasonably available or offered during the past two years.
- 2) The prerequisite has been established unlawfully, is unlawfully discriminatory, or is being applied in a discriminatory manner.
- 3) The student has the documented knowledge or demonstrated ability to succeed in the course without having completed the prerequisite/corequisite course.

A grade lower than a "C" in a prerequisite course may NOT be challenged through this process.

Decisions on challenges of prerequisite/corequisite course listings will be made by a committee of two college instructional staff members, at least one of whom will be a faculty member, knowledgeable about the discipline, but not the faculty member assigned to teach the course section for which the challenge is being made.

Placement Test Requirements

Testing for placement in English, ESL and mathematics is mandatory prior to enrolling in an English, ESL or math class. You may not register in a level higher than what is indicated for you on your test results. If you believe you can successfully complete a course above the level indicated to you, you may submit an appeal to the Literature and Language Division Dean for English or ESL. Appeals regarding mathematics may be made at the Mathematics and Science Division Office. All placements are based on both test results and student background data.

If English is not your native language and you have taken the regular English Placement Test, your placement may not be accurate for you. The regular English test may not accurately measure the reading, writing and speaking skills of non-native speakers. If English is not your native language, you should make an appointment to take the ESL Placement Test, which can correctly place you in ESL courses or in regular English courses.

To take any placement test or the English, ESL or math test, go in person to the Assessment Center in the Special Service Building or call 714/432-5789.

Admission to School of Allied Health Professions

Enrollment is limited in the health science training programs for several reasons:

- Various health care team members must have specific aptitudes and qualifications.
- Training in any health care area should be for an identified community need.

- Available clinical affiliations are limited.

General Program Requirements for All Programs

Enrolling in Allied Health 010 is the best way to apply for admission to one of the following programs:

- Cardiovascular Technology
 - Electrocardiography
 - Non-invasive Option
 - Invasive Option
- Dental Assisting – Registered
- Diagnostic Medical Sonography
- Dietetic Technician / Nutrition Care
- Medical Assisting
- Medical Transcription
- Neurodiagnostic Technology
- Polysomnography
- Radiologic Technology
- Respiratory Care

In addition, all students must prove the following:

- That they are in good physical and mental health. (A physical examination will be required before entering clinical experience.)
- That they have the required ability, as shown by their successfully completing appropriate tests. (The tests are taken in Allied Health 010 or by arrangement.)
- That they have adequate financial support so that they do not jeopardize their academic achievement and weaken their clinical experiences by extensive outside employment.

During clinical experience, students must adhere to the dress code of the program/clinical site and wear identification name pins. Students must have reliable means of transportation to off-campus clinical affiliates. Physical examination and blood testing is required for all programs; vaccinations may be required when indicated. Some areas in allied health may require criminal background checks prior to licensing/certification exams and employment.

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OCC Fees

California legislation requires the college to charge student enrollment fees. Student fees are:

The enrollment fee is \$11 per unit (at time of publication) for students meeting California residency requirements.

Other expenses to be anticipated at registration:

- \$20 parking permit
- \$11 health service fee
- \$12 College Services charge*
- \$2.50 Student Photo I.D. card (replacement charge only)

Students not meeting California Residency requirements are required to pay \$130 per unit for non-residents in addition to the \$11 per unit enrollment fee. Students who are citizens and residents of other countries are required to pay an additional \$10 per unit capital outlay fee. All fees quoted are at time of publication and are subject to change.

STUDENT PHOTO I.D. CARD: All students need a Student Photo I.D. card for use in the Bookstore, Library, and for other transactions with the college. This card may be used in succeeding semesters when properly validated. Students will be required to purchase a replacement for any lost, stolen or unusable card.

The student health service fee is mandated unless you present a waiver. Those eligible for a waiver are:

- Recipients of SSI/SSP, AFDEC, or General Assistance. For more information, phone (714) 432-5508.
- Recipients of BOGG-A, B, or C. For more information, phone (714) 432-5508.
- Students who depend solely on prayer for healing in accordance with the teachings of a bona fide religious sect, denomination, or organization. For more information, phone (714) 432-5730.
- Students in courses of less than two weeks duration.

* Students may present their request for waiver of the college services charge to the Student Services Office prior to registration.

In accordance with regulations of the Board of Governors of the California Community Colleges, Title 5, California Administrative Code, Section 59400 et seq., the Coast Community College District shall provide free of charge to students all instructional materials, except for the following materials which the student may purchase from the district at cost or may be provided through the student's own means.

- **Optional Instructional Materials:** Materials used to enhance the student's learning experience in the classroom, but that are not essential to the completion of course objectives.
- **Required Instructional Materials:** Materials required to complete the objectives of the course and that are tangible property of continuing value outside the classroom which the student will retain.

The colleges shall have the discretion to either charge or not charge a fee for instructional materials of the types indicated above. Such fees will cover actual district costs. Students may choose to provide the materials in lieu of paying the fee.

Refund Policy

According to state regulations, to be eligible for a refund students must withdraw from each course before 10% of the course is completed. All official withdrawals by the deadline will be credited to your OCC registration account. OCC student ID must be presented to a Registration representative to receive a refund in person. Students who register telephonically are obligated for all fees incurred unless they drop by the refund/fee cancellation date.

1. To be eligible to receive a refund you must officially withdraw from classes by the deadline date printed on your student program. You may do this **in person, through the mail or over the Touch-tone System (714) 438-8222**. If withdrawing through the mail, please be sure your envelope is postmarked

ON OR BEFORE THE REFUND DEADLINE.

If you wish someone to withdraw you from your courses and receive your refund, the person you designate must present written authorization to the registration clerk and they must present some form of photo identification.

2. If you are withdrawing from all your classes and wish to receive a refund for ALL fees, you must do the following **ON OR BEFORE THE DEADLINE DATE**, for each of the courses being dropped.

- A. Withdraw from classes
- B. Return Parking decal (if purchased) in person, or mail postmarked by all class refund deadlines

Please Note: The student ID Card is **NON-REFUNDABLE** after the card is issued.

3. **If you are withdrawing partially (i.e. one or two classes):**

You will be eligible for refund only for enrollment and material fees for classes dropped by each class deadline

4. **Fees Paid by Check:**

When fees are paid by check, you must meet all criteria set forth in items listed above. Further, in order to receive your refund money, 30 days must pass from the time the check was posted to your registration account **OR** you must present proof that the check has been cleared by your bank (canceled check or bank photocopy).

STOPPING PAYMENT ON A CHECK DOES NOT CONSTITUTE AUTOMATIC WITHDRAWAL from class. A check returned from the bank for any reason is subject to a \$15.00 service charge.

- 4B. **FEES PAID BY CASH OR DEBIT CARD-** (must meet all criteria set forth in Items 1-2 above) Refunds will be issued in cash. Refunds exceeding \$250 will be made by check.

- 4C. **FEES PAID BY CREDIT CARD** (must meet all criteria set forth in Items 1-2 above)

- a. **Fees paid by credit card over the touch-tone system:**

You may submit your request for a refund by mail or come into the Registration Office in person. We will need both the credit card numbers and the expiration date of the card

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you used for paying your fees.

b. Fees paid by credit card through the mail or in person:

You may submit your request for a refund by mail or come into the Registration Office in person. You must present the ORIGINAL CREDIT CARD RECEIPT received at the time of payment, or your credit card statement showing the original charge.

5. Cancelled Classes:

Fees paid at registration for the canceled class will be refunded if Orange Coast College cancels a class. The student must come in to the Registration Office to pick up the refund, or make written request for it to be mailed.

6. REFUNDS ARE NOT AUTOMATICALLY MAILED TO YOU.

Requests for refunds must be submitted in-person or by mail. Cash refunds are limited to \$250. Refund form previous semesters and those over \$250 must be mailed and may take approximately 4-6 weeks for the time of eligibility to process.

Residence Requirements

California Residence

Any person satisfying the entrance requirements may attend Orange Coast College regardless of the city in which they live. Only persons meeting California residence requirements are exempt from out-of-state tuition.

California Residence: Generally California residence is established by one of the following:

1. If the applicant is under the age of 18, his or her parents must have had legal residence within the State of California for 12 consecutive months preceding the day before the first day of the semester.
2. If the applicant is 18 but not yet 19 years of age, the applicant and the applicant's parents must have had legal residence within the State of California for 12 consecutive months preceding the day before the first day of the semester.
3. If the applicant is 19 years of age or older, the applicant must have residence within the State of California

for 12 consecutive months preceding the day before the first day of the semester. If the applicant's parents or legal guardians reside out-of-state, the student must meet requirements for financial independence. (See Non-California Residents #4).

4. A non-citizen holding a visa that does not preclude the student from establishing residency in California must have legal residence in California for 12 consecutive months preceding the day before the first day of the semester.

It is the responsibility of all students to maintain an accurate address on file with the Admissions and Records Office.

Non-California Residents: An individual who does not meet the California residency requirements may be admitted under the following conditions:

1. Students who are not residents of California as of the day immediately preceding the first day of the semester or summer session will be required to pay non-resident tuition.
2. Active military personnel are exempt from non-resident tuition fees provided they are in California for a purpose other than attending a state-supported institution of higher learning.
3. Dependents of active military personnel are granted a one-year exemption from paying the non-resident tuition fee. The one-year period begins on the date the dependent enters California. After the exemption period has ended, dependents will be charged non-resident tuition unless they have met the residency intent and durational requirements for a one-year period prior to the residency determination date.
4. Minors (under 18 years of age and not married) will be required to pay the non-resident tuition fee if their parents or legal guardians reside outside the state even though such minors may have lived in the State of California for one year or more.
5. Students who are financially dependent on their parents or legal guardians will be required to pay non-resident tuition if their parents or legal guardians reside outside the state even though such students may have lived in the State

of California for one year or more.

6. Alien students holding visas which preclude them from establishing residency in California may be restricted in their enrollment and will have to pay non-resident tuition. In addition, alien students with visas who are citizens and residents of another country are required to pay an additional per unit capital outlay fee.

International Students

OCC is authorized by the United States Immigration Naturalization Service to enroll International Students (F-1).

The faculty, students and staff of OCC believe that our international students provide an ethnic and cultural diversity to the campus and help increase the awareness and understanding of students from other countries and cultures. Conversely, we provide an opportunity for our international students to study in the United States and learn about us and our culture. If you join in our college activities, enter into class discussions and let us get to know you, we know that our lives and country will be enriched. Hopefully, yours will be too.

Interested international students should request applications for admission from the International Center, Orange Coast College, P.O. Box 5005, Costa Mesa, California 92628-5005.

The following are entrance procedures for international students requesting F-1 status:

- Our rolling admissions process allows for acceptance to OCC during the Fall, Spring and Summer terms. Applicants outside the U.S. should apply at least two months prior to the start of the term. Approximate start dates: Fall in mid-August, Spring in mid-January, and Summer in mid-June. We recommend early application for the best selection of classes.
- International applicants must complete an International Student Admission Packet and file that application with the International Center. A \$30 application fee, in U.S. dollars must be submitted with the application.

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- All evidence of academic achievement which is equivalent to American high school graduation or higher must be submitted. The transcripts of the original records must be accompanied by a notarized English translation.
- All applicants must demonstrate knowledge of the English language sufficient to enable them to profit from instruction. A score of 500 on the Test of English as a Foreign Language (TOEFL) or for applicants in the U.S., a level 5 placement on the College's English Assessment Test is required for admission. To make arrangements to take the TOEFL, write to: TOEFL, Educational Testing Service, P.O. Box 592, Princeton, New Jersey 08540. International students must designate Orange Coast College (Institutional Code 04584) as the recipient of the test results.
- When available, International students must submit all prior college transcripts along with a notarized English translation of completed courses and their grades.
- International applicants must present satisfactory statements about their character, background and experience. They must include a statement of financial support.
- International students must maintain health insurance during their entire course of studies at OCC, either through the college carrier or through a private carrier meeting the minimum requirements.
- International students must complete 12 or more units each semester with a 2.0 grade point average while pursuing their selected academic goal.
- The Immigration and Naturalization Service (INS) restricts international students from off-campus employment. International students must get approval from the INS and the Director of the International Students Office before they can be legally employed off-campus.
- International students pay non-resident tuition during their entire at-

tendance at Orange Coast College.

- Admission materials received from international applicants remain active for twelve (12) months after their submission. If the international applicant does not register during that 12-month period, the materials are destroyed.

Aliens

Aliens with the types of visas listed below, otherwise eligible for admission, may enroll for a maximum of 6 units provided they are proficient in English and have visas that do not expire before the end of the term for which they are enrolling.

- A—Career Diplomat
- B—Visitor
- E—Foreign Investor
- G—International Treaty Organization Representatives and Dependents
- H—Temporary Worker and Dependents
- I—Foreign Press
- J—Exchange Visitor
- K—Fiance'(e)
- L—Intra-Company Transferee and Dependents

An alien who is precluded from establishing domicile in the United States shall not be classified as a resident unless and until he or she has been granted a change in status by the Immigration and Naturalization Service to a classification which permits establishing domicile and has met other residency requirements.

Veterans, Active Duty Military and Credit for Military Training

Orange Coast College is approved for training veterans under all applicable laws. The college helps veterans by cooperating with the Veterans Administration and the California State Department of Veterans Affairs. Orange Coast College is a Servicemen Opportunity College (SOC) and establishes policies and programs for educating veterans and active-duty military personnel.

Veterans who were on active duty more than 180 days from February 1, 1955, through December 31, 1976, are eligible for veterans' benefits under the G.I. Bill. Those who entered the service on or after January 1, 1977, may be eligible for benefits under the contributory plan: Veterans may be entitled to 1 1/2 months of educational assistance for each month, or fraction thereof, that they served, to a maximum of 36 calendar months. In almost all cases, a veteran's education must be completed within 10 years from the veteran's date of discharge.

Some benefits are available for active-duty personnel. Those personnel must be attending college on their own time and must have served at least two years.

Orange Coast College recognizes credit and grants credit to veterans for service and training completed in the armed forces. Credit is granted according to recommendations of the American Council on Education. Orange Coast College accepts work completed through the United States Armed Forces Institute. Veterans must present authentic military service and training records, including a copy of discharge papers, to the Veteran's Clerk.

If an applicant wants credit for military training but has no previous college work, the applicant must complete one semester of residence (12 units) at Orange Coast College before receiving credit for military service. Credit earned for military training counts toward satisfying requirements for the associate in arts degree. However, under no circumstances will Orange Coast College graduate a veteran who has not completed 12 units as a resident student.

Transfer to Other Colleges

Students can complete up to two years of coursework at Orange Coast College before transferring to another college or university. Many programs are available which qualify students for junior standing in most four-year colleges and universities in the United States. Students planning to transfer should consult the catalog of the college or university in which they are interested.

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With a counselor's assistance, students can select Orange Coast College courses which satisfy the lower division requirements of that college or university.

Catalogs of schools, colleges and universities are available in the Counseling Center, the Transfer Center and in the library. Also, be sure to see the Transfer Information section of this catalog.

Upon request, a transcript from OCC will be sent to another college or university. Two transcripts of record are provided free. Each additional transcript or verification of record costs \$3.

Study Load and Student Classification

The average student, enrolled full-time in classes at Orange Coast College, carries 15 units. This load requires most students to spend 40-45 hours each week preparing for and attending classes. The college recommends that entering freshmen carrying a full academic load (15 or more units) plan to work no more than 12-16 hours each week. Students having a poor high school record—below a "C" average—probably should work no more than 6-8 hours each week.

No student may carry more than 19 units without the permission of the Dean of Counseling Services. Students are classified as follows:

Freshman—A student who has completed fewer than 30 units.

Sophomore—A student who has completed 30 or more units.

Part-time—A student carrying fewer than 12 units.

Full-time—A student carrying 12 or more units.

Remedial Coursework Limits

No more than 30 semester units of course credit may be assigned to a student for remedial coursework except, when the student is enrolled in one or more courses in English as a Second Language or is identified as having a learning disability. This limit may be waived if the student can show significant, and/or measurable progress toward the development of skills

appropriate to enrollment in college-level courses. Students needing remedial instruction beyond the course credit restrictions set forth in this section shall be referred to appropriate non-credit adult basic education programs conducted by an adult school.

Alternate Methods of Study and Course Credit

Orange Coast College recognizes work taken at other accredited colleges and for experiences outside of the traditional classroom setting. Accordingly, college credit is awarded in the following areas:

Credit by Examination

Students may petition for credit by examination for courses listed in the college catalog.

Before they petition for credit by examination, students must have completed one semester with a minimum of 12 units at Orange Coast College, with a cumulative grade point average of at least 2.4 ("C+").

Procedure - To earn credit by examination, follow these steps:

1. Get a petition from the Counseling Office.
2. Have the petition approved by the instructor who sets the requirements to be met by the student.
3. Have the petition approved by the Director of Admissions and Records.
4. Fulfill the requirements so that the instructor can certify the final grade earned.

Students should not enroll in the course to be taken as credit by examination.

This earned credit is identified by course on the students' transcript and designated "Credit by Examination." Units earned by examination will not be counted toward the 12 units in residence that one must take at this college in order to earn a degree. Units for credit by examination are excluded from enrollment verifications.

CLEP – College Level Examination Program

Orange Coast College will grant a maximum of 24 units for any combination of CLEP general exams and subject exams using as minimum standards a score at or above 500 on the general exams and 50 on the subject exams. CLEP scores will count toward graduation requirements at OCC under General Education Option 1 or Option 2 but will not be used to certify general education requirements for transfer. CLEP credit granted at OCC does not necessarily transfer to other colleges. The transferability of CLEP units is determined by the four year colleges according to their policies. The University of California does not grant credit for CLEP exams. The California State University will accept some CLEP exams; however, policies, including exams accepted and scores required, differ on each campus. CLEP policies for each four-year college can be found in their catalogs.

Students should request CLEP credit in the Records Office. Exam results and units granted will be posted on the student's transcript after completion of 12 units of course work at OCC. Credit for CLEP exams is granted as follows:

A. General Examinations:

Option 1:

English Composition – 3 units in Area A1 and 3 units of elective credit

Humanities – 3 units in Area C1 and 3 units of elective credit

Mathematics – 3 units in Area A2 (also meets math graduation requirement) and 3 units of elective credit

Natural Science – 6 units in Area B

Social Science – 3 units in Area D2 and 3 units of elective credit

Option 2:

English Composition – 3 units in A2 and 3 units of elective credit

Humanities – 3 units in Area C1 and 3 units in Area C2

Mathematics – 3 units in Area B3 and 3 units of elective credit

Natural Science – 3 units in Area B1 and 3 units in Area B2 (does not meet lab requirement)

Social Science – 3 units in Area D (does

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not meet American history and political science requirement) and 3 units of elective credit

B. Subject Examinations:

3 units of credit will be granted in the discipline for each Subject Examination and will meet elective credit or subject area requirements in both Option 1 and Option 2 for graduation purposes.

Please see a counselor for other kinds of standardized college-level examinations. For more information, call the Testing Office, (714) 432-5789.

Credit by Advanced Placement

Orange Coast College grants credit toward an Associate Degree for successful completion of examinations of the Advanced Placement Program of the College Entrance Examination Board. Students will be granted semester units of college credit as listed below. Advance Placement credit will be granted at OCC according to the following policies:

1. Course credit granted for Advanced Placement Examinations can be used to meet OCC general education requirements for an AA degree under General Education Options 1, 2 or 3.
2. Course credit earned through Advanced Placement Examination can be used to certify general education requirements for transfer to UC under Option 3 (Intersegmental General Education Transfer Curriculum). AP credit can be used to certify general education for transfer to CSU under Option 2 (CSU General Education Breadth) or Option 3 (IGETC). Students being certified using Option 3, can use only one course per exam on the IGETC.
3. The posting of AP credit on the OCC transcript does not ensure its transferability to four-year schools. Each four-year school grants AP credit according to their own policy. In some cases OCC will grant more units of credit than a particular school, sometimes less. Students planning to transfer should consult the catalog of the transfer institution to determine how AP credit is granted at that school.

4. Students will not be given duplicate credit for college courses and exams.

Students should request Advanced Placement credit in the Records Office. 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 OCC as follows:

EXAMINATION	SCORE	UNITS	COURSE
ART (STUDIO)			
General Portfolio	3	3	Art 110
ART (HISTORY)	3	6	Art 100 & 101
BIOLOGY	3	4	Biology 100
CHEMISTRY	3	5	Chemistry 110
ECONOMICS			
Macroeconomics	3	3	Economics 180
Microeconomics	3	3	Economics 185
ENGLISH			
Composition & Lit	3	3	English 100
Language & Comp	3	3	English 100
FOREIGN LANGUAGE			
French Lang	3	5	Fren 185
German Lang	3	5	Ger 185
Spanish Lang	3	5	Span 185
GOVERNMENT/POLITICS			
Comparative	3	3	Pol Sci 185
HISTORY			
American	3	6	Hist 170 & 175
European	3	6	Hist 180 & 185
MATHEMATICS			
Calculus AB	5	5	Math 180
Calculus BC	3	5	Math 180
Calculus BC	5	5	Math 185
MUSIC			
Listening & Literature	3	3	Music 100
Theory	3	3	Music 115
PHYSICS			
Physics B	3	4	Phys 110 & 111
Physics C1 (Mech.)	3	4	Physics 120
Physics C2 (Elect. & Magnetism)	3	4	Physics 125
PSYCHOLOGY	3	3	Psychology 100

Assessment of Prior Learning (APL)

Prior Learning is learning acquired on the job, through self-study, in-service training, trade or private schools, self-employment, and home and community experience. Assessment means that Orange Coast College evaluates and may grant college credit for prior learning.

Before being accepted into the APL program, the student must have an educational goal toward which the credits will apply, such as earning a degree or a certificate, or transferring to a four-year college.

A strong background of skills and knowledge that encompasses several academic or vocational areas is essential.

The number of units received depends on the equivalent documented experience and learning evidence, as well as on the number of units required to graduate or to earn a certificate.

The transferability of APL credit is determined by four-year colleges and universities according to their policies.

Students may earn up to 30 units through APL.

After acceptance into the APL program, the student will prepare a portfolio detailing and documenting work, life and learning experiences. This portfolio ordinarily takes from 18 to 20 weeks to complete. When the portfolio is complete, it is submitted to a faculty evaluation team who will make the final decision about awarding credits for prior learning. There is a \$500 fee for this program, due after completion of the portfolio.

To apply for admission into the Assessment of Prior Learning Program, call the APL office in the Counseling Center, (714) 432-5959 or e-mail to apl@mail.occ.cccd.edu.

Learning Contract for Independent Study

This is an alternative method of college study. If the instructor and the Division Dean agree, a student may take any course in the Orange Coast College catalog on a contract basis. The number of units received and the prescribed hours of study will follow the approved catalog description. Two kinds of independent study exist at Orange Coast College:

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Contracted Studies

A student who, for one reason or another, cannot attend a class or classes may negotiate Independent Study Contract by following these procedures:

1. Get a Learning Contract from the particular division office.
2. Get the permission of the instructor and ask the instructor to specify in detail in the context of the contract the way the student will master the study area and the criteria for evaluation.
3. Have the instructor and Division Dean approve the contract.
4. Take the contract personally to the Records Office if the contract is approved. The Records Office will officially enroll the student in the course.
5. After the student completes the coursework, the instructor will certify the earned grade. The Records Office will then record the grade on the student's transcript.

Directed Studies

A student may take advanced coursework in a field of study after having completed the introductory courses. Most departments offer a set of directed study courses numbered 291AD-295AD. In unusual cases, students may enroll in directed studies without completing the pertinent beginning courses. Directed studies students must have the instructor fill out a Learning Contract for Independent Study and have it approved by the Division Dean. Follow the procedures given under contracted studies.

Course No.	Units	Clock hours per semester
291AD	1	054
292AD	2	108
293AD	3	162
294AD	4	216
295AD	5	270

A maximum credit of 3 units per term, 6 units total, in otherwise transferable subject areas is allowed. The granting of transfer credit for courses of this kind is contingent upon a review of the course outline by a University of California or California State University campus.

Study Abroad Program

As part of the curriculum, the Coast Community College District sponsors a study abroad program for students who would like to enroll in a full schedule of classes while exploring a foreign culture in a location abroad. These educational opportunities, led by district faculty, include studies in art, foreign language, humanities, literature and science with fully transferable college credit. Included are semester programs in Costa Rica, Spain, France, Italy, and England, as well as summer programs in France, Italy, Ireland, and Spain. The Study Abroad Program is administered by the District Office of International Education. For information call (714)438-4704.

Military Study Programs

Three units of Health Education 100 will be awarded for a minimum of one year of active service. In addition, credit will be awarded for work at Military Service Schools according to the standards established in the American Council on Educational Guides. Credits are posted to transcripts upon completion of 12 units at Orange Coast College. Students should request the Military Evaluation from the Admissions and Records Office and attach copies of their DD214 and certificate(s).

Professional Secretarial Examination

Up to 30 units may be awarded for the following certificate holders: Certified Professional Secretary, Professional Legal Secretary, and Certified Medical Assistant, Administrative. Credits are posted to transcripts upon completion of 12 units at Orange Coast College.

Licensure Credit for Radiologic Technologist

Forty-five units may be awarded for holders of valid Certified Radiologic Technologist State License (or equivalent agency). Students must show the original license to the office of Admissions and Records in order to be eligible for this credit. Credits are posted to transcripts upon completion of 12 units of credit at Orange Coast College.

Other Licensure Credit

Other licenses issued by the State of California will be considered through the Academic Petition Council procedures as appropriate.

Grades and Grade Points

Performance in courses is indicated by one of seven grades. Five of these grades signify passing work. Each grade and its value in grade points follow:

Grade	Significance	Grade Points	P e r
Unit			
A	Excellent	4	
B	Good	3	
C	Satisfactory	2	
D	Passing; less than satisfactory	1	
F	Failing	0	
CR	Credit; at least satisfactory	(units awarded; not counted in GPA)	
NC	No Credit; not satisfactory or failing	(not counted in GPA)	

The grade point average is calculated by dividing the number of grade points by the number of units attempted for the grades of A,B,C,D,F. (CR and NC are not used in this calculation.)

The following non-evaluative abbreviations may be used as defined, but they will not be used when calculating grade point averages.

Abbreviation/Definition

W (Withdraw)

1. Withdrawing from a class is permitted by notifying the Student Records Office in writing or through the Touch-tone System through the last day of the 14th week of the semester or through 75 percent of a course, whichever is less.
2. No notation ("W" or otherwise) is made on the permanent record of a student who withdraws during the first four weeks of the semester or during the first 30 percent of a course, whichever is less.

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- The student is responsible for withdrawing from class within the appropriate time to avoid an unsatisfactory grade, and verifying receipt of withdrawal.

I (Incomplete)

- If agreed upon between the instructor and the student or, if necessary, by the instructor alone, a student may receive an "I" grade when work in the class cannot be completed.
 - Most of the academic work must be completed and there must be a justifiable reason for receiving the incomplete.
 - The condition for removal of the incomplete shall be stated by the instructor in a written record and the college will mail the form to the student.
 - An incomplete must be made up no later than one year following the end of the term in which it was assigned.
 - An incomplete not made up within the one-year limit changes to the alternate grade assigned by the instructor when the "I" was given.
 - A student may not re-enroll in a class in which the student received an incomplete.

IP (In Progress)

- The "IP" abbreviation is used only in those courses which extend beyond the usual academic term. The "IP" symbol remains on the student's academic record to document enrollment, but is not used in calculating grade points averages. If a student enrolled in an "open-entry, open-exit" course is assigned an "IP" at the end of a term and does not re-enroll in that course during the next term, the appropriate grade will be assigned.

RD (Report Delayed)

- The "RD" abbreviation is used only by the registrar. It signifies a delay in reporting the grade of a student because of circumstances beyond the student's control.

Students who enroll in courses designated "graded or credit option" and choose the credit option instead of a letter grade must complete a request form obtained from the Records Office.

- Students must choose either the letter grade option or the credit/no credit option no later than the fifth week of a semester-length course or before the completion of 30 percent of the course.
- Before selecting the letter grade option or the credit option, students should consult with a counselor. Generally, it is recommended that courses satisfying requirements for majors, general education, or a high school course deficiency be taken for a letter grade.
- A maximum of 15 units of credit option coursework earned at an accredited college or university will be counted toward the degree requirements of this college.
- Grades of "NC" are considered unsatisfactory for progress probation or dismissal.
- In courses where one performance standard determines unit credit, only the grade "CR" or "NC" is given.

Grades for Repeated Courses

Students may repeat a course in which they received a NC, D, F or "W" one time only. Only the second grade and units in the repeated course will be counted when determining grade point average. If the course is repeated within the Coast Community College District, a student can request to have the first substandard grade for a repeated course removed from the grade point average calculation, by filling out the Petition to Line Out a "D" or "F" grade available in the Records Office.

Course Repetition

If grades of "D", "F", "NC" or a "W" were received for a prior course, students may repeat the course one time only at Orange Coast College, Goldenwest College or Coastline Community College, without any special approval. After two unsuccessful attempts, a student's registration in the course is automatically blocked. Students may petition the OCC Academic Petition Council for consideration of a third attempt. Petitions are available in the Counseling Office and should be filed at least two weeks prior to the semester start date.

If grades of "A", "B", "C", or "CR" were received for prior course completions, students may petition the Division Dean of the course discipline to determine if the course is eligible for audit.

If a course is repeated within the Coast Community College District, students may petition the Records Office to have their grade point averages re-calculated to omit the prior unsatisfactory grade(s) of "D" and "F". However, previously recorded coursework will not be removed or otherwise changed on the student's permanent record.

If a grade of "I" (incomplete) is received for a course, a student may not enroll in the course. That course is completed if the student meets the prescribed requirements as set forth by the faculty member issuing the "I" grade.

Repeatability

Courses designated A-B, A-C, A-D may be repeated for credit; however, they may not be taken concurrently. A-B designated courses may be taken twice for credit; A-C courses three times, and, A-D courses four times. A course may be designated as repeatable (AB, AC, or AD) only if,

- the course content differs each time it is offered

AND

- the student who repeats the course is gaining an expanded educational experience for one of the two following reasons:
 - Skills or proficiencies are enhanced by supervised repetition and practice within class

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- periods; or
- b. Active participatory experience in individual study or group assignments is the basic means by which learning objectives are obtained.
 3. Disabled students may repeat a special education class beyond the four semester limit if it is determined that continued success in other college courses is dependent on additional repetitions of the special education class. Also, students who exceed the four semester limit may do so only if they demonstrate measurable progress according to their educational plan. (Section 56029, Title 5 of the California Code of Regulations.)

Courses designated as repeatable shall show in the course outline how each A-B-C-D segment differs. Students who are unsuccessful (W, D, F, NC) in the first two enrollments in a course are automatically blocked from enrollment in that course.

Associate of Arts Degree

Orange Coast College awards an Associate of Arts degree to students who have met all the general education requirements for graduation. The Associate Degree is not automatically awarded. A petition must be filed in the Records Office at the beginning of the semester in which you will be completing your final requirements. Petitioning periods are listed below.

The graduation requirements can be found beginning on page 33. Check with your counselor to determine which general education option you should complete and for a grad check before submitting your graduation petition.

Petitioning periods for the Associate Degree are:

- Summer - June 1 through July 15
- Fall- August 15 through October 15
- Spring- December 1 through March 1

Certificate Awards

Orange Coast College offers two types of certificate awards in career programs which are designed to prepare

the graduate to enter a particular field of employment.

1. **Certificate of Achievement:** Requires 18 or more units in an approved program. Certificates of Achievement are not automatically awarded. A petition must be filed in the Records Office at the beginning of the semester in which you will be completing your final requirements. Petitioning periods are listed below.
2. **Certificate of Completion:** Approved programs of less than 18 units. Certificates of Completion are not awarded automatically. Petitions are submitted to the Division Office of each specific program. The procedures for each division will vary (please call for details.) Most Division Offices prefer that you complete all of your required courses and then provide them with a copy of your transcripts. Some divisions will allow applications for Certificates of Completion prior to finishing.

Petitioning periods for Certificates of Achievement are:

- Summer - June 1 through July 15
- Fall- August 15 through October 15
- Spring- December 1 through March 1

• *A list of the career programs and their requirements can be found beginning on page 50. Check with your counselor to determine the requirements you should complete.*

Waiver of AA and/or Certificate Requirements

Students wishing to substitute or waive courses which satisfy AA or Certificate of Achievement requirements must see a counselor and petition the Academic Petition Council.

Course Auditing

In accordance with the California Education Code Section 76370 and district policy, students may audit courses specifically designated by the college as eligible for audit (primarily certain dance/musical/theatrical performance or physical education laboratory courses). Students who audit classes will be expected to participate in all class activities as required by the instructor. No credit is awarded. Further information can be obtained in the

Division Deans' Offices or in the office of the Administrative Dean of Admissions and Records.

Academic Standards

Standards of academic excellence are cornerstones of learning institutions and, therefore, should be maintained and promoted. It is the responsibility of all college community members to be familiar with ways to promote the highest standards of academic performance. The following guidelines are designed to clarify and facilitate attitudes and behavior consistent with standards of academic excellence.

Attendance

Please note that students who miss the first meeting of a class or who have too many absences MAY be dropped by the instructor at any time during the semester until the final deadline for withdrawal.

Absences

Instructors may allow absences for reasons of illness, emergencies, or college-sponsored activities including field trips, athletic events, speech tournaments, or other co-curricular activities. Those student activities should be scheduled to minimize absences from regularly scheduled classes. Instructors are responsible for sending Co-curricular Participation Lists to the office of the Dean of Students. Students, also, should inform instructors of upcoming co-curricular activities and ask for ways of making up the absences.

Absence/Make-up Activities

Instructors may require make-up activities equivalent to the lessons missed through absence. What constitutes an excused absence, and any required make-up activities, should be stated clearly, preferably in writing, by the instructor at the start of the course.

It is recommended a student not be absent more than the number of course units in order to maintain a passing course grade/credit. That is, one hour of absence for each unit of class. State law requires an accurate attendance record in order for the college to receive funding.

Orange Coast College

Working Students

Working students should remember that taking 15 units of college coursework requires about the same amount of time as working 40 hours a week off campus; therefore, full-time students should work no more than 20 hours a week. If a student's main concern is earning a living while attending college, then that student should go to our Financial Aid Office or call 432-5165. Maybe we can help. No student should expect any instructor to lower course standards to accommodate a student whose excuse for not doing the required coursework is that of working too many hours a week at an outside job.

Academic Honors

President's List

A student is eligible to be included on the President's List after completing a semester of at least 12 units in courses awarding letter grades and in which a GPA of 4.0 is earned. You will be sent a letter of recognizing this achievement. For additional information, please contact the Office of Instruction in the Administration Building.

Dean's List

A student is eligible to be included on the Dean's List after completing a semester of at least 12 units in courses awarding letter grades and in which a GPA of 3.50 to 3.99 is earned. To request a letter recognizing this achievement or obtain additional information, please contact the Office of Instruction in the Administration Building.

Honors List

A student is eligible to be included on the Honors List after completing a semester of 6.0 to 11.9 units in courses awarding letter grades and in which a GPA of 3.75 to 4.0 is earned. For additional information, please contact the Office of Instruction in the Administration Building.

OCC Honors Program

The Orange Coast College Honors Program provides courses designed to challenge the highly motivated student. Instructors for honors courses enhance basic curriculum requirements of their classes by offering more intensive study than is possible in most regular course sections. Honors sections are listed in the fall and spring class schedules.

Honors Program benefits include the potential for priority transfer admission to several four-year institutions, interaction with highly motivated students, and honors designation on transcripts. Honors Program completion requirements include eighteen units of honors credit from three different campus departments with at least a 3.0 GPA in all college work.

Students who do not meet the general requirements for participation in the Honors Program are encouraged to **become** Honors students by improving their GPA's while taking regular and honors courses. Students may enroll in honors sections without applying to the Honors Program. Please call 432-5846 or 432-5647 to learn more about honors courses and the Honors Program.

Alpha Gamma Sigma

Alpha Gamma Sigma is the California Community College Honor Society. It is an extension of the California Scholarship Federation at the secondary school level. Alpha Gamma Sigma was established in 1922. The Orange Coast Chapter is Alpha Kappa. The requirements for membership in this Chapter are:

Initial Membership

- Twelve (12) semester units in a maximum of three (3) semesters, for which letter grades are awarded
- Cumulative GPA of 3.50
- No grade lower than a "C"
- No units acquired more than two (2) years prior to application for initial membership shall be used prohibitively

Continuing Membership

- Enrolled in at least six (6) units of credit for which letter grades are awarded
- Achieved for previous semester not less than 3.50 GPA
- No grade lower than a "C"

Permanent Membership

- Completed a minimum of sixty (60) semester units with a minimum of thirty (30) units, for which letter grades are awarded, and earned at Orange Coast College. Course work from other colleges to be considered for permanent membership upon review
- Maintained a GPA of 3.50 or above
- No grade lower than a "C"
- Been a member of Alpha Gamma Sigma for at least one year
- Permanent members of Alpha Gamma Sigma are eligible for selection as candidates to receive a \$500 scholarship award. Application is made under the General Scholarship in the Student Services Office.

Membership is not automatic. Students must petition through the Office of the Administrative Dean of Admissions and Records for membership, and pay semester dues.

Psi Beta

Psi Beta is the national honor society in Psychology for Community and Junior Colleges.

The purpose of the society is to stimulate, encourage and recognize students' outstanding scholarship and interest in psychology.

Psi Beta offers the experience of leadership, interaction with faculty outside the classroom, participation in community service, and meeting others with the same interests. It offers the opportunity to participate in national, regional and local programs.

Students must have completed at least 12 semester hours, 3 of which must be in psychology. The student's overall GPA must be 3.0 or better; plus "B" or bet-

Admission and Academic Information

ter grade must be received in psychology classes.

There is a one-time national registration fee of \$25, plus semester dues of \$5 to the campus chapter.

Academic Renewal Policy and Procedures

Policy

The academic renewal policy for Orange Coast College is issued pursuant to Sections 55764 and 55765 of the California Administrative Code (Title 5) regulations and Coast Community College District Board Policy No. 030-4-4. The purpose of this policy is to enable the student to have past substandard academic performance disregarded when such work is not reflective of the student's current demonstrated ability. It is based on the recognition that due to unusual circumstances beyond the student's control, past substandard work may negatively impact academic standing and unnecessarily prolong the rate at which the student is able to complete her/his current objectives.

IF SPECIFIC CONDITIONS ARE MET, ORANGE COAST COLLEGE MAY DISREGARD FROM ALL CONSIDERATION ASSOCIATED WITH THE COMPUTATION OF A STUDENT'S CUMULATIVE GRADE POINT AVERAGE, UP TO A MAXIMUM OF 30 SEMESTER UNITS OF COURSEWORK FROM A MAXIMUM OF 2 SEMESTERS OR 3 QUARTERS TAKEN AT ANY COLLEGE. THESE CONDITIONS ARE:

1. The coursework to be disregarded is substandard. The grade point average of the courses to be disregarded is less than 2.0.
2. A minimum of 12 semester units have been completed at a college in the Coast Community College District with a grade point average of at least 2.0, subsequent to the coursework to be disregarded.
3. At least 2 calendar years have elapsed since the most recent coursework to be disregarded.
4. All units taken during such a semester shall be disregarded, even satisfactory units; however, course

credit may be recognized when required as a prerequisite or to satisfy a requirement in the student's redirected educational objective.

NOTE: It is important to understand that even though renewal is granted, ALL COURSEWORK WILL REMAIN LEGIBLE on the student's permanent record (transcript), ensuring a true and complete academic history. The student's permanent record will be annotated, however, so that it is readily evident to all users of the records that the units, even if satisfactory, are to be disregarded. This notation will be made at the time that the academic renewal has been approved by the appropriate college office.

THE TRANSFER STATUS OF SUCH ACTION DEPENDS UPON THE POLICY OF THE COLLEGE TO WHICH A STUDENT TRANSFERS.

If another accredited college has acted to remove previous coursework from consideration in computing the grade point average such action shall be honored in terms of its policy. However, such units disregarded shall be deducted from the 30 semester unit maximum of coursework eligible to be disregarded at Orange Coast College.

Procedures

1. Students requesting removal of previous coursework for certificate or degree consideration shall file a petition with the Dean of Counseling. The petition shall indicate the semester(s) for coursework to be disregarded, and shall include evidence verifying the expiration of at least two years since the end of the last semester containing courses to be disregarded, and the subsequent completion of a minimum of 12 units with a 2.0 cumulative grade point average.
2. The Dean of Counseling, or his designee, upon verification of the conditions set forth in the policy statement, shall act to approve the petition and make the proper annotation on the student's permanent record.

Interpretation of the academic re-

newal policy is the responsibility of the Dean of Counseling who may, for compelling reasons, make exceptions to the stated conditions provided the requirements of Title 5 (Sections 55764 and 55765) are observed.

Probation and Disqualification Policy

Probation

A student in the Coast Community College District shall be placed on probation whenever one of the two conditions listed below are met:

1. Academic Probation

The student has attempted at least 12 semester units at a district college and

- a. has a grade point average of less than 2.0 in the most recent semester completed, or
- b. has a cumulative grade point average of less than 2.0 in all units attempted.

2. Progress Probation

The student has attempted at least 12 semester units at a district college and the percentage of units in which the student has been enrolled for which entries of "W", "I", and "NC" are recorded reaches or exceeds 50 percent.

A student on probation from one district college shall be on probation at all three district colleges. All probationary students shall be notified of their status and provided with an opportunity for counseling services. (Title 5, Sections 55754, 55755)

Disqualification

A student in the Coast Community College District who is on academic or progress probation shall be disqualified whenever one of the two conditions listed below are met:

1. Academic Disqualification

Any student on academic probation for two consecutive semesters

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shall be academically disqualified. However, any student on academic probation whose most recent semester grade point average equals or exceeds 2.0 or whose cumulative grade point average equals or exceeds 2.0 shall not be disqualified but shall be continued on academic probation.

2. Progress Disqualification

Any student who is on progress probation for two consecutive semesters shall be disqualified for lack of satisfactory progress. However, any student on progress probation whose most recent semester demonstrated that fewer than 50 percent of his/her units were "W", "I", and "NC" shall not be disqualified but shall be continued on progress probation.

Appeal for reinstatement: When notified of disqualification, a student will be informed about appeal procedures, through the Counseling Division Office.

Any student disqualified from a college within the Coast Community College District may be dismissed for a minimum of one semester. A student dismissed from one district college shall not attend another district college during the semester of disqualification. (Title 5, Section 55756)

Middle College High School

Orange Coast College's Middle College High School provides a challenging environment—on OCC's campus—for high school juniors and seniors. The school is a unique collaboration between Orange Coast College and the Newport-Mesa Unified School District.

Middle College High School provides high school juniors and seniors with a supportive and academically challenging atmosphere. It is designed specifically for students who, for a variety of reasons, may not be performing up to their full potential in a traditional high school setting. Classes are small, and individual attention is emphasized. High school classes are conducted from 7:50am until 1:00pm.

MCHS is a unique, full-time high school; students must enroll in five high school classes and one or two college courses (exceptions only with administrative approval).

Because students have access to a host of Orange Coast College resources, many will graduate from the program at the end of their senior year with a substantial number of college units to their credit. Those units will apply at OCC, or will transfer directly to another college or university.

For more information, please call Counselor, Natalie Harrigan or Principal, Joe Fox at (714) 432-5732.

Graduation Requirements

CONTINUOUS ATTENDANCE AND CATALOG RIGHTS:

For graduation (AA Degree) students may follow the catalog requirements that were in effect for the academic year when their attendance began at Orange Coast College or follow the catalog requirements in effect during subsequent years of attendance provided that continuous enrollment has been maintained.

Continuous enrollment is defined as enrollment in a course at Orange Coast College for at least one semester in a calendar year. The student must receive a grade of A, B, C, D, F, CR, NCR, W, I or IP for the course.

Exceptions: Absence due to an approved leave or to attend another accredited institution of higher education shall not be considered an interruption in attendance. This absence cannot exceed two calendar years.

The Academic Petition Council may authorize or require substitutions for discontinued courses.

Catalog rights do not apply to the certification of general education for transfer. Students must follow the GE pattern in effect when they petition for certification. Courses used for certification must be on the approved list at the time they are taken.

ORANGE COAST COLLEGE

Graduation Requirements 2000-2001

Orange Coast College grants the degree of Associate in Arts. This degree may be conferred on students who complete their college work at Orange Coast College or who prepare to transfer to a 4-year institution.

In accordance with law and with rules and regulations of the Board of Governors of the California Community Colleges and the Board of Trustees of the Coast Community College District, the requirements for the degree of Associate in Arts include the following:

1. UNIT REQUIREMENT:

60 UNITS, with at least a 2.0 grade point average. At least 12 of the units must be earned at OCC and a student must be enrolled at the time of application for graduation. Units earned at an accredited college or university on a credit/no credit basis will be counted toward the degree requirements of the college, to a maximum of 15 units.

2. MAJOR REQUIREMENT:

A MAJOR AREA of study. This may be satisfied in one of the following ways:

All courses required in a career or certificate program, of at least 18 units, 12 of which must be lower division, offered at any accredited institution, **OR**

At least 18 semester units of study taken in a single discipline or related disciplines. See list of approved disciplines at the end of this section. If a student chooses this option, a plan must be developed with a counselor and placed on file in the student's counseling folder prior to petitioning for graduation. All courses must be numbered 100 or above, **OR**

40 units toward the completion of the general education requirements for any branch of the University of California or any accredited institution, **OR**

Completion of the CSU General Education Breadth Requirements, **OR**

Completion of the Intersegmental General Education Transfer Curriculum (IGETC).

3. GENERAL EDUCATION REQUIREMENT:

A program of GENERAL EDUCATION - either Option 1, Option 2 or Option 3.

4. AMERICAN INSTITUTIONS REQUIREMENT:

Some of the courses listed in this requirement can also be used to meet General Education Requirements in Options 1, 2 and 3.

American Studies 100 **OR**

Political Science 180 or 180H **AND** History 100 or 170
170H or 175 or 175H or 177

or

5. BEHAVIORAL SCIENCE REQUIREMENT:

The courses listed in this requirement can also be used to meet General Education Requirements in Options 1, 2 and 3.

Select one course from the following:

Psychology 100, 220, 260
Sociology 280

6. MATHEMATICS REQUIREMENT:

Some of the courses listed in this requirement can also be used to meet General Education Requirements in Options 1, 2 and 3.

Place at the Math 030 level (or higher) on the math placement test administered by the OCC Assessment Center **OR**

Successfully complete (grade of "C" or better or "credit") one of the following:

Electronics Technology 047
Psychology 160
Technology 040
Any math course except N005, N008, N009, N013, N021 and 220

7. PHYSICAL EDUCATION AND DANCE REQUIREMENT:

Some of the courses listed in this requirement can also be used to meet General Education Requirements in Options 1 and 2.

A minimum of 1 unit of physical education, or dance, or marine activities (must be an activity course).

8. AMERICAN CULTURAL DIVERSITY REQUIREMENT:

Some of the courses listed in this requirement can also be used to meet General Education Requirements in Options 1, 2 and 3.

Select one or more courses from the following totaling 3 units:

Anthropology 100, 100H, 102, 110, 120, 150, 190
Art 108
Dance 130A, 133A, 135A, 136A, 137A, 138A
Early Childhood 126
Education 110
English 152, 173
Ethnic Studies 100, 150
Fashion 125
Food and Nutrition 185
History 101, 110, 150, 176
Philosophy 110, 120
Psychology 105
Religious Studies 110, 120, 140, 150, 160, 185
Sociology 115, 150, 180, 180H, 190
Speech 155

PETITION FOR GRADUATION: Students are required to petition for graduation and Certificates of Achievement at the beginning of the semester in which they will be completing their final requirements as follows:

SUMMER GRADUATION-Petition June 1 through July 15

FALL GRADUATION- Petition August 1 through October 15

SPRING GRADUATION-Petition December 1 through March 1

General Education - Option 1

Orange Coast College General Education Requirements 2000-2001

A minimum of 24 units distributed among the following. **One course may not be used to meet two** separate requirements.

AREA A: LANGUAGE AND RATIONALITY

6 semester units (or 8-10 quarter units) to include English 100 and one course from Group 2. It is strongly recommended that students begin the composition requirement within their first 12 units of coursework.

1. Composition

English 100 with a grade of "C" or better

2. Communication and Analytical Thinking

Business 139
 Communications 100
 Computer Science 115, 118, 211
 Digital Media Arts 181
 Electronic Technology 047
 English 101, 101H, 102, 102H
 Any Math course **except** N005, N008, N009, N013, N021
 Office Information Systems 139
 Philosophy 150, 220
 Psychology 160
 Speech 100, 110, 120, 130, 140
 Technology 040

AREA B: PHYSICAL AND BIOLOGICAL SCIENCE

4 semester units (or 6-8 quarter units) including a lab **OR** 6 semester or 9 quarter units of lecture-only courses. Lab courses are underlined.

Anthropology 185, 185&185L
 Astronomy 100, 100H, 100&100L, 100H & 100L, 101, 102, 103
 Biology 100, 114, 125, 181, 182, 182&182L, 183, 183 & 183L,
210, 220, 220H, 221
 Chemistry 100, 100&100L, 101, 101&100L, 110, 130, 180
 Ecology 100, 110, 120, 130
 Food and Nutrition 195
 Geography 180, 180H
 Geology 100, 100H, 100&100L, 100H & 100LH, 100 & 100LH,
100H & 100L, 135, 160, 165, 180, 185, 185&185L
 Marine Science 100, 100&100L, 100H&100LH, 100 & 100LH,
100H & 110L, 180, 180&180L, 185, 185&185L
 Natural Science 100, 100&100LA, 100&100LG, 105,
105&100LA, 105&100LG, 106, 110
 Ornamental Horticulture 100
 Physics 110, 110&111, 120, 130, 185
 Psychology 250

AREA C: HUMANITIES

A minimum of 3 semester units (or 4-5 quarter units) to include one course from Group 1 and one course from Group 2.

1. Theory

Anthropology 100, 100H, 110
 Architectural Technology 290, 296
 Art 100, 100H, 101, 101H, 102, 103, 104, 108
 Dance 160, 170, 200
 English - any literature course 140 through 285
 ESL 121A, 125A, 126A, 127A, 131A, 135A, 136A, 137A, 151A,
 155A, 156A, 157A, 160A, 161A, 199A
 Film/Video 100, 103, 150
 Foreign Language - any course numbered 110 thru 290
 History 150, 180, 180H, 185, 185H
 Humanities 100, 101, 101H
 Interior Design 180, 190
 Music 100, 105, 109, 160, 165, 170, 173, 180
 Philosophy 100, 110, 115, 118, 120, 130, 150, 165, 185
 Photography 101, 130
 Religious Studies 100, 110, 115, 120, 130, 140, 150, 180
 Speech 120
 Theater Arts 100, 101, 105

2. Active Participation

Art 110, 115, 120, 120H, 125, 141, 142A, 145, 147, 149, 150,
 263A, 269, 272A
 Dance 101A, 106A, 107A, 110A, 115A, 118A, 120A, 125A,
 130A, 133A, 135A, 36A, 137A, 138A, 150A, 160, 195A,
 203A, 211A
 Digital Media Arts 181
 Film/Video 110
 Music 115, 116, 120A, 129A, 132A, 133A, 140A, 141,
 144A, 145, 150A, 230A, 233A, 234A
 Photography 120
 Speech 110, 120, 150A, 235
 Theatre Arts 106, 110A, 170A, 235

AREA D: SOCIAL AND BEHAVIORAL SCIENCE

A minimum of 9 semester units (or 12-15 quarter units) to include Option A or B in Group 1, and one course from Group 2 and one course from Group 3.

1. U.S. History and Constitution and American Ideals

A. American Studies 100 **OR**
 B. Political Science 180 or 180H **AND** one of the following
 courses: History 100 or 170 or 170H or 175 or 175H or 177

2. Social and Economic Institutions

Anthropology 100, 100H, 102, 105, 110, 150, 190, 280, 285
 Economics 100, 180, 185
 Ethnic Studies 100, 150, 190
 Geography 100, 100H, 150, 160, 185
 History 101, 102, 102H, 103, 103H, 110, 115, 120, 125, 128, 130,
 140, 145, 160, 176, 179, 180, 180H, 185, 185H, 187, 188,
 190, 195, 197, 198
 International Studies 100
 Political Science 101, 110, 185
 Sociology 105, 115, 120, 150, 180, 180H, 185, 185H, 190, 296

3. Behavioral Science

Psychology 100, 220, 260
 Sociology 280

AREA E: LIFE SKILLS - One course.

Accounting 100
 Allied Health 130
 Anthropology 105
 Business 100, 105, 120, 125*
 Computer Information Systems 100, 109
 Computer Science 113
 Construction Technology 110A
 Counseling 102, 110, 120, 123, 135
 Economics 110
 Emergency Medical Technology 100
 English 104, 124A
 Family & Consumer Science 180
 Fashion 170
 Food & Nutrition 136, 140, 170, 185
 Health Education 100, 102, 111, 112, 122, 132, 133, 134, 136
 High Technology 100, 108, 109
 Human Development 180, 190
 Interdisciplinary Studies 150A
 Interior Design 100
 Office Information Systems 109, 110, 111A, 113
 Philosophy 120
 Physical Education 132, 133, 134, 136
 Psychology 110, 117, 140, 165, 215
 Religious Studies 120
 Sociology 105, 110, 165
 Speech 100, 160, 170, 180, 220

General Education - Option 2

General Education Breadth Requirements for California State University (CSU) 2000-2001

To earn a Bachelor's degree from the California State University, each student must complete 48-51 semester units in general education. 9-12 of these units must be taken as upper division course work after transfer. Orange Coast College will certify the extent to which the lower division General Education Breadth Requirements have been met for students meeting the following A-E pattern. Students seeking certification must complete at least 12 of these units at OCC.

Any one course may be used to satisfy only one required sub-area (i.e. if Speech 110 is used to satisfy sub-area A1, it may not be used to satisfy sub-area C2), with the exception of Area B where lab courses taken to meet the B3 requirement will also count in B1 or B2. A cross-listed course (the same course listed under more than one department such as History 150 and Ethnic Studies 150) may be used to meet only one requirement.

IMPORTANT NOTE: Courses on this list are approved for a specific academic year which begins with the Fall semester. Students wishing to use a course to meet a CSU GE Breadth requirement must be sure that the course is approved for the academic year in which it is taken. **THIS LIST IS VALID ONLY FOR COURSES TAKEN FALL 2000 THROUGH SUMMER 2001.** For courses taken prior to Fall 2000, students should check the master list which shows the dates that courses were added or deleted since the original list was published in 1981. This list is available in the Counseling Center or Transfer Center.

@ Approval for this course is pending. It has been submitted to CSU for inclusion on the list. Check in the Counseling Center or Transfer Center for a copy of the finalized list which will indicate if the course has been approved. If the course is approved, it can only be used if it is taken Fall, 2000 or later.

AREA A: COMMUNICATION IN THE ENGLISH LANGUAGE AND CRITICAL THINKING

9 semester units (or 12-15 quarter units) including one course from each sub-area with a grade of "C" or better.

A1 Oral Communication

Speech 100, 110

A2 Written Communication

English 100

A3 Critical Thinking

English 101, 101H, 102, 102H
Mathematics 220
Philosophy 150, 220
Speech 130, 140

AREA B: PHYSICAL UNIVERSE AND ITS LIFE FORMS

A minimum of 9 semester units (or 12-15 quarter units) including at least one course from each sub-area. Must include at least one laboratory course. Lab courses are underlined. Natural Science 100, with a lab, (Natural Science 100LA or 100LG) will satisfy B1, B2 and B3.

B1 Physical Science

Astronomy 100, 100H, 100&100L, 100H & 100L, 101, 102, 103

Chemistry 100, 100&100L, 101, 101&100L, 110, 130, 180
Geography 180, 180H

Geology 100, 100H, 100&100L, 100H & 100LH, 100H & 100LH, 100H & 100L, 135, 160, 180, 185, 185&185L

Marine Science 185, 185&185L

Natural Science 100, 100 & 100LA, 100 & 100LG, 110, 110&100LA

Physics 110, 110&111, 120, 130, 185

B2 Life Science

Anthropology 185, 185&185L

Biology 100, 125, 181, 182, 182&182L, 183, 183& 183L, 210, 220, 220H, 221

Ecology 100, 110, 120, 130

Marine Science 100, 100H, 100&100L, 100H&100LH, 100 & 100LH, 100H & 100L, 180, 180&180L

Natural Science 100

Ornamental Horticulture 100

Psychology 250

B3 Laboratory Activity

One of the courses taken in Area B1 or B2 must include a lab. Lab courses are underlined.

B4 Mathematical Concepts

One course from the following with a grade of "C" or better.

Mathematics 100, 104, 106, 120, 130, 150, 154, 157, 160, 160H, 170, 175, 180, 182H, 185, 230, 235, 260, 270, 280, 280H, 285, 285H, 290H
Psychology 160

AREA C: ARTS, LITERATURE, PHILOSOPHY AND FOREIGN LANGUAGE

A minimum of 9 semester units (or 12-15 quarter units) with at least one course in C1 and one course in C2.

C1 Arts

Architectural Technology 290, 296
Art 100, 100H, 101, 101H, 102, 103, 104, 108, 110, 120, 125, 141, 142A, 145, 147, 150, 263A, 269, 272A

Dance 101A, 107A, 110A, 120A, 125A, 130A, 133A, 150A, 160, 200, 211A

Digital Media Arts 181

Film/Video 100, 103, 150

Humanities 100#

Interior Design 180, 190

Music 100, 105, 109, 115, 116, 129A, 140A, 141, 144A,
145, 170, 173, 180
Photography 101, 120, 130
Theatre Arts 100, 101, 105, 106, 110A, 170A

C2 Humanities

Anthropology 190
English 119, 140, 141, 143, 144, 147, 148, 149@, 150,
151, 152, 157, 160, 161, 165, 170, 172, 173, 175, 176,
280, 285
Ethnic Studies 100
French 110, 120, 130, 180, 185, 280, 285
German 110, 120, 130, 180, 185, 280, 285
Hebrew 180@
History 102, 102H, 103, 103H, 180, 180H, 185, 185H
Humanities 100#, 101, 101H
Italian 110, 120, 130, 180, 180A, 180B, 185, 185A, 185B,
280, 285, 289
Japanese 180, 180A, 180B, 181, 182, 185, 280, 285
Mathematics 220
Philosophy 100, 110, 115, 118, 120, 130, 165, 185, 220
Religious Studies 100, 110, 115, 120, 130, 140, 150, 180
Spanish 180, 180A, 180B, 180H, 185, 185A, 185B,
185H, 280, 280A, 280B, 280H, 285, 289, 290
Speech 110, 120, 150A, 235
Theatre Arts 235

This course will satisfy either C1 or C2

AREA D: SOCIAL, POLITICAL AND ECONOMIC INSTITUTIONS AND BEHAVIOR; HISTORICAL BACKGROUND

A minimum of 9 semester units (or 12-15 quarter units) with courses from at least two sub-areas

D1 Anthropology

Anthropology 100, 100H, 102, 105, 110, 190, 280, 285

D2 Economics

Economics 100, 110, 180, 185

D3 Ethnic Studies

Anthropology 150
Ethnic Studies 100, 150, 190
History 150
Sociology 150, 190

D4 Gender Studies

History 176, 187

D5 Geography

Geography 100, 100H, 160, 185

D6 History

History 100, 101@, 102, 102H, 103, 103H, 110, 115, 120,
125, 128, 130, 145, 160, 170, 170H, 175, 175H, 177,
179, 180, 180H, 185, 185H, 188, 190, 195, 197, 198

D7 Interdisciplinary

Health Education 122
Human Development 180
Interdisciplinary Studies 125, 200
International Studies 100
Psychology 165 or Sociology 165
Social Science 100

D8 Political Science

Political Science 101, 110, 185

D9 Psychology

Psychology 100, 185, 220, 260

D10 Sociology

Sociology 105, 110, 115, 120, 180, 180H, 185, 185H, 280,
296

Note: Completion of one course from Behavioral Science (Psychology 100, 220, 260 or Sociology 280) is required for graduation from OCC.

AREA E: LIFE-LONG UNDERSTANDING AND SELF-DEVELOPMENT

3 semester units (or 4-5 quarter units); no more than 1 unit of activity courses.

Non-Activity

Anthropology 105
Counseling 110, 120, 135@
Economics 110
Emergency Medical Technology 100
English 124A
Family & Consumer Science 180
Food & Nutrition 136, 140, 170
Health Education 100, 102@, 112, 132, 133@, 134, 136
Physical Education 132, 133@, 134, 136
Psychology 110, 117, 140, 165, 215
Sociology 105, 165
Speech 100, 160, 170, 220

Activity

Marine Activities 147A, 148A, 149A
Physical Education 102A, 104A, 105A, 106, 107A, 108A,
109A, 110A, 111A, 112A, 113A, 114A, 115A, 119A,
120A, 122A, 123A, 125, 140A, 142A, 143A, 146A,
147A, 148A, 149A, 150A, 154A, 155A, 157A,
167A@, 173A, 174A, 177A, 178A, 179A, 190A, 191A,
192A, 193A, 194A, 195A, 196A, 197A, 198A, 221A,
222A, 235A, 236A, 238A, 239A@, 240A, 241A, 242A,
243A, 244A, 245A, 246A@, 250A, 251A, 252A, 253A,
254A, 257A, 258A, 259A, 260A, 261A, 263A

AMERICAN INSTITUTIONS REQUIREMENT (Not part of CSU GE Breadth. May be completed prior to transfer.)

In addition to the General Education Requirements listed above, all students must complete coursework in American History and Constitution for graduation from CSU. Completion of History 100, 170, 170H, 175, 175H, or 177 in Area D6 will fulfill part of this requirement. To complete this requirement students must also take:

Political Science 180 or 180H

General Education - Option 3

Completion of the Intersegmental General Education Transfer Curriculum (IGETC) will permit a student to transfer from Orange Coast College to a campus in either the California State University or University of California system without the need, after transfer, to take additional lower-division general education courses to satisfy campus general education requirements. The IGETC should be completed in its entirety before transferring or the student may be subject to the general education requirements of the campus to which they have been admitted.

All courses must be completed with grades of "C" or better. Courses used to meet IGETC requirements must be at least 3 semester units or 4 quarter units.

IMPORTANT NOTE: Courses on this list are approved for a specific academic year which begins in the Fall. Students wishing to use a course to meet an IGETC requirement must be sure that the course is approved for the academic year in which it is taken. **THIS LIST IS VALID ONLY FOR COURSES TAKEN FALL 2000 THROUGH SUMMER 2001.** For courses taken prior to Fall 2000, students should check the master list which shows the dates that courses were added or deleted since the original list was published in 1991. This list is available in the Counseling Center or Transfer Center.

@ *Approval for this course is pending. It has been submitted to UC and CSU for inclusion on the list. Check in the Counseling Center or Transfer Center for a copy of the finalized list which will indicate if the course has been approved. If the course is approved, it can only be used if it is taken Fall, 2000 or later.*

AREA 1: ENGLISH COMMUNICATION

CSU: Three courses (one from each group). 9 semester units (or 12-15 quarter units).

UC: Two courses (one from Group A and one from Group B). 6 semester units (or 8-10 quarter units).

Group A: English Composition

English 100

Group B: Critical Thinking-English Composition

English 101 or 101H, 102 or 102H
Philosophy 150

Group C: Oral Communication (CSU ONLY)

Speech 110

QUANTITATIVE REASONING

One course. At least 3 semester units (or 4-5 quarter units).

Math 130*, 154, 157*, 160 or 160H, 170, 180*, 182H*, 185, 230, 235, 260, 280 or 280H*, 285 or 285H*, 290H

AREA 3: ARTS AND HUMANITIES

Three courses, with at least one course from Group A and one from Group B. 9 semester units (or 12-15 quarter units).

Group A: Arts

Architectural Technology 290*, 296*
Art 100 or 100H, 101 or 101H, 102, 103, 104, 108, 110
Dance 200
Film 100
Music 100, 105, 109, 115*, 170, 173, 180
Photography 130
Theatre Arts 100*, 101*, 105

Group B: Humanities

English 140*, 141, 143, 144, 147, 148, 149@, 150, 151, 152, 157, 160, 161, 170, 173, 175, 176, 280, 285
Ethnic Studies 150
French 185, 280, 285
German 185, 280, 285
History 100*#, 101@, 102 or 102H, 103 or 103H, 110, 115, 120, 125, 128, 130, 145, 150, 160, 170# or 170H#, 175# or 175H#, 176, 177#, 179*, 180 or 180 H, 185 or 185H, 187, 188, 190, 195
Humanities 100, 101 or 101H
Italian 185, 280, 285, 289
Japanese 185, 280, 285
Philosophy 100, 110, 115, 118, 120, 130, 165, 185
Religious Studies 100, 110, 115, 120, 130, 140, 150, 180
Spanish 185 or 185H, 280 or 280H, 285, 289, 290

If this course is being used to meet CSU American Institutions Requirement, it cannot be used to satisfy this area.

AREA 2: MATHEMATICAL CONCEPTS AND

AREA 4: SOCIAL AND BEHAVIORAL SCIENCES

Three courses from at least two disciplines. 9 semester units (or 12-15 quarter units).

- 4A Anthropology**
Anthropology 100 or 100H, 102, 110, 150, 190, 280, 285
- 4B Economics**
Economics 100*, 180, 185
- 4C Ethnic Studies**
Ethnic Studies 100, 190
- 4D Gender Studies**
OCC does not have any courses approved in this area
- 4E Geography**
Geography 100 or 100H, 160, 185
- 4F History**
OCC does not have any courses approved in this area
History courses can be used to satisfy Area 3B
- 4G Interdisciplinary Studies**
Interdisciplinary Studies 125
Human Development 180
Psychology 165*
Sociology 165*
- 4H Political Science**
Political Science 101, 110, 180# or 180H#, 185
- 4I Psychology**
Psychology 100, 185, 220*, 260
- 4J Sociology**
Sociology 110, 115, 120, 150, 180 or 180H, 185 or 185H, 190, 280

If this course is being used to meet CSU American Institutions Requirement, it cannot be used to satisfy this area.

NOTE: Completion of one course from Behavioral Science (Psychology 100, 220, 260 or Sociology 280) is required for graduation from OCC.

AREA 5: PHYSICAL AND BIOLOGICAL SCIENCES

Two courses, with one from Group A and one from Group B. One of the courses must include a lab. Lab courses are underlined. 7-9 semester units (or 9-12 quarter units).

Group A: Physical Science

Astronomy 100 or 100H, 100&100L or 100 & 100LH, 101, 102, 103
Chemistry 100*, 100&100L*, 101&100L*, 110*, 130*, 180
Geography 180 or 180H
Geology 100* or 100H*, 100&100L* or 100H&100LH* or 100 & 100LH* or 100H & 100L*, 160, 180, 185, 185&185L
Marine Science 185*, 185&185L*
Natural Science 100*#, 100&100LA*, 100 & 100LG*
Physics 110*, 110&111*, 120*, 130*, 185*

Group B: Biological Science

Anthropology 185, 185&185L
Biology 100*, 125, 181, 182, 182&182L, 183, 183&183L, 210, 220* or 220H*, 221*
Ecology 100
Marine Science 100 or 100H, 100&100L or 100H&100LH or 100&100LH or 100H&100L, 180, 180&180L
Natural Science 100*#
Psychology 250

This course will satisfy either Group A or Group B.

LANGUAGE OTHER THAN ENGLISH (UC ONLY)

- A. Complete two years of a single high school foreign language with grades of "C" or better (high school transcripts must be on file at OCC), **OR**
- B. Complete French, German, Hebrew@, Italian, Japanese or Spanish 180. Advanced courses will validate this requirement, **OR**
- C. Earn a satisfactory score on one of the following tests (results must be on file at OCC):
1. SAT II Subject Test in a language other than English (Before 5/95 - score: 500. After 5/95 - Chinese: 520, French: 540, German: 510, Hebrew: 470, Italian: 520, Japanese: 510, Latin: 530, Spanish: 520).
 2. College Board Advanced Placement Examination in a language other than English (score: 3 or better)
 3. International Baccalaureate Higher Level Examination in a language other than English (score: 5 or better)
 4. An achievement test administered by a college or university (score: proficiency equivalent to at least two years of high school language). **OR**
- D. Complete, with grades of "C" or better, two years of formal schooling at the sixth grade level or higher in an institution where the language of instruction is not English (documentation must be on file at OCC).

AMERICAN INSTITUTIONS REQUIREMENT

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

CSU has an American Institutions requirement that is separate from IGETC. Courses used to meet the CSU requirement cannot be used in Area 3 or 4. To meet the CSU requirement, students should take Political Science 180 or 180H **AND** one of the following courses: History 100, 170, 170H, 175 175H or 177.

UC requires the completion of a college course or courses with a grade of "C" or better **OR** a one-year course in high school in U.S. history or a half-year course in U.S. history and a half-year course in American government with grades of "C" or better (UCLA requires grades of "B"). UCSB requires the completion of a college course. If you are using college coursework to satisfy this requirement, check the appropriate UC catalog to determine which course(s) to take.

** Indicates that transfer credit may be limited by UC. Please see UC Transferable Course List available in the Counseling Center or Transfer Center for these limitations.*

List of approved majors for the AA degree

Agriculture	History
Anthropology	Humanities
Architecture	Industrial Technology
Art	Journalism
Biology	Liberal Arts
Business	Mathematics
Chemistry	Music
Communications	Natural Science
Dance	Philosophy
Economics	Photography
Engineering	Physical Education
English	Physics
Family & Consumer Sciences	Political Science
Film/Video	Psychology
Food and Nutrition	Religious Studies
Foreign Language	Social Science
Geography	Sociology
Geology	Speech
Health	Theatre Arts

Transfer Information

For the past decade, Orange Coast College has transferred more students to four-year-colleges and universities than any other community college in Southern California.

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.

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

Four year colleges and universities often make changes in their requirements. The requirements listed in this section were updated at the time of publication; however, changes may have occurred after publication. Current Transfer Curriculum Guides and official articulation agreements are available in the Transfer Center, the Counseling Center and on the Internet.

Orange Coast College

Transfer to a Four Year College or University

Orange Coast College provides the first two years of a four year college or university program. Students enrolled in a transfer program will complete most of their general education and lower division major requirements before transferring. Students who are planning to transfer to a four year college or university should meet with a counselor in the Counseling Center to develop a Student Educational Plan which will identify the courses needed to transfer.

Transfer Center

The Transfer Center which is located in the Counseling and Admission Annex provides information and assistance to students who are preparing to transfer to four year colleges and universities. Representatives from four year schools are available in the Transfer Center to meet with students individually and provide information about their programs, requirements and procedures. The Center maintains a complete resource library containing college catalogs and other information on transfer programs. Applications for CSU, UC and several independent colleges and universities are available in the Center. The Transfer Center also sponsors a Transfer Day in the fall semester with representatives on campus from over fifty colleges and universities. College Fairs are held each semester with representatives from Southern California colleges and universities providing information to potential students. Transfer planning workshops are offered throughout the academic year. Organized tours to various four year campuses are also available through the Transfer Center each semester.

The World Wide Web

The Transfer Center web page on the Internet is a rich source of information for potential transfer students. Information at this site includes: a listing of scheduled events and rep visits, transfer course requirements, articulation agreements, transfer planning guides, ratings and evaluations of colleges, financial aid resources, and college search engines. There is also a complete application center

which allows students to apply to colleges throughout the country electronically. The site can be reached by going to the Student Services icon on the OCC home page at <http://www.occ.cccd.edu>

Transfer Opportunity Program (TOP)

Historically, underrepresented students (African Americans, Latinos and Native Americans) have made up a small percentage of transfer students. The Transfer Opportunity Program at Orange Coast College seeks to increase the pool of eligible underrepresented students and close the gap between minority and majority transfer students. TOP is designed to assist historically underrepresented students transfer to four year colleges and universities. The primary goal of the program is to retain these students and increase the probability of their transfer. Through the program these students are provided with support services including a college success course, information workshops, personal advisement and counseling, tutoring and group study sessions.

Transferability of Courses

Many courses offered at Orange Coast College will transfer to meet general education, major or elective requirements at four-year colleges and universities.

All courses numbered 100 or above will transfer to **CALIFORNIA STATE UNIVERSITY**.

Courses which are transferable to the **UNIVERSITY OF CALIFORNIA** will be designated in the Courses section of the catalog with a UC at the end of the course description. Some of the courses which are transferable to the University of California have credit limitations. Check the UC Transferable Course List to determine these limitations. This list is available in the Counseling Center and the Transfer Center.

INDEPENDENT AND OUT-OF-STATE COLLEGES AND UNIVERSITIES usually accept most courses which are transferable to the University of California and many of the courses acceptable at CSU. Articulation agreements are available for selected colleges in the Counseling Center and the Transfer Center.

California Articulation Number (CAN)

The California Articulation Number (CAN) System identifies many of the transferable, lower division, introductory courses commonly taught on California college campuses.

The system assures students that CAN courses at one participating college will be accepted in lieu of the comparable CAN courses on another participating campus. For example: CAN ECON 2 at one college will be accepted for CAN ECON 2 at every other participating college. Each college retains its own numbering system, but adds the CAN designation parenthetically in its publications.

Most colleges throughout the state have qualified courses to use the California Articulation Numbers. Check in the Counseling Center or Transfer Center for current listings of CAN courses and colleges participating in the CAN system.

OCC Course	CAN
ACCT 101	BUS 2
ACCT 102	BUS 4
ACCT 101 & 102	BUS SEQ A
ANTH 100	ANTH 4
ANTH 185	ANTH 2
ANTH 280	ANTH 6
ART 100	ART 2
ART 101	ART 4
ART 100 & 101	ART SEQ A
ART 110	ART 14
ART 111	ART 16
ART 120	ART 8
ART 121AD	ART 24
ART 130	ART 10
ART 141	ART 12
ART 147	ART 26
ART 150	ART 6
ART 170	ART 20
BIOL 181	BIOL 2
BIOL 182 & 182L	BIOL 4
BIOL 183 & 183L	BIOL 6
BIOL 181 182/ 182L 183/183L	BIOL SEQ A

Transfer Information

BIOL 210	BIOL 14	HIST 102	HIST 14	SOC 185	SOC 4
BIOL 220	BIOL 10	HIST 103	HIST 16	SPAN 180	SPAN 2
BIOL 225	BIOL 12	HIST 102 & 103	HIST SEQ C	SPAN 185	SPAN 4
BIOL 220 & 225	BIOL SEQ B	HIST 170	HIST 8	SPAN 180 & 185	SPAN SEQ A
BUS 110	BUS 12	HIST 175	HIST 10	SPAN 280	SPAN 8
CHEM 110	CHEM 6	HIST 170 & 175	HIST SEQ B	SPAN 285	SPAN 10
CHEM 180	CHEM 2	HIST 180	HIST 2	SPAN 280 & 285	SPAN SEQ B
CHEM 185	CHEM 4	HIST 185	HIST 4	SPCH 100	SPCH 8
CHEM 180 & 185	CHEM SEQ A	HIST 180 & 185	HIST SEQ A	SPCH 110	SPCH 4
CHEM 250	CHEM 12	HMDV 180	FCS 14	SPCH 112	SPCH 10
C S 111	BUS 6	MATH 100	MATH 2	SPCH 130	SPCH 6
C S 115	CSCI 12	MATH 120	MATH 8	THART 100	DRAM 18
C S 150	CSCI 16	MATH 130	MATH 10	THART 106	DRAM 8
C S 270	CSCI 20	MATH 154	MATH 12	THART 107	DRAM 22
COMM 100	JOUR 4	MATH 157	MATH 34	THART 200	DRAM 6
ECON 180	ECON 2	MATH 160	STAT 2		
ECON 185	ECON 4	MATH 170	MATH 16		
ENGL 100	ENGL 2	MATH 180	MATH 18		
ENGL 101	ENGL 4	MATH 185	MATH 20		
ENGL 100 & 101	ENGL SEQ A	MATH 180 & 185	MATH SEQ B		
ENGL 119	ENGL 6	MATH 220	PHIL 6		
ENGL 150	ENGL 14	MATH 230	CSCI 26		
ENGL 151	ENGL 16	MATH 235	MATH 26		
ENGL 150 & 151	ENGL SEQ C	MATH 280	MATH 22		
ENGL 280	ENGL 8	MATH 180, 185 & 280	MATH SEQ C		
ENGL 285	ENGL 10	MATH 285	MATH 24		
ENGL 280 & 285	ENGL SEQ B	MUS 180	MUS 2		
ENGR 180	ENGR 2	MUS 185	MUS 4		
ENGR 270	CSCI 20	MUS 180 & 185	MUS SEQ A		
ENGR 280	ENGR 8	PHIL 100	PHIL 2		
F N 170	FCS 2	PHIL 120	PHIL 4		
F N 180	FCS 8	PHIL 125	PHIL 8		
FREN 180	FREN 2	PHIL 220	PHIL 6		
FREN 185	FREN 4	PHOTO 120	ART 18		
FREN 180 & 185	FREN SEQ A	PHYS 120	PHYS 2		
FREN 280	FREN 8	PHYS 125	PHYS 4		
FREN 285	FREN 10	PHYS 120 & 125	PHYS SEQ A		
FREN 280 & 285	FREN SEQ B	PHYS 185	PHYS 8		
GEOG 180	GEOG 2	PHYS 280	PHYS 12		
GEOG 185	GEOG 4	PHYS 285	PHYS 14		
GEOL 180	GEOL 2	PHYS 185, 280 & 285	PHYS SEQ B		
GEOL 185 & 185L	GEOL 4	POL SC 180	GOVT 2		
GRMN 180	GERM 2	PSYCH 100	PSY 2		
GRMN 185	GERM 4	PSYCH 160	PSY 6		
GRMN 180 & 185	GERM SEQ A	PSYCH 280	PSY 8		
GRMN 280	GERM 8	SOC 180	SOC 2		

Course Requirements for Transfer Students

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

- 1. Lower Division Major Requirements.** These courses should be completed before transferring. They provide background and preparation in order to concentrate on the major beginning in the junior year. Course requirements for specific majors and schools are listed in the Transfer Curriculum Guides. These Guides are available in the Counseling Center and Transfer Center.
- 2. General Education Requirements.** These are the courses required of everyone to obtain a degree regardless of major. They are designed to provide students with the knowledge, skills and understanding which will enable them to function as intelligent and creative members of the community. Courses in writing, critical thinking, mathematics, sciences, arts and humanities and the social sciences are included in general education.
- 3. Electives.** These are courses of choice taken in addition to courses for the major and general education requirements.

Lower Division Major Requirements

Orange Coast College

Most majors at four year colleges and universities require the completion of one or more lower division courses as preparation for the upper division. Orange Coast College offers courses to meet the lower division requirements for most majors at most four year colleges and universities. Transfer Curriculum Guides indicating the requirements for specific majors at specific colleges are available in the Counseling Center and the Transfer Center. Students should check the catalog of the college of intended transfer and meet with their counselor for additional information about major programs and requirements.

Transfer Curriculum Guides listing required courses are available in the following major areas:

- Advertising
- Anthropology
- Architecture/Landscape Architecture
- Art
- Biological Science
- Business
- Chemistry
- Child Development
- Communications
- Computer Science
- Dance
- Economics
- Engineering
- English
- Environmental Studies
- Family and Consumer Sciences
- Film
- Food Science and Nutrition
- Foreign Languages
- Forestry/Natural Resources
- Geography
- Geology
- Health Sciences
- History
- Hotel & Food Service
- Interior Design
- Journalism
- Liberal Studies
- Marine Science/Oceanography
- Mathematics
- Music

- Ornamental Horticulture
- Philosophy
- Physical Education and Recreation
- Physics
- Political Science
- Psychology
- Public Relations
- Religious Studies
- Social Ecology
- Social Science
- Social Work
- Sociology
- Speech and Communicative Disorders
- Teaching
- Technology
- Theatre Arts

Certification of General Education for Transfer to UC or CSU

Upon a student's request Orange Coast College will verify the completion of lower division general education requirements for transfer to the University of California (Intersegmental General Education Transfer Curriculum) or the California State University (either the CSU General Education Breadth Requirements or the Intersegmental General Education Transfer Curriculum). Students who transfer without certification will have to meet the general education requirements of the specific UC or CSU campus to which they are transferring. Meeting these requirements usually necessitates taking additional courses.

Both CSU GE Breadth and the IGETC should be completed in their entirety prior to transfer. Students can request partial certification of CSU GE Breadth sub-areas if all requirements within the sub-area are met. Students using the IGETC who are unable to complete one or two courses, may be eligible to complete it after transferring if they have good cause. Typical situations which constitute good cause include illness, unavailable or cancelled courses, military services and unexpected hardships.

Students who have taken courses at other colleges can have these courses "passed along" in the certification process. Orange

Coast College will certify courses taken at other California community colleges and CSU in the areas designated by the offering college. Courses taken at California four year colleges or out-of-state two year or four year colleges will be certified if they are equivalent to courses on the IGETC or CSU GE Breadth list. Courses from foreign institutions cannot be used in the certification process.

Students requesting CSU GE Breadth certification must complete at least 12 of the 39 required units at OCC.

OCC will certify courses only once. 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 Records Office when final transcripts are sent to UC or CSU. Courses taken at other colleges after a student has left OCC will not be certified.

A course used in the certification process must be on either the IGETC or the CSU GE Breadth list during the term in which it is taken. If a course is taken before it is approved for inclusion on the list, it cannot be certified. Similarly, a course which is taken after it has been removed from the list cannot be certified.

OCC will also certify the completion of the CSU American Institutions Requirement for students following either IGETC or CSU GE Breadth.

Admission Procedures for Four-Year Colleges and Universities

Students should take the following steps in applying for admission:

1. Request application forms from the admissions office of the transfer college approximately one year in advance of transfer. Applications for the University of California, the California State University and local independent colleges and universities are available in the Transfer Center or Counseling Center.
2. Submit completed application forms during the filing period. Do not send them early as they will not be accepted before the initial filing date. Sending them early will only delay processing.

Transfer Information

3. If entrance exams (SAT, ACT) are required, register for them as soon as possible and at least six months in advance of transfer. Registration forms are available from the Assessment Center located in OCC's Special Services Building. Most four year schools do not require entrance exams for transfer students.
4. Have the OCC Records Office send a copy of your Orange Coast College transcript to the transfer college as requested. Four year colleges and universities will also require transcripts of coursework completed at all other educational institutions.
2. Are in good standing at the last college attended.
3. 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 courses.
4. Meet the eligibility index (GPA and SAT/ACT scores) required for a freshman.

Upper Division Transfer Admission Requirement

You are eligible for admission if you:

1. Have a college GPA of 2.0 or better (2.4 for non-California residents) in all transferable course work.
2. Are in good standing at the last college attended.
3. Have completed or will complete prior to transfer at least 30 semester units of courses equivalent to general education requirements with a grade of C or better in each course. The 30 units must include the general education requirements in communication in the English language (English composition, oral communication and critical thinking) and one course of at least 3 units required in college level mathematics.

General Education Requirements for California State University

To earn a bachelor's degree from the California State University, each student must complete a program of general education. Orange Coast College offers two general education programs which will enable students to meet the lower division general education requirements for all CSU campuses prior to transfer. Students can complete either the Intersegmental General Education Transfer Curriculum (OCC GE Option 3) or the CSU General Education breadth Requirements (OCC GE Option 2). Students transferring to a specific CSU campus can also meet the general education requirements of that campus.

INTERSEGMENTAL GENERAL EDUCATION TRANSFER CURRICULUM (IGETC) FOR CSU

See the Graduation Requirements section of the Catalog for specific courses which meet these requirements.

1. ENGLISH COMMUNICATION - 9 units
2. MATHEMATICAL CONCEPTS - 3 units
3. ARTS AND HUMANITIES - 9 units
4. SOCIAL AND BEHAVIORAL SCIENCE - 9 units
5. PHYSICAL AND BIOLOGICAL SCIENCES - 7-9 units

California State University in addition has an American Institutions requirement which can be satisfied prior to transfer by taking Political Science 180 or 180H and one of the following courses: History 100, 170, 170H, 175, 175H or 177.

The IGETC should be completed in its entirety prior to transfer. Students who do not complete the entire program before transfer may be subject to the regulations regarding breadth and general education of the school or college of the campus to which they have been admitted.

CSU GENERAL EDUCATION BREADTH REQUIREMENTS

See the Graduation Requirements section of the Catalog for specific courses which meet these requirements.

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

California State University has an American Institutions requirement which can

CALIFORNIA STATE UNIVERSITY

California State University has 23 campuses located throughout the state. While each campus within the system has its own unique geographic and curricular character, all campuses offer undergraduate and graduate instruction for professional and occupation goals as well as broad liberal education. The CSU offers more than 1,500 bachelor's and master's degrees in some 200 subject areas. Campuses are located at Bakersfield, Channel Islands, Chico, Dominguez Hills, Fresno, Fullerton, Hayward, Humboldt, Long Beach, Los Angeles, Monterey Bay, Northridge, Pomona (Cal Poly), Sacramento, San Bernardino, San Diego, San Francisco, San Jose, San Luis Obispo (Cal Poly), San Marcos, Sonoma and Stanislaus and Vallejo (California Maritime Academy).

California State University – Admission Requirements for Transfers

Students who transfer with 55 or fewer transferable semester units are considered lower division transfer students.

Students who transfer with 56 or more transferable semester units are considered upper division transfer students.

Lower Division Transfer Admission Requirements:

You are eligible if you:

1. Have a college GPA of 2.0 or better in all transferable course work.

Orange Coast College

be satisfied prior to transfer by taking an American History course in Area D and Political Science 180 or 180H.

UNIVERSITY OF CALIFORNIA

The University of California has 9 campuses located throughout the state. Each campus within the system has its own unique geographic and academic character. The university offers bachelor's, master's and doctoral degrees in a variety of subject areas. Campuses of the university are located at Berkeley, Davis, Irvine, Los Angeles, Riverside, San Diego, San Francisco (Schools of Medicine, Dentistry and Pharmacy), Santa Barbara and Santa Cruz.

University of California – Admission Requirements

Students planning to transfer to the University of California must follow the requirements listed below:

1. Applicants eligible for admission to the University as freshman, meaning they satisfied the Subject, Scholarship, and Examination Requirements, are eligible to transfer after they have a "C" (2.0) average in their transferable college coursework.
2. Applicants who met the Scholarship Requirement but did not satisfy the A-F Subject requirements must take transferable college courses in the missing high school subjects to be eligible to transfer. Students who met the Scholarship Requirement but did not meet the Examination requirement will need to complete a minimum of at least 12 semester units of transferable work to remedy this omission. All such applicants will need to earn a grade of "C" or better in each of these required courses and an overall "C" (2.0) average in all transferable college coursework completed.
3. Applicants not eligible for admission to the University as freshmen because they did not meet the Scholarship Requirement must:

A. Complete 60 semester units of transferable college work with a grade point average of at least 2.4.

Some campuses and majors require higher grade point averages.

B. Complete a course pattern requirement to include:

1. Two transferable college courses (3 semester or 4-5 quarter units each) in English Composition;
2. One transferable college course (3 semester or 4-5 quarter units each) in Mathematical Concepts and Quantitative Reasoning; and
3. 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; and the Physical and Biological Sciences.

Community College Honors Transfer Program -UCI

The Community College Honors Transfer Program gives students priority consideration for admission to UCI. Students in this program may use the UCI library and attend selected cultural activities on the UCI campus. Students wishing to participate in this program must first apply to and be accepted into the OCC Honors Program. Additional information about this program is available in the Transfer Center.

Transfer Alliance Program-UCLA

The Transfer Alliance Program (TAP) gives students priority consideration for admission to UCLA's College of Letters and Science. Students participating in TAP learn more about UCLA through meetings with UCLA counselors, faculty and students. TAP students may use the UCLA library and participate in cultural and sports events on the UCLA campus. TAP students must complete the OCC Honors Program. Students wishing to participate in TAP must first apply to and be accepted into the OCC Honors Program. Additional information about this program is available in the Transfer Center.

CAP – Transfer Agreement with UC Berkeley

The Cooperative Admission Program with the University of California at Berkeley provides UC-eligible high school applicants who are not admitted to the College of Letters and Science or the College of Environmental Design with the option to attend Orange Coast College and transfer to Berkeley in junior standing. Students in CAP must meet all program requirements and maintain a 3.0 GPA in transferable coursework taken at Orange Coast College. Students are selected by UC Berkeley to participate in this program prior to attending Orange Coast College.

TAG-Transfer Agreement with UC Riverside

UCR's Transfer Admission Guarantee (TAG) program encourages students to begin their work on their bachelor's degree at Orange Coast College and then transfer to UCR to complete it. TAG benefits include course planning assistance while you are at Orange Coast College by a UCR counselor, workshops on financial aid, housing and the application, and guaranteed admission to UCR. OCC also has an honors transfer agreement with UCR (HART). Information about the program is available in the Transfer Center.

General Education Requirements for the University of California

To earn a bachelor's degree from the University of California, each student must complete a program of general education. To meet the general education requirements of the university, students can complete either the Intersegmental General Education Transfer Curriculum (Orange Coast College GE Option 3) or individual campus general education requirements. Orange Coast College strongly recommends that students follow the IGETC rather than the individual campus requirements as this will provide more flexibility when applying to transfer. IGETC should not be used for the following: Business Administration, Chemistry, Environmental Design

Transfer Information

and Natural Resources at UC Berkeley, Nursing at UCLA, Revell and Roosevelt College at UCSD. Engineering at all UC campuses, and other high unit majors at UC campuses (e.g. biological and physical sciences). Students who began at a UC campus and who intend to transfer back to the same campus cannot use IGETC. Some UC campuses do not allow students who began at another UC campus to use IGETC. Students in the above categories should follow the GE requirements of the UC campus they are transferring to.

INTERSEGMENTAL GENERAL EDUCATION TRANSFER CURRICULUM (IGETC) FOR UC

See the Graduation Requirements section of the Catalog for specific courses which meet these requirements.

ENGLISH COMMUNICATION

- 6 units

MATHEMATICAL CONCEPTS

- 3 units

ARTS AND HUMANITIES - 9 units

SOCIAL AND BEHAVIORAL SCIENCES - 9 units

PHYSICAL AND BIOLOGICAL SCIENCES - 7-9 units

LANGUAGE OTHER THAN ENGLISH - 0-5 units

The IGETC should be completed in its entirety prior to transfer. Students who do not complete the entire program before transfer may be subject to the regulations regarding general education of the school or college of the campus to which they have been admitted.

INDIVIDUAL CAMPUS GENERAL EDUCATION REQUIREMENTS

Each campus of the university has its own general education requirements. Students transferring to a specific UC campus can meet the general education requirements of that campus rather than follow the IGETC.

Orange Coast College has articulated individual general education requirements with several UC campuses.

Copies of these agreements are available in the Transfer Center and the Counseling Center.

INDEPENDENT AND OUT-OF-STATE COLLEGE AND UNIVERSITIES

In addition to state supported colleges and universities in California, there are many outstanding independent institutions in the state. There are also many colleges, both private and public, located throughout the United States which Orange Coast College students can transfer to. Each of these institutions has its own unique requirements for admission. In order to determine eligibility, students should obtain a copy of the school catalog and consult with their counselor.

General Education Requirements for Independent and Out-Of-State Colleges and Universities

Orange Coast College has articulated general education requirements with Biola University, Brigham Young University, Chapman University, Concordia University, Golden Gate University, Loma Linda University, Loyola Marymount University, Mount St. Mary's College, National University, Occidental College, Pepperdine University, Oregon State, Scripps College, Vanguard University, Westmont College, Woodbury University, University of San Francisco and the University of Southern California. Students transferring to other independent or out-of-state institutions should obtain a catalog and meet with a counselor in order to determine appropriate general education requirements.

Transfer Agreements

Orange Coast College has transfer agreements with the following institutions:

- Chapman University (honors)
- Pepperdine University (honors)
- Pomona College (honors)
- University of Northern Colorado
- Rensselaer Polytechnic Institute
- University of Southern California (honors)

Information about these programs is available in the Transfer Center.

Orange Coast College

Career and Certificate Programs

As never before in its history, America needs people who are trained in scientific; professional and technical fields. Orange Coast College can provide that training.

Thousands of students enroll annually in OCC's highly acclaimed career programs. We offer more than 50 programs which lead to exciting, well-paying careers within two years or less.

Our comprehensive programs, which grant certificates of achievement and/or associate in arts degrees, prepare students to become qualified employees as well as educated citizens. A number of programs offer transfer options to four-year colleges and universities. Our career courses are both professional and high tech. They are fully accredited and feature industry advisory committees which meet annually to ensure the course curriculum accurately reflects current industry standards.

Majors leading to technical competence in a variety of occupational areas are available at Orange Coast College. Business and industry are making ever increasing demands for education beyond high school level. These career programs are designed to prepare the graduate to enter a particular field of employment.

Students should refer to the Graduation Requirements section of this catalog for general education and elective courses for the Associate in Arts Degree.

Students may follow the catalog requirements that were in effect for the academic year when their attendance began at Orange Coast College or follow the catalog requirements in effect during subsequent years of attendance provided that continuous enrollment has been maintained. Continuous enrollment is defined as enrollment in a course at OCC for at least one semester in a calendar year.

Students must maintain at least a 2.0 overall GPA using transcripts from all colleges attended, except where there are specific certificate requirements indicated. At least 12 units must be completed at Orange Coast College. At least 3 units in an advanced course from the program must be completed at Orange Coast College. Credit by examination may be required to determine extent of knowledge.

Career Programs

ACCOUNTING —

Accounting
Entry-Level Accounting
(Certificate of Completion)

AIRFRAME AND POWERPLANT TECHNOLOGY —

Airframe
Powerplant
Airframe and Powerplant
Avionics
Helicopter Theory and Maintenance
(Certificate of Completion)

AIRLINE TRAVEL CAREERS —

Flight
Ground

ARCHITECTURAL TECHNOLOGY

AVIATION AND SPACE

CARDIOVASCULAR TECHNOLOGY —

Electrocardiography Technician
Noninvasive – Option #1
(Associate Degree)
Invasive – Option #2
(Associate Degree)

COMMERCIAL ART —

Advertising Design
Illustration Design
Jewelry Design

COMPUTER INFORMATION SYSTEMS —

Business Computer Programming
Technical Computer Programming

COMPUTERIZED OFFICE TECHNOLOGY —

(Formerly Office Information Systems)
Core Curriculum
(Certificate of Completion)
Electronic Office
General Office
Word Processing Management

CONSTRUCTION TECHNOLOGY —

Basic Construction Practices
Master Construction Specialist
Residential Construction Development
Residential Construction Professional
Upgrade (Certificate of Completion)

COSTUME CAREERS —

Costume Dresser
Costume Stitcher
Costume Cutter/Draper
Assistant Costume Designer (Associate Degree)

CULINARY ARTS —

Cook Apprentice
Culinary Arts
Advanced Culinary Arts

DANCE —

Dance Instructor
World Dance

DENTAL ASSISTING — REGISTERED

DIAGNOSTIC MEDICAL SONOGRAPHY

(Associate Degree)

DIETETIC TECHNOLOGY

(See: NUTRITION CARE)

DIGITAL MEDIA ARTS —

Computer Graphics
Multimedia

DISPLAY AND VISUAL PRESENTATION

DRAFTING TECHNOLOGY —

Computer Aided Design/Drafting
Electro-Mechanical Design/Drafting
Mechanical Design/Drafting
Electro-Mechanical CADD Upgrade
(Certificate of Completion)
Dimensioning Upgrade
(Certificate of Completion)

EARLY CHILDHOOD EDUCATION —

Early Childhood Education
Early Childhood Administration
In-Home Caregiver
(Certificate of Completion)
School-Age Child Care
(Certificate of Completion)

ELECTRONICS TECHNOLOGY —

Electronics
Electronic Equipment Engineering Services Technician
(Associate Degree)
Professional Upgrade Certificates —
Microcomputers
(Certificate of Completion)
Test & Troubleshooting
(Certificate of Completion)

EMERGENCY MEDICAL TECHNOLOGY—

Emergency Medical Technician – 1
(Certificate of Completion)

ENTERTAINMENT TECHNOLOGY —

Scenic Artist
Scenic Carpenter
Lighting Technician
Audio Technician

FASHION —

Costume (Associate Degree)
Design/Production (Associate Degree)
Apparel Construction (Associate Degree)
Fashion Merchandising (Associate Degree)
Industrial Sewing (Certificate of Completion)

FILM/VIDEO

FITNESS SPECIALIST —

Group Fitness Instructor Training
(Certificate of Completion)
Health Fitness Instructor/Personal Trainer

FOOD AND NUTRITION —

Food Science (Associate Degree)
 Food Science Technician
 Community Nutrition Assistant

FOOD SERVICE MANAGEMENT —

Catering
 (Certificate of Completion)
 Fast Food Services
 (Certificate of Completion)
 Child Nutrition Programs
 Institutional – Dietetic Service Supervisor
 Institutional – Dietetic Service Manager
 Institutional – Dietetic Technician (Associate Degree)
 Restaurant (Associate Degree)
 Restaurant Supervision

HEATING AND AIR CONDITIONING —

HVAC Technology

HOTEL MANAGEMENT —

Advanced Studies (Associate Degree)
 Operations
 Hotel Housekeeping & Maintenance Operations
 (Certificate of Completion)

REGIONAL INTERIOR DESIGN PROGRAM

(Associate Degree)

MACHINE TECHNOLOGY —

Machinist
 Tooling
 CNC Machine Operator
 CNC Machine Programmer
 Professional Upgrade Certificates—
 CNC Operator
 (Certificate of Completion)
 CNC Programmer
 (Certificate of Completion)

MANAGEMENT —

Management
 Management Institute
 (Certificate of Completion)

MARKETING (Merchandising) —

Advertising
 International
 International Studies
 (Certificate of Completion)
 Retail
 Sales

MEDICAL ASSISTING —

Administrative/Clinical
 Administrative
 (Certificate of Completion)
 Clinical
 (Certificate of Completion)
 Medical Insurance
 (Certificate of Completion)

MEDICAL TRANSCRIPTION**MUSIC**

Business Employee
 Concert Sound Engineer
 Composer/Orchestrator/Copyist
 Instrument Repair
 (Certificate of Completion)
 MIDI Applications
 Musical Entertainer – Instrumental
 Musical Entertainer – Vocal
 Private Music Teacher
 Studio Guitar Performer

NEURODIAGNOSTIC TECHNOLOGY

(Associate Degree)
 NDT Upgrade (Certificate of Completion)

NUTRITION CARE (Dietetic Technician)

(Associate Degree)

NUTRITION EDUCATION**ORNAMENTAL HORTICULTURE****PHOTOGRAPHY —STILL****POLYSOMNOGRAPHY****RADIOLOGIC TECHNOLOGY (Diagnostic)**

(Associate Degree)

RESPIRATORY CARE

(Associate Degree)

SPEECH-LANGUAGE PATHOLOGY ASSISTANT

(Associate Degree)

TECHNICAL WRITING

(Certificate of Completion)

WELDING TECHNOLOGY —

Welding
 Weld Testing Certificates of Completion –
 Basic Welding (SMAW)
 Intermediate Welding (SMAW)
 Advanced Welding (SMAW)
 Advanced I Welding (FCAW)
 Advanced II Welding (FCAW)
 Gas Tungsten Arc Welding (GTAW)
 Gas Metal Arc Welding (GMAW)
 Pipe

Additional Nonvocational Programs —**COMPUTER INFORMATION SYSTEMS**

(Four-Year College Transfer)

ETHNIC STUDIES —

Ethnic Studies
 Ethnic Studies
 (Certificate of Completion)

FAMILY AND CONSUMER SCIENCES

(formerly Home Economics)

(Associate Degree)
 Personal Resource Management
 (Certificate of Completion)

HOME MANAGEMENT**RELIGIOUS STUDIES**

ACCOUNTING

The Accounting Certificate program contains coursework in principles of accounting, computer processing, data entry techniques, and intermediate and cost accounting. Completing the program will provide students with skills necessary for employment as public, private, or governmental bookkeepers.

Employment possibilities include:

Account Clerk
Cost Clerk
Bookkeeper
Accountant Trainee
Junior Accountant
Income Tax Form Clerk

CERTIFICATE OF ACHIEVEMENT

Required Courses		Units	
Course			
First Semester			
Introduction to Business	Bus	100	(3)
Financial Accounting	Acct	101	(4)
Beg Computer Keyboarding 1	COT	109	(1.5)
Second Semester			
Managerial Accounting	Acct	102	(4)
Microcomputer Accounting	Acct	110	(3)
Third Semester			
Intermediate Accounting	Acct	211	(4)
Intro to Info Sys & Prog	C S	111	(4)
Fourth Semester			
Federal Income Tax	Acct	111	(3)
Cost Accounting	Acct	210	(3)
		Total:	(29.5)
Additional recommended courses:			
Business Law	Bus	110	(3)
Business Math	Bus	125	(3)
Business Communication	Bus	139	(3)
Small Business Ownership	Bus	240	(3)
Applied Management	Mgmt	100	(3)
Human Relations & Supervsn	Mgmt	115	(3)
Introduction to Statistics	Math	160	(3)

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

ENTRY-LEVEL ACCOUNTING

This certificate, issued through the Business Division, provides students with basic accounting and computer accounting coursework. Completion of the certificate will enable students to apply for entry-level positions in accounting.

A grade of "C" or better is required in all courses.

CERTIFICATE OF COMPLETION

Required Courses		Units	
Course			
Financial Accounting	Acct	101	(4)
Managerial Accounting	Acct	102	(4)
Microcomputer Accounting	Acct	110	(3)
		Total:	(11)

APPRENTICESHIP

The only apprenticeship program offered at Orange Coast College is the Cook Apprentice (see Culinary Arts).

ARCHITECTURAL TECHNOLOGY

The program in architecture at Orange Coast College offers coursework in drafting, design, building materials and construction, graphics, building codes, site design, and computer-assisted design and drafting. Our comprehensive program provides students with the training and background necessary to transfer to a broad range of universities or to become employed by one of the more than 100 firms in this area which hire our graduates.

Orange Coast College has earned an unparalleled reputation for its program in architecture. One university's spokesman called our program "one of the top three community college programs in the state." Projected construction activity over the next several years should assure one of excellent employment opportunities in this field.

CERTIFICATE OF ACHIEVEMENT

Required Courses		Units	
Course			
FALL			
Intro to Architectural Graphics	Arch	105	(2)
Intro to Architecture	Arch	110	(2)
Arch Draft & Const Documents	Arch	180	(4)
SPRING			
Intro to Arch Design/Theory	Arch	115	(3)
Arch Plan & Const Documents	Arch	185	(4)
Architectural Design Graphics	Arch	270	(3)
FALL			
Architectural Design 2	Arch	130	(3)
Building Materials & Systems	Arch	220	(4)
Basic Comp Aided Dsgn/Draft	Draft	150AB	(4)
SPRING			
Building Codes & Standards	Arch	250	(2)
Architectural Design 3	Arch	286	(4)
Adv Comp Aided Design/Draft-Arch	Draft	158	(4)
		Total:	(39)
Suggested electives:			
History of Arch 1	Arch	290	(3)
History of Arch 2	Arch	296	(3)
Freehand Drawing	Art	120	(3)
Land & Building Development	Arc/Const	225	(3)
Residential Energy Strnds	Const	152	(1)
Computer Use in Technology	H Tech	100	(3)
Fund of Interior Design	I D	100	(3)
Space Planning	I D	170	(3)
Technical Math	Tech	040	(3)

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

ART

—See COMMERCIAL ART

AVIATION TECHNOLOGY

The Aviation Technology programs at OCC are divided into three areas: Airframe and Powerplant Technology, Aviation and Space and Airline Travel Careers. The Airframe and Powerplant and Aviation and Space programs can be completed in approximately four semesters, while Airline Travel Careers can be completed in two semesters.

Students must complete the required courses for the specific program in which they are enrolled to qualify for that program's Certificate of Achievement. Completion of a specific certificate program also satisfies the major requirement for the Associate in Arts degree. A minimum of 60 units is required for completion of the AA degree as specified in the Graduation Requirements section of this catalog.

The curriculum was developed by educators and industry representatives to ensure that course offerings accurately reflect current industry standards.

AIRFRAME AND POWERPLANT TECHNOLOGY

The Airframe and Powerplant Technology program is divided into four areas: Airframe and Powerplant, Airframe, Powerplant, and Helicopters.

Students must complete the required courses for the specific program in which they are enrolled to qualify for that program's Certificate of Achievement. Completion of a specific certificate program also satisfies the major requirement for the Associate in Arts degree. A minimum of 60 units is required for completion of the AA degree as specified in the Graduation Requirements section of this catalog.

The curriculum was developed by educators and industry representatives to ensure that course offerings accurately reflect current industry standards.

The aviation technology fields are of continuing growth and opportunity. The opportunities vary from field to field depending on the population's need for travel, business, and pleasure. Overall, the opportunities and availability outlooks are good to excellent. Each program prepares students in a specific area of aviation and will enable them to seek entry-level or higher levels of employment in the aviation industry.

The following job titles include senior positions earned after beginning in an entry-level position and advancing upward:

- Airframe & Powerplant Technician
- Airframe Mechanic
- Powerplant Mechanic
- Airline Maintenance Mechanic
- General Aviation Maintenance Mechanic
- Aircraft Manufacturer Flight Test Mechanic
- Civil Defense Aircraft Mechanic
- U.S. Military Aircraft Mechanic
- FAA Repair Station Technician
- Helicopter Mechanic
- Executive Aviation Mechanic
- Aircraft Inspector
- Engine Overhaul Mechanic (Turbine or Recips.)
- Aircraft Hydraulic, Pneumatic, Electrical Technician

AIRFRAME AND POWERPLANT TECHNOLOGY—AIRFRAME

This program provides training for the student who desires to be only an Airframe Technician. The training received enables the technician to return to service an airplane, related part, and appliance after performing, supervising or inspecting its maintenance or alterations. This Certificate of Achievement can be acquired in two semesters and one summer school session.

This certificate would enable a student to achieve employment at local aircraft manufacturing and repair facilities.

CERTIFICATE OF ACHIEVEMENT

Required Courses

Course	Required Courses			Units
	FALL			
General 1	Av T	150	(4)	
General 2	Av T	151	(3)	
Gen-Airframe & Powerplant 1	Av T	152	(2)	
General 3	Av T	153	(3)	
General 4	Av T	154	(2)	
General 5	Av T	155	(1)	
Airframe & Powerplant				

Instrumentation	Av T	180	(2.5)
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SPRING

Airframe & Powerplant			
Electricity 1	Av T	160	(6)
Airframe 1	Av T	161	(5.5)
Airframe 2	Av T	162	(3)
Airframe 3	Av T	163	(4.5)
Commun/Navigation Systems	Av T	181	(2)
		Total:	(38.5)

Program approved by the Federal Aviation Administration (FAA).

Completion of the above enables the student to take the FAA Airframe written examination.

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

AIRFRAME AND POWERPLANT TECHNOLOGY—POWERPLANT

This program provides training for the student who desires to be only a Powerplant Technician. The training received enables the technician to return to service an aircraft powerplant and propeller after performing, supervising or inspecting its maintenance, overhaul or alterations.

The Certificate of Achievement can be acquired in three semesters.

This certificate would enable a student to achieve employment in local powerplant and propeller overhaul facilities and repair stations.

CERTIFICATE OF ACHIEVEMENT

Required Courses

Course	Required Courses			Units
	FALL			
General 1	Av T	150	(4)	
General 2	Av T	151	(3)	
General Airframe/Powerplant 1	Av T	152	(2)	
Airframe & Powerplant				
Instrumentation	Av T	180	(2.5)	
		SPRING		
General 3	Av T	153	(3)	
General 4	Av T	154	(2)	
General 5	Av T	155	(1)	
Commun/Navigation Systems	Av T	181	(2)	
		FALL		
Airframe & Powerplant				
Electricity 1	Av T	160	(6)	
Powerplant Theory & Maint 1	Av T	170	(6)	
Powerplant Systems 1	Av T	171	(4)	
		SPRING		
Powerplant Systems 2	Av T	172	(4)	
Powerplant Theory & Maint 2	Av T	173	(6)	
Powerplant Systems 3	Av T	174	(3)	
		Total:	(48.5)	

Program approved by the Federal Aviation Administration (FAA).

Completion of the above enables the student to take the FAA Powerplant written examination.

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

AIRFRAME AND POWERPLANT TECHNOLOGY

This program provides students with the technical skills and systems analysis necessary for entry-level positions as Airframe and Powerplant Certificated Mechanics in the aviation industry, such as airframe inspection, powerplant inspection, maintenance, and return-to-flight status of all types of U.S. Certificated aircraft.

Trained technicians are also successful in related fields of aircraft manufacturing, electronics, hydraulics, pneumatics, welding, sheet metal, quality control, civil and military defense. Additionally, students who have followed this program may earn an engineering degree at any one of several four-year institutions.

CERTIFICATE OF ACHIEVEMENT

Course	Required Courses		Units
	FALL		
General 1	Av T	150	(4)
General 2	Av T	151	(3)
General Airframe/Powerplant 1	Av T	152	(2)
General 3	Av T	153	(3)
General 4	Av T	154	(2)
General 5	Av T	155	(1)
Airframe & Powerplant Instrumentation	Av T	180	(2.5)
	SPRING		
Airframe & Powerplant Electricity 1	Av T	160	(6)
Airframe 1	Av T	161	(5.5)
Airframe 2	Av T	162	(3)
Airframe 3	Av T	163	(4.5)
Commun/Navigation Systems	Av T	181	(2)
	FALL		
Powerplant Theory & Maint 1	Av T	170	(6)
Powerplant Systems 1	Av T	171	(4)
	SPRING		
Powerplant Systems 2	Av T	172	(4)
Powerplant Theory & Maint 2	Av T	173	(6)
Powerplant Systems 3	Av T	174	(3)
	Total:		(61.5)

Program approved by the Federal Aviation Administration (FAA).

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

AIRFRAME AND POWERPLANT TECHNOLOGY—AVIONICS

The Avionics program is designed to prepare students for entry-level positions as installation, maintenance and repair technicians for avionic equipment in private, corporate and commercial aircraft.

The aircraft industry is quickly evolving its level of sophisticated navigational and communications systems to include microprocessor-based systems in all areas of the airframe. This requires a new competent work force capable in the state-of-the-art technology of the future.

This two-semester certificate program combines theory and laboratory practices with hands-on application in actual aircraft. Upon completion, the student will be ready for employment in this fast growing and exciting field.

CERTIFICATE OF ACHIEVEMENT

Course	Required Courses		Units
	FALL		
Airframe & Powerplant Instrumentation	Av T	180	(2.5)
General 2	Av T	151	(3)
Aircraft Avionics Circuits	Av T	182	(5)
	SPRING		
Commun/Navigation Systems	Av T	181	(2)
Aircraft Avionics Systems	Av T	184	(5.5)
Avionics Rules & Regulations	Av T	188	(1.5)
	Total:		(19.5)

ASSOCIATE DEGREE

Complete certificate of achievement and graduation requirements as outlined in the Graduation Requirements section of the catalog.

HELICOPTER THEORY AND MAINTENANCE

This course provides students with the general knowledge of rotary wing development, technology, construction, and a general survey of the helicopter industry.

This course also provides a good understanding of the helicopter type aircraft to interested individuals, technicians and pilots.

CERTIFICATE OF COMPLETION

Course	Required Courses		Units
	FALL		
Theory and Operations	Av T	140	(3)
	SPRING		
Helicopter Maintenance	Av T	290	(4)
	Total:		(7)

AIRLINE TRAVEL CAREERS

This program prepares men and women of all ages for the highly competitive customer service careers including Flight Attendant in the airline and travel industry. Classes include a career survey, hiring qualifications and requirements, communication skills, appearance and image standards, oral interviewing techniques, written employment seeking skills, airline, airport and travel terminology and codes, and airline reservations systems. Students will work at campus, John Wayne Airport, charity and community events to gain the public contact experience considered valuable in the travel industry. Most courses are nine weeks except those indicated by an asterisk.

AIRLINE TRAVEL CAREERS—FLIGHT

CERTIFICATE OF ACHIEVEMENT

Required Courses			
Course			Units
Public Serv-AirLn/Trav Careers (two semesters at 2.0 units each or one semester at 4.0 units)	AirLn	105AC	(4)
Personal Development, Appearance, Image, Attitude	AirLn	110	(1.5)
Travel Careers Survey	AirLn	111	(1.5)
Flight Attendant Qualifications and Opportunities	AirLn	112	(1.5)
Employment Skills-Written	AirLn	114	(1.5)
Interviewing Techniques	AirLn	115	(1.5)
Travel Industry Operations and Terminology	AirLn	116	(1.5)
Travel Safety Inflight/Ground	AirLn	119	(1.5)
Service Excellence Inflt/Grnd	AirLn	120	(1.5)
Computer Reservation Systems 1*	AirLn	129	(3)
Intercultrl Awareness/Etiquette	AirLn	132	(1.5)
First Aid/CPR*	Hled	112	(2)

Subtotal: (22.5)

Select at least four and one half (4.5) units from the following:

Travel Geography-United States	AirLn	122	(1.5)
Travel Geography-Northern Europe	AirLn	123	(1.5)
Travel Geography-Africa	AirLn	124	(1.5)
Travel Geography-The Americas	AirLn	125	(1.5)
Travel Geography-Southern Europe	AirLn	126	(1.5)
Travel Geography-Eastern Europe	AirLn	127	(1.5)
Travel Geography-Pacific Rim	AirLn	128	(1.5)

(4.5)

Total: (27)

Suggested electives:

Conversational Language*			(3)
Management-Travel/Aviation	AirLn	117	(1.5)
Beg Computer Keyboarding 1	COT	109	(1.5)
Consumer Economics*	Econ	110	(3)
Interpersonal Communication*	Spch	100	(3)

*Eighteen-week courses

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

AIRLINE TRAVEL CAREERS—GROUND

CERTIFICATE OF ACHIEVEMENT

Required Courses

Course			Units
Public Serv-AirLn/Trav Careers (two semesters at 2.0 units each or one semester at 4.0 units)	AirLn	105AC	(4)
Personal Development, Appearance, Image, Attitude	AirLn	110	(1.5)
Travel Careers Survey	AirLn	111	(1.5)
Employment Skills Written	AirLn	114	(1.5)
Interviewing Skills	AirLn	115	(1.5)
Travel Industry Operations, Terminology, History	AirLn	116	(1.5)
Travel Safety Inflight/Ground	AirLn	119	(1.5)
Service Excellence Inflt/Grnd	AirLn	120	(1.5)
Computer Reservation Systems 1*	AirLn	129	(3)
Computer Reservation Systems 2	AirLn	131	(1.5)
Intercultrl Awareness/Etiquette	AirLn	132	(1.5)
First Aid/CPR*	Hled	112	(2)

Subtotal: (22.5)

Select at least four and one half (4.5) units from the following:

Travel Geography-United States	AirLn	122	(1.5)
Travel Geography-Northern Europe	AirLn	123	(1.5)
Travel Geography-Africa	AirLn	124	(1.5)
Travel Geography-The Americas	AirLn	125	(1.5)
Travel Geography-Southern Europe	AirLn	126	(1.5)
Travel Geography-Eastern Europe	AirLn	127	(1.5)
Travel Geography-Pacific Rim	AirLn	128	(1.5)

(4.5)

Total: (27)

Suggested electives:

Management-Travel/Aviation	AirLn	117	(1.5)
Beg Computer Keyboarding 1	COT	109	(1.5)
Consumer Economics*	Econ	110	(3)
Interpersonal Communication*	Spch	100	(3)
Conversational Language*			(3)

*Eighteen-week courses

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

AVIATION AND SPACE

This program offers training in areas such as corporate piloting, commuter airline piloting, aerial photography, and flight instruction. The curriculum also exposes students to space systems and employment opportunities in local aerospace corporations.

CERTIFICATE OF ACHIEVEMENT

Required Courses			
Course			Units
FALL			
Aviation Ground School	Av Spc	130	(5)
Basic Air Transportation	Av Spc	180	(3)
Aviation-Meteorology	Av Spc	133	(3)
SPRING			
Aviation-Navigation	Av Spc	132	(3)
Instrument Ground School	Av Spc	134	(3)
Astronautics/Spacecraft Design	Av Spc	195	(3)
FALL			
Aviation Ground School	Av Spc	139	(3)
GPS Nav & Elect Flite Planning	Av Spc	191	(3)
		Total:	(26)
Suggested electives:			
Air Traffic Control for Pilots	Av Spc	125	(1.5)
Soaring-Glider Ground School	Av Spc	136	(3)
Aircraft Engines	Av Spc	135	(3)
Aircraft Preventive Maintenance	Av Spc	137	(1.5)
Aerodynamics	Av Spc	138	(3)
Flight Instructor Ground School	Av Spc	140	(3)
Flight Simulator Course	Av Spc	141AB	(2)
Turbine Aircraft Systems	Av Spc	145	(3)
Space Station	Av Spc	196	(1.5)
Advanced Space Systems	Av Spc	197	(1.5)

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

AVIATION AND SPACE

Professional Upgrade Certificates

The following Professional Upgrade Certificates of Completion are intended for the advanced student or the employed aerospace professional who desires advanced or recurrent training in a specific area. Certificates may be obtained from the Technology Division office by bringing in official records showing the successful completion of required courses.

Space Systems

A program of study which covers current topics in the aerospace industry for the advanced student or working professional employed at a government agency or private contractor. Topics include space shuttle systems, mission operations and support, flightcrew selection and training, International Space Station components and systems, commercial satellites and launch services, and local industry employment opportunities supporting America's space program.

CERTIFICATE OF COMPLETION

Required Courses

Course			Units
Astronautics & Spacecraft Design	Av Spc	195	(3)
Space Station	Av Spc	196	(1.5)
		Total:	(4.5)

Turbine Transition

A program of study which covers turbine aircraft systems and cockpit resource management. The courses are intended to explore those topics that a student would cover in obtaining a type rating in a Cessna Citation or Boeing 737-200. The student will also become familiar with CRM and how it is utilized in the cockpits of commuter, corporate, and airline flightdecks.

CERTIFICATE OF COMPLETION

Required Courses

Course			Units
Turbine Aircraft Systems	Av Spc	145	(3)
Human Factors & Cockpit Resource Management	Av Spc	192	(1.5)
		Total	(4.5)

BUSINESS

—See ACCOUNTING
COMPUTER INFORMATION SYSTEMS
COMPUTER SCIENCE
COMPUTERIZED OFFICE TECHNOLOGY
FOOD SERVICE MANAGEMENT
HOTEL MANAGEMENT
MANAGEMENT
MARKETING

CARDIOVASCULAR TECHNOLOGY

Cardiovascular technology is an allied health profession concerned with the diagnosis and treatment of patients with heart and blood vessel disease. The cardiovascular technologist performs tests at the request of a physician to obtain information about that patient's heart and blood vessel anatomy and function so the physician can make a diagnosis. The profession of cardiovascular technology includes three areas of diagnostic evaluation: 1) invasive cardiovascular technology (diagnosis of heart disease by cardiac catheterization), 2) noninvasive cardiovascular technology (diagnosis of heart disease by cardiac ultrasound, exercise, and electrocardiographic testing), and 3) noninvasive peripheral vascular study (diagnosis of blood vessel disease using ultrasound testing).

The Cardiovascular Technology program provides the necessary classroom and clinical courses to allow graduates to work as invasive cardiovascular technologists and noninvasive cardiovascular technologists. Specifically, the program objectives include:

1. Graduate qualified invasive cardiovascular technologists.
2. Graduate qualified noninvasive cardiovascular technologists who obtain RDCS within two years of completing the program and who are qualified in all noninvasive tests.
3. Provide an adequate number of graduates to meet the need for employees within the community.
4. Acquire and maintain Commission on Accreditation of Allied Health Education Programs (CAAHEP).

During the first year of the program, students learn basic medical sciences and noninvasive cardiovascular tests including electrocardiography (ECG), exercise testing, Holter monitoring, pacemaker evaluation and continuous cardiac monitoring. Students may exit the program after the first year and obtain a Certificate of Achievement as an Electrocardiography Technician. With this certificate, graduates may obtain employment as an ECG technician, stress testing technician, Holter monitor technician, pacemaker technician and/or monitor (telemetry) technician.

Students wishing to complete the two-year program must complete the first year courses and Diagnostic Medical Sonography 150, and have an Associate in Arts degree or its equivalent or satisfy the requirements for an Associate in Arts degree before Option #1 or Option #2 certificates can be awarded. During the second year of the program, students must choose Option #1 - Noninvasive Cardiovascular Technology or Option #2 - Invasive Cardiovascular Technology. Graduates of the Noninvasive Cardiovascular Technology program option may obtain employment as a cardiovascular

technologist performing all noninvasive tests, particularly cardiac ultrasound or echocardiography. Additionally, graduates may perform limited cerebrovascular ultrasound tests. Graduates of the Invasive Cardiovascular Technology program option may obtain employment as a cardiovascular technologist performing all invasive tests performed in the cardiac catheterization laboratory.

ELECTROCARDIOGRAPHY TECHNICIAN

Employment possibilities include:

ECG Technician
Stress Testing Technician
Holter Monitor Technician
Pacemaker Technician
Monitor (Telemetry) Technician

CERTIFICATE OF ACHIEVEMENT

Program prerequisites:

Health Occupations	AI H	010	(.5)
Anatomy-Physiology	Biol	221	(4)

Required Courses

Course			Units
FALL			
Intro Info Sys & Appl	CIS	100	(3)
Medical Terminology	AI H	111	(3)
Patient Care	AI H	115	(2.5)
Intro to Electrocardiography	CVT	100	(2)
Technical Math	Tech	040	(3)
SPRING			
Human Diseases	AI H	120	(2)
Adv Electrocardiography	CVT	150	(2)
Cardiac Anat & Pathophysiology	CVT	160	(3)
ECG Clinical Experience	CVT	170	(3)
Technical Electronics	Elec	140	(3)
Total:			(31)

Students are required to obtain a grade of "C" or better in all required courses.

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

CARDIOVASCULAR TECHNOLOGY—NONINVASIVE-OPTION #1

Employment possibilities include:

Noninvasive Cardiovascular Technologist
Echocardiographer/Echocardiography Technologist
Cerebrovascular Ultrasound Technologist

ASSOCIATE DEGREE PROGRAM

This is an Associate Degree program which requires an Associate in Arts Degree or higher from an accredited college before the certificate can be awarded. Students who do not already have a degree must complete the Orange Coast College Graduation Requirements for the AA Degree, including General Education Options 1, 2 or 3.

Required prerequisites:

Electrocardiography Technician
Certificate of Achievement

Subtotal:			(31)
Required Courses			
Course			Units
FALL			
Sono Physics/Instrumentation	DMS	150	(4.5)
Intro to Echocardiography	CVT	200	(3)
Intro to Echocardiography Lab	CVT	205	(1)
Echocardiography Clin Lab 1	CVT	210	(5)
SPRING			
Adv Echocardiography	CVT	250	(2)
Adv Echocardiography Lab	CVT	255	(1)
Cerebrovascular Ultrasound	CVT	260	(2)
Echocardiography Clin Lab 2	CVT	265	(5)
Total:			(54.5)

Students are required to obtain a grade of "C" or better in all required courses.

CARDIOVASCULAR TECHNOLOGY— INVASIVE-OPTION #2

This option is offered only upon community demand. For information, please call the Allied Health Advisor at (714) 432-5541.

Employment possibilities include:

Invasive Cardiovascular Technologist
Cardiac Catheterization Lab Technologist

ASSOCIATE DEGREE PROGRAM

This is an Associate Degree program which requires an Associate in Arts Degree or higher from an accredited college before the certificate can be awarded. Students who do not already have a degree must complete the Orange Coast College Graduation Requirements for the AA Degree, including General Education Options 1, 2 or 3.

Required prerequisites:

Electrocardiography Technician
Certificate of Achievement

Course	Required Courses	Subtotal:	(31)
		Units	
FALL			
Sono Physics/Instrumentation	DMS 150	(4.5)	
Intro to Invasive Cardiology	CVT 230	(3)	
Intro to Invasive Cardiology Lab	CVT 235	(1)	
Invasive Cardiology Clin Lab 1	CVT 240	(5)	
Fundamentals of Radiation Protection Practices	Rad T 105	(1)	
SPRING			
Adv Invasive Cardiology	CVT 275	(3)	
Adv Invasive Cardiology Lab	CVT 280	(1)	
Invasive Cardiology Clin Lab 2	CVT 285	(5)	
Total:		(54.5)	

Students are required to obtain a grade of "C" or better in all required courses.

COMMERCIAL ART—ADVERTISING DESIGN

This two-year certificate program is intended to prepare the student for an early "entry-level" into the advertising art industry.

Employment possibilities in the field of art are highly dependent on the quality of one's artistic portfolios. Therefore, employment such as a graphic artist or advertising layout designer is only possible when a student has a very broad and strong portfolio in addition to basic art courses.

CERTIFICATE OF ACHIEVEMENT

Course	Required Courses		Units
First Semester			
Color & Design 2-D	Art	110	(3)
Lettering/Computer Typography	Art	115	(3)
Freehand Drawing	Art	120	(3)
Second Semester			
Product Illustration 1	Art	118	(2)
Computer Art Production	Art	163	(4)
Basic Photography	Photo	120	(3)
Third Semester			
Rapid Illustration	Art	117	(3)
Story Illustration Techniques	Art	143AD	(3)
Advertising Design 1	Art	160	(3)
Fourth Semester			
Contemporary Art History	Art	102	(3)
Advertising Design 2	Art	161	(3)
Professional Studies	Art	180	(2)
		Total:	(35)
Suggested electives:			
Color & Design 3-D	Art	111	(3)
Life Drawing	Art	121AD	(3)
Intro to Computer Graphics	DMA	181	(3)
Illus & Computer Graphics 1	DMA	190	(4)
2-D Animation	DMA	280AC	(4)
Video Workshop	Film	110	(3)
Advertising Copywriting	Mktg	114	(3)
Principles of Advertising	Mktg	130	(3)

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

COMMERCIAL ART—ILLUSTRATION DESIGN

The Illustration Design option places its emphasis on a great variety of drawing and painting courses. The diversity of this curriculum may lead the student into career alternatives, such as illustrating for books, magazines, record album covers and brochures.

CERTIFICATE OF ACHIEVEMENT

Required Courses			
Course			Units
First Semester			
Color & Design 2-D	Art	110	(3)
Rapid Illustration Techniques	Art	117	(3)
Freehand Drawing	Art	120	(3)
Second Semester			
Color & Design 3-D	Art	111	(3)
Life Drawing	Art	121AD	(3)
Perspective	Art	125	(3)
Advertising Design 1	Art	160	(3)
Third Semester			
Painting 1	Art	130	(3)
Story Illustration Techniques	Art	143AD	(3)
Figure Composition	Art	220AD	(3)
Fourth Semester			
Printmaking 1	Art	170	(3)
Professional Studies	Art	180	(2)
Intro to Marketing	Mktg	100	(3)
Total:			(38)
Suggested electives:			
Contemporary Art History	Art	102	(3)
2-D Animation	DMA	280AC	(4)

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

COMMERCIAL ART—JEWELRY DESIGN

The Jewelry Design program offers a strong fine arts background in design, materials and techniques. Further studies at the university level are encouraged; however, potential areas of employment exist in freelance jewelry design, sales, and activities related to retirement and recreational programs.

CERTIFICATE OF ACHIEVEMENT

Required Courses			
Course			Units
First Semester			
Color & Design 2-D	Art	110	(3)
Freehand Drawing	Art	120	(3)
Second Semester			
Color & Design 3-D	Art	111	(3)
Sculpture 1	Art	141	(3)
Jewelry 1	Art	147	(3)
Third Semester			
Jewelry 2	Art	247AC	(3)
Intro to Marketing	Mktg	100	(3)
Fourth Semester			
Professional Studies	Art	180	(2)
Sculpture 2	Art	241AC	(3)
Total:			(26)

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

COMPUTER INFORMATION SYSTEMS

Major and Purpose: To provide an individual with the technical skills and systems perspective necessary for entry-level positions in the computer and information industry, i.e., programming, operations, systems analysis and marketing of computers and allied products. Students may transfer to programs leading to four-year degrees at state colleges and universities. Computer Information Systems (CIS) offers a variety of career-oriented paths.

COMPUTER INFORMATION SYSTEMS— BUSINESS COMPUTER PROGRAMMING

Designed to provide a good foundation for students who are interested in computer programming. Career professionals should take as many additional languages and computer-oriented courses as possible. In today's dynamic and changing technological environment, continuous professional upgrading is a requirement.

CERTIFICATE OF ACHIEVEMENT

Required Courses			
Course			Units
Financial Accounting	Acct	101	(4)
Intro to Info Sys & Prog	C S	111	(4)
First Course in Visual Basic	C S	118	(4)
Second Course in Visual Basic	C S	119	(4)
(Or)			
Beginning COBOL	C S	120	(4)
Access Programming	C S	165	(4)
Intro to Systems Analysis	CIS	175	(3)
Local Area Networking	CIS	191	(4)
Finite Math	Math	154	
(Or)			
Calculus for BMSS	Math	157	(5)
(Or)			
Calculus 1	Math	180	
Total:			(32)

Suggested electives:

Desktop Publishing	CIS	103	(4)
PASCAL Programming	C S	115	(4)
Computer Architecture	C S	116	(4)
C++ Programming 1	C S	150	(4)
Windows Programming in C	C S	152	(4)
Java Programming	C S	170	(4)
Data Structures	C S	200	(4)
Microcomputer Sys Development	C S	240	(4)
C++ Programming 2	C S	250	(4)

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

COMPUTER INFORMATION SYSTEMS— TECHNICAL COMPUTER PROGRAMMING

The personal computer, desktop computer, or home computer by any other name is probably a microprocessor. An option in this challenging program includes a knowledge of the hardware and operation as well as the programming languages used by the system. Designed for the student to use microprocessors for personal or professional growth.

CERTIFICATE OF ACHIEVEMENT

Required Courses			Units
Course			
Intro to Info Sys & Prog	C S	111	(4)
Pascal Programming	C S	115	(4)
Computer Architecture (4)	C S	116	
(And)			
Microcomputer Sys Development (4)	C S	240	
(Or)			(8)
Digital Comptrs/Microprocess (4)	Elec	241	
(And)			
Applied Digital Circuits (4)	Elec	245	
C++ Programming 1	C S	150	(4)
C++ Programming 2	C S	250	
(Or)			(4)
Computer Programming	C S	270	
Local Area Networking	CIS	191	(4)
Basic Digital Technology	Elec	135	(3)
	Total:		(31)

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

COMPUTER INFORMATION SYSTEMS (FOUR-YEAR COLLEGE TRANSFER)

This option provides the student with the necessary lower division transfer courses for most business oriented majors. C S 115, Pascal, is accepted at some four-year institutions in place of C S 120, Beginning COBOL. C S 111, Introduction to Information Systems and Programming or CIS 100, Introduction to Information Systems and Microcomputer Applications, and C S 113, BASIC, are accepted by a few four-year institutions. Students are advised to check course transferability with the school to which they intend to transfer prior to enrolling in CIS courses.

CERTIFICATE OF ACHIEVEMENT

Required Courses			Units
Course			
Financial Accounting	Acct	101	(4)
Managerial Accounting	Acct	102	(4)
Business Law	Bus	110	(3)
Intro to Info Sys & Prog (4)	C S	111	
(Or)			
Intro to Info Sys & Appl (3)	CIS	100	(4)
(And)			
BASIC (1)	C S	113	
PASCAL Programming	C S	115	
(Or)			
Beginning COBOL	C S	120	(4)
(Or)			
Second Course in Visual Basic	C S	119	
First Course in Visual Basic	C S	118	(4)
Intro to Systems Analysis	CIS	175	(3)
Macroeconomics	Econ	180	(3)
Microeconomics	Econ	185	(3)
Calculus for BMSS	Math	157	
(Or)			(5)
Calculus 1	Math	180	
	Total:		(37)

This program will meet major requirements for the Associate in Arts degree but has not been articulated with any particular four-year institution. Students should not expect that they will necessarily meet the lower division requirements at specific colleges or universities. Students should consult the Transfer Information section of this catalog for specific transfer information.

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

COMPUTERIZED OFFICE TECHNOLOGY

All you have to do is look at any metropolitan skyline to realize the vast employment opportunities in office administration. Where there are offices there is a need for people to work. Orange County's employment outlook is even better than the nation's because it is particularly strong in the areas of defense, electronics, housing, and business services, as well as tourism.

Employers are in desperate need of QUALIFIED office personnel—ranging from clerk, stenographer, typing specialist, word processing specialist, data entry specialist, to the administrative assistant. The entry-level jobs are plentiful, and the career ladder to the top is better today than ever before.

The Core Curriculum given below will give you the basic skills you need for entry-level employment. These courses, along with the required courses for the following Certificates of Achievement, will round out your skills to meet the requirements for specific job titles.

Students are required to obtain a grade of "C" or better in all required courses.

COMPUTERIZED OFFICE TECHNOLOGY— CORE CURRICULUM

CERTIFICATE OF COMPLETION

Required Courses			Units
Course			
Beg Comp Keyboarding 1* (1.5)	COT	109	
(And)			(3)
Beg Comp Keyboarding 2 (1.5)	COT	113	
Int Computer Keyboarding	COT	116	(1.5)
Keyboard Speed & Accuracy	COT	111AB	(1.5)
Business English	Bus	138	(3)
Office Skills	COT	150	(3)
Beg Word Processing	COT	217AB	(1.5)
			(13.5)

**Students with typing ability should enroll in Computerized Office Technology 113.*

COMPUTERIZED OFFICE TECHNOLOGY— ELECTRONIC OFFICE

Walk into any office today and you will see a computer. You may see a secretary working on a spreadsheet or processing words using a word processor. You may witness a clerk inputting information for inventory control or database management. Whatever the application, the electronic office is in full swing and it will not go away.

To receive the Electronic Office Certificate of Achievement it is necessary to complete the Computerized Office Technology Core Curriculum Certificate of Completion and the additional required units listed below.

Employment possibilities include:

- Word Processing Keyboard Operator
- Word Processing Correspondence Secretary
- Administrative Services/Word Processor
- Secretary/Word Processor
- Administrative Secretary
- Word Processing Trainee

CERTIFICATE OF ACHIEVEMENT

Required prerequisite:

Computerized Office Technology Core Curriculum Certificate of Completion must be taken prior to or concurrently with the required courses.

	Subtotal:	(13.5)
Required Courses		
Course		Units
Business English Mechanics	Bus 137	(3)
Business Communication	Bus 139	(3)
Int Word Processing	COT 218AB	(1.5)
Excel	CIS/Bus 134	(3)
	Total:	(24)

Suggested electives:

Desktop Publishing	CIS 103	(4)
Intro to Business	Bus 100	(3)
Career/Prof Success Skills	Bus 170	(3)

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

COMPUTERIZED OFFICE TECHNOLOGY— GENERAL OFFICE

The information age is here! More office personnel is needed than ever before to handle this vast amount of information. Whenever paper is generated, it requires people to handle the paper and people to run the offices that use the information and store the paper.

To receive the Certificate of Achievement in General Office it is necessary to complete the Computerized Office Technology Core Curriculum Certificate of Completion and the additional required units listed below.

Employment possibilities include:

- Receptionist
- Typist Clerk
- Clerk/Typist
- Bookkeeping Clerk
- File Clerk
- General Office Clerk

Continued next column

CERTIFICATE OF ACHIEVEMENT

Required prerequisite:

Computerized Office Technology Core Curriculum Certificate of Completion must be taken prior to or concurrently with the required courses.

	Subtotal:	(13.5)
Required Courses		
Course		Units
Intro to Accounting (3)	Acct 100	(3-4)
(Or)		
Financial Accounting (4)	Acct 101	(3)
Business Communication	Bus 139	(1)
Electronic Calculator	Bus 161	(3)
Business Math	Bus 125	(3)
Excel	Bus/CIS 134	(3)
	Total:	(26.5-27.5)

Suggested electives:

Keyboarding Speed & Accuracy	COT 111AB	(1.5)
Business English Mechanics	Bus 137	(3)
Intro to Business	Bus 100	(3)
Career/Prof Success Skills	Bus 170	(3)

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

COMPUTERIZED OFFICE TECHNOLOGY— WORD PROCESSING MANAGEMENT

Insurance companies, hospitals, municipal and county offices, large law firms, and many other organizations in Orange County and throughout Southern California have a Word Processing Center, which is a centralized area in which word processing functions take place. These Centers may have as few as two word processing stations or as many as forty. Regardless of size, these Centers must have someone to oversee the operation, train the operators, and manage the employees.

If you have completed the Computerized Office Technology Core Curriculum Certificate of Completion and have satisfied the requirements for the Electronic Office Certificate of Achievement, and have several years of on-the-job word processing experience, the Word Processing Management Certificate of Achievement will help you acquire a supervisory / manager position.

Employment possibilities include:

- Word Processing Manager
- Word Processing Lead Operator
- Word Processing Trainer

CERTIFICATE OF ACHIEVEMENT

Required prerequisite:

Computerized Office Technology Core Curriculum Certificate of Completion AND Electronic Office Certificate of Achievement

	Subtotal:	(24)
Required Courses		
Course		Units
Applied Management	Mgmt 100	(3)
Human Relations & Supervsn	Mgmt 115	(3)
Applied Communications	Mgmt 210	(3)
	Total:	(33)

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined

CONSTRUCTION TECHNOLOGY

The Construction Technology program has courses that can be divided into two major areas of emphasis: Residential Trades and Construction Management. Due to the vast diversity of occupations and areas of specialization within the construction industry and recognizing that individual student needs will be as diverse, a Certificate of Achievement can be designed that satisfies those specific needs. Completion of a certificate program satisfies the major requirement for the Associate of Arts degree. A minimum of sixty (60) units is required for completion of the AA degree as specified in the catalog under Graduation Requirements. Certificates of Achievement and Completion can be completed in one to two semesters.

CONSTRUCTION TECHNOLOGY—BASIC CONSTRUCTION PRACTICES

Construction Technology 165, Construction Safety/CAL-OSHA, is required for any first earned Certificate of Achievement.

It is recommended that all beginning, full-time students enroll in the following courses leading to a Certificate of Achievement.

CERTIFICATE OF ACHIEVEMENT

Required Courses			
Course			Units
Construction Safety/CAL-OSHA	Const	165	(3)
Building Construction	Const	180	(5)
Blueprint Reading & Drafting	Const	190	(4)
Building Code & Law	Const	195	(2)
Residential Finish Carpentry	Const	240	(4)
Total:			(18)

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

CONSTRUCTION TECHNOLOGY— RESIDENTIAL CONSTRUCTION DEVELOPMENT

Students may select any combination of courses that total eighteen (18) or more units from the following list. Note: Construction Technology 165, Construction Safety/CAL OSHA, is required for any first earned Certificate of Achievement.

RESIDENTIAL CONSTRUCTION DEVELOPMENT SECOND AWARD

RESIDENTIAL CONSTRUCTION DEVELOPMENT THIRD AWARD

Students may earn a second and third award of the certificate by completing eighteen (18) or more units from the following list, however, no course may be applied to more than one certificate.

CERTIFICATE OF ACHIEVEMENT

Required Courses			
Course			Units
Wood Technology 1	Const	110AD	(4)
Cabinet Making	Const	114AD	(4)
Residential Energy Stds	Const	152	(1)
Introduction to Construction	Const	170	(3)
Building Construction	Const	180	(5)
Building Construction	Const	185	(5)
Blueprint Reading & Drafting	Const	190	(4)
Building Code & Law	Const	195	(2)

Continued next column

Concrete Construction	Const	210	(5)
Construction Estimating	Const	220	(3)
Land & Building Development	Const	225	(3)
Construction Inspection	Const	230	(3)
Contractor's Business Practice	Const	235	(3)
Residential Finish Carpentry	Const	240	(4)
Supervision and Project Mgmt	Const	250	(3)
Construction Finance	Const	255	(3)
Masonry Construction	Const	260	(3)
Plumbing 1	Const	265	(4)
Contractor's License Law	Const	270AD	(1.5)
Residential Electrical Wiring	Const	275	(5)
Introduction to Computers	Const	280	(1)
Res Lt Steel Frame Const	Const	285	(5)

Total: (18) Minimum

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

CONSTRUCTION TECHNOLOGY— MASTER CONSTRUCTION SPECIALIST

This special professional upgrade certificate is given to students who complete a minimum of 50 semester units. The terms "Master" and "Specialist" imply a very broad knowledge in several of the construction trades and management disciplines. Students who complete this program will have their names displayed on a perpetual "Award of Excellence" listing in the Construction Department.

CERTIFICATE OF ACHIEVEMENT

Required Courses			
Course			Units
Residential Energy Standards	Const	152	(1)
(Or)			
Intro to Computers in Construction	Const	280	
Construction Safety/CAL OSHA	Const	165	(3)
Blueprint Reading & Drafting	Const	190	(4)
Cabinet Making	Const	114AD	(4)
Building Construction	Const	180	(5)
Concrete Construction	Const	210	(5)
Residential Finish Carpentry	Const	240	(4)
Plumbing 1	Const	265	
(Or)			
Plumbing 2	Const	266	(4)
Residential Electrical Wiring	Const	275	(5)
Res Lt Steel Frame Const	Const	285	(5)
Subtotal:			(40)

Select ten (10) units from the following:

Building Construction	Const	185	(5)
Building Code & Law	Const	195	(2)
Construction Estimating	Const	220	(3)
Construction Inspection	Const	230	(3)
Supervision & Project Management	Const	250	(3)
Masonry Construction	Const	260	(3)

Total: (10)
(50)

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

RESIDENTIAL CONSTRUCTION PROFESSIONAL UPGRADE

CERTIFICATES OF COMPLETION

Students may earn a Certificate of Completion in any of the subject areas specified.

Course			Units
Basic Carpentry			
Building Construction	Const	180	(5)
Building Construction	Const	185	(5)
			(10)
Finish Carpentry			
Cabinet Making	Const	114AD	(4)
Building Code & Law	Const	195	(2)
Residential Finish Carpentry	Const	240	(4)
			(10)
Concrete & Masonry			
Concrete Construction	Const	210	(5)
Masonry Construction	Const	260	(3)
			(8)
Residential Utilities			
Plumbing 1	Const	265	(4)
Residential Electrical Wiring	Const	275	(5)
			(9)
General Contracting & Development			
Construction Estimating	Const	220	(3)
Land & Building Development	Const	225	(3)
Contractor's Business Practice	Const	235	(3)
			(9)
Construction Field Management			
Blueprint Reading & Drafting	Const	190	(4)
Construction Inspection	Const	230	(3)
Supervision & Project Mgmt	Const	250	(3)
			(10)
Introduction to Construction			
Wood Technology 1	Const	110AD	(4)
Intro to Construction	Const	170	(3)
Intro to Computers in Constr	Const	280	(1)
			(8)
Construction Basics			
Construction Safety/CAL-OSHA	Const	165	(3)
Blueprint Reading & Drafting	Const	190	(4)
Building Code & Law	Const	195	(2)
			(9)

COSTUME CAREERS

The following certificates represent skill levels and job titles found in the fashion and entertainment technology industry. The certificates/degree programs all require the same core set of courses. The certificates build skills toward higher levels of employment and toward higher degrees.

COSTUME CORE

Required Courses			
Course			Units
Careers in Fashion	Fash	115	(3)
Beg Clothing Techniques*	Fash	100	(3)
Intro to Theatre	Thart	100	(3)
Costume Crafts	Thart	178	(3)
OCC Theatre Repertory	Thart	141AD	(3)
Play Production (take both 1st & 2nd 9 wks)	Thart	171AD	(4)
Subtotal:			(19)

*Experienced sewers may demonstrate competency in techniques listed under Fashion 100 and 101 by taking Fashion 105, Sewing Skills Assessment.

COSTUME DRESSER

This course of study provides the student with the practical knowledge and experience necessary to work backstage preparing, changing, and maintaining costumes before and during performances. Students are trained in basic costuming techniques, as well as basic theatrical production practices.

CERTIFICATE OF ACHIEVEMENT

Required Courses			
Course			Units
Costume Core Curriculum			(19)
Applied Textiles & Design	Fash	110	(3)
Make-up	Thart	177AD	(3)
OCC Theatre Repertory	Thart	141AD	(3)
Total:			(28)
Suggested electives:			
Inter Clothing Techniques	Fash	101	(3)
Play Production	Thart	171AD	(2)
OCC Theatre Repertory	Thart	141AD	(3)

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

COSTUME STITCHER

The courses in this program provide training in the specialized sewing techniques and other skills required to build a variety of costumes required in theatre and other performance acts. Students also receive training in basic theatrical production practices.

CERTIFICATE OF ACHIEVEMENT

Required Courses			
Course			Units
Costume Core Curriculum			(19)
Inter Clothing Techniques*	Fash	101	(2)
Industrial Sewing Techniques	Fash	102	(2)
Alterations	Fash	137	(2)
Couture Techniques	Fash	233	(2)
Total:			(27)
Suggested electives:			
Play Production	Thart	171AD	(2)
Flat Pattern Techniques	Fash	150	(3)

*Experienced sewers may demonstrate competency in techniques listed under Fashion 100 and 101 by taking Fashion 105, Sewing Skills Assessment.

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

COSTUME CUTTER/DRAPER

The courses in this certificate program train students to create patterns for costumes by flat-pattern and draping methods, and to cut out and assemble costumes for the performing arts. Students also receive training in basic theatrical production practices.

CERTIFICATE OF ACHIEVEMENT

Required Courses			
Course			Units
Costume Core Curriculum			(19)
Costume Stitcher Curriculum			(8)
History of Fashion	Fash	120	(3)
Flat Pattern Techniques	Fash	150	(3)
Draping	Fash	235	(2)
Pattern Drafting & Design	Fash	245	(1.5)
Total:			(36.5)
Suggested electives:			
Pattern Grading	Fash	251	(1.5)
Play Production	Thart	171AD	(2)

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

ASSISTANT COSTUME DESIGNER

High-level of responsibility to assist the designer in work such as costuming for film, TV, theme park entertainment, or theater. The Assistant Costume Designer should be able to utilize the skills acquired in the Cutter/Draper and Stitcher certificates, be able to illustrate fashion, and have design skills.

ASSOCIATE DEGREE PROGRAM

This is an Associate Degree program which requires an Associate Degree or higher from an accredited college before the certificate will be awarded. Students who do not already have a degree must complete the Orange Coast College Graduation Requirements for the AA Degree including General Education Options 1,2 or 3.

Required Courses			
Course			Units
Costume Cutter/Draper Curriculum			(36.5)
Make-up	Thart	177AD	(3)
Fashion Illustrating Tech	Fash	255	(2)
Clothing Design & Selection	Fash	170	(3)
Fashion Internship	Fash	181	(3)
Total:			(47.5)
Suggested electives:			
Play Production	Thart	171AD	(2)
OCC Theatre Repertory	Thart	141AD	(3)
Color & Design 2-D	Art	110	(3)
Intro to Humanities	Hum	100	(3)
Flat Pattern Application	Fash	155	(3)

--See also

ENTERTAINMENT TECHNOLOGY
FASHION

CULINARY ARTS—CULINARY ARTS

The requirements for the Certificate of Achievement in Culinary Arts provide students with the basics in the methods and chemistry of cooking. These requirements include exposure to many kinds of menus, to techniques of traditional and specialty cooking, and to the proper ways to use various tools and culinary equipment.

This program is accredited by the American Culinary Federation Educational Institute Accrediting Commission.

CERTIFICATE OF ACHIEVEMENT

Required Courses			
Course			Units
FALL			
Intro to Hospitality Industry	C A	100	(3)
Culinary Principles 1	C A	120	(3)
Principles of Baking 1	C A	124	(2)
Pantry	C A	149	(2)
Sanitation & Safety	FSM	160	(3)
FSM Math/Accounting	FSM	240	(4)
SPRING			
Culinary Principles 2	C A	122	(3)
Emergency Medical Care	EMT	100	(3)
Intro to Nutrition Concepts	F N	140	(2)
Food Production Management	FSM	151	(2)
Directed Practice*	FSM	286A	(2)
Total:			(29)

*Approved by Program Coordinator

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

CULINARY ARTS— ADVANCED CULINARY ARTS

The requirements for the Certificate of Achievement in Advanced Culinary Arts include courses which lead to students' gaining a solid foundational knowledge of the restaurant and hospitality industry. Courses are designed for students who aspire to be any of the following: garde-manger, banquet chef, sous chef, working chef, and—ultimately—Master Chef.

CERTIFICATE OF ACHIEVEMENT

Required prerequisite:			
Culinary Arts Certificate of Achievement			
		Subtotal:	(29)
Culinary Arts and Food Service Management courses must be completed with a "B" average.			

Required Courses			
Course			Units
FALL			
Garde Manger	C A	200	(2)
Ala Minute Continental Cooking	C A	265	(2)
Dining Room Service	FSM	190	(2)
Supervision & Training Tech	FSM	260	(3)
SPRING			
Baking Principles 2	C A	126	(2)
Advanced Garde Manger	C A	255	(2)
Menu Planning/Purchasing	FSM	250	(3)
Restaurant Management	FSM	285	(3)
Total:			(48)
Suggested electives:			
Catering	FSM	284	(3)
Hotel Sales	Hotel	240	(2)

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

CULINARY ARTS—COOK APPRENTICESHIP

The Cook Apprenticeship Certificate of Achievement will be awarded only upon completion of the three year American Culinary Federation approved apprenticeship program administered by the State of California Apprenticeship Board. Students are required to complete 2,000 hours per year for three years for a total of 6,000 hours in addition to completion of the Certificate of Achievement.

CERTIFICATE OF ACHIEVEMENT

Required Courses			
Course			Units
FIRST YEAR			
First Semester			
Culinary Principles 1	C A	120	(3)
Sanitation & Safety	FSM	160	(3)
Second Semester			
Intro to Hospitality Industry	C A	100	(3)
Culinary Principles 2	C A	122	(3)
SECOND YEAR			
Third Semester			
Principles of Baking 1	C A	124	(2)
FSM Math/ Accounting	FSM	240	(4)
Intro to Nutrition Concepts	F N	140	(2)
Fourth Semester			
Menu Planning/ Purchasing	FSM	250	(3)
Supervision & Training Tech	FSM	260	(3)
THIRD YEAR			
Fifth Semester			
Food Production Management	FSM	151	(2)
Dining Room Service	FSM	190	(2)
Sixth Semester			
Garde Manger	C A	200	(2)
Restaurant Management	FSM	285	(3)
Emergency Medical Care (3)	EMT	100	(2-3)
(Or)			
First Aid & CPR (2)	Hled	112	
Total:			(37-38)

NOTE: FSM 160, Sanitation and Safety, is a prerequisite to all laboratory classes.

Program sequence may be modified to suit individual student needs.

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

DANCE INSTRUCTOR

The dance certificate program trains students for positions in the commercial and artistic areas of dance. Graduates of the program would be qualified as instructors in ballet, modern, jazz and tap dance in private studios, recreation or other community dance programs. The Dance Department also recommends that students complete their General Education Requirements for an Associate Degree.

Students are able to apply principles of movement and creativity to all forms of dance, demonstrate skills of instructing dance to communicate through movement and words, and apply information learned in other disciplines to the art form of dance.

Instruction will utilize both classroom work, using a variety of instructional methods (lecture, lab/ demonstration, independent and group projects) and *internship* experiences in business/ industry to prepare the student for job requirements.

CERTIFICATE OF ACHIEVEMENT

Required Courses			
Course			Units
Alignment & Correctives	Danc	108AD	(2)
Improvisation	Danc	150AD	(1)
Intro to Choreography	Danc	160	(3)
Advanced Dance Composition	Danc	162AB	(3)
Music for Dancers	Danc	170	(2)
Appreciation of Dance	Danc	200	(3)
Rehearsal & Performance	Danc	201AD	(1)
Dance Profession Seminar	Danc	205	(2)
Intro Dance Technology	Danc	206	(5-2)
Repertoire	Danc	211AD	(1-3)
Internship Academy	Intern	392AB	
(Or)			(1-4)
Internship Academy	Intern	393AB	
Subtotal:			(19.5-26)

Select at least ten (10) units of dance technique courses at the intermediate/advanced levels from at least four different dance styles:

Modern Dance (1-2)	Danc	101AD	(8)
Ballet (1-2)	Danc	110AD	(8)
Jazz Dance (1-2)	Danc	120AD	(8)
Tap (1-2)	Danc	125AD	(8)
Mid-Eastern Dance (1-2)	Danc	130AD	(8)
Intro to World Dance (1-2)	Danc	133AB	(8)
Flamenco Dance (1-2)	Danc	135AD	(8)
Spanish Classical Dance (1-2)	Danc	136AD	(8)
Classical Dance of India (1-2)	Danc	137AD	(8)
American Vernacular (1-2)	Danc	140AD	(8)
Total:			(10)
Total:			(29.5-36)

Suggested electives:

Anatomy & Physiology	Biol	221	(3)
Intro to Business	BUS	100	(3)
Personal Financial Success	BUS	120	(3)
Creativity for Children	E C	131	(3)
Health Education	Hled	100	(3)
Fitness & Health	Hled	134	(3)
Child Development	Hmdv	180	(3)
Intro to Psychology	Psych	100	(3)
Interpersonal Communication	Spch	100	(3)

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

WORLD DANCE

The dance certificate program trains students for positions in the commercial and artistic areas of dance. Graduates of the program would be qualified as instructors in private studios, recreation or other community dance programs, and act as consultants, lecturers, or performers with an emphasis on the ethnic dance forms, primarily Mid-Eastern, Flamenco, Spanish Classical, East Indian, or African (Nigeria/ Ghana). The Dance Department also recommends that students complete their General Education Requirements for an Associate Degree.

Students are able to apply principles of movement and creativity to all forms of dance, demonstrate skills of instructing dance to communicate through movement and words, and apply information learned in other disciplines to the art form of dance.

Instruction will utilize both classroom work, using a variety of instructional methods (lecture, lab / demonstration, independent and group projects) and *internship* experiences in business/industry to prepare the student for job requirements.

CERTIFICATE OF ACHIEVEMENT

Required Courses			Units
Course			
Alignment & Correctives	Danc	108AD	(2)
Improvisation	Danc	150AD	(1)
Intro to Choreography	Danc	160	(3)
Music for Dancers	Danc	170	(2)
Appreciation of Dance	Danc	200	(3)
Rehearsal & Performance*	Danc	201AD	(1)
Dance Profession Seminar	Danc	205	(2)
Intro Dance Technology	Danc	206	(.5-2)
Repertoire	Danc	211AD	(1)
Multicultural Behavior	Anth	150	(3)
Internship Academy	Intern	392AB	
(Or)			(1-4)
Internship Academy	Intern	393AB	
Subtotal:		(19.5-24)	
Select ten (10) units of ethnic dance technique from the following:			
Mid-Eastern Dance (1-2)	Danc	130AD	(8)
Intro to World Dance (1-2)	Danc	133AB	(8)
Flamenco Dance (1-2)	Danc	135AD	(8)
Spanish Classical Dance (1-2)	Danc	136AD	(8)
Classical Dance of India (1-2)	Danc	137AD	(8)
Dances of Africa (.5-2)	Danc	138AD	(8)
			(10)
Select two (2) units from the following:			
Modern Dance	Danc	101AD	(1-2)
Ballet	Danc	110AD	(1-2)
Jazz Dance	Danc	120AD	(1-2)
Tap	Danc	125AD	(1-2)
			(2)
Total:		(31.5-36)	

*Must perform in one Student Dance Concert or acceptable alternative presented to faculty for approval.

Suggested electives:

Nonverbal Behavior	Anth	105	(3)
Comparative Cultures	Anth	110	(3)
World Ethnology	Anth	285	(3)
Ethnic Groups in United States	Eth St	150	(3)
World Religion	Phil	110	(3)
Eastern Thought	Rel St	150	(3)
History & Appreciation of Music	Mus	100	(3)
Arts & Ideas of Latin America	Hum	110B	(1.5)

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

DENTAL ASSISTING—REGISTERED

Dental assisting is a challenging field requiring skills in chairside assisting, dental radiology, preventive therapy, patient management, receptionist duties, expanded functions and office management.

Qualified dental assistants find employment opportunities in a variety of settings such as private dental offices, specialty practices, federal or state dental programs and dental schools.

The dental assisting program is accredited by the Commission on Dental Accreditation, a specialized accrediting body recognized by the Commission on Recognition of Postsecondary Accreditation and by the United States Department of Education. The Commission on Dental Accreditation can be contacted at (312) 440-2719 or at 211 East Chicago Avenue, Chicago, IL 60611. The program is also accredited by the State of California Department of Consumer Affairs, Board of Dental Examiners, Committee on Dental Auxiliaries, 1426 Howe Avenue, Suite 50, Sacramento, CA 95825-3222.

RDA functions are taught to laboratory competency and clinical competency where applicable. A list of laboratory and clinical competencies is available upon request.

High school diploma or equivalency is required for program entry as mandated by the Commission on Dental Accreditation, American Dental Association.

Students must complete all required courses with a grade of "C" or better.

This program is a sequential program. All fall semester courses must be taken concurrently in the fall semester. All spring semester courses must be taken concurrently in the spring semester.

CERTIFICATE OF ACHIEVEMENT

Required Courses			Units
Course			
Fall Semester			
Dental Anatomy	D A	100	(2)
Chairside Techniques 1	D A	110	(3)
Dental Materials	D A	120	(3)
Preventive Dentistry	D A	130	(1)
Dental Radiography 1	D A	140	(3)
Biomedical Sciences	D A	150	(2)
Clinical Experience 1	D A	160	(1)
Spring Semester			
First 15 weeks			
Chairside Techniques 2	D A	115	(2)
Expanded Functions	D A	125	(2)
Dental Radiography 2	D A	145	(2)
Clinical Experience 2	D A	165	(3)
Prin Bus & Prac Mgmt	D A	175	(1.5)
Last 3 weeks (40 Hrs/Week)			
Clinical Experience 3	D A	168	(1.5)
Completion of Current CPR Certificate			
Total:			(27)

Suggested electives:

Introductory Psychology	Psych	100	(3)
Interpersonal Communication	Spch	100	(3)
Public Speaking	Spch	110	(3)
Becoming a Master Student	Coun	102	(2)
Intro to Info Sys & Appl	CIS	100	(3)
Freshman Composition	Engl	100	(3)

Certification:

Program approved by the American Dental Association. Graduates are eligible to take the California Registered Dental Assistant Exam and the National Certification Exam upon program completion and qualify for their State radiation license and coronal polishing license.

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

DESIGN

— See *COMMERCIAL ART*
COSTUME CAREERS
DIGITAL MEDIA ARTS
DRAFTING (CADD)
ENTERTAINMENT TECHNOLOGY
FASHION

DIAGNOSTIC MEDICAL SONOGRAPHY

Diagnostic Medical Sonography is a technique using high frequency sound to create images of specific areas of the body from which pathology may be diagnosed. A competent Sonographer must have a thorough knowledge of anatomy, cross sectional anatomy, and pathology, as well as the skills to manipulate a wide variety of sophisticated instruments. This is a Commission on Accreditation of Allied Health Education Programs (CAAHEP).

ASSOCIATE DEGREE PROGRAM

This is an Associate Degree program which requires an Associate Degree or higher from an accredited college before the certificate will be awarded. Students who do not already have a degree must complete the Orange Coast College Graduation Requirements for the AA Degree including General Education Options 1, 2 or 3.

A "C" grade is required in all program courses.

Recommended preparation:

Becoming a Master Student	Coun	102	(2)
Technical Math	Tech	040	(3)

Required prerequisites:

Health Occupations	Al H	010	(.5)
Medical Terminology	Al H	111	(3)
Anatomy & Physiology	Biol	221	(4)

Subtotal: (7.5-12.5)

Course	Required Courses			Units
	FALL			
Sectional Anatomy	Biol	223	(4)	
Sono Physics/Instrumentation	DMS	150	(4.5)	
Human Diseases	Al H	120	(2)	
SPRING				
Patient Care	Al H	115	(2.5)	
Adv Sectional Anatomy	Biol	226	(3)	
Intro to Vascular Ultrasound	DMS	155	(2.5)	
Pathophysiology 1	DMS	160	(3)	
Intro to Scanning Practice	DMS	165	(3)	
Clinical Experience 1 (8 hrs/wk - 9 wks)	DMS	166	(1)	
SUMMER				
Clinical Experience 2 (32 hrs/wk - 8 wks)	DMS	167	(4)	
FALL				
Pathophysiology 2	DMS	265	(3)	
Clinical Experience 3 (32 hrs/wk - 18 wks)	DMS	271	(6)	
Sonographic Scanning Tech 1	DMS	274	(3)	
Sonographic Scanning Tech 2	DMS	275	(3)	
INTERSESSION				
Clinical Experience 4 (32 hrs/wk - 2 wks)	DMS	276	(1)	
SPRING				
Clinical Experience 5 (36 hrs/wk - 18 wks)	DMS	281	(11)	
			(56.5)	
Total:			(64-69)	

DIETETIC TECHNOLOGY

— See *options under FOOD SERVICE MANAGEMENT*
NUTRITION CARE

DIGITAL MEDIA ARTS - COMPUTER GRAPHICS

This program is designed for the person who wants a concentrated course of study in the field of digital media arts. Courses are designed to accommodate specific interest areas of application for both programmers and users.

The OCC Digital Media Arts program is unique and bases its wide reputation on its emphasis on visual literacy. Concept development and the generation of a portfolio suitable for job applications or transfer to a degree program is a major focus in each of the core courses.

Students from a wide range of disciplines are discovering the creative visual potential of the computer and are applying their newly acquired skills in innovative ways, competing successfully on an international level with images generated here at OCC.

While the program provides broad-based entry level training for a variety of industries, students are encouraged to work toward an Associate in Arts degree.

CERTIFICATE OF ACHIEVEMENT

Course	Required Courses			Units
	First Semester			
Freehand Drawing	Art	120	(3)	
Color & Design 2-D	Art	110	(3)	
Intro to Computer Graphics	DMA	181	(3)	
Second Semester				
Contemporary Art History	Art	102	(3)	
Computer Art Production	Art	163	(4)	
Basic Photography	Photo	120	(3)	
Third Semester				
Photo & Computer Graphics 1 (4) (Or)	DMA	193	(3-4)	
Intro to Digital Photo (3)	Photo	125		
Advertising Design 1	Art	160	(3)	
Interactive Multimedia	DMA	200AB	(4)	
Fourth Semester				
2-D Animation	DMA	280AC	(4)	
Illus & Computer Graphics 1	DMA	190	(4)	
Professional Studies	Art	180	(2)	
			Subtotal:	(39-40)
Select one (1) from the following:				
Lettering/Computer Typography (Or)	Art	115	(3)	
Film/Video Editing (Or)	Film	194	(3)	
Intro to Color Photography	Photo	155	(2)	
			Total:	(41-43)
Suggested electives:				
Life Drawing	Art	121AD	(3)	
Painting 1	Art	130	(3)	
Story Illustration Techniques	Art	143AD	(3)	
Printmaking 1	Art	170	(3)	
Photo & Computer Graphics 2	DMA	194AC	(4)	
Cartooning 1	Art	269	(3)	
3-D Computer Graphics Animation	DMA	281AB	(4)	
Application of Color Theory	Art	112	(3)	
Illus & Computer Graphics 2	DMA	191AB	(4)	
Image Processing Digital Video	DMA	262AC	(4)	
Intro to Humanities	Hum	100	(3)	
Art Photography	Photo	283AB	(3)	

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

DIGITAL MEDIA ARTS - MULTIMEDIA

The Multimedia certificate is designed to prepare the student for an entry level position in the multimedia industry. The student will be exposed to a broad range of media, including art, photography, video, animation, music, text, and the techniques required to incorporate them into digital media.

Digital Media Arts is an important sector of the economy and industry is eager to find qualified candidates who not only understand a particular media but also know how to put together multimedia projects.

CERTIFICATE OF ACHIEVEMENT

Required Courses			
Courses			Units
First Semester			
Intro to Computer Graphics	DMA	181	(3)
Freehand Drawing	Art	120	(3)
Color & Design 2-D	Art	110	(3)
Second Semester			
2-D Animation	DMA	280AC	(4)
Computers in Music	Music	102AD	(3)
Basic Photography	Photo	120	(3)
Third Semester			
Video Workshop	Film	110	(3)
Intro to Digital Photography (3)	Photo	125	(3-4)
(Or)			
Photo & Computer Graphics 1 (4)	DMA	193	(2)
Intro to Color Photography	Photo	155	(2)
Fourth Semester			
Interactive Multimedia	DMA	200AB	(4)
Image Processing Digital Video	DMA	262AC	(4)
3-D Computer Graphics Animation	DMA	281AB	(4)
Subtotal			(39-40)
Select one (1) from the following:			
Contemporary Art History	Art	102	(3)
His & Appr of Cinema	Film	100	(3)
Internet for Technology	H Tech	109	(2)
Computers in Music	Music	102AD	(3)
History & Aesthetics of Photo	Photo	130	(3)
			(2-3)
Total			(41-43)
Suggested electives:			
Color & Design 3-D	Art	111	(3)
Life Drawing	Art	121AD	(3)
Story Illustration Techniques	Art	143AD	(3)
Illus & Computer Graphics 1	DMA	190	(4)
Photo & Computer Graphics 2	DMA	194AC	(4)
Basic Film/Video Production	Film	192	(4)
Film/Video Editing	Film	194	(3)
Fundamentals of Music	Music	115	(3)
Intro to Sound Reinforcement	Music	236AB	(3)
Recording Techniques	Music	261AB	(2)
Art Photography	Photo	283AB	(3)

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

DISPLAY AND VISUAL PRESENTATION

This curriculum is designed to prepare students seeking careers as display designers in the display fields and includes point-of-sale interior displays, industrial displays, and visual promotions. The training program includes consideration of the total visual sales and service promotion mix as applied to retailers, wholesalers, manufacturers and corporate display. Students are encouraged to work toward an Associate in Arts degree.

Employment possibilities include:

Display Designer
 Visual Merchandising Stylist
 Display Division Assistant
 Display Manager/Director
 Regional Display Director
 Exhibit Designer
 Retail Space Planner/Designer

CERTIFICATE OF ACHIEVEMENT

Required Courses			
Course			Units
FALL			
Color & Design 2-D	Art	110	(3)
Freehand Drawing	Art	120	(3)
Exhibition Design (Gallery)	Art	145	(2)
Elem Display & Visual Presentation	D&VP	180	(3)
Principles of Advertising	Mktg	130	(3)
SPRING			
Color & Design 3-D	Art	111	(3)
Advertising Design 1	Art	160	(3)
Wood Technology 1	Const	110AD	(4)
Inter Display & Visual Presentation	D&VP	185	(3)
Field Experience	D&VP	190	(2)
Total:			(29)
Suggested electives:			
Rapid Illustration Techniques	Art	117	(3)
Basic Comp Aided Design/Draft	Draft	150AB	(4)

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

DRAFTING TECHNOLOGY—COMPUTER AIDED DESIGN/DRAFTING

With an emphasis in Architectural Technology, Electro-Mechanical, or Mechanical Design/Drafting. This option is designed to provide students with the basic skills to enter computer aided design/drafting in any one of several areas.

CADD instruction includes the use of hardware and software to develop working drawings in architectural, electronic and mechanical design drafting. The CADD lab is state-of-the-art equipped with IBM computers and Autocad software.

The student may receive a Certificate of Achievement in one or more areas of emphasis within the program.

CERTIFICATE OF ACHIEVEMENT

Required prerequisite:	
Architectural Technology Certificate of Achievement	(39)
(Or)	
Electro-Mechanical Design/Drafting Certificate of Achievement	(21)
(Or)	
Mechanical Design/Drafting Certificate of Achievement	(22)
Subtotal:	(21-39)

Required Courses		Units
Course		
FALL		
Basic Comp Aided Dsgn/Draft	Draft 150AB	(4)
SPRING		
Select one or more of the following:		
Adv Comp Aided Dsgn/Draft-Electro-Mechanical (4)	Draft 156	(4)
Adv Comp Aided Dsgn/Draft-Mechanical (4)	Draft 157	(4)
Adv Comp Aided Dsgn/Draft-Architectural (4)	Draft 158	(4)
Total:		(29-47)

The student is encouraged to work towards attaining an Associate Degree in conjunction with the certificate.

Suggested electives:			
Intro to Info Sys & Appl	CIS	100	(3)
Adv 3-D Comp Aided Dsgn/Draft	Draft	159AB	(1.5)

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

DRAFTING TECHNOLOGY—ELECTRO-MECHANICAL DESIGN/DRAFTING

This certificate program prepares students to enter the electronic drafting field utilizing skills of mechanical drafting and electrical drafting. Students learn to prepare schematic drawings, layout drawings, and art work "tape-ups" used in the production of printed circuit boards. The new electro/mechanical drafting lab is available to day and evening students. Students are encouraged to work toward an Associate in Arts degree in conjunction with the certificate.

CERTIFICATE OF ACHIEVEMENT

Required Courses		Units
Course		
FALL		
Basic Drafting Practices*	Draft 110	(4)
Manufacturing Processes	Mach 195	(3)
Technical Math**	Tech 040	(3)
SPRING		
Engineering Drafting Design 1	Draft 115	(4)
Technical Electronics	Elec 140	(3)
FALL		
Elec/Mech Drafting 1	Draft 140	(4)
Total:		(21)

*May substitute 2 years of high school mechanical drafting.

**Two years of high school algebra or equivalent will satisfy this requirement.

Suggested electives:

Basic Comp Aided Dsgn/Draft	Draft	150AB	(4)
Dimensioning	Draft	160	(4)
Intro to Machine Shop	Mach	100	(3)

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements sections of the catalog.

DRAFTING TECHNOLOGY—MECHANICAL DESIGN/DRAFTING

Mechanical Drafting instruction related to the four manufacturing processes, i.e., machining, casting, forging, and welding. Emphasis is placed on working drawings and precision dimensioning skills used in industry. Students may go immediately into industry as an entry-level drafter after the fourth semester. Students are encouraged to work toward attaining an Associate in Arts degree in conjunction with the Certificate.

CERTIFICATE OF ACHIEVEMENT

Required Courses		Units	
Course			
FALL			
Basic Drafting Practices	Draft 110	(4)	
Manufacturing Processes	Mach 195	(3)	
SPRING			
Engineering Drafting Design 1	Draft 115	(4)	
Dimensioning	Draft 160	(4)	
FALL			
Engineering Drafting Design 2	Draft 120	(4)	
Technical Math	Tech 040	(3)	
Total:		(22)	
Suggested electives:			
Elec/Mech Drafting 1	Draft	140	(4)
Adv Comp Dsgn/Draft-Mech	Draft	157	(4)
Adv 3-D Comp Aided Dsgn/Draft	Draft	159AB	(1.5)
Intro to Machine Shop	Mach	100	(3)
Metallurgy	Mach	190	(4)

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

DRAFTING TECHNOLOGY Professional Upgrade Certificates

Electro/Mechanical CADD Upgrade

This professional upgrade certificate program is designed for entry level employment, job upgrade for people currently working in the drafting industry, and those currently employed but wishing to re-enter the electro/mechanical and computer assisted industry.

Certificate will be awarded by the Drafting Technology Department, Technology Division.

CERTIFICATE OF COMPLETION

Required Courses			
Course			Units
Engineering Drafting Design 1	Draft	115	(4)
Electro/Mechanical Drafting 1	Draft	140	(4)
Basic Comp Aided Dsgn/Draft	Draft	150AB	(4)
Total			(12)

Dimensioning Upgrade

This professional upgrade certificate program is designed for Drafting/ Machine Technology students preparing to enter the job market and individuals already in the field seeking an upgrade in their skills. Industry people involved in quality control, manufacturing, and/or engineering need to have a clear understanding of dimensioning practices. Those individuals also need to be literate in geometric dimensioning and tolerancing, a means of controlling geometric features of parts.

CERTIFICATE OF COMPLETION

Required Courses			
Course			Units
Dimensioning	Draft	160	4
Dimensioning & Tolerancing	Mach	175	3

EARLY CHILDHOOD EDUCATION

A certificate is earned by students who have developed skills necessary to work as teachers of infant, toddler, or preschool children in child care settings, or as an early primary classroom aide, depending on program option. Courses emphasize strong theoretical and practical knowledge in working with children: birth to 2 years, 2-5 years, or 4-8 years. Ample employment opportunities exist; salaries are increasing.

CERTIFICATE OF ACHIEVEMENT

A grade of "C" or better is required in all courses.

CORE

Required Courses			
Course			Units
Child Development	Hmdv	180	(3)
Child, Family & Community	Hmdv	190	(3)
Intro to E C Education (3)	E C	105	(3)
(Or)			
The Exceptional Child (3)	Hmdv	210	(3)
Cross-cultural Perspectives on Child Development	E C	126	(3)
Observing & Recording Child Behavior	E C	165	(2)
Emergency Medical Care for Children	EMT	145	(1)
			(15)
Select one (1) from the following:			
Learning Title 22	E C	261	(.5)
Disaster Preparedness	E C	262	(.5)
Child Abuse ID & Referral	E C	263	(.5)
Current Issues in E C	E C	199AD	(.5)
			(.5)
Subtotal:			(15.5)

Continued next column

Choose OPTION 1 or 2 or 3 to complete Certificate of Achievement.

OPTION 1—INFANT & TODDLER TEACHER

(Birth to 2 years)

Required prerequisite:

Core courses

Subtotal: (15.5)

Required Courses

Course			Units
Infant Development & Relationships	Hmdv	184	(3)
Infant & Toddler Programs	E C	220	(3)
Infant Toddler Field Experience	E C	221	(3)
Guidance for Preschool	E C	157	(3)
Language Arts in Preschool (2)	E C	130	(2-3)
(Or)			
Language & Literacy Development (3)	Hmdv	280	(3)
			(14-15)
Total:			(29.5-30.5)

OPTION 2—PRESCHOOL TEACHER

(2-5 years)

Required prerequisite:

Core courses

Subtotal: (15.5)

Required Courses

Course			Units
Early Child Dev Thru Play	E C	155	(3)
Early Childhood Laboratory	E C	156	(2)
Guidance for Preschool	E C	157	(3)
Creativity for Children	E C	131	(3)
Language Arts in Preschool (2)	E C	130	(2-3)
(Or)			
Language & Literacy Development (3)	Hmdv	280	(3)
Science in the Preschool	E C	132	(3)
Preschool Programs-Curriculum	E C	200	(3)
Early Childhood Field Experience	E C	201	(3)
			(22-23)
Total:			(37.5-38.5)

OPTION 3—EARLY PRIMARY CLASSROOM AIDE

(4-8 years)

Required prerequisite:

Core courses

Subtotal: (15.5)

Required Courses

Course			Units
Early Child Dev Thru Play	E C	155	(3)
Language & Literacy Development	Hmdv	280	(3)
Early Primary Curriculum: Materials & Methods	E C	230	(3)
Primary Aide Field Exp	E C	232	(3)
Creativity for Children	E C	131	(3)
Middle Childhood/Development & Guidance	Hmdv	182	(3)
			(18)
Total:			(33.5)

ASSOCIATE DEGREE

Complete Core and Certificate of Achievement Option 1 or 2 or 3 courses and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

EARLY CHILDHOOD—EARLY CHILDHOOD ADMINISTRATION

Students who already have Early Childhood certificates may qualify to become directors or administrators of early childhood centers by earning this Preschool Administration Certificate.

CERTIFICATE OF ACHIEVEMENT

Required prerequisite:

Early Childhood Education Certificate of Achievement Option 1,
Infant/Toddler Teacher

(Or)

Early Childhood Education Certificate of Achievement Option 2,
Preschool Teacher

(Or)

Early Childhood Education Certificate of Achievement Option 3,
Early Primary Classroom Aide

Subtotal: (29.5-30.5)
or
(37.5-38.5)
or (33.5)

A grade of "C" or better is required in all courses.

Required Courses

Course			Units
Early Childhood Adm-Program	E C	275	(3)
Early Childhood Management	E C	276	(3)
Life Cycle Nutritn:Children	F N	145	(1)
Human Relations/Supervision	Mgmt	115	(3)
Select 1.5 units from the following:			
Learning Title 22	E C	261	(.5)
Disaster Preparedness	E C	262	(.5)
Child Abuse ID & Referral	E C	263	(.5)
Current Issues in E C	E C	199AD	(.5-2)
			(11.5)
Total:			(41-42) or (49-50) or (45)

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

EARLY CHILDHOOD— SCHOOL-AGE CHILD CARE

This certificate, for students who want to work with children ages 6-12 in after-school programs, provides developmentally based courses designed to teach students how to provide competent after-school care for school-age children.

CERTIFICATE OF COMPLETION

Required Courses

Course			Units
School-Age Creative Activities	E C	229	(3)
School-Age Field Experience	E C	231	(3)
Emergency Med Care/Children	EMT	145	(1)
Child, Family & Community	Hmdv	190	(3)
Middle Childhood/Development & Guidance	Hmdv	182	(3)
Current Issues in E C	E C	199AD	(.5-2)
Subtotal:			(13.5-15)
Select one (1) of the following:			
Cross-cultural Perspectives on Child Development	E C	126	(3)
Creativity for Children	E C	131	(3)
Science in the Preschool	E C	132	(3)
Early Child Devel Thru Play	E C	155	(3)
Early Primary Curriculum: Materials & Methods	E C	230	(3)
Language & Literacy Development	Hmdv	280	(3)
			(3)
Total:			(16.5-18)

EARLY CHILDHOOD—IN-HOME CAREGIVER

CERTIFICATE OF COMPLETION

Required Courses

Course			Units
Early Child Devel Thru Play	E C	155	(3)
Emergency Med Care/Children	EMT	145	(1)
Life Cycle Nutritn: Children	F N	145	(1)
Child Development	Hmdv	180	(3)
Child, Family & Community	Hmdv	190	(3)
Subtotal:			(11)
Select one (1) of the following:			
Infant Development & Relationships	Hmdv	184	(3)
Preschool Programs-Curriculum	E C	200	(3)
School-Age Creative Activities	E C	229	(3)
			(3)
Total:			(14)

ELECTRONICS TECHNOLOGY

The Electronics Technology program trains students in those basic electronics skills necessary for immediate employment and provides the foundation for more advanced studies.

Electronics is an industrial area of growth and opportunity. Constantly upgraded new technologies have created a strong demand for employees who are well trained as electronics technicians. Employment opportunities also exist in many related fields, such as computing, communications, industrial controls, aerospace, biomedical electronics, semi-conductor fabrication, and instrumentation. Employee assignments ordinarily involve product testing, troubleshooting of circuits and systems, or field maintenance and repair.

The employment outlook in communities surrounding Orange Coast College continues to be excellent.

CERTIFICATE OF ACHIEVEMENT

It is highly recommended that the student follow the first year sequence.

Required Courses

Course			Units
First Semester			
Elec Problem Solving**	Elec	047	(3)
Basic Digital Technology	Elec	135	(3)
Basic Electronics*	Elec	180	(6)
Second Semester			
Pulse Circuits***	Elec	165	(4)
Electronic Construction	Elec	170	(3)
Digital Computers/Microprocess	Elec	241	(4)
Third Semester			
Analog Semiconductor Circuits***	Elec	160	(4)
Applied Digital Circuits	Elec	245	(4)
Subtotal:			(31)
Select six (6) units from the following:			
Integrated Circuit Manufacturing	Elec	206	(3)
Communications Systems	Elec	215	(3)
Computer Installation & Repair	Elec	246	(3)
Electronic Measurements	Elec	286	(3)
Electronic Troubleshooting	Elec	290	(3)
Computer Use in Technology	H Tech	100	(3)
			(6)
Total:			(37)

*Evening equivalent courses may be substituted. Check catalog. Electronics 150 & 155 may be substituted for Electronics 180.

**A basic college math course(s) in algebra and trigonometry may be substituted.

***Electronics 160 and 165 do not have to be taken in sequential order.

THE ASSOCIATE DEGREE IS STRONGLY RECOMMENDED FOR STUDENTS PLANNING TO WORK AS ELECTRONIC TECHNICIANS.

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

ELECTRONICS TECHNOLOGY Professional Upgrade Certificates

The following Professional Upgrade Certificates of Completion are intended for the advanced electronics student or the employed technician who desires some advanced training in a specific area. Most courses listed have required prerequisites.

Certificates may be obtained from the Technology Division Office by bringing in official records showing the successful completion of required courses.

Microcomputers

A program of study which covers microcomputer architecture, interconnections to peripheral circuits, and assembly language programming.

CERTIFICATE OF COMPLETION

Required Courses

Course		Units
Digital Computers/Microprocess	Elec	241 (4)
Applied Digital Circuits	Elec	245 (4)
Computer Installation & Repair	Elec	246 (3)
		(11)

Test & Troubleshooting

A program of study which covers electronic test equipment, troubleshooting and repair techniques, and basic use of small computers.

CERTIFICATE OF COMPLETION

Required Courses

Course		Units
Electronic Measurements	Elec	286 (3)
Electronic Troubleshooting	Elec	290 (3)
Computer Use in Technology	H Tech	100 (3)
		(9)

ELECTRONIC EQUIPMENT ENGINEERING SERVICES TECHNICIAN (EEEST)

ASSOCIATE DEGREE PROGRAM

This is an Associate Degree program. Students must complete the requirements listed below. It is suggested that students follow this outline or see a counselor for appropriate course substitutions if they already have an AA degree or higher from an accredited college. This program was developed with the SEMATECH National Technician Curriculum Training Task Force through a grant from the Advanced Research Projects Agency (ARPA) in which an Orange Coast College Electronics/High Technology faculty member was a participant.

Required Courses for Option 1

Course		Units
First Semester		
Basic Electronics (6)	Elec	180
(Or)		
Intro Electronics, D.C. (3)	Elec	150 (6)
(And)		
Intro Electronics, A.C. (3)	Elec	155
Basic Digital Technology	Elec	135 (3)
Precalculus Math	Math	170 (5)
Survey of High Technology	H Tech	108 (3)
Second Semester		
Analog Semiconductor Circuits	Elec	160 (4)
Introductory Chemistry	Chem	110 (5)
Fitness Programs	P E	107AD (1)
Freshman Composition	Engl	100 (3)
Laser Technology	H Tech	196 (3)

Third Semester

Computer Use in Technology	H Tech	100 (3)
Institutions	Am S	100 (3)
Public Speaking	Spch	110 (3)
Contemporary Ethnic America (3)	Eth Stu	100 (3)
(Or)		
Multicultural Behavior (3)	Anth	150
Pulse Circuits	Elec	165 (4)

Fourth Semester

History of Architecture 1 (3)	Arch	290 (3)
(Or)		
History of Architecture 2 (3)	Arch	296
Introductory Psychology	Psych	100 (3)
Integrated Circuit Mfg.	Elec	206 (3)
Robotics	H Tech	101 (3)
Digit Computers/Microprocess	Elec	241 (4)

Required Courses for Option 2

Course		Units
First Semester		
Basic Electronics (6)	Elec	180
(Or)		
Intro to Electronics, D.C. (3)	Elec	150 (6)
(And)		
Intro to Electronics, A.C. (3)	Elec	155
Basic Digital Technology (3)	Elec	135 (3-4)
(Or)		
Digit Computers/Microprocess (4)	Elec	241
Computer Use in Technology	H Tech	100 (3)
Precalculus Math	Math	170 (5)
Survey of High Technology	H Tech	108 (3)

Second Semester

Analog Semiconductor Circuits (4)	Elec	160 (4)
(Or)		
Pulse Circuits (4)	Elec	165
Introductory Chemistry	Chem	110 (5)
Fitness Programs	P E	107AD (1)
Freshman Composition	Engl	100 (3)
History of Architecture 1 (3)	Arch	290 (3)
(Or)		
History of Architecture 2 (3)	Arch	296
Laser Technology	H Tech	196 (3)

Third Semester

Intro to U.S. Government	Pol Sc	180 (3)
Survey of American History (3)	Hist	100
(Or)		
History of U.S. to 1876 (3)	Hist	170 (3)
(Or)		
History of U.S. Since 1876 (3)	Hist	175
(Or)		
Economic History of U.S. (3)	Hist	177
First Aid & CPR	Hled	112 (2)
Public Speaking	Spch	110 (3)
Contemporary Ethnic America	Eth Stu	100 (3)
Environment & Man	Ecol	100 (3)

Fourth Semester

World Religion	Phil	110 (3)
Introductory Psychology	Psych	100 (3)
Integrated Circuit Mfg.	Elec	206 (3)
Critical Reason: Nonfiction	Engl	102 (3)
Robotics	H Tech	101 (3)
Macroeconomics	Econ	180 (3)

Total (74-75)

Option 2 will transfer to California State University, Long Beach; however, students will need to take additional lower division coursework after transfer.

Continued next column

EMERGENCY MEDICAL TECHNICIAN—1

EMT-1 Certification is required to work for an ambulance service or in an emergency room and may be required for lifeguards, ski patrol and fire fighters. The EMT-1 provides the care necessary to preserve life and to prevent disability among the acutely ill and the seriously injured.

The EMT-1 must have basic knowledge of anatomy and physiology, medical terminology and sterile techniques. The course of study emphasizes treating traumatic injuries and medical emergencies, as well as treating minor disorders and emotional problems. Specialized areas include obstetrical and pediatric emergencies and extricating entrapped persons.

Successful completion of the EMT-1 course qualifies the student to sit for the EMT-

1 county certifying examination.

The EMT-1 course is a prerequisite for paramedic training. Job opportunities are good.

CERTIFICATE OF COMPLETION

Course	Required Courses		Units
EMT-1*	EMT	150	(5.5)
EMT-1 Clinical Internship	EMT	151	(.5)
			(6)
Suggested electives:			
Medical Terminology	Al H	111	(3)
Anatomy-Physiology	Biol	221	(4)
Interpersonal Communication	Spch	100	(3)

*Note: Standard First Aid and CPR, or EMT 100 are prerequisites for EMT 150. Concurrent enrollment in EMT 151 is required.

ENTERTAINMENT TECHNOLOGY

The Orange Coast College Entertainment Technology Certificate Program is designed to give the student two years of extensive technical experience in the process of creating the scenery, costumes, lighting, or sound effects common to all aspects of the entertainment industry.

Through an intensive program of production work in the OCC Theatre Arts Department, combined with classes throughout the college, the student will acquire the theory, applied training, and work-based experience needed to gain entry-level positions in this highly competitive industry.

CORE COURSES

Course	Required Courses		Units
Intro to Theatre	Thart	100	(3)
OCC Theatre Repertory	Thart	141AD*	(6)
Stage Crew Activity	Thart	170AD*	(2)
Play Production	Thart	171AD*	(4)
Performing Arts Management	Thart	276	(2)
Internship Academy	Intern	393AB	(3)
(*2 semesters required)			
	Total:		(20)

SCENIC ARTIST

This program is designed to give students a concentrated background in the art techniques and theatrical theory and production practices required to recreate a scenic designer's artwork on a large scale for theatre, theme parks, or other entertainment uses.

CERTIFICATE OF ACHIEVEMENT

Course	Required Courses		Units
Entertainment Tech Core Curriculum			(20)
Stage Scenery	Thart	175	(3)
Elements of Stage Design	Thart	271	(3)
History / Apprec Western Art	Art	100	(3)
History / Apprec Western Art	Art	101	(3)
Color & Design 2-D	Art	110	(3)
Freehand Drawing	Art	120	(3)
Perspective	Art	125	(3)
Painting 1	Art	130	(3)
Life Painting	Art	236AD	(3)
Rendering & Rapid Visualization	ID	260	(2)
	Total:		(49)

Suggested electives:

Intro to Computer Graphics	DMA	181	(3)
Application of Color Theory	Art	112	(3)
Color & Design 3-D	Art	111	(3)
(And)			
History of Architecture 1 (3)	Arch	290	
History of Architecture 2 (3)	Arch	296	
(Or)			
History Arch/Furnishings 1 (3)	ID	180	
History Arch/Furnishings 2 (3)	ID	190	

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

SCENIC CARPENTER

The courses in this program provide training in the basic skills required to build the wide variety of scenic elements used in the entertainment industry, as well as training in the theory and practice of theatrical production.

CERTIFICATE OF ACHIEVEMENT

Course	Required courses		Units
Entertainment Tech Core Curriculum			(20)
Stage Scenery	Thart	175	(3)
Technical Math	Tech	040	(3)
Wood Technology 1	Const	110AD	(4)
Residential Finish Carpentry	Const	240	(4)
Residential Electrical Wiring	Const	275	(5)
Intro to Architectural Graphics	Arch	105	(2)
Arc & Oxy Welding	Weld	100	(3)
Advanced Welding	Weld	200	(3)
	Total:		(47)
Suggested electives:			
Practical Math	Math	N005	(3)
Weld Testing Basic	Weld	105AD	(5)
History Arch/Furnishings 1	ID	180	(3)
History Arch/Furnishings 2	ID	190	(3)
Elements of Design	Thart	271	(3)

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

LIGHTING TECHNICIAN

This program is intended to give a fundamental understanding of electronics and wiring in conjunction with practical and theoretical knowledge of lighting equipment and the processes used in show production.

CERTIFICATE OF ACHIEVEMENT

Required Courses

Course			Units
Entertainment Tech Core Curriculum			(20)
Stage Lighting	Thart	176	(3)
Elec Problem Solving	Elec	047	(3)
Technical Electronics	Elec	140	(3)
Basic Electronics	Elec	180	(6)
Residential Electrical Wiring	Const	275	(5)
	Total:		(40)

Suggested electives:

Basic Digital Technology	Elec	135	(3)
Electronic Construction	Elec	170	(3)
Analog Semiconductor Circuits	Elec	160	(4)
Communications Systems	Elec	215	(3)
Electronic Troubleshooting	Elec	290	(3)
Fundamentals of Lighting	ID	210	(3)

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

AUDIO TECHNICIAN

This program is intended to give a fundamental understanding of electronics and wiring in conjunction with the practical and theoretical knowledge of audio equipment and the processes used in show production.

CERTIFICATE OF ACHIEVEMENT

Required Courses

Course			Units
Entertainment Tech Core Curriculum			(20)
Stage Lighting	Thart	176	(3)
Elec Problem Solving	Elec	047	(3)
Basic Electronics	Elec	180	(6)
History/Appreciation of Music	Mus	100	(3)
Computers in Music	Mus	102AD	(3)
Intro to Sound Reinforcement	Mus	236AB	(3)
Concert Sound Engineering	Mus	237AB	(3)
Recording Techniques	Mus	261AB	(2)
Film/Video Sound	Film	193	(3)
	Total:		(49)

Suggested electives:

Basic Digital Technology	Elec	135	(3)
Analog Semiconductor Circuits	Elec	160	(4)
Electronic Construction Tech	Elec	170	(3)
Communications Systems	Elec	215	(3)
Electronic Troubleshooting	Elec	290	(3)

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

ETHNIC STUDIES

Completing the Ethnic Studies Certificate of Achievement program provides students with an in-depth background and understanding of multicultural issues.

CERTIFICATE OF ACHIEVEMENT

Required Courses

Course			Units
Native American	Anth	102	(3)
Comparative Cultures	Anth	110	(3)
Contemporary Ethnic America	Eth Stu	100	(3)
Ethnic Groups of the US	Hist/E S	150	(3)
Multicultural Behavior	Soc/Anth	150	(3)
The Ethnic Family	Soc/E S	190	(3)
			(18)

Select at least six (6) units from the following:

World Ethnology	Anth	285	(3)
Afro-American History	Hist	101	(3)
Mexican-American Heritage	Hist	110	(3)
The Other Americas	Hist	115	(3)
Survey of African History	Hist	130	(3)
Contemporary Chicano	Soc	115	(3)
			(6)

Select at least three (3) units from the following:

East Asia Since 1800	Hist	125	(3)
History of Modern China	Hist	128	(3)
Arts & Ideas of the Orient	Hum	110A	(1.5)
Arts & Ideas of Latin America	Hum	110B	(1.5)
World Religion	Phil/Rel	110	(3)
Cultural Dimensions Int'l Trade	Soc Sc	100	(3)
Int'l Trade with China	Soc Sc	153	(3)
			(3)

Total: (27)

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

ETHNIC STUDIES

Completing the Ethnic Studies Certificate of Completion provides students with an introductory background and understanding of multicultural issues.

CERTIFICATE OF COMPLETION

Required Courses

Course			Units
Contemporary Ethnic America	Eth Stu	100	(3)
Ethnic Groups of the US	Hist	150	(3)
Multicultural Behavior	Soc/Anth	150	(3)
			(9)

--See also *COSTUME CAREERS*

FAMILY AND CONSUMER SCIENCES

For an Associate in Arts degree, complete the 17.0 required units under Section I, at least 9.0 units in one of the five areas of emphasis under Section II, and sufficient units to meet the general education requirements and electives unit requirements to total at least 60.0 units of work.

Students completing this transfer oriented degree program should consult the lower division requirements in the university or college catalog of their choice or the Transfer Information section of this catalog.

ASSOCIATE DEGREE PROGRAM

This is an Associate Degree program which requires an Associate Degree or higher from an accredited college before the certificate will be awarded. Students who do not already have a degree must complete the Orange Coast College Graduation Requirements for the AA Degree including General Education Options 1, 2 or 3.

I. Complete the following required courses:

Course			Units
Clothing Design & Selection	Fash	170	(3)
Nutrition	F N	170	(3)
Careers in FCS	FCS	100	(1)
FCS Field Study	FCS	101	(1)
Life Management	FCS	180	(3)
Child Development	Hmdv	180	(3)
Fund of Interior Design	ID	100	(3)

(17)

II. Areas of emphasis: select at least nine (9) units from one of the following:

(9)
Total: (26)

A. GENERAL FAMILY AND CONSUMER SCIENCES

Required Courses

Prin of Clothing Construction	Fash	180	(3)
Principles of Foods	F N	180	(3)

Select at least three (3) units from the following:

Financial Accounting	Acct	101	(4)
Color & Design 2-D	Art	110	(3)
Newswriting & Reporting	Comm	110	(3)
Community Interaction	FCS	102	(1)
Current Issues in FCS	FCS	199AD	(1-2)
Basic Photography	Photo	120	(2)

B. FASHION

Required Courses

Applied Textiles & Design	Fash	110	(3)
Prin of Clothing Construction	Fash	180	(3)

Select at least three (3) units from the following:

Flat Pattern Techniques	Fash	150	(3)
Flat Pattern Application	Fash	155	(3)
Couture Techniques	Fash	233	(2)
Draping	Fash	235	(2)
Pattern Grading	Fash	251	(1.5)
Fashion Illustrating Tech	Fash	255	(2)

C. FOOD AND NUTRITION

Required Courses

Meal Management	F N	120	(2)
Principles of Foods	F N	180	(3)
Cultural Foods	F N	185	(2)
Intro Med Nutrition Therapy	N C	180	(3)

Select at least three (3) units from the following:

Vegetarian Cuisine	F N	125	(2)
Nutrition/Fitness/Performance	F N	136	(2)
Food for Health/Fitness/Perform	F N	136L	(1)
Life Cycle Nutritn:Children	F N	145	(1)
Life Cycle Nutritn:Later Years	F N	146	(1)
Food Science	F N	195	(4)
Current Issues Food/Nutr/Food Sci	F N	199AD	(1-2)

Continued next column

D. HUMAN DEVELOPMENT

Required Course

Child, Family, & Community	Hmdv	190	(3)
Select at least six (6) units from the following:			
E C Development Through Play	E C	155	(3)
Preschool Programs—			
The Curriculum	E C	200	(3)
Language/Literacy Development	Hmdv	280	(3)

E. INTERIOR DESIGN

Required Courses

Interior Design Studio 1	ID	105	(2)
Applied Textiles & Design	Fash	110	(3)
Select at least three (3) units from the following:			
Building Systems & Draft	Arch	181	(3)
Intro to Architectural Graphics	Arch	105	(2)
History Interior Arch/Furnish 1	ID	180	(3)
Interior Materials & Products	ID	150	(4)
Interior Design Careers	ID	120	(1)

This program will meet major requirements for the Associate in Arts degree but has not been articulated with any particular four-year institution. Students should not expect that they will necessarily meet the lower division requirements at specific colleges or universities. Students should consult the Transfer Information section of this catalog for specific transfer information.

FAMILY AND CONSUMER SCIENCES— PERSONAL RESOURCE MANAGEMENT

This course of study prepares an individual to more effectively manage personal environment.

CERTIFICATE OF COMPLETION

Required Courses

Course			Units
Clothing Design & Selection	Fash	170	(3)
Consumer Economics	Econ	110	(3)
Meal Management	F N	120	(2)
Nutrition	F N	170	(3)
Life Management	FCS	180	(3)

(14)

Select at least two (2) units from the following:

Emergency Medical Care	EMT	100	(3)
Current Issues in FCS	FCS	199AD	(1-2)
Marriage & Family Life	Soc	110	(3)

(2)
(16)

FAMILY AND CONSUMER SCIENCES— HOME MANAGEMENT

This course of study prepares an individual to more effectively manage the home environment.

CERTIFICATE OF ACHIEVEMENT

Required Courses

Course			Units
Clothing Design & Selection	Fash	170	(3)
Consumer Economics	Econ	110	(3)
Emergency Medical Care	EMT	100	(3)
Meal Management	F N	120	(2)
Nutrition	F N	170	(3)
Life Management	FCS	180	(3)
Introductory Psychology	Psych	100	(3)
Marriage & Family Life	Soc	110	(3)
Interpersonal Communication	Spch	100	(3)
			<hr style="width: 100%; border: 0.5px solid black;"/>
			(26)

Select at least three (3) units from the following:

Beg Clothing Techniques (Or)	Fash	100	(3)
Prin of Clothing Constr	Fash	180	
Parent/Infant Workshop	E C	100AD	(1)
Parent/Toddler Workshop	E C	101AD	(1)
Parent/Child Preschool Workshop	E C	102AD	(1)
Principles of Foods	F N	180	(3)
Community Interaction	FCS	102	(2)
Current Issues in FCS	FCS	199AD	(1-2)
Child Development	Hmdv	180	(3)
Fund of Interior Design	ID	100	(3)
			<hr style="width: 100%; border: 0.5px solid black;"/>
			(3)
Total:			(29)

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

FASHION CORE

Required Courses

Course			Units
Applied Textiles & Design	Fash	110	(3)
Careers in Fashion	Fash	115	(3)
History of Fashion	Fash	120	(3)
Clothing Design & Selection	Fash	170	(3)
			<hr style="width: 100%; border: 0.5px solid black;"/>
Total:			(12)

**Experienced sewers may demonstrate competency in techniques listed under Fashion 100 and 101 by taking Fashion 105.*

DESIGN/PRODUCTION

Required Courses

Course			Units
Fashion Core Curriculum			(12)
Beg Clothing Techniques*	Fash	100	(3)
Inter Clothing Techniques*	Fash	101	(2)
Industrial Sewing Techniques*	Fash	102	(2)
Intro to Fashion on Computr	Fash	108	(2)
Street Style	Fash	121	(1.5)
Flat Pattern Techniques	Fash	150	(3)
Flat Pattern Application	Fash	155	(3)
Applied Color	Fash	175	(4)
Fashion Internship	Fash	181	(3)
Draping	Fash	235	(2)
Pattern Drafting & Design	Fash	245	(1.5)
Pattern Grading	Fash	251	(1.5)
Fashion Illustrating Tech	Fash	255	(2)
Fashion Prod Concepts & Appl	Fash	260	(3)
Digitizing/Marker Making	Fash	265	(1)
Pattern Design System	Fash	266AB	(1)
			<hr style="width: 100%; border: 0.5px solid black;"/>
Total:			(47.5)

APPAREL CONSTRUCTION

Required Courses

Course			Units
Fashion Core Curriculum			(12)
Beg Clothing Techniques*	Fash	100	(3)
Inter Clothing Techniques*	Fash	101	(2)
Industrial Sewing Techniques*	Fash	102	(2)
Tailoring	Fash	130AB	(2)
Alterations	Fash	137	(2)
Flat Pattern Techniques	Fash	150	(3)
Flat Pattern Application	Fash	155	(3)
Fashion Internship	Fash	181	(3)
Couture Techniques	Fash	233	(2)
Draping	Fash	235	(2)
Pattern Drafting	Fash	245	(1.5)
Pattern Grading	Fash	251	(1.5)
			<hr style="width: 100%; border: 0.5px solid black;"/>
Total:			(39)

FASHION

Four certificate options are available through the Fashion Department: 1) Design/Production, 2) Apparel Construction, 3) Fashion Merchandising, 4) Costume.

Completion of the Fashion certificate programs prepares students for careers in the fashion industry and in related businesses. Students may also transfer to programs at four-year colleges.

Employment possibilities include:

Patternmaker	Cutter
Grader	Educator
Designer/Assistant Designer	Production Manager
Self-Employed	Quality Control
Fashion Illustrator	Color Consultant
Marker Maker	Figure Analyst
Dressmaker	Personal Shopper
Alterationist	Image/Fashion Consultant
Sample Maker	Computer-Assisted Careers
Stylist	Special Events Assistant
Management Trainee	Assistant Fashion Buyer
Department Manager	Fashion Resource Sales Trainee

ASSOCIATE DEGREE

This is an Associate Degree program which requires an Associate Degree or higher from an accredited college before the certificate will be awarded. Students who do not already have a degree must complete the OCC Graduation Requirements for the AA Degree including General Education Options 1, 2 or 3. (Option 2 recommended for transfer to four-year institutions.)

FASHION MERCHANDISING

Required Courses

Course			Units (12)
Fashion Core Curriculum			
Spec Events Coordination	Fash	225	(3)
Professional Selling	Mktg	110	(3)
Evaluation of Apparel Quality	Fash	140	(1.5)
Buying/Store Operations	Mktg	220	(4)
Image Consulting	Fash	176	(3)
Fash Merchandising Concepts	Fash	177	(3)
Human Relations/Supervision	Mgmt	115	(3)
Elem Display/Visual Presentation	D&VP	180	(3)
Fashion Internship	Fash	181	(3)
Applied Color/Design Theory	Fash	175	(4)
Street Style	Fash	121	(1.5)
Principles of Advertising	Mktg	130	(3)

Total: (47)

Suggested electives:

Principles Financial Acct	Acct	101	(4)
Business Math	Bus	125	(3)
Business English	Bus	138	(3)
Retailing	Mktg	200	(3)
Small Business Ownership	Mgmt	240	(3)
Intro to Info Sys/Micro Appl	CIS	100	(3)
Direct Mail/Marketing	Mktg	142	(1.5)
Interpersonal Communication	Spch	100	
(Or)			(3)
Public Speaking	Spch	110	

COSTUME

--See *Costume Careers*

FASHION—INDUSTRIAL SEWING

The courses in this certificate provide short-term training in the areas of clothing construction and the use of high-speed industrial sewing equipment. The certificate can be completed in one to two semesters. The program offers a self-paced open entry, open exit lab that allows for enrollment throughout the semester.

Employment possibilities include:

- Apparel Construction
- Textile Product Assembly

CERTIFICATE OF COMPLETION

Required Courses

Course			Units
Beg Clothing Techniques	Fash	100	(3)
Int Clothing Techniques	Fash	101	(2)
Industrial Sewing Techniques	Fash	102	(2)
Sewing Lab	Fash	N050AD	(.5-2)

(7.5-9)

Suggested electives:

Alterations	Fash	137	(2)
Internship Academy-Level 2	Intern	392AB	(1-4)

FILM/VIDEO

The Film/Video program at OCC is designed to give the student two years of extensive theory and technical experience training in the basic skills required for employment in the film/video industry.

CERTIFICATE OF ACHIEVEMENT

Required Courses

Course			Units
FALL			
Hist & Appr of Cinema	Film	100	(3)
Video Workshop	Film	110	(3)
SPRING			
TV Production 1	Film	250	(3)
Basic Photography	Photo	120	(3)
FALL			
Basic Film/Video Production	Film	192	(4)
Electronic Field Production	Film	265AD	(4)
SPRING			
TV Production 2	Film	255AC	(3)
Adv Film Production	Film	270AB	(4)
Subtotal:			(27)

Select nine-ten (9-10) units from the following:

Broadcast Journalism	Brct	105	(3)
Scriptwriting	Engl	127	(3)
Film as Literature	Engl	148	(3)
Contemporary Films	Film	103	(3)
Image Processing Digital Video	DMA	262AC	(4)
Great Directors of Cinema	Film	104AB	(3)
Home Video Mktg/Distribution	Film	112	(3)
Intro to Broadcasting	Film	150	(3)
Film/Video Sound	Film	193	(3)
Film/Video Editing	Film	194	(3)
Special Projects	Film	260AB	(2)
Television Lab	Film	261AD	(2)

(9-10)

Total: (36-37)

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

FITNESS SPECIALIST

The Orange Coast College Fitness Specialist program trains students for positions entry-level or higher in the booming fitness industry. Graduates are qualified to be fitness instructors, exercise testing technicians, aerobic instructors, weight training coaches, and personal fitness counselors.

Students in this program learn scientific principles of exercise and physical conditioning, techniques of leading exercise classes, and methods appropriate to establishing healthy behavior. The Fitness Specialist evaluates the physiological and psychological effects of physical activities and designs personalized exercise prescriptions.

The Fitness Specialist Certificate of Achievement has two options: Health/Fitness Instructor and Personal Trainer. A Certificate of Completion is available for Group Fitness Instructor Training.

The fitness industry, experiencing rapid growth, has a growing demand for trained instructors and exercise test technologists in health clubs, fitness studios, and sports medicine clinics. The employment outlook is excellent.

FITNESS SPECIALIST—GROUP FITNESS INSTRUCTOR TRAINING

The Group Fitness Instructor Training program provides students with theoretical and practical experiences in leading safe, effective group exercise classes. Completion of the prescribed courses will prepare students for the International Dance-Exercise Association Foundation's (A.C.E.) certification examination.

CERTIFICATE OF COMPLETION

Required prerequisite:

Current First Aid/CPR Certification

Required Courses			
Course			Units
Fitness and Health	PE	134	(3)
Grp Fitness Instr Training	PE	272	(3)
			(6)
Suggested electives:			
Nutrition, Fitness & Perf	PE	136	(2)
Movement Analysis	PE	274	(3)
Sports Medicine	PE	281	(3)
Activity Classes	PE		(.5-4)

FITNESS SPECIALIST—HEALTH FITNESS INSTRUCTOR/PERSONAL TRAINER

This program provides students with theory necessary to be effective in the health fitness industry (health clubs, corporate fitness, etc.). Students in this program will learn scientific principles of exercise and physical conditioning, techniques for the measurement of human performance, and methods for establishing healthy nutritional patterns.

CERTIFICATE OF ACHIEVEMENT

Required prerequisite:

Current First Aid/CPR Certification

Required Courses			
Course			Units
Anatomy-Physiology	Biol	221	(4)
Nutrition, Fitness & Perf	PE	136	(2)
Movement Analysis	PE	274	(3)
Sports Management	PE	278	(3)
Sports Medicine	PE	281	(3)
Strength Conditioning/Theory	PE	289	(3)
Subtotal:			(18)
Select two (2) courses from the following:			
Fitness and Health	PE	134	(3)
Drugs & Sports	PE	138	(2)
Intro to Adapted PE	PE	268	(2.5)
Fitness & Exercise Testing	PE	284	(3)
			(4.5-6)
Total:			(22.5-24)

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

FOOD AND NUTRITION—FOOD SCIENCE

This program is designed for the students whose objective is a B.S. degree in Food Science at a university. Such degrees are offered at Chapman University, California Polytechnic University, Pomona and San Luis Obispo, and California State University, Long Beach.

With a 4-year degree in Food Science, students are prepared for employment in the food processing/manufacturing/ingredient industries, and in government agencies, i.e. USDA, FDA. Other possible opportunities are in education and research at colleges and with University Cooperative Extension programs, as well as with the World Health Organization.

ASSOCIATE DEGREE PROGRAM

This is an Associate Degree program which requires an Associate Degree or higher from an accredited college before the certificate will be awarded. Students who do not already have a degree must complete the Orange Coast College Graduation Requirements for the AA Degree including General Education Options 1, 2 or 3.

Required Courses			
Course			Units
General Microbiology	Biol	210	(5)
Preparatory General Chemistry	Chem	130	(4)
General Chemistry	Chem	180	(5)
Freshman Composition	Engl	100	(3)
Careers in Dietetics/Food Sci	FN/N C	100	(1)
Nutrition	FN	170	(3)
Principles of Foods	FN	180	(3)
Food Science	FN	195	(4)
Intro to Statistics	Math	160	
			(3)
Statistics for Behavioral Sci	Psych	160	
Internship Academy Level 2	Intern	392AB	(2-4)
Total:			(33-35)

— See Also

*FAMILY & CONSUMER SCIENCES-Food & Nutrition
NUTRITION EDUCATION
NUTRITION CARE*

FOOD AND NUTRITION—FOOD SCIENCE TECHNICIAN

Southern California is the nation's third largest food manufacturing area and many opportunities exist for persons trained in food science. Orange Coast College's Food Science Technician program is designed for students who are interested in working in the food manufacturing industry. With a food science certificate, the graduate will be qualified for employment as:

Assistant Food Technician	Quality Assurance Technician
Assistant Food Plant Sanitarian	Research Technician
Laboratory Technician	Sensory Technician
Quality Control Technician	Culinary Technician
Salesperson	

Students are encouraged to complete an Associate in Arts degree at Orange Coast College along with the certificate.

CERTIFICATE OF ACHIEVEMENT

Required Courses			
Course			Units
Careers in Dietetics/Food Sci	FN/N C	100	(1)
Principles of Foods	FN	180	(3)
Nutrition	FN	170	(3)
Food Science	FN	195	(4)
Sanitation & Safety	FSM	160	(3)
Food & Microorganisms	Biol	211	(2)
Principles of Chemistry	Chem	100	(3)
Technical Math	Tech	040	(3)
Internship Academy Level 2	Intern	392AB	(2-4)
Total			24-26

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

FOOD AND NUTRITION— COMMUNITY NUTRITION ASSISTANT

This certificate prepares students to work in community agencies as nutrition assistants. The students complete the core courses and select one option to complete the certificate.

CERTIFICATE OF ACHIEVEMENT

CORE

Required Courses

Course			Units
Food Sanitation	FSM	161	(1)
Nutrition Concepts	F N	140	(2)
Cultural Foods	F N	185	(2)
Supervised Practice	N C	281	(3)
			(8)

Choose Option 1 or 2 to complete the Certificate of Achievement

OPTION 1—YOUNG CHILD

Required prerequisite:

Core courses	Subtotal:	(8)
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Required Courses

Course			Units
Infant Development	Hmdv	184	(3)
Life Cycle Nutritn:Mother/Infant	F N	144	(1)
Life Cycle Nutritn:Children	F N	145	(1)
Cross-Cultural Perspectives	E C	126	(3)
Intermediate Nutrition Care	N C	280	(2)
			(10)
Total:			(18)

OPTION 2—SCHOOL-AGE CHILD/TEEN

Required prerequisite:

Core courses	Subtotal:	(8)
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Required Courses

Course			Units
Middle Childhood	Hmdv	182	(3)
Nutrition-Fitness/Performance	F N	136	(2)
Life Cycle Nutritn:Children	F N	145	(1)
Cooking Lite	F N	173	(2)
Intermediate Nutrition Care	N C	280	(2)
			(10)
Total:			(18)

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

FOOD SERVICE MANAGEMENT—CATERING

Students who complete the program in Catering offered by the Food Service Management faculty will have been trained to operate a catering business, whether it be a business conducted on premises or off premises. Those enrolling in this program will learn about organization and management, menu pricing, selling, advertising and promotion, and preparing and serving food, as well as cost accountability, a most important factor in operating a catering service successfully. Students will be employable in the catering departments of hotels and restaurants, and will also be knowledgeable enough to reasonably decide about opening their own catering business. Opportunities for employment in this field are excellent.

CERTIFICATE OF COMPLETION

Required Courses

Course			Units
Pantry	C A	149	(2)
Garde Manger	C A	200	(2)
Intro to Nutrition Concepts	F N	140	(2)
Sanitation & Safety	FSM	160	(3)
Menu Planning/Purchasing	FSM	250	(3)
Catering	FSM	284	(3)

Continued next column

Suggested electives:

Principles of Baking 1	C A	124	(2)
Food Production Management	FSM	151	(2)
FSM Math/Accounting	FSM	240	(4)
Supervision & Training Tech	FSM	260	(3)
Hotel Sales	Hotel	240	(2)
Small Business Ownership	Bus	240	(3)

FOOD SERVICE MANAGEMENT— FAST FOOD SERVICES

The Fast Food Certificate requirements have been carefully planned by the food service faculty for those students interested in following a career in this booming segment of the food service industry. The fast food world is not only demanding but also filled with the excitement that comes from operating a thriving business. If you are interested in the kind of career that provides unlimited potential for advancement, then the fast food services career is the one for you.

CERTIFICATE OF COMPLETION

Required Courses

Course			Units
Sanitation & Safety	FSM	160	(3)
Supervision/Training Tech	FSM	260	(3)
Restaurant Management	FSM	285	(3)
FSM Math/Acct	FSM	240	(4)
Directed Practice	FSM	286AB	(4)
			(17)

FOOD SERVICE MANAGEMENT— CHILD NUTRITION PROGRAMS

This certificate prepares students for supervisory responsibilities in a school district at the school or unit level of management. Responsibilities include implementation and coordination of food services and employees to ensure high standards of food preparation, nutrition education and student services. Students are eligible to join the American School Food Service Association at the Manager Certification Level, maintaining certification through continuing education of 10 hours per year.

CERTIFICATE OF ACHIEVEMENT

Required Courses

Course			Units
First Semester			
Quantity Foods Preparation	C A	150	(4)
Nutrition	F N	170	(3)
Applied Nutrition	F N	171	(2)
Sanitation & Safety	FSM	160	(3)
Child Development	Hmdv	180	(3)
Second Semester			
Life Cycle Nutritn:Children	F N	145	(1)
Child Nutrition Program Mgmt	FSM	145	(2)
Food Production Management	FSM	151	(2)
Menu Planning/Purchasing	FSM	250	(3)
Supervision & Training Tech	FSM	260	(3)
Total:			(26)

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

—See Also *NUTRITION CARE & DIETETICS*
HOTEL MANAGEMENT

FOOD SERVICE MANAGEMENT— RESTAURANT

Restaurant Management is an attractive profession which has been described a number of ways by those who are active in it, including such accolades as glamorous, well-paying, creative, challenging, and filled with excitement. One employment estimate shows a need for more than 250,000 additional employees annually. The future of restaurant management holds promise for individuals willing to devote their talents to this lively career.

Restaurant Supervision CERTIFICATE OF ACHIEVEMENT

Required Courses			
Course			Units
FALL			
Quantity Foods Preparation	C A	150	(4)
Intro to Nutrition Concepts	F N	140	(2)
Intro to Hospitality Industry	FSM	100	(3)
Sanitation & Safety	FSM	160	(3)
Dining Room Service	FSM	190	(2)
SPRING			
Food Production Management	FSM	151	(2)
Dining Room Management	FSM	210	(3)
FSM Math/Accounting	FSM	240	(4)
Supervision & Training Tech	FSM	260	(3)
Restaurant Management	FSM	285	(3)
Total:			(29)

FOOD SERVICE MANAGEMENT— RESTAURANT

ASSOCIATE DEGREE PROGRAM

This is an Associate Degree program which requires an Associate Degree or higher from an accredited college before the certificate will be awarded. Students who do not already have a degree must complete the Orange Coast College Graduation Requirements for the AA Degree including General Education Options 1, 2 or 3.

Required prerequisite:

Restaurant Supervision Certificate of Achievement	Subtotal:	(29)
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Required Courses			
Course			Units
FALL			
Intro to Info Sys & Appl	CIS	100	(3)
Menu Planning/Purchasing	FSM	250	(3)
Directed Practice*	FSM	286A	(2)
Hotel/Restaurant Law	Hotel	286	(3)
Introductory Psychology	Psych	100	(3)
SPRING			
Catering	FSM	284	(3)
Directed Practice*	FSM	286B	(2)
Total:			(19)
Total:			(48)

Suggested electives:

Emergency Medical Care	EMT	100	(3)
(Or)			
First Aid & CPR	Hled	112	(2)
Beg Computer Keyboarding 1	COT	109	(1.5)

*Supervisory or management position approved by Program Coordinator.

FOOD SERVICE MANAGEMENT— INSTITUTIONAL

DIETETIC SERVICE SUPERVISOR*

CERTIFICATE OF ACHIEVEMENT

Required Courses			
Course			Units
Sanitation & Safety	FSM	160	(3)
Nutrition	F N	170	(3)
Quantity Foods Preparation	C A	150	(4)
Supervision & Training Tech	FSM	260	(3)
Food Production Management	FSM	151	(2)
Health Care Field Experience	N C	175	(3)
Total:			(18)

*Upon successful completion, student meets California Department of Health Licensing Requirements for Dietetic Service Supervisor.

DIETETIC SERVICE MANAGER*

CERTIFICATE OF ACHIEVEMENT

Required prerequisite:

Completion of all courses for Dietetic Service Supervisor Certificate of Achievement with a grade of "C" or better

Required Courses			
Course			Units
Careers in Dietetics/Food Sci	N C/F N	100	(1)
Interpersonal Communication	Spch	100	(3)
Food Service Math/Accounting	FSM	240	(4)
Applied Nutrition	F N	171	(2)
Intro Med Nutrition Therapy	N C	180	(3)
Menu Planning/Purchasing	FSM	250	(3)
Patient Care	AI H	115	(2.5)
Total:			(18.5)
Total:			(36.5)

*Upon successful completion, students meet Dietary Managers' Association criteria for certification and are eligible to take the National Certification Examination.

DIETETIC TECHNICIAN*

ASSOCIATE DEGREE PROGRAM

This is an Associate Degree program which requires an Associate Degree or higher from an accredited college before the certificate will be awarded. Students who do not already have a degree must complete the Orange Coast College Graduation Requirements for the AA degree including General Education Options 1, 2 or 3.

Required prerequisites: Completion of all courses for Dietetic Service Supervisor and Dietetic Service Manager Certificates of Achievement with a grade of "C" or better

Required Courses		Subtotal:	(36.5)
Course			Units
Medical Terminology	Al H	111	(3)
Anatomy-Physiology	Biol	221	(4)
Intermediate Nutrition Care	N C	280	(2)
Supervised Practice 1	N C	281	(3)
Advanced Nutrition Care	N C	285	(2)
Supervised Practice 2	N C	286	(3)
Life Cycle Nutritn:Mother/Infant	F N	144	(1)
Life Cycle Nutritn:Children	F N	145	(1)
Life Cycle Nutritn:Later Years	F N	146	(1)
Restaurant Management	FSM	285	(3)
			<hr/>
			(23)
		Total:	(59.5)
Suggested electives:			
Catering	FSM	284	(3)
Introductory Sociology	Soc	180	(3)

*Upon successful completion of these courses (with grade of "C" or better) and the General Education requirements, students will receive a Letter of Verification from the Program director confirming that all requirements of the program have been met. Students will then be eligible for membership in the American Dietetic Association and for taking the National Registration Examination administered by the Commission on Dietetic Registration, The American Dietetic Association.

This program has been granted developmental accreditation status by the Commission on Accreditation/Approval for Dietetics Education of the American Dietetics Association, 216 W. Jackson Blvd., Chicago, IL 60606-6995, (312) 899-4876.

HEALTH SCIENCES

— See **CARDIOVASCULAR TECHNOLOGY**
DENTAL ASSISTING—REGISTERED
DIAGNOSTIC MEDICAL SONOGRAPHY
ELECTROCARDIOGRAPHY TECHNICIAN
EMERGENCY MEDICAL TECHNICIAN
MEDICAL ASSISTING
MEDICAL TRANSCRIPTION
NEURODIAGNOSTIC TECHNOLOGY
NUTRITION CARE/DIETETICS
RADIOLOGIC TECHNOLOGY
RESPIRATORY CARE

HEATING AND AIR CONDITIONING— HVAC TECHNOLOGY

Employment possibilities include:

Heating, Air Conditioning Technician
Refrigeration Mechanic
Stationary Engineer

The Heating, Ventilation and Air Conditioning (HVAC) option prepares students for employment as heating, ventilating and air conditioning technicians. Students will be trained to install, service and maintain air conditioning / refrigeration equipment in buildings. The program provides a background for more advanced studies in the design and installation of computerized building automation systems.

CERTIFICATE OF ACHIEVEMENT

Required Courses*				Units
Course				
Refrigeration Principles (3)	HVAC	100		
(Or)				(3)
Air Conditioning Principles (3)	HVAC	101		
Air Conditioning Service	HVAC	103		(3)
Air Conditioning—Air Balance	HVAC	104		(3)
Air Conditioning Controls	HVAC	105		(3)
Pneumatic Controls	HVAC	110		(3)
Building Automation/EMS	HVAC	140		(3)
				<hr/>
			Subtotal:	(18)
Select nine (9) units from the following:				
Centrifugal Refrigeration	HVAC	106		(3)
Steam Plant Operation & Maintenance	HVAC	107		(3)
Applied Electricity	HVAC	120		(3)
Computer Use in Technology	H Tech	100		(3)
				<hr/>
				(9)
			Total:	(27)

*A math competency level equivalent to Tech 040 is strongly recommended or satisfactory score on math competency examination.

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

HOTEL MANAGEMENT

The Hotel Management programs are designed for students interested in pursuing careers in the hospitality industry. In addition to sound technical knowledge, students will develop a sense of professional ethics, initiative and character, as well as the ability to adapt to the constant evolution of the profession.

Career opportunities abound as multimillion dollar hotels and resorts continue to be built across the United States requiring trained individuals to fill the multitude of varied and exciting positions.

HOTEL MANAGEMENT—OPERATIONS

CERTIFICATE OF ACHIEVEMENT

Course	Required Courses			Units
	FALL			
Intro to Hospitality Industry	Hotel	100	(3)	
Housekeeping Room Mgmt	Hotel	101	(1)	
Housekeeping Oper/Maintenance	Hotel	102	(1)	
Housekeeping Tech/Strategies	Hotel	103	(1)	
Front Office Procedures	Hotel	110	(3)	
Human Resource Management	Hotel	288	(3)	
SPRING				
Accounting & Night Audit	Hotel	115	(3)	
Internship 1	Hotel	116	(2)	
Supervision & Training	Hotel	260	(3)	
Hotel/Restaurant Law	Hotel	286	(3)	
Sanitation & Safety	FSM	160	(3)	
				(26)

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

HOTEL MANAGEMENT—ADVANCED STUDIES

ASSOCIATE DEGREE PROGRAM

This is an Associate Degree program which requires an Associate Degree or higher from an accredited college before the certificate will be awarded. Students who do not already have a degree must complete Orange Coast College Graduation Requirements for the AA Degree including General Education Options 1, 2 or 3.

Required prerequisite:

Completion of or concurrent enrollment in Hotel Management—Operations Certificate of Achievement

Course	Required Courses			Units
	First Semester			
Hotel Sales	Hotel	240	(3)	
Prin of Mktg & Convention Mgmt	Hotel	265	(3)	
Restaurant Management	FSM	285	(3)	
Second Semester				
Hotel Marketing	Hotel	270	(3)	
Hotel Operation	Hotel	285	(3)	
Hospitality Purchasing	Hotel	230	(3)	
Internship 2	Hotel	279AC	(2)	
				(20)
Total				(46)
Suggested electives:				
Emergency Medical Care	EMT	100	(3)	
Business Communication	Bus	139	(3)	
Economics: General Concepts	Econ	100	(3)	
Introductory Sociology	Soc	180	(3)	
Intro to Info Sys & Appl	CIS	100	(3)	
Comparative Cultures	Anth	110	(3)	
Elementary Spanish	Span	180	(5)	

HOTEL HOUSEKEEPING AND MAINTENANCE OPERATIONS

Certificate of Completion

Completion of these three courses and the Internship Academy will provide entry-

level skills for employment in any hotel in the housekeeping and maintenance departments.

Required Courses

Course			Units
Housekeeping Room Mgmt	Hotel	101	(1)
Housekeeping Oper/Maintenance	Hotel	102	(1)
Housekeeping Tech/Strategies	Hotel	103	(1)
Internship Academy-Level 2	Intern	392AB	(1-4)
<hr/>			
(4-7)			

HOTEL FOOD SERVICE MANAGEMENT

—See *FOOD SERVICE MANAGEMENT—RESTAURANT*

REGIONAL INTERIOR DESIGN PROGRAM

The Regional Interior Design Program at Orange Coast College is a multi-level program offering a certificate in Interior Furnishings (Level 1), an associate in arts degree (Level 2), and a Professional (Level 3). Students completing Level 1 are employed in retail furnishings and merchandising. Level 2 Interior Design Assistants assist interior design practitioners through illustration, selection and specification of furnishings and materials, as well as drafting and merchandising. Level 3 prepares students to practice as full professional interior designers. Level 2 students must complete an A.A. Degree, and Level 3 students must complete the requirements for the bachelor's degree. This program replaces all previous interior design programs.

Developed by educators and professional interior designers, this program offers an interdisciplinary approach to fundamental design, space planning, design analysis, and materials selection and specifications relating to residential and commercial spaces.

Orange Coast College participates in a Regional Interior Design Consortium with Long Beach City College, Saddleback College, Fullerton College, and Mt. San Antonio College. All required interior design courses are articulated with these schools, and students may take interior design courses at any of the colleges in the consortium.

DEGREE PROGRAMS

The Level 2 Interior Design Assistant requires an associate degree or higher from an accredited college before the certificate will be awarded. Students who do not already have a degree must complete the Orange Coast College Graduation Requirements for the A.A. degree including General Education Options 1, 2 OR 3.

Level 3 Interior Design Professional requires a student to complete the requirements for a bachelor's degree.

Required Courses

Level 1 - Interior Merchandising

Course			Units
First Semester			
Fundamentals of Interior Design	ID	100	(3)
Interior Design Studio 1	ID	105	(2)
Intro to Architectural Graphics	Arch	105	(2)
Interior Design Careers	ID	120	(2)
Second Semester			
Applied Color/Design Theory	Fash	175	(4)
Basic Comp Aided Design/Drafting	Draft	150AB	(4)
Interior Materials & Products	ID	150	(4)
Professional Selling	Mktg	110	(3)
Subtotal:			(24)

Level 2 - Associate Degree

Course			Units
Third Semester			
Space Planning	ID	170	(3)
Hist Arch/Furnishings 1	ID	180	(3)
Interior Illustration	ID	200	(2)
Fundamentals of Lighting	ID	210	(3)
Fourth Semester			
Hist Arch/Furnishings 2	ID	190	(3)
Interior Design Studio 2	ID	215	(2)
Arch Drafting/Constr Documents	Arch	180	(4)
Business and Professional Practice	ID	230	(3)
Interior Design Internship	ID	240	(3)
Subtotal:			(26)

Level 3 - Professional Level

Course			Units
Fifth Semester			
Interior Design Studio 3	ID	265	(2)
Codes and Specifications	ID	250	(2)
Rendering & Rapid Visualization	ID	260	(2)
Adv Comp Aided Dsgn/Draft-Arch	Draft	158	(4)
Sixth Semester			
Interior Design Studio 4	ID	275	(2)
Small Business Ownership	Bus	240	(3)
Subtotal:			(15)
Total:			(65)

Suggested electives:

Color & Design 2-D	Art	110	(3)
Color & Design 3-D	Art	111	(3)
Freehand Drawing	Art	120	(3)
Perspective	Art	125	(3)
Exhibition Design (Gallery)	Art	145	(2)
Elem Display/ Visual Presentation	D&VP	180	(3)

Note: This program replaces all previous Interior Design programs.

MACHINE TECHNOLOGY

OCC's Machine Technology program is designed to train students for entry-level positions as machine operators. Additionally, both beginning students and working machinists can build on their skill and knowledge by completing the requirements for one of the advanced certificates.

The Machine Technology program is divided into four areas: Machinist, Computer Numerical Control (CNC) Operator, CNC Programmer, and Tool Maker. All four programs follow sequential plans which spin off from the core machinist program. After completing the machinist program in two semesters, the student can take the classes required for one of the more advanced certificates. The student who completes the machinist program also satisfies the major requirements for the Associate in Arts degree.

MACHINE TECHNOLOGY—MACHINIST

The Machinist Certificate program trains students for positions as entry-level operators, which often are the first manufacturing jobs for industrial employees. This certificate program provides the skill and knowledge necessary for job candidates to become successful wage earners. This program also comprises the core courses for the more advanced certificates.

CERTIFICATE OF ACHIEVEMENT

Course			Units
Required Courses			
FALL			
Intro to Machine Shop	Mach	100	(3)
Lathe	Mach	105	(5)
Blueprint Reading	Mach	120	(3)
SPRING			
Milling Machine	Mach	110	(5)
Production Machining Tech	Mach	115	(3)
Technical Math	Tech	040	(3)
Total:			(22)

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

MACHINE TECHNOLOGY— CNC MACHINE OPERATOR

The CNC Operator's Certificate enhances the skills of students who have earned the Machinist Certificate, by providing that student with CNC machine operating skills and manual programming skills. The courses required for earning this certificate are designed to make the machine operator capable of setting up and manually programming a CNC machine tool. The CNC Machine Operator Professional Upgrade Certificate is specifically for the returning student with on-the-job machining experience.

CERTIFICATE OF ACHIEVEMENT

Required prerequisite:

Machine Technology—Machinist Certificate of Achievement

Subtotal: (22)

Required Courses			
Course			Units
FALL			
Numerical Control Machine Operation*	Mach	125	(3)
Intro to Numerical Control & Manual Programming*	Mach	130	(4)
SPRING			
Adv CNC Mach Operation	Mach	126	(2)
			(9)
Total:			(31)

*Machine 123 & 124 may be substituted for Machine 125.

**Machine 128 & 129 may be substituted for Machine 130.

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

MACHINE TECHNOLOGY— CNC MACHINE PROGRAMMER

The CNC Programmer certificate includes courses designed to upgrade the skills and knowledge of the machinist or the CNC machine operator to the level of the CNC machine programmer. If you are a machinist and have minimal experience with CNC machines or machine language programming, you will first want to complete the CNC Operator Professional Upgrade Certificate. If you have both machining experience and CNC experience, the software used for the Machine Technology 133AB and 134AB courses provides excellent experiences in computer-

assisted CNC programming. All of our programming courses require the use of a personal-type computer. If you have no computer experience, we strongly suggest you enroll in a basic computer use type course first (High Technology 100 or CIS 100).

CERTIFICATE OF ACHIEVEMENT

Required prerequisite:

Machine Technology—Machinist Certificate of Achievement

Subtotal: (22)

Required Courses			
Course			Units
FALL			
Numerical Control Machine Operation*	Mach	125	(3)
Intro to Numerical Control & Manual Programming**	Mach	130	(4)
SPRING			
Adv CNC Machine Operator	Mach	126	(2)
CNC Programming-Mastercam	Mach	133AB	(3)
FALL			
Adv CNC Programming-Mastercam	Mach	134AB	(2.5)
			(14.5)
Total:			(36.5)

Continued next column

Note: The A and B courses cannot be mixed. They are totally different software packages and must be taken as a sequential pattern. Example: Machine 133A must be followed by Machine 134A, not 134B.

*Machine 123 & 124 may be substituted for Machine 125.

**Machine 128 & 129 may be substituted for Machine 130.

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

MACHINE TECHNOLOGY—TOOLING

Earning the Tooling Certificate upgrades the skills of the machinist to the point required for profitable employment as an entry-level tool maker, a die maker, or a mold maker. As well as other subjects that must be learned by the beginning tool maker, the Tooling Certificate program includes courses in metallurgy, tool and cutter grinding, and welding tooling.

CERTIFICATE OF ACHIEVEMENT

Required Courses			
Course			Units
Intro to Machine Shop	Mach	100	(3)
Lathe	Mach	105	(5)
Milling Machine	Mach	110	(5)
Production Machining Tech	Mach	115	(3)
Blueprint Reading	Mach	120	(3)
Numerical Control Machine Operation	Mach	125	(3)
Intro to Numerical Control & Manual Programming	Mach	130	(4)
Tool & Cutter Grinding	Mach	150	(3)
Dimensioning & Tolerancing	Mach	175	(3)
Elementary Metallurgy	Mach	190	(4)
Tooling	Mach	200	(4)
Arc & Oxy-acetylene Welding	Weld	100	(3)
			(43)
Total:			(43)

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

MACHINE TECHNOLOGY

Professional Upgrade Certificates

CNC Operator

This professional upgrade certificate is designed for students who are already machinists. Before starting on this plan you should be able to set up and operate both conventional lathes and mills. You should be able to read blueprints and use all common machine shop measuring tools. If you have a deficiency in these areas, please refer back to the basic machining courses found in the Machinist certificate.

CERTIFICATE OF COMPLETION

Required Courses				Units
Course				
FALL				
Numerical Control Machine Operation	Mach	125		(3)
Intro to Numerical Control & Manual Programming	Mach	130		(4)
SPRING				
Adv CNC Mach Operation	Mach	126		(2)
			Total:	(9)

CNC Programmer

This professional upgrade certificate is designed to upgrade the skills and knowledge of the machinist or the CNC machine operator to the level of the CNC machine programmer. If you are a machinist and have minimal experience with CNC machines or machine language programming, you will first want to complete the CNC Operator upgrade certificate. If you have both machining experience and CNC experience, the software used for the Machine 133AB and 134AB courses provide excellent experiences in computer-assisted CNC programming. All of our programming courses require the use of a personal computer. If you have no computer experience, we strongly suggest you enroll in a basic computer use course first (High Technology 100 or Computer Information Systems 100).

Note: Two unit contract education course requirements must be designed in cooperation with the student and the instructor, or the student, instructor, and employer. This course will require the student to complete a project from beginning to end, to include all necessary paperwork, fixturing, programming, and machining of the final part.

CERTIFICATE OF COMPLETION

Required Courses				Units
Course				
CNC Programming-Mastercam	Mach	133AB		(3)
Adv CNC Programming-Mastercam	Mach	134AB		(2.5)
Contract Education				(2)
			Total:	(7.5)

Note: The A and B courses cannot be mixed. They are totally different software packages and must be taken as a sequential pattern. Example: Machine 133A must be followed

MANAGEMENT

The Management certificate program is designed to train or upgrade skills and to acknowledge those individuals whose career paths involve the supervision of human resources. Courses emphasize organizing, planning, communicating, selecting, leading, training and controlling of personnel.

CERTIFICATE OF ACHIEVEMENT

Required Courses				Units
Course				
FALL				
Intro to Info Sys & Appl		CIS	100	(3)
Beg Computer Keyboarding 1		COT	109	(1.5)
Business Law		Bus	110	(3)
Applied Management		Mgmt	100	(3)
SPRING				
Financial Accounting		Acct	101	(4)
Business English		Bus	138	(3)
Human Relations & Supervsn		Mgmt	115	(3)
FALL				
Managerial Accounting		Acct	102	(4)
Business Communication		Bus	139	(3)
SPRING				
Applied Communications		Mgmt	210	(3)
Intro to Marketing		Mktg	100	(3)
			Subtotal:	(33.5)

Select three (3) units from the following:

Cost Accounting	Acct	210	(3)	
Business Math	Bus	125	(3)	
Business Finance	Bus	200	(3)	
Patterns of Prob Solving	C S	211	(3)	
Technical Report Writing	Engl	105	(3)	
Personnel Management	Mgmt	130	(3)	
Small Business Ownership	Bus	240	(3)	
Comm in Organizations	Spch	220	(3)	
			(3)	
			Total:	(36.5)

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

MANAGEMENT INSTITUTE

CERTIFICATE OF COMPLETION

These selected courses are designed for students who desire to sharpen their managerial skills. Completion of all three courses will provide the basic skills necessary to succeed in any managerial position. Students may elect to take these three courses, complete the certificate requirements in Accounting or Administrative Services—Word Processing, and earn a certificate with a management emphasis.

A grade of "C" or better is required in all courses.

Required Courses

Course			Units
Applied Management		Mgmt	100 (3)
Human Relations and Supervsn		Mgmt	115 (3)
Applied Communications		Mgmt	210 (3)
			(9)

MARKETING

The Marketing certificate programs are designed to train those individuals who career paths involve the creative techniques of both oral and written sales presentations, identification of target population, practices and procedures in the international area and retail operations. Certificates having emphasis in Advertising, International Studies, Retail, or Sales can be earned.

MARKETING—ADVERTISING

CERTIFICATE OF ACHIEVEMENT

Required Courses

Course			Units
Financial Accounting	Acct	101	(4)
Intro to Business	Bus	100	(3)
Intro to Marketing	Mktg	100	(3)
Professional Selling	Mktg	110	(3)
Principles of Advertising	Mktg	130	(3)
Advertising 2	Mktg	131AD	(3)
Direct Mail & Marketing	Mktg	142	(1.5)
Retailing (3)	Mktg	200	
(Or)			(3-4)
Buying & Store Operation (4)	Mktg	220	
	Total:	(23.5-24.5)	

Suggested electives:

Color & Design 2-D	Art	110	(3)
Freehand Drawing	Art	120	(3)
Advertising Design 1	Art	160	(3)
Advertising Design 2	Art	161	(3)
Intro to Broadcasting	Film	150	(3)
Business Math	Bus	125	(3)
Business English	Bus	138	(3)
Public Relations	Bus	140	(3)
Mass Communication	Comm	100	(3)
Advertising Copywriting	Comm	114	(3)
Publication Design/Production	Comm	118	(3)
Applied Communications	Mgmt	210	(3)
Advertising Copywriting	Mktg	114	(3)
Computer Advertising Design & Copywriting	Mktg/Art	113	(3)

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

MARKETING—INTERNATIONAL

CERTIFICATE OF ACHIEVEMENT

Required Courses

Course			Units
Intro International Business	Bus	118	(3)
Adv International Business	Bus	119	(3)
Introduction to Marketing	Mktg	100	(3)
International Marketing	Mktg	150	(3)
Export / Import Procedures	Mktg	152	(3)
Conversational Language (3)		110	
(Or)			(3)
Traditional Language (3)		180	
	Subtotal:	(18)	

Select three (3) units from the following:

Business Math	Bus	125	(3)
Business English	Bus	138	(3)
Business Finance	Bus	200	(3)
Macroeconomics	Econ	180	(3)
Microeconomics	Econ	185	(3)
Economic Geography	Geog	160	(3)
Applied Communications	Mgmt	210	(3)
Cultural Dimensions Int'l Trade	So Sci	100	(3)

Total: (3)
(21)

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

MARKETING—INTERNATIONAL STUDIES

A grade of "C" or better is required in all courses.

CERTIFICATE OF COMPLETION

Required Courses

Course			Units
Intro International Business	Bus	118	(3)
Adv International Business	Bus	119	(3)
Introduction to Marketing	Mktg	100	(3)
International Marketing	Mktg	150	(3)

(12)

MARKETING—MARKETING

A grade of "C" or better is required in all courses.

CERTIFICATE OF COMPLETION

Required Courses

Course			Units
Introduction to Marketing	Mktg	100	(3)
Professional Selling	Mktg	110	(3)
Principles of Advertising	Mktg	130	(3)

(9)

MARKETING—RETAIL

Employment possibilities include:

- Management Trainee
- Department Manager
- Assistant Department Manager
- Assistant Buyer
- Sales Specialists
- Resource Sales Trainee

CERTIFICATE OF ACHIEVEMENT

Required Courses

Course			Units
FALL			
Financial Accounting	Acct	101	(4)
Business Law	Bus	110	(3)
Professional Selling	Mktg	110	(3)
Principles of Advertising	Mktg	130	(3)

SPRING

Small Business Ownership	Bus	240	(3)
Retailing	Mktg	200	(3)
Intro to Marketing (3)	Mktg	100	
(Or)			(3-4)
Buying & Store Operations (4)	Mktg	220	

Subtotal: (22-23)

Select three (3) units from the following:

Business English	Bus	138	(3)
Business Communication	Bus	139	(3)
Intro to Business	Bus	100	(3)
Business Math	Bus	125	(3)
Elem Display & Visual Pres	D&VP	180	(3)
Human Relations & Supervisn	Mgmt	115	(3)
Applied Communications	Mgmt	210	(3)
Retail Business Training	Mktg	221AB	(2-3)

Total: (25-26)

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

MARKETING—SALES

CERTIFICATE OF ACHIEVEMENT

Required Courses

Course	Required Courses			Units
	FALL			
Elem Display & Visual Presentation	D&VP	180	(3)	
Intro to Marketing	Mktg	100	(3)	
Professional Selling	Mktg	110	(3)	
Principles of Advertising	Mktg	130	(3)	
Interpersonal Communication	Spch	100	(3)	
SPRING				
Business Math	Bus	125	(3)	
Applied Communications	Mgmt	210	(3)	
Sales Management	Mktg	115	(3)	
Professional Selling, Advanced	Mktg	210	(3)	
Subtotal:			(27)	

Select three (3) units from the following:

Business English	Bus	138	(3)	
Business Communication	Bus	139	(3)	
Intro International Business	Bus	118	(3)	
Career/Prof Success Skills	Bus	170	(3)	
Human Relations & Supervision	Mgmt	115	(3)	
Direct Mail & Marketing	Mktg	142	(1.5)	
International Marketing	Mktg	150	(3)	
Total:			(30)	

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

MEDICAL ASSISTING— ADMINISTRATIVE/CLINICAL

The Medical Assisting program includes specific business and medical courses that prepare students for employment as clinical or administrative assistants in medical offices, clinics, hospitals, or in related medical and business fields. The coursework can be completed in three or four semesters, and includes on-the-job experience in a medical office or a clinic.

The American Association of Medical Assistants, Inc. accredits Orange Coast College's Medical Assisting program. Such accreditation permits our students in this program to take the National Certified Medical Assistant examination immediately after they graduate.

The medical assisting profession is highly diversified, and the work is challenging and personally rewarding. Employment opportunities are excellent in the expanding health care field.

CERTIFICATE OF ACHIEVEMENT

Program prerequisite:

Computer keyboarding of 40 wpm

Required Courses

Course	Required Courses			Units
	SPRING			
Medical Terminology	Al H	111	(3)	
Intro Med Asst/Transcription	M A	175	(3)	
Medical Bookkeeping	M A/Acct	115	(4)	
Medical Insurance Billing	M A	185	(3)	
Patient Care	Al H	115	(2.5)	
SUMMER OR FALL				
Anatomy-Physiology	Biol	221	(4)	
FALL				
Clinical Lab Procedures	M A	135	(2)	
Medications/Injections	M A	286	(1)	
Physical/Specialty Exams	M A	287	(1.5)	
Sterile Tech/Minor Surgery	M A	288	(1)	
Specialty Procedures	M A	289	(1)	
Admin M A Procedures	M A	180	(2)	

Continued next column

SPRING

Administrative Experience	M A	186	(2)
Clinical Experience	M A	281	(2)
Introductory Psychology	Psych	100	(3)

Total: (35)

Suggested electives:

Human Disease	Al H	120	(2)
Applied Pharmacology	Al H	130	(2)
Emergency Medical Care	EMT	100	(3)

Medical Transcription Certificate

Students are required to obtain a grade of "C" or better in all required courses.

This program is accredited by The American Medical Association and the American Association of Medical Assistants, Inc. (through Commission on Accreditation of Allied Health Education Programs (CAAHEP).

NOTE: Students having completed prior course requirements and seeking advanced status in the program should meet on an individual basis with the Medical Assisting Program Coordinator.

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

MEDICAL ASSISTING—ADMINISTRATIVE

CERTIFICATE OF ACHIEVEMENT

Program prerequisite:

Computer keyboarding of 40 wpm

Required Courses

Course	Required Courses			Units
	SPRING			
Medical Terminology	Al H	111	(3)	
Intro Med Asst/Transcription	M A	175	(3)	
Medical Bookkeeping	M A/Acct	115	(4)	
FALL				
Admin M A Procedures	M A	180	(2)	
Medical Insurance Billing	M A	185	(3)	
Patient Care	Al H	115	(2.5)	
SPRING				
Administrative Experience	M A	186	(2)	
Total:			(19.5)	

Suggested electives:

Human Diseases	Al H	120	(2)
Applied Pharmacology	Al H	130	(2)
Anatomy-Physiology	Biol	221	(4)
Emergency Medical Care	EMT	100	(3)
Introductory Psychology	Psych	100	(3)

Students are required to obtain a grade of "C" or better in all required courses.

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

MEDICAL ASSISTING—CLINICAL

CERTIFICATE OF ACHIEVEMENT

Required Courses			
Course			Units
SPRING			
Medical Terminology	Al H	111	(3)
Intro Med Asst/Transcription	M A	175	(3)
Patient Care	Al H	115	(2.5)
SUMMER			
Anatomy-Physiology	Biol	221	(4)
FALL			
Clinical Lab Procedures	M A	135	(2)
Medications/Injections	M A	286	(1)
Physical/Specialty Exams	M A	287	(1.5)
Sterile Tech/Minor Surgery	M A	288	(1)
Specialty Procedures	M A	289	(1)
SPRING			
Clinical Experience	M A	281	(2)
			(21)
Suggested electives:			
Human Diseases	Al H	120	(2)
Applied Pharmacology	Al H	130	(2)
Emergency Medical Care	EMT	100	(3)
Introductory Psychology	Psych	100	(3)

Students are required to obtain a grade of "C" or better in all required courses.

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

MEDICAL ASSISTING—MEDICAL INSURANCE

The Medical Insurance Certificate prepares the student for employment as a medical insurance biller with job opportunities in medical offices, clinics, or hospitals.

CERTIFICATE OF COMPLETION

Required Courses			
Course			Units
Medical Bookkeeping	M A / Acct	115	(4)
Medical Terminology	Al H	111	(3)
Medical Insurance Billing	M A	185	(3)
			(10)

Students are required to obtain a grade of "C" or better in all required courses.

MEDICAL TRANSCRIPTION

This program provides instruction and experience in medical transcribing procedures to train the medical transcriber who is a health professional responsible for typing medical letters, charts, and reports from tapes dictated by physicians.

Medical transcribers have the option of working in medical offices, clinics, or hospitals, or to be self-employed. Their work is interesting and challenging, and it has excellent income potential, which includes encouraging tax benefits if the transcriber is self-employed.

CERTIFICATE OF ACHIEVEMENT

Program prerequisites:

Keyboarding ability of 40 wpm

Proficiency in word processing

(Or)

Beg Word Processing COT 217AB (1.5)

Required Courses			
Course			Units
FALL			
Medical Terminology	Al H	111	(3)
Intro Med Asst/Transcription	M A	175	(3)
Beg Medical Transcribing	H Rec	190	(3)
Business English	Bus	138	(3)
SPRING			
Adv Medical Transcribing	H Rec	195	(2)
Human Disease	Al H	120	(2)
Anatomy-Physiology	Biol	221	(4)
			Total: (20-21.5)

Suggested electives:

Medical Assisting-Administrative

Certificate of Achievement

(19.5)

Medical Insurance Certificate

of Completion

(10)

Small Business Ownership

Bus

240

(3)

Students are required to obtain a grade of "C" or better in all required courses.

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

MUSIC

Because Orange County is close to the heart of the television, movie, and recording industries, OCC answers a real need to train performing musicians and sound technicians, as well as composers, teachers, instrument-repair people and music-store owners and salespeople.

Our music industry programs are designed to give the serious music student the theory, applied training, and performing experience needed for success in the field they choose. Traditional music courses are integrated with music-industry courses to provide comprehensive programs.

To increase their chances of enjoying long and satisfying careers in a highly competitive industry, we encourage our students to become proficient in a wide variety of musical styles, and to be aware of the many career alternatives open to them.

MUSIC—BUSINESS EMPLOYEE

This program will prepare students for employment in music stores, record shops, and other commercial music activities. Many opportunities in the business of music are available to students with a broad general knowledge of how this segment of the music industry functions in addition to traditional musical skills.

CERTIFICATE OF ACHIEVEMENT

Course	Required Courses			Units
	First Semester			
Piano 1	Music	141	(2)	
Voice 1	Music	145	(1)	
Music Industry Studies	Music	155	(3)	
Music in America	Music	170	(3)	
Second Semester				
Basic Guitar	Music	116	(2)	
Harmony & Sightsinging 1	Music	180	(5)	
Recording Techniques	Music	261AB	(2)	
Third Semester				
Professional Selling	Mktg	110	(3)	
Computers in Music	Music	102AD	(3)	
Intro Sound Reinforcement	Music	236AB	(3)	
Instrument Repair	Music	250AD	(2)	
		Total:	(29)	
Suggested electives:				
Intro to Accounting	Acct	100	(3)	
Small Business Ownership	Bus	240	(3)	
Retailing	Mktg	200	(3)	
Beginning Instruments	Music	140AB	(2)	
Piano 2	Music	142	(2)	
Voice 2	Music	146	(1)	
Classical Guitar 1	Music	148	(2)	
Studio Guitar 1	Music	151	(1.5)	
Lyric Theatre Workshop	Music	210AD	(2)	
Piano 3	Music	241	(2)	
Piano 4	Music	242	(2)	

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

MUSIC— COMPOSER/ORCHESTRATOR/COPYIST

This program is designed to give the composer or songwriter a concentrated theoretical background in traditional and commercial music. Numerous opportunities exist for the performance of original musical compositions.

CERTIFICATE OF ACHIEVEMENT

Course	Required Courses			Units
	First Semester			
Ear Training	Music	104AB	(3)	
Piano 1	Music	141	(2)	
Harmony & Sightsinging 1	Music	180	(5)	
Music Performing Group*			(2)	

Continued next column

Second Semester

Piano 2	Music	142	(2)
Harmony & Sightsinging 2	Music	185	(5)
Applied Music	Music	290AD	(2-4)
Music Performing Group*			(2)

Third Semester

Sophomore Recital	Music	240	(.5)
Harmony & Sightsinging 3	Music	280	(5)
Arranging & Orchestration	Music	283	(3)
Jazz/Rock Theory	Music	287AB	(3)
Applied Music	Music	290AD	(2-4)
Music Performing Group*			(2)

Total: (38.5-42.5)

*Music students in this major must participate in at least one major performing group per semester. Students should select a performing group that fits their performance specialty or interest. Vocalists should choose Music 120AD. Instrumentalists should choose from Music 127AD, 132AD, 133AD, 134AD, 150AB, 230AD, 231AD, 233AD, 234AD. Guitarists should choose Music 129AD.

Suggested electives:

Computers in Music	Music	102AD	(3)
Voice 1	Music	145	(1)
Conducting 1	Music	147	(2)
Jazz Workshop	Music	234AD	(1)
Music as a Business	Music	262	(2)
Film/Video Scoring	Music	263AB	(2)

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

MUSIC—CONCERT SOUND ENGINEER

This program will provide students with the knowledge, skills and experience to acquire employment in the field of sound reinforcement and concert sound engineering. Numerous and varied hands-on opportunities to do sound reinforcement on and off campus are provided, as well as opportunities to gain the practical and theoretical knowledge necessary for employment.

CERTIFICATE OF ACHIEVEMENT

Course	Required Courses			Units
	First Semester			
Intro Sound Reinforcement	Mus	236AB	(3)	
Computers in Music	Mus	102AD	(3)	
Fundamentals of Music	Mus	115	(3)	
Second Semester				
Concert Sound Engineering	Mus	237AB	(3)	
Recording Techniques	Mus	261AB	(2)	
History of Rock Music	Mus	109	(3)	
Third Semester				
Concert Sound Engineering	Mus	237AB	(3)	
Adv Recording Techniques	Mus	265AD	(2)	
Video Workshop	Film	110	(3)	
Sound System Maintenance	Mus	239AB	(2)	
		Total:	(27)	

Suggested electives:

Stage Crew Activity	Thart	170AD	(1)
Technical Electronics	Elec	140	(3)

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

MUSIC—INSTRUMENT REPAIR

The program, unique to Orange Coast College, provides students with theory and hands-on experience in the repair and restoration of all musical instruments. A nationwide demand for instrument technicians creates employment opportunities for the trained and skilled student.

CERTIFICATE OF COMPLETION

Course	Required Courses			Units
	First Semester			
Instrument Repair	Music	250AD	(2)	
	Second Semester			
Instrument Repair	Music	250AD	(2)	
	Third Semester			
Instrument Repair	Music	250AD	(2)	
	Fourth Semester			
Instrument Repair	Music	250AD	(2)	
				(8)

MUSIC—MIDI APPLICATIONS

This program is designed for the musician or computer professional who wants a concentrated course of study in the field of computer music. Courses are designed to emphasize the practical application of MIDI (Musical Instrument Digital Interface).

CERTIFICATE OF ACHIEVEMENT

Course	Required Courses			Units
	First Semester			
Intro to Info Sys & Appl Computers in Music*	CIS	100	(3)	
Fundamentals of Music	Music	115	(3)	
Recording Techniques Workshop	Music	261AB	(2)	
	Subtotal:			(20)
Select five (5) units from the following:				
PASCAL Programming	C S	115	(4)	
C++ Programming 1	C S	150	(4)	
Video Workshop	Film	110	(3)	
Piano 1	Music	141	(2)	
Piano 2	Music	142	(2)	
Harmony & Sightsinging 1	Music	180	(5)	
Synthesizers & Samplers	Music	182AB	(3)	
Intro Sound Reinforcement	Music	236AB	(3)	
Piano 3	Music	241	(2)	
Piano 4	Music	242	(2)	
Film/ Video Scoring	Music	263AB	(2)	
Arranging & Orchestration	Music	283	(3)	
				(5)
	Total:			(25)

*Music 102AD (3 units) is to be taken 4 times for 12 units.

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

MUSIC—

MUSICAL ENTERTAINER-INSTRUMENTAL

This program is designed to give the aspiring commercial instrumentalist a concentrated theoretical background in traditional and commercial music as well as a look at the music industry.

CERTIFICATE OF ACHIEVEMENT

Course	Required Courses			Units
	First Semester			
Ear Training	Music	104AB	(3)	
Piano 1	Music	141	(2)	
Music Industry Studies	Music	155	(3)	
Harmony & Sightsinging 1	Music	180	(5)	
Music Performing Group*			(2)	
	Second Semester			
Piano 2	Music	142	(2)	
History of Jazz	Music	173	(3)	
Harmony & Sightsinging 2	Music	185	(5)	
Applied Music	Music	290AD	(2-4)	
Music Performing Group*			(2)	
	Third Semester			
Sophomore Recital	Music	240	(.5)	
Recording Techniques	Music	261AB	(2)	
Music as a Business	Music	262	(2)	
Jazz/Rock Theory	Music	287AB	(3)	
Applied Music	Music	290AD	(2-4)	
Music Performing Group*			(2)	
	Total:			(40.5-44.5)

*Music students in this major must participate in at least one major performing group per semester. Students should select a performing group that fits their performance specialty or interest. Vocalists should choose Music 120AD. Instrumentalists should choose from Music 127AD, 132AD, 133AD, 134AD, 150AB, 230AD, 231AD, 233AD, 234AD. Guitarists should choose Music 129AD.

Suggested electives:

Computers in Music	Music	102AD	(3)
Big Band	Music	134AD	(1)
Studio Guitar 1	Music	151	(1.5)
Studio Guitar 2	Music	152	(1.5)
Keyboard Improvisation	Music	225AD	(2)
Rock Ensemble Workshop	Music	235AD	(3)

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

MUSIC—MUSICAL ENTERTAINER-VOCAL

This program is designed to give the aspiring commercial vocalist a concentrated theoretical background in traditional and commercial music and vocal techniques as well as a look at the music industry.

CERTIFICATE OF ACHIEVEMENT

Course		Required Courses		Units
First Semester				
Piano 1	Music	141		(2)
Popular Vocal Techniques	Music	144AD		(2)
Harmony & Sightsinging 1	Music	180		(5)
Music Performing Group*				(2)
Second Semester				
Ear Training	Music	104AB		(3)
Popular Vocal Techniques	Music	144AD		(2)
Music Industry Studies	Music	155		(3)
Applied Music	Music	290AD		(2-4)
Music Performing Group*				(2)
Third Semester				
History of Jazz	Music	173		(3)
Sophomore Recital	Music	240		(.5)
Adv Pop Vocal Techniques	Music	247AB		(2)
Recording Techniques	Music	261AB		(2)
Music as a Business	Music	262		(2)
Applied Music	Music	290AD		(2-4)
Music Performing Group*				(2)
Total:				(36.5-40.5)

*Music students in this major must participate in at least one major performing group per semester. Students should select a performing group that fits their performance specialty or interest. Vocalists should choose Music 120AD. Instrumentalists should choose from Music 127AD, 132AD, 133AD, 134AD, 150AB, 230AD, 231AD, 233AD, 234AD. Guitarists should choose Music 129AD.

Suggested electives:

Basic Guitar	Music	116		(2)
Rock Ensemble	Music	235AD		(3)
Recording Techniques	Music	261AB		(2)

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

MUSIC—PRIVATE MUSIC TEACHER

This program provides basic skills for private teaching. Broadbased preparation in musical skills and the "art of teaching" are necessary components for successful private music teachers.

CERTIFICATE OF ACHIEVEMENT

Course		Required Courses		Units
First Semester				
Piano 1	Music	141		(2)
Harmony & Sightsinging 1	Music	180		(5)
Applied Music	Music	290AD		(2-4)
Music Performing Group*				(2)
Second Semester				
Voice 1	Music	145		(1)
Harmony & Sightsinging 2	Music	185		(5)
Sophomore Recital	Music	240		(.5)
Applied Music	Music	290AD		(2-4)
Music Performing Group*				(2)
Subtotal:				(21.5-25.5)

Continued next column

Select three (3) units from the following:

History & Apprec of Music	Music	100		(3)
Lit & History of Music 1	Music	160		(3)
Lit & History of Music 2	Music	165		(3)
Music in America	Music	170		(3)
Total:				(24.5-28.5)

*Music students in this major must participate in at least one major performing group per semester. Students should select a performing group that fits their performance specialty or interest. Vocalists should choose Music 120AD. Instrumentalists should choose from Music 127AD, 132AD, 133AD, 134AD, 150AB, 230AD, 231AD, 233AD, 234AD. Guitarists should choose Music 129AD.

Suggested electives:

Computers in Music	Music	102AD		(3)
Beginning Instruments	Music	140AB		(2)
Conducting 1	Music	147		(2)
Jazz Improvisation	Music	230AD		(1)
Instrument Repair	Music	250AD		(2)
Harmony & Sightsinging 3	Music	280		(5)
Arranging & Orchestration	Music	283		(3)

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

MUSIC—STUDIO GUITAR PERFORMER

A studio guitarist is a complete guitarist and musician who can accurately perform in a variety of musical styles. The courses in this program cover jazz, rock and classical guitar techniques, traditional and commercial music theory and include numerous performance opportunities.

CERTIFICATE OF ACHIEVEMENT

Course		Required Courses		Units
First Semester				
Piano 1	Music	141		(2)
Classical Guitar 1	Music	148		(2)
Studio Guitar 1	Music	151		(1.5)
Harmony & Sightsinging 1	Music	180		(5)
Second Semester				
Ear Training	Music	104AB		(3)
Guitar Ensemble	Music	129AD		(1)
Classical Guitar 2	Music	149		(2)
Studio Guitar 2	Music	152		(1.5)
Applied Music	Music	290AD		(2-4)
Third Semester				
Guitar Ensemble	Music	129AD		(1)
Music Industry Studies	Music	155		(3)
Sophomore Recital	Music	240		(.5)
Recording Techniques	Music	261AB		(2)
Jazz/Rock Theory	Music	287AB		(3)
Applied Music	Music	290AD		(2-4)
Total:				(31.5-35.5)

Suggested electives:

Rhythm Study 1	Music	101AB		(1)
Computers in Music	Music	102AD		(3)
Popular Vocal Techniques	Music	144AD		(2)
Voice 1	Music	145		(1)
Harmony & Sightsinging 2	Music	185		(5)
Classical Guitar 3	Music	248		(2)
Studio Guitar 3	Music	271		(1.5)
Harmony & Sightsinging 3	Music	280		(5)

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

NEURODIAGNOSTIC TECHNOLOGY

Neurodiagnostic Technology (previously known as EEG) is an allied health specialty for diagnosing patients with neurological disorders such as epilepsy, stroke, coma, multiple sclerosis, and others. A competent neurodiagnostic technologist has knowledge of the nervous system and knows how to operate many types of sophisticated instruments properly. Neurodiagnostic technologists are employed in hospitals, clinics, physicians offices, university medical centers and research centers.

Orange Coast College's Neurodiagnostic program provides theory and clinical experience in Electroencephalography (EEG) and in Evoked Potential (BAEP, PVEP, SSEP) testing as well as an introduction to other neurological testing procedures. Some of the testing procedures include Nerve Conduction testing, Brain Mapping, Telemetry, ENG, Transcranial Doppler (TCD) Studies, polysomnography and more. The program can be completed in approximately 22 months (4 semesters and 1 summer). Completion of the program earns an Associate Degree in Neurodiagnostic Technology. A new group of students begin this program in the fall semester.

ASSOCIATE DEGREE

This is an Associate Degree program which requires an Associate Degree or higher from an accredited college before the certificate will be awarded. Students who do not already have a degree must complete the Orange Coast College Graduation Requirements for the AA Degree including General Education Options 1, 2 or 3.

Students are required to earn a grade of "C" or better in all program courses and prerequisites.

Program prerequisites:

Health Occupations	Al H	010	(.5)
Anatomy-Physiology	Biol	221	(4)
Introductory Psychology	Psych	100	(3)
Technical Math	Tech	040	(3)

Subtotal: (10.5)

Required Courses

Course			Units
FALL			
Medical Terminology	Al H	111	(3)
Patient Care	Al H	115	(2.5)
Intro to Info Sys & Appl	CIS	100	(3)
Basic EEG	NDT	110	(4)
INTERSESSION			
Neurodiagnostic Lab Practice	NDT	200A	(.5)
SPRING			
Human Diseases	Al H	120	(2)
Advanced EEG	NDT	115	(4)
Clinical Experience 1	NDT	116	(3)
Neuro Anatomy & Physiology	NDT	190	(3)
EEG Record Review-Normal	NDT	191	(1)
SUMMER			
Clinical Experience 2	NDT	117	(3)
FALL			
Neurologic Disorders	NDT	280	(3)
Neurodiagnostic Testing EDT	NDT	285	(2)
Clinical Experience 3	NDT	286	(1.5)
EEG Record Review-Abnormal	NDT	287	(1.5)
Basic Evoked Potentials	NDT	288	(3)
INTERSESSION			
Neurodiagnostic Lab Practice	NDT	200B	(.5)
SPRING			
Clinical Experience 4	NDT	289	(1.5)
Adv Evoked Potentials	NDT	296	(1.5)
Microcomputer Applications	NDT	297	(2)
Clinical Internship	NDT	298	(1)
			<u>(46.5)</u>
Total:			(57)

Continued next column

Suggested electives:

Advanced Patient Care	Al H	116	(2)
Applied Pharmacology	Al H	130	(2)
Technical Electronics	Elec	140	(3)
Specialty Procedures	M A	289	(1)
Technical Report Writing	Engl	105	(3)
Child Development	Hmdv	180	(3)
Intro to Physics	Phys	110	(3)
Statistics for Behavioral Sci	Psych	160	(3)
Elementary Spanish	Span	180	(5)
Interpersonal Communication	Spch	100	(3)

This program is fully accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP).

Neurodiagnostic Technology Upgrade

The courses required in this professional upgrade certificate are intended for the advanced neurodiagnostic student or for technologists working in the field of electroneurodiagnostic technology. The required courses reflect the most recent industry changes, and many have listed required prerequisites. Certificates will be awarded through the Consumer and Health Sciences division office.

CERTIFICATE OF COMPLETION

Required Courses

Course			Units
Advanced Evoked Potentials	NDT	296	(1.5)
Microcomputer Applications	NDT	297	(2)
Subtotal:			<u>(3.5)</u>
Select one (1) course from the following:			
Intro to Info Sys & Appl	CIS	100	(3)
Statistics for Behavioral Sci	Psych	160	(3)
Neurodiagnostic Testing EDT	NDT	285	(2)
EEG Record Review-Abnormal	NDT	287	(1.5)
Total:			<u>(1.5-3)</u> (5-6.5)

NUTRITION CARE

DIETETIC TECHNICIAN

Students completing this program are prepared to assist dietitians in maintaining all the nutritional aspects of health care. Options in Nutrition Care or Food Service Management may be chosen through classes and supervised practice during the second year of the program. Graduates from this program are qualified to be employed by acute care and rehabilitation hospitals, as well as by community agencies that provide education in nutrition.

Employment possibilities include:

Dietetic Technician in Hospital or Extended Care Facility
Public Health Department
Community Agency

ASSOCIATE DEGREE PROGRAM

This is an Associate Degree program which requires an Associate Degree or higher from an accredited college before the certificate will be awarded. Students who do not already have a degree must complete the Orange Coast College Graduation Requirements for the AA Degree including General Education Options 1, 2 or 3.

It is recommended that the student complete at least 15-17 units of general education requirements prior to entering the program.

Required prerequisites:

Health Occupations	Al H	010	(.5)
Medical Terminology	Al H	111	(3)
Sanitation & Safety*	FSM	160	(3)
	Subtotal:		(6.5)

Course	Required Courses	Units
FIRST SEMESTER		
Quantity Foods Preparation*	CA	150 (4)
Nutrition*	FN	170 (3)
Patient Care	Al H	115 (2.5)
Supervision & Training Tech*	FSM	260 (3)
Careers in Dietetics/Food Sci	N C/F N	100 (1)
SECOND SEMESTER		
Food Production Management*	FSM	151 (2)
Applied Nutrition	FN	171 (2)
Health Care Field Exper*	N C	175 (3)
Intro Med Nutrition Therapy	N C	180 (3)
Interpersonal Communication	Spch	100 (3)

*These courses meet the California Department of Health requirement for Dietetic Service Supervisor.

Completion of the first year with a "C" grade in all courses is required before beginning second year.

Course	Units
THIRD SEMESTER	
Anatomy-Physiology	Biol 221 (4)
Menu Planning & Purchasing	FSM 250 (3)
Life Cycle Nutritn:Mother/Infant	FN 144 (1)
Life Cycle Nutritn:Children	FN 145 (1)
Life Cycle Nutritn:Later Years	FN 146 (1)
Intermediate Nutrition Care	N C 280 (2)
Supervised Practice 1	N C 281 (3)
FOURTH SEMESTER	
Food Science (4)	FN 195 (4-5)
(Or)	
Introductory Chemistry (5)	Chem 110 (2)
Advanced Nutrition Care	N C 285 (3)
Supervised Practice 2	N C 286 (3)
	(50.5-51.5)
Total:	(57-58)

Suggested electives:

Human Diseases	Al H	120	(2)
Current Issues Food/Nutr/Food Sci	FN	199AD	(.5-1)
Child Development	Hmdv	180	(3)
Introductory Sociology	Soc	180	(3)

Continued next column

Upon successful completion of these courses (with grade of "C" or better) and the General Education requirements, students will receive a Letter of Verification from the Program Director confirming that all requirements of the program have been met. Students will then be eligible for membership in the American Dietetic Association and for taking the National Registration Exam administered by the Commission on Dietetic Registration, the American Dietetic Association.

This program has been granted developmental accreditation status by the Commission on Accreditation/Approval for Dietetics Education of the American Dietetics Association, 216 W. Jackson Blvd., Chicago, IL 60606-6995, (312) 899-4876.

NUTRITION EDUCATION

Students who graduate from this program are prepared for employment in one of the fastest growing and most prolific industries in Southern California, that which encompasses weight control clinics, health and exercise spas and gymnasiums, community agencies concerned with nutrition education, and manufacturers and distributors of nutritionally related products.

CERTIFICATE OF ACHIEVEMENT

Course	Required Courses	Units
SPRING		
Meal Management	FN	120 (2)
Sanitation & Safety	FSM	160 (3)
Nutrition	FN	170 (3)
Applied Nutrition	FN	171 (2)
Cultural Foods	FN	185 (2)
Intro to Med Nutrition Therapy	NC	180 (3)
FALL		
Anatomy & Physiology	Biol	221 (4)
Life Cycle Nutritn:Mother/Infant	FN	144 (1)
Life Cycle Nutritn:Children	FN	145 (1)
Life Cycle Nutritn:Later Years	FN	146 (1)
Principles of Foods	FN	180 (3)
Careers in Dietetics/Food Sci	N C/F N	100 (1)
Intermediate Nutrition Care	N C	280 (2)
Supervised Practice 1	N C	281 (3)
Fitness Programs	PE	107AD (5-3)
	Total:	(31.5-34)

Suggested electives:

Elem Display & Visual Presentation	D&VP	180	(3)
Vegetarian Cuisine	FN	125	(2)
Nutrition/Fitness/Performance	FN	136	(2)
Food for Health/Fitness/Perform	FN	136L	(1)
Nutrition and the Mature Adult	FN	148	(2)
Feeding the Young Child	FN	145	(1)
Cooking Lite	FN	173	(2)
Current Issues Food/Nutr/Food Sci	FN	199AD	(.5-1)
Child Development	Hmdv	180	(3)
Professional Selling	Mktg	110	(3)

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

— See Also *FAMILY & CONSUMER SCIENCES-Food & Nutrition*

— See Also *FOOD SERVICE MANAGEMENT*

OFFICE INFORMATION SYSTEMS

--See *Computerized Office Technology*

ORNAMENTAL HORTICULTURE

The Ornamental Horticulture program prepares students for many attractively paying positions in the nursery industry. These positions include those in production and sales, interior plantscaping, landscape design, and construction and maintenance.

Students may take one or more courses from the program to learn about horticulture for its own sake and for theirs, or they may take the courses required for the Certificate in Achievement in Ornamental Horticulture. Either option is an introduction to natural beauty. The courses have been designed both for full-time students planning to enter the horticulture field and for those people working in one of the many interesting areas of horticulture who wish to expand their horticultural knowledge. Most classes are conducted during convenient evening hours to allow working students to study for a new career and those with jobs in the field of ornamental horticulture to upgrade their skills.

The Horticulture Department boasts excellent facilities, including a well-equipped classroom building set in beautifully landscaped grounds. The grounds themselves have been planted with a large collection of trees, shrubs, ground covers, and vines, and they serve as a laboratory for many of the classes. A nursery with over 6,000 square feet of greenhouse space and 4,000 square feet of shade structures round out this marvelous facility on the Orange Coast College campus.

CERTIFICATE OF ACHIEVEMENT

Required Courses

A. Preliminary courses which should be taken in the first year:

Course			Units
	FALL		
Botany*	Biol	183	(3)
Orientation to Horticulture	O H	090	(.5)
Knowing Your Soils	O H	109	(3)
Ornamental Trees	O H	181	(3)
	SPRING		
Ornamental Shrubs	O H	182	(3)
	Subtotal:		(12.5)

*Transfer students should also take *Biology 183L*.

B. Suggested second year sequence:

Select twelve (12) units from the following:

Course			Units
	FALL		
Landscape Drafting	O H	111	(1)
Maintenance & Repair of Small Gas Eng & other Gard Equip	O H	163	(2)
Pest Control Applicators & Gardeners P.C.D. Cert	O H	170	(1)
Nursery Practices and Mgmt	O H	184	(3)
Plant Diseases	O H	185	(1.5)
Interior Plantscaping	O H	187	(2)
Intro to Landscape Design	O H	285	(3)
	SPRING		
Plant Propagation	O H	183	(3)
Pests of Ornamentals	O H	186	(1.5)
Turf Culture Mgmt	O H	188	(3)
Weeds & Their Control	O H	189	(1.5)
Xeriscape	O H	190	(2)
Landscape Design Elements	O H	286	(2)
Planting Design	O H	287	(2)
Sprinkler Irrigation Sys Design	O H	288	(1)
Business elective			(3)
			(12)
	Total:		(24.5)

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

PHOTOGRAPHY—STILL

Anyone with an interest in photography, whether beginner, advanced amateur or professional, will find a course or program within the photography program that will teach them new skills or prepare them for a career in photography.

The OCC Photography program is intended to prepare students for employment in a number of specialization areas within the field of professional photography. The student, after completing the first year foundation courses, may elect to take advanced courses in commercial photography, advertising illustration, portraiture, architectural photography, fashion photography, documentary photography, multi-media presentations, photo journalism, retouching and business practices for photographers.

In addition to courses intended to train photographers, the program also includes several black and white and color laboratory classes for professional photographers who wish to learn new skills or for those who are interested in careers as photographic laboratory technicians.

CERTIFICATE OF ACHIEVEMENT

Course	Required Courses		Units
	First Semester		
Color & Design 2-D	Art	110	(3)
Intro to Professional Photo (4)	Photo	180	
(Or)			(4-5)
Basic Photography (3)	Photo	120	
(And)			
View Camera (2)	Photo	121	
History & Aesthetics of Photo	Photo	130	(3)
	Second Semester		
History / Apprec Western Art (3)	Art	101	
(Or)			(3)
Contemporary Art History (3)	Art	102	
Lab Practices	Photo	187	(3)
Commercial Photo	Photo	188	(5)
Any "100" level photo course			(2) minimum
	Third Semester		
Intro to Digital Photography	Photo	125	(3)
Intro to Prof Color Photo	Photo	280	(3)
Art Photography	Photo	283AB	(3)
	Fourth Semester		
	Select six (6) units from the following:		
Any "200" level photo courses			(6)
	Total:		(38-39)

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

PHYSICAL EDUCATION

—See *FITNESS SPECIALIST*

POLYSOMNOGRAPHY

Polysomnographic (PSG) Technology is an allied health specialty for the diagnosis and treatment of disorders of sleep and daytime alertness. The range of sleep disorders is varied but includes common disorders such as narcolepsy, sleep apnea, insomnia and many others. PSG technologists operate a variety of sophisticated electronic monitoring devices which record brain activity (EEG), muscle and eye movement, respiration, blood oxygen and other physiological events. Technologists are also involved in evaluation of various treatment methods.

PSG technologists are employed in Sleep Disorders Centers which can be located in medical centers, hospitals or clinic/office settings. OCC's PSG program offers a certificate which will provide lectures, laboratory on campus, clinical experience at accredited sleep centers and physician lectures. A major emphasis of the program will be to prepare technologists for Board Registration by the Association of PSG Technologists.

Graduates from OCC's Neurodiagnostic Technology or Respiratory Care programs may complete the PSG certificate program with one additional year of study. Many courses from these programs are directly related to polysomnography. Students without those backgrounds can complete this certificate within two years. This program will accept students to begin in the fall semester.

CERTIFICATE OF ACHIEVEMENT

Program prerequisite or concurrent enrollment:

Health Occupations	Al H	010	(.5)
Anatomy-Physiology	Biol	221	(4)
Technical Math	Tech	040	(3)

Subtotal: (7.5)

Required Courses

Course			Units
FALL			
Medical Terminology	Al H	111	(3)
Intro to Info Sys & Appl	CIS	100	(3)
Basic EEG	NDT	110	(4)
Resp Anatomy & Physiology	Resp C	185	(3)
SPRING			
Patient Care	Al H	115	(2.5)
Human Diseases	Al H	120	(2)
Applied Pharmacology	Al H	130	(2)
M A Specialty Procedures	M A	289	(1)
Intro to Neuroanatomy & Phys	NDT	190	(3)
Introductory Psychology	Psych	100	(3)
FALL			
Intro to Polysomnography	PSG	150	(3)
Polysomnography Testing	PSG	160	(2)
Polysomnography Clinical 1	PSG	165	(.5)
Polysomnographic Practice	PSG	170	(1)
Pulmonary Pathology	Resp C	265	(3)
INTERSESSION			
Polysomnography Clinical 2	PSG	175	(.5)
SPRING			
Polysomnography Record Review	PSG	250	(2.5)
Advanced Polysomnography	PSG	260	(2)
Polysomnography Clinical 3	PSG	265	(2)
Physician Lecture Series	PSG	270	(1)
Polysomnography Internship	PSG	285	(2)
Total:			(53.5)

Suggested electives:

Advanced Patient Care	AL H	116	(2)
Technical Report Writing	Engl	105	(3)
Child Development	Hmdv	180	(3)
Intro to Physics	Phys	110	(3)
Conversation 1	Span	110	(3)
Interpersonal Communication	Spch	100	(3)
Intro to Abnormal Psychology	Psych	158	(3)
Statistics for Behavioral Sci	Psych	160	(3)
Neurodiagnostic Lab Practice	NDT	200C	(.5)

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

POLYSOMNOGRAPHY—NDT

This option is recommended for Neurodiagnostic Technology graduates who would like to cross-train as Polysomnography Technicians. Accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP).

CERTIFICATE OF ACHIEVEMENT

Program option prerequisite:

Neurodiagnostic Technology Associate Degree

Subtotal: (57)

Required Courses

Course			Units
FALL			
Intro to Polysomnography	PSG	150	(3)
Polysomnography Testing	PSG	160	(2)
Polysomnography Clinical 1	PSG	165	(.5)
Polysomnographic Practice	PSG	170	(1)
Resp Anatomy & Physiology	Resp C	185	(3)
Pulmonary Pathology	Resp C	265	(3)
INTERSESSION			
Polysomnography Clinical 2	PSG	175	(.5)
SPRING			
Applied Pharmacology	Al H	130	(2)
M A Specialty Procedures	M A	289	(1)
Polysomnography Record Review	PSG	250	(2.5)
Advanced Polysomnography	PSG	260	(2)
Polysomnography Clinical 3	PSG	265	(2)
Physician Lecture Series	PSG	270	(1)
Polysomnography Internship	PSG	285	(2)
Total:			(25.5)
Total:			(81.5)

POLYSOMNOGRAPHY—RESPIRATORY CARE

This option is recommended for Respiratory Care graduates who would like to cross-train as Polysomnography Technicians.

CERTIFICATE OF ACHIEVEMENT

Program option prerequisite:

Respiratory Care Associate Degree

Subtotal: (61.5)

Required Courses

Course			Units
FALL			
Basic EEG	NDT	110	(4)
Intro to Polysomnography	PSG	150	(3)
Polysomnography Testing	PSG	160	(2)
Polysomnography Clinical 1	PSG	165	(.5)
Polysomnographic Practice	PSG	170	(1)
Intro to Info Sys & Appl	CIS	100	(3)
INTERSESSION			
Polysomnography Clinical 2	PSG	175	(.5)
SPRING			
Intro to Neuroanatomy & Phys	NDT	190	(3)
Polysomnography Record Review	PSG	250	(2.5)
Advanced Polysomnography	PSG	260	(2)
Polysomnography Clinical 3	PSG	265	(2)
Physician Lecture Series	PSG	270	(1)
Polysomnography Internship	PSG	285	(2)
Total:			(26.5)
Total:			(87)

RADIOLOGIC TECHNOLOGY (DIAGNOSTIC)

The Radiologic Technologist prepares demonstrations of human anatomy on an x-ray film or fluoroscopic screen for diagnostic use by a radiologist or other medical specialist. Graduates of the program are eligible for examination by the American Registry of Radiologist Technologists. Successful applicants have the right to use the title "Registered Radiologic Technologist" (RT(R)). In order to practice in California, the R.T. must also apply for certification by the Department of Health Services in Sacramento. Completion of the Associate in Arts degree and two-year certificate program qualifies the student for eligibility for the state C.R.T. Examination. A bachelor degree program has been articulated with CSU Northridge.

The Orange Coast College Radiologic Technology program is accredited by the Joint Review Committee on Education in Radiologic Technology and approved by the California Department of Health Services and is affiliated with numerous hospitals in Orange County. In this training consortium, students are rotated through planned learning experiences. Classrooms are well equipped and include on-campus energized x-ray laboratories.

Program application process is accomplished by taking program prerequisite, Allied Health 010. This short-term course is mandatory for all prospective program applicants. See current class schedule for specific course meeting times. Although applications are accepted throughout the year, the Radiologic Technology program starts only in the fall semester of every school year.

In addition to the Allied Health 010 course, the program has other prerequisites which must be completed with grade "C" or better before program entry. Students with prior Radiologic Technology training or experience may be eligible for a waiver of Allied Health 010 and/or advanced program standing.

The Radiologic Technology program is a full-time (two years including two summer sessions) program. Successful program completion requires the following: 1) completion of all required Radiologic Technology courses as outlined in catalog, 2) completion of approximately 1900 clinical hours, and 3) completion of all requirements for Associate in Arts degree as required by Orange Coast College. These specific program completion requirements must be satisfied within the two-year time frame of the Radiologic Technology program. Eligibility for the post program state and registry examinations are dependent upon meeting these requirements. It is highly recommended that the program applicant first complete all units of the General Education requirement before program entry. This program requires the student to

participate in clinical experience concurrent with classroom

courses. Clinical responsibilities will be arranged by the Radiologic Technology faculty and will include evening and/or weekend assignments. The student receives no salary for this clinical experience but will receive course credit toward program completion.

Radiologic Technology is a rapidly expanding allied health profession.

Employment possibilities include:

- Hospitals
- Imaging Centers
- Private Offices
- Medical Clinics
- Industry
- Sales

ASSOCIATE DEGREE PROGRAM

This is an Associate Degree program which requires an Associate Degree or higher from an accredited college before the certificate will be awarded. Students who do not already have a degree must complete the Orange Coast College Graduation Requirements for the AA Degree including General Education Options 1, 2 or 3.

Program prerequisite:

High School graduate, G.E.D., or California Proficiency Exam.

A. Preliminary group of courses which must be taken prior to enrollment in the major course sequence as outlined in "B":

Health Occupations	Al H	010	(.5)
Medical Terminology	Al H	111	(3)
Anatomy-Physiology*	Biol	221	(4)
Technical Math*	Tech	040	(3)

(or equivalent, i.e. Math 010 or college algebra)

General Ed Requirements for AA Degree**

(15-17)

Subtotal: (18.5-20.5)

Continued next column

*These courses satisfy 7 of the required 15-17 general education units.

**Not required if college degree has already been completed.

Students are required to earn a grade of "C" or better in all courses.

B. Required courses for this major:

Course			Units
FIRST YEAR			
FALL			
Patient Care	Al H	115	(2.5)
Rad Physics & Protection	Rad T	110	(3)
Beg Radiologic Practice	Rad T	165	(1.5)
Rad Positioning/Critique 1	Rad T	170	(3)
Clinical Lab 1	Rad T	171	(1.5)
Radiographic Imaging	Rad T	180	(3)
INTERSESSION			
Clinical Lab 1A	Rad T	172	(1)
SPRING			
Human Diseases	Al H	120	(2)
Rad Positioning/Critique 2	Rad T	175	(3)
Clinical Lab 2	Rad T	176	(6)
Radiographic Pathology	Rad T	185	(1)
General Education			(4)
SUMMER			
Clinical Lab 3	Rad T	177	(3)
SECOND YEAR			
FALL			
Digital Imaging & Computer Applications	Rad T	265	(3)
Rad Positioning/Critique 3	Rad T	270	(3)
Clinical Lab 4	Rad T	271	(6)
General Education			(2)
SPRING			
Advanced Patient Care	Al H	116	(2)
Rad Positioning/Critique 4	Rad T	275	(3)
Clinical Lab 5	Rad T	276	(6)
CRT/ARRT Board Prep	Rad T	285	(1)
Applied Physics & Fluoroscopy	Rad T	290	(4)
SUMMER			
Clinical Lab 6	Rad T	277	(2)
			(66.5)
			Total: (85-87)

Additional graduation requirements:

English 100	(3) units
Comm & Analytical Thinking	(3) units
Humanities Theory	(3) units
Humanities Participation	(1-3) units
Life Skills	(1-3) units
Social Science Group (1 & 2 & 3)	(9) units
Math Competency	
PE/Dance/Marine Activities	(1) unit

RELIGIOUS STUDIES

Completing the Religious Studies Certificate of Achievement program provides students with an in-depth background and broad understanding of religion. Students may work toward an Associate in Arts degree or upper division status as a Religious Studies major under Plan B. Religious Studies helps one to understand all cultures, including the American culture with its rich religious diversity. This program will prepare the student for world understanding and world travel.

CERTIFICATE OF ACHIEVEMENT

Required Courses

Course			Units
Intro to Religious Studies	Rel St	100	(3)
World Religions	Rel St	110	(3)
Introduction to the Bible	Rel St	125	(3)
History of Christianity	Rel St	128	(3)
History of Judaism	Rel St	140	(3)
Eastern Thought	Rel St	150	(3)

Subtotal: **(18)**

Select six (6) units from the following:

Philosophy of Religion	Phil	115	(3)
Ethics	Phil	120	(3)
Life & Times of Jesus	Rel St	130	(3)
Mysticism and Meditation	Rel St	145	(3)
Religion Behind Iron Curtain	Rel St	155	(3)
Islam	Rel St	160	(3)
The Bible as Literature	Rel St	180	(3)

(6)

Select nine (9) units from the following:

Anthropology 100, 102, or 280
 Art 100, 101, 102
 English 141, 160, 161, or 176
 History 110, 120, 125, 128, 130, 180, 185 or 190
 Humanities 100, 110A, 110B
 Music 160, 165
 Philosophy 100, 118, 150 or 185
 Psychology 100 or 110
 Sociology 180
 Speech 100 or 110

Total: **(9)**
(33)

Suggested Schedule of Classes

Course			Units
First Semester			
Intro to Religious Studies	Rel St	100	(3)
World Religions	Rel St	110	(3)
One Course Group B List			(3)
Second Semester			
Introduction to the Bible	Rel St	125	(3)
History of Christianity	Rel St	128	(3)
One Course Group B List			(3)
Third Semester			
History of Judaism	Rel St	140	(3)
Eastern Thought	Rel St	150	(3)
One Course Group C List			(3)
Fourth Semester			
One Course Group C List			(3)
One Course Group C List			(3)
			(33)

This program will meet major requirements for the Associate in Arts degree but has not been articulated with any particular four-year institution. Students should not expect that they will necessarily meet the lower division requirements at specific colleges or universities. Students should consult the Transfer Information section of this catalog for specific information.

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

RESPIRATORY CARE

Respiratory Care is an allied health specialty dealing with the diagnosis, treatment, and management of patients with acute and chronic diseases affecting the pulmonary system. Respiratory Care Practitioners/Respiratory Therapists work in all areas within the hospital, especially within the critical care areas with patients who are in a life-threatening phase of their illness. Additionally, some Respiratory Care Practitioners/Respiratory Therapists work with home care agencies to treat patients in their homes. Duties include analysis of pulmonary function and blood gases, artificial ventilation, CPR, assessment of pulmonary status, airway care, etc. Specialties in Respiratory Care include Adult Critical Care, Neonatal and Pediatric Critical Care, Pulmonary Function Testing, Home Care and Rehabilitation, Management and Education.

The Respiratory Care program at Orange Coast College is a two-year program beginning each fall semester. The student must complete the program prerequisites prior to entering the program. This leads to a Certificate of Achievement with the strong recommendation to complete General Education course requirements to obtain the Associate in Arts degree. Courses within the program include lectures, practice of procedures and techniques in the simulated laboratory on campus, approximately 1000 hours of clinical practice within area hospitals practicing the latest procedures in medicine, and lectures/discussions with physician specialists.

The Respiratory Care program at Orange Coast College is fully accredited. Program graduates are eligible for California legal certification (licensure) and Certification (CRTT) and Registry (RRT) by the National Board for Respiratory Care. The employment outlook for Respiratory Care Practitioners/Respiratory Therapists is very good throughout the United States. Most graduates obtain jobs within the Orange County/Long Beach areas.

Employment possibilities include:

Respiratory Therapist
 Respiratory Therapy Specialist
 Respiratory Care Practitioner

ASSOCIATE DEGREE PROGRAM

This is an Associate Degree program which requires an Associate Degree or higher from an accredited college before the certificate will be awarded. Students who do not already have a degree must complete the Orange Coast College Graduation Requirements for the AA Degree including General Education Options 1, 2 or 3.

All courses must be completed with grade of "C" or better.

Prerequisites:

Health Occupations	Al H	010	(.5)
Anatomy-Physiology	Biol	221	(4)

Required Courses

Course			Units
FALL			
Medical Terminology	Al H	111	(3)
Patient Care	Al H	115	(2.5)
Basic Microbiology	Biol	114	(2)
Introductory Chemistry	Chem	110	(5)
Resp Anatomy & Physiology	Resp C	185	(3)
SPRING			
Human Diseases	Al H	120	(2)
Applied Pharmacology	Al H	130	(2)
Basic Resp Care Equip	Resp C	190	(3)
Clinical Lab 1	Resp C	191	(1.5)
Respiratory Pharmacology	Resp C	195	(1)
Interpersonal Communication	Spch	100	
(Or)			(3)
Public Speaking	Spch	110	
SUMMER			
Clinical Lab 2	Resp C	192	(1)
FALL			
Home Care & Rehabilitation	Resp C	255	(2)
Arterial Blood Gases, Theory & Prac	Resp C	260	(2.5)
Pulmonary Pathology	Resp C	265	(3)
Ventilators & Resp Mgmt	Resp C	270	(2)
Resp Care Procedures	Resp C	275	(3)
Clinical Lab 3	Resp C	276	(3)
Physician Series 1	Resp C	279	(1)

Continued next page

INTERSESSION

Pulmonary Case Assessment	Resp C	278	(1)
SPRING			
Critical Care Monitoring	Resp C	280	(1)
Pulmonary Func Testing	Resp C	285	(2)
Clinical Lab 4	Resp C	286	(2.5)
Clinical Internship	Resp C	287	(2)
Physician Series 2	Resp C	289	(1)
Neonatal Intensive Care	Resp C	290	(2)
		Total:	(61.5)

Fully accredited Respiratory Therapist Program by the American Medical Association.

State License: Legally Certified Respiratory Care Practitioner

National Credential: RRT, CRTT, CPFT, by the National Board for Respiratory Care (NBRC)

Persons with experience as a respiratory therapist/technician or formal education in a respiratory therapy program may be eligible for advanced standing in the program. Contact the Program Coordinator for further information.

Program requires successful completion of a comprehensive national exam for graduation.

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

The following certificate is pending state approval at the time of catalog publication.

SPEECH-LANGUAGE PATHOLOGY ASSISTANT

The Speech-Language Pathology Assistant program will provide the community with professionally trained personnel to assist the Speech Pathologist in this specialized field and to provide services in multiple settings to a diverse population in the administration of therapeutic and screening services.

Employment possibilities include:

- Private Offices
- Hospitals
- Educational Institutes
- Rehabilitation Centers

ASSOCIATE DEGREE PROGRAM

This is an Associate Degree program which requires an Associate Degree or higher from an accredited college before the certificate will be awarded. Students who do not already have a degree must complete the Orange Coast College Graduation Requirements for the AA Degree including General Education Options 1, 2, or 3.

All courses must be completed with grade of "C" or better.

Prerequisites:

Anatomy-Physiology	Biol	221	(4)
Health Occupations	Al H	010	(.5)
Child Development	Hmdv	180	(3)

Subtotal: **(7.5)**

Required Courses

Course			Units
FALL			
Patient Care	Al H	115	(2.5)
Medical Terminology	Al H	111	(3)
Intro to Linguistics	Anth	190	(3)
Intro Speech Pathology Asst	SLPA	100	(2)
Speech/Language/Hearing Dev	SLPA	115	(2.5)
Speech-Language Admin Proced	SLPA	120	(2)
SPRING			
Early Child Dev Thru Play	E C	155	(3)
Early Childhood Laboratory	E C	156	(2)
Observe/Record Behavior	E C	165	(2)
Intro to Commun Disorders	SLPA	140	(3)

Continued next column

Intro to Phonetics	SLPA	150	(3)
Clinical Experience 1	SLPA	160	(.5)
FALL			
Human Diseases	Al H	120	(2)
Screen/Therapeutic Process	SLPA	180	(3)
Clinical Experience 2	SLPA	190	(2)
SPRING			
The Exceptional Child	Hmdv	210	(3)
Adult/Geriatric Disorders	SLPA	200	(2)
Clinical Experience 3	SLPA	250	(4)
		Total:	(52)

TECHNICAL WRITING

Orange Coast College's technical writing certificate of completion identifies students who are prepared for many entry-level technical writing positions. Students will also be prepared to pursue technical writing interests by entering technical writing programs at four year universities, however, students should not expect that they will necessarily meet the lower division requirements at specific colleges or universities by completing the certificate.

For the technical writing certificate of completion a student must complete 15 units as described below with a grade of "C" or better in all courses.

CERTIFICATE OF COMPLETION**Required Courses**

Course			Units
Freshman Composition	Engl	100	(3)
Technical Report Writing	Engl	105	(3)
			(6)

Communication skill elective**Select one (1) course from the following:**

Critical Reasoning, Reading, Writing thru Nonfiction	Engl	102	(3)
Honors Critical Reasoning, Reading, Writing thru Nonfiction	Engl	102H	(3)
Script Writing	Engl	127	(3)
Public Relations in Commun	Comm	120	(3)
Interpersonal Communications	Spch	100	(3)
Public Speaking	Spch	110	(3)
			(3)

Visual Presentation & Production Layout**Select six (6) units from the following:**

Product Illustration	Art	118	(2)
Newspaper Production	Comm	115AD	(3-7)
Publication Design/Production	Comm	118	(3)
Intro to Info Sys & Micro Appl	CIS	100	(3)
Desktop Publishing	CIS	103	(4)
Basic Drafting Practices	Draft	110	(4)
Engineering Drafting Design 1	Draft	115	(4)
Intro Computer Graphics	DMA	181	(3)
Illus & Computer Graphics 1	DMA	190	(4)
Video Workshop	Film	110	(3)
Computer Use in Technology	H Tech	100	(3)
Survey of High Technology	H Tech	108	(3)
Basic Photography	Photo	120	(3)

Total: **(15)**

WELDING TECHNOLOGY

Welding Technology is the application of the art and science of joining metals. Welding technologists have important roles in the fabrication and construction of nuclear and fossil fuel power plants, heavy equipment, agricultural machinery, petro-chemical plants, bridges, buildings, floating and underwater vessels, automobiles, appliances, and projects for national security. Specifically anything involving metals, from miniature electronic devices to sophisticated space projects, will require the skills of the expert welding technologist. These highly skilled members of the technological team apply practical working knowledge of welding processes, welding metallurgy and welding code standards in solving problems of welding design and production. The field is open to men and women. The OCC Welding Department is licensed to qualify (certify) weldors to code standards.

WELDING TECHNOLOGY

The Certificate of Achievement program in Welding Technology is for those who desire advanced knowledge of welding for employment as welding technicians, welding inspectors, welding engineers, welding supervisors, and advanced welders. Students also completing the required general education requirements and electives may earn the Associate in Arts degree. In addition, many OCC welding courses are transferable and can be used by those students who are interested in the welding engineering degree program at Cal Poly San Luis Obispo. Whatever the case, a person's chances for the job of their choice are much higher when they have the technical background as evidenced by earning our Certificate of Achievement in welding.

CERTIFICATE OF ACHIEVEMENT

Required Courses

Course			Units
FALL			
Technical Report Writing	Engl	105	(3)
Arc & Oxy Welding (3)	Weld	100	
(Or)			(3-4)
Arc & Oxy Welding (4)	Weld	101	
Welding Math & Science	Weld	120	(3)
SPRING			
Advanced Welding (3)	Weld	200	
(Or)			(3-4)
Advanced Welding (4)	Weld	201	
Welding Metallurgy	Weld	230	(3)
FALL			
Basic Drafting Practices	Draft	110	(4)
Welding Inspec & Test	Weld	210	(4)
SPRING			
Blueprint Reading	Weld	180	(3)
Welding Specs and Codes	Weld	220	(2)
Total:			(28-30)
Suggested electives:			
Arc-Oxy Weld (Open Lab)	Weld	115AD	(1-2)
GTAW (Gas Tungsten Arc Welding)	Weld	130AD	(1.5)
Arc-Oxy Weld (Open Lab)	Weld	215AD	(1-2)
Pipe Welding	Weld	250AD	(3)

ASSOCIATE DEGREE

Complete Certificate of Achievement and Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

WELD TESTING

The Weld Testing Certificates of Completion will be awarded upon successful completion of a proficiency test for each identified level (e.g., Level I, II, etc.) within a category of welding (i.e., SMAW, FCAW, GTAW, GMAW or Pipe). The indicated Weld Testing class must be repeated for each type of certificate received. Higher levels of certification will potentially lead to better paying jobs within the industry.

BASIC WELDING (SMAW)

CERTIFICATE OF COMPLETION

Required Courses

Course			Units
Arc & Oxy Welding	Weld	100	(3)
Weld Testing Basic	Weld	105AD	(.5)
			(3.5)

This Certificate of Completion certifies mastery of basic Shielded Metal Arc Welding (SMAW) Levels I, II, III, or IV.

INTERMEDIATE WELDING (SMAW)

CERTIFICATE OF COMPLETION

Required Courses

Course			Units
Arc & Oxy Welding	Weld	100	(3)
Weld Testing Intermediate	Weld	106AB	(.5)
Arc & Oxy Weld Practice (1-2)	Weld	115AD minimum(1)	
			(4.5)

This Certificate of Completion certifies mastery of intermediate Shielded Metal Arc Welding (SMAW) Levels V or VI.

ADVANCED WELDING (SMAW)

CERTIFICATE OF COMPLETION

Required Courses

Course			Units
Arc & Oxy Welding	Weld	100	(3)
Weld Testing Advanced	Weld	107AC	(.5)
Arc & Oxy Welding Pract (1-2)	Weld	115AD	
(Or)			minimum (3)
Adv Arc & Oxy Weld Pract (1-2)	Weld	215AD	
Advanced Welding	Weld	200	(3)
			(9.5)

This Certificate of Completion certifies mastery of first level advanced welding in Shielded Metal Arc Welding (SMAW) Levels VII, VIII and IX.

ADVANCED I WELDING (FCAW)

CERTIFICATE OF COMPLETION

Required Courses

Course			Units
Arc & Oxy Welding	Weld	100	(3)
Weld Testing Advanced	Weld	108AB	(.5)
Arc & Oxy Welding Pract (1-2)	Weld	115AD	
(Or)			minimum (3)
Adv Arc & Oxy Weld Pract (1-2)	Weld	215AD	
Advanced Welding	Weld	200	(3)
			(9.5)

This Certificate of Completion certifies mastery of first level advanced welding in Flux-Cored Arc Welding (FCAW) Levels I, II, & or IV.

ADVANCED II WELDING (FCAW)**CERTIFICATE OF COMPLETION**

Required Courses			Units
Course			
Arc & Oxy Welding	Weld	100	(3)
Weld Testing FCAW (.5)	Weld	109AD	
(Or)			(.5)
Weld Testing FCAW	Weld	110	
Arc & Oxy Welding Pract (1-2)	Weld	115AD	
(Or)		minimum	(5)
Adv Arc & Oxy Weld Pract (1-2)	Weld	215AD	
Advanced Welding	Weld	200	(3)
			<hr/>
			(11.5)

This Certificate of Completion certifies mastery of second level advanced welding in Flux-Cored Arc Welding (FCAW) Levels V, VI, VII, VIII, or IX.

GAS TUNGSTEN ARC WELDING (GTAW)**CERTIFICATE OF COMPLETION**

Required Courses			Units
Course			
Arc & Oxy Welding	Weld	100	(3)
Weld Testing GTAW	Weld	104	(.5)
Gas Tungsten Arc Welding	Weld	130AD	(1.5)
			<hr/>
			(5)

This Certificate of Completion certifies mastery of skills necessary for Gas Tungsten Arc Welding (GTAW) Level I.

GAS METAL ARC WELDING (GMAW)**CERTIFICATE OF COMPLETION**

Required Courses			Units
Course			
Arc & Oxy Welding	Weld	100	(3)
Weld Testing GMAW (.5)	Weld	102AD	
(Or)			(.5)
Weld Testing GMAW (.5)	Weld	103	
Adv Arc & Oxy Welding	Weld	200	(3)
			<hr/>
			(6.5)

This Certificate of Completion certifies mastery of skills necessary for Gas Metal Arc Welding (GMAW) Levels I, II, III, IV or V.

PIPE**CERTIFICATE OF COMPLETION**

Required Courses			Units
Course			
Arc & Oxy Welding	Weld	100	(3)
Weld Testing Pipe	Weld	111AB	(.5)
Adv Arc & Oxy Welding	Weld	200	(3)
Pipe Welding and Adv GTAW	Weld	250AD	(3)
			<hr/>
			(9.5)

This Certificate of Completion certifies mastery of skills necessary or Pipe Levels I and/or II.

Courses

Courses

Transfer Courses

All courses numbered 100 or higher are transferable to the California State Universities (CSU).

Courses that are transferable to the University of California are designated 'UC.' Some of these courses have limits on the amount of credit that is granted. See the UC Transferable Course List available in the Counseling Center or Transfer Center for these limitations.

Courses that are non-credit or not AA degree applicable are designated with the letter 'N' preceding the course number.

Identification of courses that have been accepted into the California Articulation Number (CAN) system appears after the course title.

ACCOUNTING

Accounting 100—Introduction to Accounting (3)

Fundamental accounting principles and concepts as applied to professional services and merchandising firms. Emphasis is on basic accounting concepts, vocabulary, practical procedures, and accounting forms. May be taken for grades or on a credit-no credit basis. Four hours. Offered: F,S.

Accounting 101—Financial Accounting (4) (CAN BUS 2)

An introductory course covering the fundamentals of financial accounting of the corporate entity. Involves the analysis, recording, and summarizing of accounting transactions on the accrual basis. Emphasis is on accounting as an information system meeting the demands of users for decision making. Five hours. (UC) Offered: F,S.

Accounting 102—Managerial Accounting (4) (CAN BUS 4)

Prerequisite: Accounting 101.

The second semester accounting course emphasizes managerial accounting. The primary aim is to use accounting information as a decision making tool in order for management to achieve the organization's financial goals and objectives. Five hours. (UC) Offered: F,S.

Accounting 110—Microcomputer Accounting (3)

Prerequisite: Accounting 100 or 101.

Computerized accounting course designed to develop employable skills utilizing integrated accounting and electronic spreadsheet software; evaluation and comparison of commercial software; and analysis of financial reporting. May be taken for grades or on a credit-no credit basis. Four hours. Offered: F,S.

Accounting 111—Federal Income Tax (3)

Introduction to federal income taxation theory and practice as applied to individuals. Covers gross income, business and personal deductions, exemptions, tax credits, property transactions, and tax computation. Includes problem solving and tax return preparation. May be taken for grades or on a credit-no credit basis. Three hours. Offered: F,S.

Accounting 115—Medical Bookkeeping (4)

Terminology, techniques, application, hands-on training of accounts receivable and accounts payable systems, and payroll as it pertains to the medical office. Course includes computerized procedures. Same as Medical Assisting 115. Students completing Accounting 115 may not receive credit for Medical Assisting 115. Four hours. Offered: F,S.

Information in italics designates the semester(s) in which the course is offered. The Division Office reserves the right to make changes as budget or other constraints warrant. F=Fall, S=Spring, Sum=Summer, Inter=Intercession

Accounting 210—Cost Accounting (3)

Prerequisite: Accounting 102.

Principles of cost accounting, cost determination procedures, control and analysis of costs, and managerial cost analysis applications. Included will be accounting for materials, labor, factory overhead, job and process cost systems, standard cost accounting, budgeting, and statistical approaches to cost evaluation. May be taken for grades or on a credit-no credit basis. Three hours. Offered: F,S.

Accounting 211—Intermediate Accounting (4)

Prerequisite: Accounting 102.

Financial accounting theory and practice. Reviews and builds upon concepts learned in earlier accounting courses. Emphasizes preparation and analysis of more complex accounting records and financial statements for corporations, including the underlying principles involved. Five hours. Offered: F,S.

AIRLINE TRAVEL CAREERS

Airline Travel Careers 105AC—Public Service for Airline Travel Careers (2-4)

Field service training for students to utilize communication, social skills, and knowledge of airline and travel industry. Classroom plus field service will enable students to utilize skills in corporate, travel, airport, airline, community and public service environments. This formal internship program enables students to work at their own level to recruit, train, and supervise other students. Four hours or eight hours lecture/field service. Offered: F,S.

Airline Travel Careers 110—Personal Development, Appearance, Image and Attitude (1.5) (9 week course)

Personal development to include appearance, image, attitude, lifestyle decisions, etiquette, and wellness. Personality development, techniques to build confidence, and professional and business skills to secure successful employment. Three hours. Offered: F,S.

Airline Travel Careers 111—Travel Careers Survey (1.5) (9 week course)

Employment opportunities, qualifications, salaries, benefits in travel careers including airlines, airports, train, cruise/adventure travel, tours, hospitality, corporate, sports, agencies, general/commercial aviation, and support businesses. Three hours. Offered: F,S.

Airline Travel Careers 112—Flight Attendant Qualifications and Opportunities (1.5) (9 week course)

Survey of flight attendant and inflight service team qualifications and opportunities for employment, including base stations, responsibilities, salary schedule, and benefits. Three hours. Offered: F,S.

Airline Travel Careers 114—Employment Skills—Written (1.5) (9 week course)

Written skills for becoming employed, including resume, application, business letters, self-evaluation, and marketing plan, and an updated personal register of employment data. Employment testing, labor organizations, and affirmative action will be discussed. Three hours. Offered: F,S.

Airline Travel Careers 115—Employment Interviewing Techniques (1.5) (9 week course)

Build confidence for interview process, design self-marketing plan, analyze interview techniques and employment tests, evaluate interviewer's questions and expected answers, use of video taped interviews and critique. Three hours. Offered: F,S.

Airline Travel Careers 116—Travel Industry Operations and Terminology (1.5) (9 week course)

Preparation for stringent demands of airline travel career training and FAA exams to include industry terminology, airline codes, schedules, Official Airline Guide, federal agencies, airport operations, history, airline deregulation, mergers and acquisitions and their effects. Three hours. Offered: F,S.

Airline Travel Careers 117—Management—Travel/Aviation (1.5) (9 week course)

Travel/aviation management to include successful presentations, business writing skills, employee recruiting, selection, training and supervision, goal setting, team building, time management, customer service, and delegation. Three hours. Offered: as needed.

Airline Travel Careers 118—Overcome Fear of Flight Workshop (1.5) (9 week course)

Overcome and understand fear of flight through knowledge of theory of flight, flight crew training, safety precautions, incident statistics, aircraft familiarization, physiological and psychological factors. Anxiety reducing techniques: breathing, creative visualization and imagery. Offered on a credit-no credit basis only. Three hours. Offered: as needed.

Airline Travel Careers 119—Travel Safety Inflight and Ground (1.5) (9 week course)

Travel safety and security to include ground and inflight equipment, passenger psychology, airport security, federal regulations, safety precautions while traveling, anti-terrorism and hijacking discussion. Three hours. Offered: F,S.

Airline Travel Careers 120—Service Excellence Inflight and Ground (1.5) (9 week course)

Service techniques and presentation for inflight and ground operations. Identification and pronunciation of foods and beverages plus knowledge of equipment to provide quality service while developing a personal serving style. Three hours. Offered: F,S.

Airline Travel Careers 122—Travel Geography—United States (1.5) (9 week course)

This course provides the traveler and industry employee with information for maximizing the travel experience to include regional accents and dialects, shopping, historical and recreational tourist destinations, and regional culture and cultural diversity for the United States. Three hours. Offered: S.

Airline Travel Careers 123—Travel Geography—Northern Europe (1.5) (9 week course)

This course provides the traveler and industry employee with information for maximizing the travel experience to include customs, entry requirements, currency, language and dialects, shopping, historical and recreational tourist destinations, and regional culture and cultural diversity for Scandinavia, the British Isles, the Low Countries. Three hours. Offered: as needed.

Airline Travel Careers 124—Travel Geography—Africa (1.5) (9 week course)

This course provides the traveler and industry employee with information for maximizing the travel experience to include customs, entry requirements, currency, language and dialects, shopping, historical and recreational tourist destinations, and regional culture and cultural diversity for Africa. Three hours. Offered: as needed.

Courses

Airline Travel Careers 125—Travel Geography—The Americas (1.5) (9 week course)

Traveler's information for maximizing sightseeing to include culture, currency, language, shopping, tourist destinations and information. Canada, Mexico, Caribbean, Central America and South America. Three hours. Offered: F.

Airline Travel Careers 126—Travel Geography—Southern Europe (1.5) (9 week course)

This course provides the traveler and industry employee with information for maximizing the travel experience to include regional accents and dialects, shopping, historical and recreational tourist destinations, and regional culture and cultural diversity for Greece, Spain, Portugal, Italy, Austria, Germany, Switzerland, and France. Three hours. Offered: F.

Airline Travel Careers 127—Travel Geography—Eastern Europe (1.5) (9 week course)

This course provides the traveler and industry employee with information for maximizing the travel experience to include regional accents and dialects, shopping, historical and recreational tourist destinations, and regional culture and cultural diversity for Russia and Republics, Czechoslovakia, Hungary, Poland, Yugoslav Republics, Romania, and Albania. Three hours. Offered: F.

Airline Travel Careers 128—Travel Geography—Pacific Rim (1.5) (9 week course)

This course provides the traveler and industry employee with information for maximizing the travel experience to include regional accents and dialects, shopping, historical and recreational tourist destinations, and regional culture and cultural diversity for Australia, New Zealand, Japan, South Korea, Hong Kong, China, Taiwan, Thailand, Philippines, Tahiti, Samoa, Fiji, Singapore, Malaysia, Indonesia, and Indochina. Three hours. Offered: S.

Airline Travel Careers 129—Computer Reservation Systems 1 (3)

Recommended preparation: Airline Travel Careers 111 and 116, or Travel & Tourism 300.

Introduction to all computer travel industry reservation and ticketing systems. The SABRE system will be used for computer terminal experience; customer service role playing. Two hours lecture, two hours non-lecture. Offered: F;S.

Airline Travel Careers 131—Computer Reservation Systems 2 (1.5) (9 week course)

Prerequisite: Airline Travel Careers 129.

Advanced computer travel industry reservation and ticketing systems utilizing the SABRE system. Reservations, customer service, and role playing are emphasized. One and one-half hours lecture, one and one-half hours non-lecture. Offered: F;S.

Airline Travel Careers 132—Intercultural Awareness and Etiquette (1.5) (9 week course)

This course will provide the student with intercultural awareness and multicultural insight into the cultures of the world including Latin, Asian, Middle Eastern, African, and European countries. Curriculum includes: values, historical beliefs, and religion, plus cultural etiquette to include social practices, gestures, body language, eating, drinking practices, and business behavior. Three hours. Offered: F;S.

ALLIED HEALTH

Allied Health 010—Health Occupations (.5) (4 week course)

Introduction to the allied health programs at Orange Coast College including presentations of each allied health program. Required prerequisite for admission to some allied health programs. Offered on a credit-no credit basis only. Testing fee required for this course. Four hours. Offered: F;S.

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Course numbers followed by an AB, AC, or AD may be repeated once, twice or three times respectively.

Courses that are non-credit or not AA applicable are designated with the letter "N" preceding the course number.

Allied Health 111—Medical Terminology (3)

Recommended preparation: Biology 221.

Development of medical vocabulary emphasizing the building of terms utilizing prefixes, combining forms and suffixes. Includes symptomatic, therapeutic, diagnostic and operative terms along with terms related to diagnostic tests. Students learn the meaning and spelling of medical terms and the application of these terms to comprehend medical record documents. Three hours. Offered: F;S.

Allied Health 115—Patient Care (2.5) (9 week course)

Prerequisite: Allied Health 010; non-native speakers must complete ESL 151AB (exemption based on assessment results).

Corequisite: Allied Health 111.

A pre-clinical preparation to be taken no more than six months prior to the first scheduled allied health clinical internship. An orientation to the clinical setting to include interpersonal communication, legal and ethical issues, an overview of health care finance, basic patient care techniques, universal precautions, cardiopulmonary resuscitation, emergency medical interventions, the psychological aspects of the ill and dying patient, and the psychological aspects of being employed as a health care professional. Three hours lecture, three hours non-lecture. Offered: F;S.

Allied Health 116—Advanced Patient Care (2) (8 week course)

Prerequisite: Allied Health 115.

Multi-skill preparation for the allied health professional including management communication skills, phlebotomy, with injection of contrast media, and basic electrocardiography. Three hours lecture, three hours laboratory. Offered: S.

Allied Health 120—Human Diseases (2)

Prerequisite: Biology 221; Allied Health 111 recommended.

The study of disease processes and diseases affecting each body system. Includes etiology, pathophysiological mechanisms, methods of diagnosis, manifestations and treatment of each disease. Recent completion of human anatomy and physiology is recommended before attempting this class. Two hours. Offered: F;S.

Allied Health 130—Applied Pharmacology (2)

Recommended preparation: Biology 221.

Common drug categories, methods, and legal aspects of drug administration is emphasized and includes action, indication, hazards, metabolism and excretion. Calculation of drug dosages and solutions. Use of drugs in the treatment of various disease processes. Two hours. Offered: S.

Allied Health 199AD—Current Issues in Allied Health (.5) (1-9 week course)

This course deals with current issues in the allied health profession. Topics vary. See class schedule. May be taken for grades or on a credit-no credit basis. One to nine hours. Offered: F;S.

Allied Health 280—Supervisory Management for Health Care Professionals (2)

Procedures for developing personnel programs and desirable employer/employee relationships in health care facilities. Selection, placement, orientation, training, counseling, rating, promotion, and scheduling of personnel. Also includes basic budgeting techniques. Two hours. Offered: as needed.

AMERICAN STUDIES

American Studies 100—Institutions (3)

A one-semester survey of selected political, social, economic, and cultural institutions of the United States and California. Some topics discussed will include the role of the media in the U.S., 'American national character' and the American political party system. May be taken for grades or on a credit-no credit basis. Three hours. **(UC credit limitation)** Offered: F;S.

ANATOMY

(See Biology 220, 221, 223, or 225)

ANTHROPOLOGY

Anthropology 100—Cultural (3) (CAN ANTH 4)

The analysis of social structure, family, kinship, belief, and rite. The determinants of culture and personality. The social analysis of three societies. The methods and perspectives of anthropology. Three hours. **(UC credit limitation)** Offered: F;S;Sum.

Anthropology 100H—Honors Cultural Anthropology (3)

The analysis of social structure, family, kinship, belief, and rite. The determinants of culture and personality. The social analysis of three societies. The methods and perspectives of anthropology. Three hours. **(UC credit limitation)** Offered: as needed.

Anthropology 102—Native American (3)

An introduction to the development of Native American (Indian) cultures prior to the introduction of European Civilization in the Western Hemisphere and the cultural conflicts generated by the European invasion and the position of Native American life in contemporary America. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: F;S.

Anthropology 105—Anthropology of Nonverbal Behavior (3)

An analysis and individual awareness of nonverbal behavior in human interaction with emphasis on western cultural patterns. Attention is given to the various levels or segments of nonverbal human interaction including gesture, spatiality, body positions and expression laughter. Foundations and developmental patterns of nonverbal dimensions are explored. Same as Sociology 105. Students completing Anthropology 105 may not receive credit for Sociology 105. May be taken for grades or on a credit-no credit basis. Three hours. Offered: F;S.

Anthropology 110—Comparative Cultures (3)

An examination of the cultural similarities and differences that exist in the major areas of the world. Non-western societies will be compared and contrasted with one another and with western societies. Employees in multinational companies, general education students, and anthropology majors will benefit from this course. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: F;S.

Courses

Anthropology 120—Natural History and Cultures of the Southwest (3)

An introduction to the natural history of the Southwest including the geology, ecology and cultures of the region. The interrelationship between the human populations and their environments, past and present, is examined. Same as Natural Science 120. Students completing Anthropology 120 may not receive credit for Natural Science 120. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: S; odd yrs.

Anthropology 150—Multicultural Behavior (3)

Multicultural approaches to cultural diversity including immigration policy, affirmative action, and bilingual debates. Intercultural comparisons including Native American, African American, Hispanic American, Asian American, and European American cultural traditions. Social science theories and methodologies for development of positive intercultural relationships. Same as Sociology 150. Students completing Anthropology 150 may not receive credit for Sociology 150. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: F; S.

Anthropology 185—Physical (3) (CAN ANTH 2)

As an introductory survey course, the class will cover three major areas in particular: 1) evolutionary theory, 2) the theories of man's origin and his evolution based upon comparative anatomy, biochemical studies and the fossil record, and 3) the origin and evolution of man's culture and social organizations as revealed by the archaeological record and biochemical variations in modern man, individual adaptations and growth and development studies. Three hours. **(UC)** Offered: F; S; Sum.

Anthropology 185L—Physical Anthropology Laboratory (1)

Prerequisite: Anthropology 185, or concurrent enrollment. A beginning laboratory course emphasizing the physical nature of man from an anthropological perspective. An examination of the fossils record and man's physical variation. May be taken for grades or on a credit-no credit basis. Three hours non-lecture. **(UC)** Offered: F; S; Sum.

Anthropology 190—Introduction to Linguistics (3)

Linguistic analysis and language structures from many areas of the world. Descriptive and historical linguistics. Relationships between language and culture. Three hours. **(UC)** Offered: as needed.

Anthropology 195—Culture, Society and Medicine (3)

A general overview of human health and disease and their relationship to environmental factors, social institutions, and cultural beliefs and practices. A survey of the history of various diseases and attempts at their control. The comparative study of western and nonwestern medical systems, emphasizing the United States. Specific case studies and results of current research will be analyzed. Three hours. **(UC)** Offered: as needed.

Anthropology 280—Introduction to Archaeology (3) (CAN ANTH 6)

A study of the basic principles of archaeological research and cultural evolution based on technological change. Artifact types, site composition, and dating techniques are discussed as they relate to Paleolithic, Mesolithic, and Neolithic cultures in the Old and New World. The cultural evolution of humans is then traced using artifact assemblages as the key to understanding cultural growth. Three hours. **(UC)** Offered: F; S.

Anthropology 282—Field Archaeology (3)

Recommended preparation: Anthropology 280. Introduction to the strategies and techniques required for the archaeological excavation of a prehistoric site. Site survey and excavation methodology, mapping, and recording procedures will be emphasized in a field environment. May be taken for grades or on a credit-no credit basis. Two hours lecture, four hours non-lecture. Offered: as needed.

Information in italics designates the semester(s) in which the course is offered. The Division Office reserves the right to make changes as budget or other constraints warrant. F=Fall, S=Spring, Sum=Summer, Inter=Interession

Anthropology 285—World Ethnology (3)

A survey of primitive, peasant and contemporary cultures representing major world areas. Different levels of cultural development with emphasis on the interaction of environment, technology, social system, and culture history. The major theories of culture will be explored. Three hours. **(UC)** Offered: as needed.

ARCHITECTURAL TECHNOLOGY

Architectural Technology 105—Introduction to Architectural Graphics (2)

Recommended preparation: Concurrent enrollment in Architectural Technology 110 and 180.

This course is an introduction to architectural presentation techniques which will give students the elementary ability to explain a three-dimensional design solution using a two-dimensional medium. Subjects and techniques presented in the course will include orthographic projection, title blocks, floor plans, elevations, sections, shade and shadow, isometrics, and elementary rendering. One hour lecture, three hours non-lecture. Offered: F, S.

Architectural Technology 110—Introduction to Architecture (2)

Recommended preparation: Concurrent enrollment in Architectural Technology 105 and 180.

Familiarization with the professional fields of architecture, engineering, city and regional planning, and their philosophies and contribution to the total living environment. Two hours. **(UC credit limitation)** Offered: F.

Architectural Technology 115—Introduction to Architectural Design and Theory (3)

Prerequisite: Architectural Technology 105.

Study of perceptual and visual phenomena as applied to both two- and three-dimensional design principles and architectural theory. Two hours lecture, three hours studio. **(UC credit limitation)** Offered: S.

Architectural Technology 130—Architectural Design 2 (3)

Prerequisite: Architectural Technology 115.

Recommended preparation: Concurrent enrollment in Architectural Technology 270 and 285.

An advanced course dealing with concepts pertaining to architectural form, space, structure and organization. Focus is on the consideration of program elements, function, spatial organization, and the relationship of design elements to human and aesthetic determinants. Two hours lecture, three hours studio. **(UC credit limitation)** Offered: F.

Architectural Technology 180—Architectural Drafting and Construction Documents (4)

Recommended preparation: Concurrent enrollment in Architectural Technology 110 and 105 when offered.

A basic course focusing on the preparation of drawings as a media for an understanding of building systems, materials, products, and code requirements for residential and wood frame construction. Further emphasis is placed on lettering and notations, dimensions, and the use of symbols and conventions as a means of architectural communications. Two hours lecture, six hours studio. Offered: F; S.

Architectural Technology 185—Architectural Planning and Construction Documents (4)

Prerequisite: Architectural Technology 180.

Recommended preparation: Concurrent enrollment in Architectural Technology 115.

An advanced course dealing with two-story construction and site planning for multifamily use. Concentration is on components and systems as they pertain to two-story, multi-family structures, as well as related construction documents. Study is also made of space planning, concrete masonry, and heavy timber construction. Two hours lecture, six hours studio. Offered: S.

Architectural Technology 220—Building Materials and Systems (4)

Prerequisite: Architectural Technology 185.

The study of architectural materials and principles of building systems as typically applied in commercial and industrial building. Three hours lecture, four hours non-lecture. Offered: F.

Architectural Technology 225—Land and Building Development (3)

A general survey of land development principles and procedures used prior to the actual construction of structures. Site analysis and planning, mapping, regulatory controls, obtaining entitlements, grading, road and street designs, utility systems, principles of real property value, and project financing will be covered. Same as Construction Technology 225. Students completing Architectural Technology 225 may not receive credit for Construction Technology 225. Three hours. Offered: F.

Architectural Technology 250—Building Codes and Standards (2)

Recommended preparation: Concurrent enrollment in Architectural Technology 286.

Introduction to the codes and standards prevalent in the Southern California area. Concentration is on Title 24 and Americans With Disabilities Act regulations, the Uniform Building Code, and local enforcement as applied to building design. Two hours. Offered: S.

Architectural Technology 270—Architectural Design Graphics (3)

Prerequisite: Architectural Technology 105.

Course instruction discusses techniques used in architectural presentations. Color and monochromatic presentation formats are explored, also 2D and 3D graphic alternatives for the presentation of architectural design solutions. Two hours lecture, three hours non-lecture. **(UC credit limitation)** Offered: F.

Architectural Technology 285—Building Systems and Detailing (4)

Recommended preparation: Architectural Technology 185 and concurrent enrollment in Architectural Technology 130 and 270.

The study and detailing of architectural and structural systems as applied to commercial and industrial buildings. Two hours lecture, seven hours studio. Offered: F.

Architectural Technology 286—Architectural Design 3 (4)

Recommended preparation: Architectural Technology 285 and concurrent enrollment in **Recommended preparation:** Architectural Technology 285 and concurrent enrollment in Architectural Technology 250.

An advanced course dealing with the design of a commercial-type building. Emphasis is on the problem solving process, development of design techniques, and graphic presentation forms. Two hours lecture, seven hours studio. Offered: S.

Courses

Architectural Technology 290—History of Architecture 1 (3)

A study of the development of architecture from primitive shelters throughout the complex structures of the Renaissance. Focuses on styles of architects who have made significant contributions. Emphasis and discussion on political, economic and cultural influences in the evolution of architectural history. Three hours. **(UC credit limitation)** Offered: F.

Architectural Technology 296—History of Architecture 2 (3)

Study of the development of architecture from the 18th century to the present. Focuses on the styles of architecture in various historical periods, highlighting architects who have made significant contributions. Special emphasis on the architecture of the 20th century, emphasis and discussion on political, economic, social and cultural influences in the evolution of architectural history. Three hours. **(UC credit limitation)** Offered: S.

ART

Art 100—History and Appreciation of Western Art (3) (CAN ART 2)

A survey of art from prehistoric to the Gothic periods emphasizing principles of history of art as revealed in artifacts found from each period that establish significant ideas about the conditions of each historical age. Required for art majors. May be taken for grades or on a credit-no credit basis. Three hours. **(UC credit limitation)** Offered: F,S.

Art 100H—Honors History and Appreciation of Western Art (3)

A survey of art from prehistoric to the Gothic periods emphasizing principles of history of art as revealed in artifacts found from each period that establish significant ideas about the conditions of each historical age. May be taken for grades or on a credit-no credit basis. Three hours. **(UC credit limitation)** Offered: as needed.

Art 101—History and Appreciation of Western Art (3) (CAN ART 4)

A survey of painting, sculpture, and architecture beginning with the Proto-Renaissance (Late Gothic) and concluding with Post Impressionism. The course will relate major developments in the arts to the historical and social events of the period. May be taken for grades or on a credit-no credit basis. Three hours. **(UC credit limitation)** Offered: F,S.

Art 101H—Honors History and Appreciation of Western Art (3)

A survey of painting, sculpture, and architecture beginning with the Proto-Renaissance (Late Gothic) and concluding with Post Impressionism. The course will relate major developments in the arts to the historical and social events of the period. May be taken for grades or on a credit-no credit basis. Three hours. **(UC credit limitation)** Offered: as needed.

Art 102—Contemporary Art History (3)

A survey of American and international art movements from 1945 to the present. Particular emphasis will be placed on the biomorphic forties, abstract expressionism, second generation expressionism, pop and op art, minimal, new and photo realism, conceptual art, happenings, performance, video, art in public spaces, earth and site works, pattern, graffiti and neo-expressionism. Recommended for art majors. Three hours. **(UC)** Offered: F,S.

Art 103—History of Asian Art: China, Korea, Japan (3)

A survey of the painting, sculpture, architecture, and minor arts of China, Korea, and Japan, emphasizing their relationship to the philosophy and religions of Asia. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: F,S.

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Courses that are non-credit or not AA applicable are designated with the letter "N" preceding the course number.

Art 104—Art of India and Southeast Asia (3)

Hindu, Buddhist, and Jain arts as expressed in architecture, art, and painting. Indian influence on the arts of Nepal, Tibet, Kashmir, Sri Lanka, Java, Cambodia, Thailand, and Burma. Religious and philosophical influence on the arts and architecture. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: as needed.

Art 106—Picture Framing (1.5)

How to frame prints, photographs, oils, watercolors, stitchery, needlepoint, etc., using correct frame, backing and molding. One hour lecture, two hours non-lecture. Offered: F,S.

Art 107—Introduction to Art (3)

An appreciation of art methods and materials presented in historical and contemporary context. Designed to develop both observational and hands-on experience in the creation of art emphasizing fundamental art ideas, terminology, methodology, and the relationship of art to society. Topics will include drawing, painting, sculpture, film arts, printmaking, and architecture. Gallery/museum visits are required. May be taken for grades or on a credit-no credit basis. Three hours. Offered: F.

Art 108—Women in Art (3)

Women artists and the image of women in art from the paleolithic period to the present day. Art criticisms, the feminist art movement, and the status of contemporary women artists. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: as needed.

Art 110—Color and Design: Two-Dimensional (3) (CAN ART 14)

A basic course in the visual organization of the principles and elements of design. Selected fundamental concepts using line, color, mass, value, and texture in two-dimensional applications. Required for art majors and certificate programs. Six hours lecture-studio. **(UC)** Offered: F,S,Sum.

Art 111—Color and Design: Three-Dimensional (3) (CAN ART 16)

Prerequisite: Art 110.

Explores the basic concepts of three-dimensional form in visual art and design. Studio practice using basic materials. Required for art majors and recommended for certificate programs. Six hours lecture-studio. **(UC)** Offered: F,S.

Art 112—Application of Color Theory (3)

Prerequisite: Art 110.

Investigates the dimensions of color through the aspects of visual application of color theory. Emphasis will be structured around the development and articulation of sensory concepts. Recommended for art majors and certificate programs. Six hours lecture-studio. **(UC)** Offered: S.

Art 113—Computer Advertising Design and Copywriting (3)

A course covering the fundamentals of advertising copywriting, advertising layout and paste-up, with an introduction to and hands-on experience using the Macintosh computer. This course will prepare art and advertising students to think in both the graphic and verbal modalities. Same as Marketing 113. Students completing Art 113 may not receive credit for Marketing 113. May be taken for grades or on a credit-no credit basis. Three hours lecture, three hours non-lecture. Offered: F,S.

Art 115—Lettering and Computer Typography (3)

History and development of basic letter forms, with calligraphic origins. Lettering as a design form emphasized. Hand lettering logotype/symbol, computer and mechanical typography from professionals' point of view. Class projects oriented toward portfolio samples. Recommended for art majors and practicing art professionals. Six hours lecture-studio. Offered: F,S,Sum.

Art 117—Rapid Illustration Techniques (3)

Prerequisite: Art 120.

Course expands upon freehand drawing skills. Illustration methods of determining design solutions and as final presentations. Techniques drawn from areas of graphic and advertising design, industrial design and interior design. Emphasis on acquiring pieces suitable for student's portfolio. Recommended for art majors and practicing professionals. May be taken for grades or on a credit-no credit basis. Six hours lecture-studio. Offered: F,S.

Art 118—Product Illustration 1 (2)

For the beginner through semi-professional levels of drawing skill. Principles of line, shade, shadow, highlight, reflection, color, materials and graphic presentation. Sketching and rendering using various media and papers. May be taken for grades or on a credit-no credit basis. Three hours. Offered: F,S.

Art 119—Product Illustration 2 (2)

Prerequisite: Art 118.

Continuation of Product Illustration 1 to include more detailed renderings. May be taken for grades or on a credit-no credit basis. Three hours. Offered: F,S.

Art 120—Freehand Drawing (3) (CAN ART 8)

The student will draw natural and artificial forms from observation using a variety of media on paper, apply visual devices that affect the illusion of three-dimensional space on a flat surface, and apply critical thought to affect justifiable interpretations of content and meaning in visual statements. Six hours studio. **(UC credit limitation)** Offered: F,S,Sum.

Art 120H—Honors Freehand Drawing (3)

The student will draw natural and artificial forms from observation using a variety of media on paper, apply visual devices that affect the illusion of three-dimensional space on a flat surface, and apply critical thought to affect justifiable interpretations of content and meaning in visual statements. Six hours studio. **(UC credit limitation)** Offered: as needed.

Art 121AD—Life Drawing (3) (CAN ART 24)

Prerequisite: Art 120.

Figure drawing from the model. Study of volumes, foreshortening and composition of the human form. Required of art majors. Six hours lecture-studio. **(UC)** Offered: F,S.

Art 122—Human Anatomy for Artists (3)

Prerequisite: Art 110.

A drawing and study course using the human figure as a model. Emphasis will be on human anatomy and how it relates to drawing the figure. This course is recommended for art majors. Six hours non-lecture. **(UC)** Offered: as needed.

Courses

Art 125—Perspective Drawing (3)

Drawing of three-dimensional objects using perspective as a tool. Emphasis on fundamentals and different procedures used. Emphasizes methods which are directly related to the artist's needs including short-cuts. Recommended for art majors and certificate programs. Six hours lecture-studio. **(UC)** Offered: F;S.

Art 130—Painting 1 (3) (CAN ART 10)

Prerequisite: Art 110 and 120.

Students will develop the basic craft of painting landscape, still life, and the figure using selected media. Students will apply and practice a creative approach to painting to achieve an understanding of color, space, form, and composition. Six hours lecture-studio. **(UC)** Offered: F;S.

Art 131AC—Painting 2 (3)

Prerequisite: Art 130.

A continuation of Painting 1 with emphasis on personal expression. Alternate painting mediums introduced. Six hours lecture-studio. **(UC)** Offered: F;S.

Art 141—Sculpture 1 (3) (CAN ART 12)

Exploration of sculptural material and concepts. Technical experiences may include modeling, casting and fabricating with sculptural media. Six hours lecture-studio. **(UC)** Offered: F;S.

Art 142AD—Life Sculpture (3)

Exploration of figurative sculpture from the model emphasizing structure and expressive potential. Technical experiences may include armature building, clay modeling and hand-building, moldmaking and casting in various media. Required of art majors. May be taken for grades or on a credit-no credit basis. Six hours non-lecture. **(UC)** Offered: F;S.

Art 143AD—Story Illustration Techniques (3)

Prerequisite: Art 121AD.

Principles of story illustration applied to various drawings and painting media. Creative and imaginative application of theories and techniques and accurate representation. Six hours lecture-studio. Offered: F;S.

Art 145—Exhibition Design (Gallery) (2)

Gallery and exhibition design—the processes, materials and design concepts as they relate to the operation of a gallery or museum. Experience and emphasis on problems involved in planning and preparing exhibits, bulletin boards, wall cases and art portfolio. Recommended for art majors. Two hours lecture, four hours practical. Offered: F;S.

Art 147—Jewelry 1 (3) (CAN ART 26)

Application of the basic concepts of design related to two- and three-dimensional crafts. Projects in hand wrought jewelry fabrication (sterling silver, copper and brass), copper enameling and small three-dimensional wood construction. May be taken for grades or on a credit, no-credit basis. Six hours lecture-studio. Offered: F;S.

Art 149—Introduction to Ceramics (1.5)

Introduction to ceramics, including basic forms, glazing techniques, and use of the potter's wheel. Historical aspects and contemporary applications will be explored. May be taken for grades or on a credit-no credit basis. Four hours non-lecture. **(UC)** Offered: F;S.

Art 150—Ceramics 1 (3) (CAN ART 6)

Basic pottery forms. Handbuilding techniques, introduction to the sculptural and 2-dimensional use of clay. The course will explore traditional pottery forms and move toward the development of concepts based on the main directions of contemporary ceramics. Introduction to firing and glazing. Basic techniques in raku, earthenware, stoneware and porcelain. Six hours lecture-studio. **(UC)** Offered: F;S.

Information in italics designates the semester(s) in which the course is offered. The Division Office reserves the right to make changes as budget or other constraints warrant. F=Fall, S=Spring, Sum=Summer, Inter=Intercession

Art 151AC—Ceramics 2 (3)

Prerequisite: Art 150.

Introduction to the potter's wheel including functional form combinations of thrown forms and other ceramic sculpture techniques. Six hours lecture-studio. **(UC)** Offered: F;S.

Art 160—Advertising Design 1 (3)

Prerequisite: Art 110 and 120.

Introduction to principles of layout and design as applied to advertising and graphic design. Basic visual design techniques are emphasized using a variety of art media including photography. Required for advertising design certificate. Six hours lecture-studio. Offered: F.

Art 161—Advertising Design 2 (3)

Prerequisite: Art 160.

Design and preparation of finished work for reproduction. Emphasis on presentation and technique. Projects include advertising illustration, packing, collateral materials and preparation of material for professional portfolio. Required for advertising design certificate. Six hours lecture-studio. Offered: S.

Art 163—Computer Art Production (4)

Computer production art and traditional paste up skills that relate to the design of mechanical and computer advertising art for printing. Eight hours lecture-studio. Offered: F;S.

Art 170—Printmaking 1 (3) (CAN ART 20)

Studio problems in relief and intaglio printing: monoprints, lino cuts, woodcuts and collographs. Six hours lecture-studio. **(UC)** Offered: F;S;Sum.

Art 171AC—Printmaking 2 (3)

Prerequisite: Art 170.

Continued studio problems in relief and intaglio processes, as well as monoprints and various combined processes and registration techniques with emphasis on development of personal expression. Six hours lecture-studio. **(UC)** Offered: F;S;Sum.

Art 175AB—Screen Process Printing (3)

Theory and practice of screen process printing, construction of the screen, techniques of photo stencil making, color registration and printing on various surfaces pertinent to fine art and commercial application. Production of serigraphs, posters, greeting cards, textiles. Emphasis on execution of original designs. Six hours lecture-studio. Offered: F;S.

Art 180—Professional Studies (2)

Prerequisite: Art 110 or 120.

Exploration and identification of areas of employment and professional activity in art. Techniques of obtaining employment, such as the evaluation of art work and the construction of a portfolio of art samples. Emphasis on access to information through guest lecturers, films and field trips. Required reading of selected materials. Four hours lecture-studio. Offered: as needed.

Art 195—Art of Western Europe (1-3)

A varied selection of national and international academic field studies. Opportunities to visit cities throughout the world for first-hand observation of major artistic achievements, such as architecture, art museums, sculpture and other significant historical sites. May be taken for grades or on a credit-no credit basis. Offered: Sum.

Art 202—Contemporary Art Theory (1) (9 week course)

Prerequisite: Art 102 and/or Art 210AD.

An in-depth theory and philosophic examination of contemporary art issues and movements to be presented in a group seminar environment to include lecture, slides, discussion, field trips to galleries and studios, as well as individual research. May be taken for grades or on a credit-no credit basis. Two hours. Offered: as needed.

Art 210AD—New Concepts (3)

Prerequisite: Art 102 and 110.

Interactive video as a medium for electronic imagery, personal content, documentation and conceptual concerns. Experimentation with other media and various art forms such as performance, bookworks and environments of light and sound. Six hours lecture-studio. **(UC)** Offered: as needed.

Art 220AD—Figure Composition (3)

Prerequisite: Art 121AD.

Advanced drawing emphasizing a deeper involvement with structure, composition and experimentation. Still life, landscape and live models will be used as the basis for compositions. Six hours lecture-studio. **(UC)** Offered: F;S.

Art 235AD—Experimental Painting (3)

Prerequisite: Art 110 and/or portfolio.

Exploration and presentation of painting using contemporary mixed media and materials in non-traditional contexts for the purpose of developing individual expressive directions. Experimentation with various painting supports and non-traditional media. Six hours lecture-studio. **(UC)** Offered: F;S.

Art 236AD—Life Painting (3)

Prerequisite: Art 121AD and 130.

A course in figure painting using the live model. Various painting media and analysis of light, shade, and color will be covered. May be taken for grades or on a credit-no credit basis. Six hours studio. **(UC)** Offered: F;S.

Art 241AC—Sculpture 2 (3)

Prerequisite: Art 141.

Advanced study in the creative use of techniques and materials of sculpture with an emphasis on mold making and casting. Six hours lecture-studio. **(UC)** Offered: F;S.

Art 243AD—Bronze Casting (3)

Art bronze casting using the lost-wax method and sand casting pattern. Six hours lecture-studio. Offered: as needed.

Art 245AC—Exhibition Design (2)

Prerequisite: Art 145.

Continued work in gallery and exhibition design. Directed emphasis in the use of the environment as a means of communication, assigned individual responsibility for specific areas of installation of professional shows in the gallery. Management of art openings and receptions. Two hours lecture, four hours studio. Offered: F;S.

Art 247AC—Jewelry 2 (3)

Prerequisite: Art 147.

A continuation of Jewelry 1. Further development of hand wrought jewelry fabrication techniques to include explorations in casting, hollow form construction, linking device and lapidary. Emphasis will also be on individual student's field of interest. May be taken for grades or on a credit-no credit basis. Six hours lecture-studio. Offered: F;S.

Art 263AD—Painting in Watercolor (3)

Prerequisite: Art 110 and 120.

Materials, methods, composition, design and color for both still life and landscape. Six hours lecture-studio. **(UC)** Offered: F;S;Sum.

Courses

Art 269—Cartooning 1 (3)

A basic course in cartooning for students interested in learning how to cartoon without any previous formal art training. Six hours lecture-studio. **(UC)** Offered: F;S.

Art 270—Cartooning 2 (3)

Prerequisite: Art 269.

A continuation of Cartooning 1 with an emphasis on developing skills and story idea interpretation. Six hours lecture-studio. Offered: F;S.

Art 272AD—Pencil Sketching (2)

Introduction to sketching natural and artificial forms from observation emphasizing straight and curved line combinations. Use of texture, patterns, lights, shadows and movements of three-dimensional forms. For non-art majors. Three hours lecture-studio. **(UC)** Offered: F;S.

Art 286AD—Papermaking and Book Arts (2)

An exploration into historical and modern approaches in the making of paper and construction and binding of artists' books. Using various fibers, natural materials, linters and recycled paper, the student will explore visual and tactile experiences in the making of paper. Preliminary exercises in both papermaking and experimenting with bindings will lead the student to a final project in book form. May be taken for grades or on a credit-no credit basis. Six hours non-lecture. **(UC credit limitation)** Offered: as needed.

ASSESSMENT OF PRIOR LEARNING (See Counseling 181)

ASTRONOMY

Astronomy 100—Elementary Astronomy (3)

Introduction to the origin, evolution and structure of the solar system, stars, galaxies and the universe. Historical milestones in the science of astronomy from ancient times to the space age. Consideration of current controversies in astronomy and the future of astronomical research and space exploration. May be taken for grades or on a credit-no credit basis. Three hours. **(UC credit limitation)** Offered: F;S.

Astronomy 100H—Honors Elementary Astronomy (3)

Introduction to the origin, evolution, and structure of the solar system, stars, galaxies, and the universe. Historical milestones in the science of astronomy from ancient times to the space age. Consideration of current controversies in astronomy and the future of astronomical research and space exploration. May be taken for grades or on a credit-no credit basis. Three hours. **(UC credit limitation)** Offered: as needed.

Astronomy 100L—Elementary Astronomy Laboratory (1)

Prerequisite: Astronomy 100

Recommended preparation: Math 010.

A beginning laboratory course designed for non-science majors. It will provide practical experience with the scientific method through outdoor astronomical observations and indoor analysis of experimental data. Same as Natural Science 100LA. Students completing Astronomy 100L may not receive credit for Natural Science 100LA. May be taken for grades or on a credit-no credit basis. Three hours laboratory. **(UC)** Offered: F;S;Sum.

Astronomy 101—Planetary Astronomy (3)

An introduction to the current solar system family surveying each of the individual constituents. A comparative study will be made of the nine planets and their satellites and a detailed look at comets, asteroids and interplanetary debris will be undertaken. An overview of the formation, evolution and structure of the solar nebula will be presented. Current topics on interplanetary missions, other planetary system candidates and extraterrestrial life will be discussed. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: F.

Astronomy 102—Stellar Astronomy (3)

A detailed study of the formation, structure and life cycles of stars in the universe including the sun. Supernovas, pulsars, black holes and other stellar phenomena will be covered. Galaxies, quasars and models for the origin and evolution of the universe will be discussed. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: S.

Astronomy 103—Cosmology (3)

An introduction to the origin and evolution of the universe with emphasis on the major cosmological models. Galaxy types and the distribution of populations of stars will be studied. Concepts in particle physics, special and general relativity, and an overview of the nuclear processes in stars will be covered, including a detailed study of black holes, neutron stars and white dwarfs. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: as needed.

Astronomy 108—Preparation for Observational Astronomy (2)

An introduction to the methods and techniques of observational astronomy, telescope principles, and operations as applied to public viewing of astronomical phenomena. This course is designed for students to operate the telescopes and assist the public in observing objects in the night sky. May be taken for grades or on a credit-no credit basis. One hour lecture, three hours non-lecture. Offered: F;S;Sum.

Astronomy 120—Special Topics in Modern Astronomy (3)

Prerequisite: Astronomy 100.

Review of major unanswered questions of Nature and the Universe with emphasis on current astrophysical research. The course will provide practical experience in using the scientific method and available evidence to formulate one's own opinions regarding the answers to these questions. Discussions will include the theories of relativity and the possibility of extraterrestrial life, as well as the impact of modern space science on the environment, philosophy, society and the destiny of humanity. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: S.

AVIATION AND SPACE

Aviation and Space 125—Air Traffic Control For Pilots (1.5) (9 week course)

Prerequisite: Aviation and Space 130, or private pilot's license.

Principles of air traffic control for piloting aircraft. Three hours. Offered: S.

Aviation and Space 130—Aviation Ground School (5)

Introductory course for commercial pilot program. Preparation for private pilot's written examination. Navigation, weather, aircraft and engines and federal aviation regulations will be discussed. Five hours. Offered: F;S.

Aviation and Space 132—Aviation—Navigation (3)

Prerequisite: Aviation and Space 130, or private pilot's license.

Intermediate air navigation (not celestial). Meets navigation requirements for commercial and airline transport pilots. Navigation instruments required. Three hours. Offered: F.

Aviation and Space 133—Aviation—Meteorology (3)

Meets weather instructional needs for commercial or instrument license and promotes flight safety. Three hours. Offered: F;S.

Aviation and Space 134—Aviation Instrument Ground School (3)

Prerequisite: Aviation and Space 130, or private pilot's license.

Preparation for instrument pilot written exam; refresher for rated instrument pilot. Three hours. Offered: F;S.

Aviation and Space 135—Aircraft Engines (3)

Prerequisite: Aviation and Space 130, or private pilot's license.

An advanced course for pilots in aircraft engine operation and includes turbo-supercharging, ignition, carburetion, injection, accessories and engine performance charts. One of the courses fulfilling the requirements in preparation for the FAA commercial pilot's examination. Three hours. Offered: as needed.

Aviation and Space 136—Soaring-Glider Ground School (3)

Preparation for private pilot's (glider) certificate: basic glider aerodynamics, instruments, oxygen and radio operation, weather, navigation, Federal Air Regulations, soaring and basic cross country soaring ground school. Three hours. Offered: as needed.

Aviation and Space 137—Aircraft Preventive Maintenance for Pilots (1.5) (9 week course)

Prerequisite: Private pilot's license.

FAA rules related to pilot performed maintenance: electrical, fuel, hydraulic systems, airframe and powerplant. Three hours. Offered: as needed.

Aviation and Space 138—Aerodynamics (3)

Prerequisite: Aviation and Space 130, or private pilot's license.

An advanced course for pilots in aircraft aerodynamics and performance. Preparation for the commercial pilot's examination. Three hours. Offered: as needed.

Aviation and Space 139—Aviation Ground School, Advanced (3)

Prerequisite: Aviation and Space 130, or private pilot's license; Aviation and Space 132 and 133 recommended.

Refresher for experienced pilots and preparation for commercial examination. Meteorology, FAA regulations, navigation, radio navigation, flight planning and communication procedures are covered. Three hours. Offered: S.

Aviation and Space 140—Flight Instructor Ground School (3)

Prerequisite: Aviation and Space 139.

Preparation for the flight instructor written examination. Fundamentals of teaching and learning, and ground and flight instruction procedures. Three hours. Offered: as needed.

Courses

Aviation and Space 141AB—Flight Simulator Course (2)

Prerequisite: 120 hours flight time and completion of Aviation and Space 134, or concurrent enrollment, or completion of FAA instrument pilot written examination.

Preparation for the FAA instrument flight test and for instrument rated pilots who want to maintain their proficiency. Two hours. Offered: F;S.

Aviation and Space 145—Turbine Aircraft Systems (3)

Prerequisite: Aviation and Space 130 and 134.

Advanced course for pilots concentrating on turbine aircraft systems such as those found on the Boeing 737-200 and Cessna Citation. Information can be used in preparation for type rating training or flight engineer written exam. Three hours. Offered: S.

Aviation and Space 155—Private Pilot Flight Maneuvers (3)

Practical application of private pilot flight maneuvers. Three hours. Offered: as needed.

Aviation and Space 180—Basic Air Transportation (3)

Broad overview of the aerospace industry, the history of flight, and history of commercial air transportation. Three hours. Offered: F.

Aviation and Space 191—GPS Navigational and Electronic Flight Planning (3)

Introductory course for the new or experienced pilot to GPS navigation as used in VFR and IFR navigation. GPS instrument en route and approach procedures will be covered, and the use of GPS to drive a moving map display. The use of a personal computer in planning cross country flight logs using current software such as FliteStar and DUATS Cirrus will be covered. Three hours. Offered: F;S.

Aviation and Space 192—Human Factors and Cockpit Resource Management (1.5) (9 week course)

Introducing the new or experienced pilot to Cockpit Resource Management for single and multi-crew cockpits. Human factors research (C/L/R) conducted by United Airlines and accident investigations and their recommendations on reducing "pilot error" will be examined along with many practical methodologies to make single pilot VFR and IFR safer and more efficient. Three hours. Offered: F;S.

Aviation and Space 195—Astronautics and Spacecraft Design (3)

An introduction to astronautics and spacecraft design. This course will concentrate on the technology used in the space shuttle, International Space Station, and unmanned spacecraft. Topics include orbital mechanics, propulsion systems, GNS, shuttle orbiter systems, mission operations, avionics, GPS, and military space systems. Three hours. Offered: S.

Aviation and Space 196—Space Station (1.5) (9 week course)

An in-depth evaluation of the elements of the proposed U.S. Space Station. The design process will be stressed focusing on Phase C and D development. The various systems will be examined including environmental life support, propulsion, electrical, robotic servicers, OMV, unmanned platforms and module configuration. Three hours. Offered: S.

Aviation and Space 197—Advanced Space Systems (1.5) (9 week course)

An advanced course exploring current projects in NASA, DoD, and private aerospace systems. Topics will include elements and infrastructure of the Strategic Defense Initiative; space platforms for surveillance, communications, navigation, data transfer, manufacturing, and the National Aerospace Plane and other DARPA sponsored projects. Current leading edge technologies will be incorporated into the class including new commercial and private projects. Three hours. Offered: as needed.

AVIATION TECHNOLOGY

Aviation Technology 140—Introduction to Helicopter Theory and Operations (3)

Rotary wing aircraft development, technology, construction, and FAA requirements for operation and maintenance. Survey of helicopter industry. May be taken for grades or on a credit-no credit basis. Three hours. Offered: F.

Aviation Technology 150—General 1 (4) (9 week course)

Recordkeeping, mechanic's privileges, limitations, forms, records, and ground operation. Practical experience in completion of maintenance records, inspections, selection of maintenance publications, interpretation of technical data, precision measurement, non-destructive testing, ground operation and servicing of aircraft. Four hours lecture, ten hours laboratory. Offered: F.

Aviation Technology 151—General 2 (3) (9 week course)

Fundamental theory of electricity. Practical experience in calculating and determining electrical circuit problems, and battery inspection and servicing. Three hours lecture, nine hours laboratory. Offered: F.

Aviation Technology 152—General Airframe and Powerplant 1 (2) (9 week course)

Theory of fuel systems and lines and fittings. Practical experience in repair, check, service, overhaul, testing and troubleshooting of fuel systems, and system component parts. Two hours lecture, eight hours non-lecture. Offered: F.

Aviation Technology 153—General 3 (3) (9 week course)

Theory of materials used in aircraft, processes of inspection, cleaning of parts, hardware identification and other fasteners. Practical experience in hardware selection, installation, material selection, and cleaning and corrosion control. Three hours lecture, ten and one-half hours laboratory. Offered: F.

Aviation Technology 154—General 4 (2)

Basic math. Theory and practical experience in a variety of aircraft math, physics, weight and balance calculations, and varied problems. Practical experience in weight and balance of aircraft. Three hours lecture, one-half hour non-lecture. Offered: F.

Aviation Technology 155—General 5 (1)

Fundamental theory of drafting and blueprints. Practical experience in drawing, sketches of repairs, alterations, schematics, blueprint reading, and varied use of graphs and charts. One and one-half hours lecture, one and one-half hours laboratory. Offered: F.

Aviation Technology 160—Air and Power 1 (6)

Prerequisite: Aviation Technology 151.

Fundamental theory relating to aircraft electrical systems, ice and rain, and fire protection systems. Practical experience in disassembly, repair, overhaul, inspection, testing of electrical components and systems. Four hours lecture, eight hours laboratory. Offered: S.

Aviation Technology 161—Airframe 1 (5.5)

Prerequisite: Aviation Technology 153.

Fundamental theory relating to aircraft structures. Practical experience in sheet metal, composites, wood, riveting, fabric, inspection and painting. Three hours lecture, eight hours laboratory. Offered: S.

Aviation Technology 162—Airframe 2 (3)

Prerequisite: Aviation Technology 153.

Fundamental theory of assembly, cabin control systems and rigging. Practical experience in rigging, assembly, disassembly, repair, overhaul, testing, inspection, and operation of component parts of the cabin control systems. Two hours lecture, four and one-half hours laboratory. Offered: S.

Aviation Technology 163—Airframe 3 (4.5)

Prerequisite: Aviation Technology 150 and 153.

Fundamental theory of hydraulic, pneumatic and landing gear systems. Practical experience in disassembly, repair, overhaul, test, inspection, and operation of component parts. Two hours lecture, seven hours laboratory. Offered: Sum.

Aviation Technology 170—Powerplant Theory and Maintenance 1 (6)

Prerequisite: Aviation Technology 150 and 153.

Fundamental theory of aircraft reciprocating engines. Practical experience in overhauling, repair, assembly, testing and troubleshooting various powerplants. Three hours lecture, nine and one-half hours laboratory. Offered: F.

Aviation Technology 171—Powerplant Systems 1 (4)

Prerequisite: Aviation Technology 152.

Fundamental theory of aircraft reciprocating engine fuel metering, induction, cooling, and exhaust systems. Practical experience in overhauling, repair, testing, and troubleshooting a variety of different systems and components. Two and one-half hours lecture, five hours laboratory. Offered: F.

Aviation Technology 172—Powerplant Systems 2 (4)

Prerequisite: Aviation Technology 170.

Fundamental theory of propellers and lubrication system components. Practical experience in overhauling, repair, testing, and troubleshooting different types of systems and components. Two and one-half hours lecture, six hours laboratory. Offered: S.

Aviation Technology 173—Powerplant Theory and Maintenance 2 (6)

Prerequisite: Aviation Technology 150 and 153.

Fundamental theory and overhaul of turbine engines, starting systems and system components. Practical experience in disassembly, repair, overhaul, inspection, and testing of turbine engines and components. Three and one-half hours lecture, ten hours laboratory. Offered: S.

Aviation Technology 174—Powerplant Systems 3 (3) (9 week course)

Prerequisite: Aviation Technology 151.

Fundamental theory of ignition systems and practical experience in disassembly, repair, overhaul, inspection, and testing of ignition components. Three hours lecture, nine and one-half hours laboratory. Offered: S.

Courses

Aviation Technology 180—Airframe and Powerplant Instrumentation (2.5) (9 week course)

A survey and limited practical experience of basic instrumentation systems used in private, corporate, and commercial aircraft. Included is aircraft nomenclature, acronyms, and use of computer-based training systems. Three and one-half hours lecture, five hours non-lecture. Offered: F.

Aviation Technology 181—Communication and Navigation Systems (2) (9 week course)

Prerequisite: Aviation Technology 180.

A survey and limited practical experience of basic avionics systems used in navigational, communication, and flight management systems as applied to private, corporate, and commercial aircraft. Included is aircraft nomenclature, acronyms, and use of computer-based training systems. Three hours lecture, three and one-half hours non-lecture. Offered: S.

Aviation Technology 182—Aircraft Avionics Circuits (5)

Prerequisite: Aviation Technology 151.

Semiconductor and digital logic gate fundamentals including bread boarding of linear and analog and digital circuits. Analysis and application of amplifiers, oscillators, and superheterodyne receivers. Test bench procedures utilizing diagnostic equipment and fault finding logic tree techniques to a systems level. Four hours lecture, four hours non-lecture. Offered: F.

Aviation Technology 184—Aircraft Avionics Systems (5.5)

Prerequisite: Aviation Technology 182.

A course in aircraft radio navigational and communication systems. Bench test, installation and ramp test of transmitter and receiver systems and their operating principles. Systems include VHF comm, VOR, ILS, and Transponder. Students are required to bring hand tools. Four hours lecture, five and one-half hours non-lecture. Offered: S.

Aviation Technology 188—Avionics Rules and Regulations (1.5) (9 week course)

A basic course focusing on the rules and regulations of communication, navigation and electronic equipment as they apply to aircraft. Emphasis is placed on Federal Aviation Regulations and Federal Communication Commission regulations as they apply to the servicing and repair of aircraft navigation, communication and general electronics. Preparation for FCC Radio Telephone Operator's License examination is covered. Three hours. Offered: S.

Aviation Technology 290—Helicopter Maintenance (4)

Prerequisite: Aviation Technology 140; airframe and/or powerplant license or in process.

Maintenance of helicopters, helicopter rotor systems, power trains, unique system features, instrumentation, and design construction. Practical experience in dismantling, inspection, repair, assembly, testing and troubleshooting a variety of helicopters and system components. Two hours lecture, six hours laboratory. Offered: S.

BACTERIOLOGY (See Biology 210)

All courses numbered 100 or higher are transferable to the California State Universities (CSU).

Courses that are transferable to the University of California are designated "UC". Some of these courses have limits on the amount of credit that is granted. See the UC transferable Course List available in the Counseling Center or Transfer Center for these limitations.

Course numbers followed by an AB, AC, or AD may be repeated once, twice or three times respectively.

Courses that are non-credit or not AA applicable are designated with the letter "N" preceding the course number.

BIOLOGY (See also Ecology)

Biology 100—Principles of Biology (4)

A general study of life processes with emphasis on biological molecules, cells, heredity, evolution and diversity of life. Suitable as a general education elective for the non-science major. Three hours lecture, three hours laboratory. **(UC credit limitation)** Offered: F,S;Sum.

Biology 104—Wildlife Photography (3)

Prerequisite: Photography skills.

Methods, equipment and application of techniques in photographing wildlife. Emphasis on natural history and identification of Southern California species. Student to supply own 35mm camera, film and film processing. May be taken for grades or on a credit-no credit basis. Two hours lecture, three hours laboratory. Offered: as needed.

Biology 114—Basic Microbiology (2) (9 week course)

Introduction to theory and techniques of microbiology as applied to human nutrition, disease, immunity and the environment. No science prerequisite. Two hours lecture, two hours laboratory. Offered: F.

Biology 125—Human Biology (3)

A transferable general education biology course for students not majoring in the life sciences. Emphasis on relationships of biology to human beings with particular attention to the most current work on molecular genetics, heredity, fertility, genetic engineering, the immune system, AIDS, cancer and drug effects on the nervous system. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: as needed.

Biology 140—The Biology of Drugs (1) (9 week course)

A survey of psychoactive recreational drugs emphasizing history, biological effects upon the human body, uses and origins. Will not deal with legal, moral or social implications. Two hours. Offered: as needed.

Biology 155—Insects of California (1) (9 week course)

An introduction to the techniques involved in collecting, preserving, controlling, and identifying local insects for scientific and educational purposes. May be taken for grades or on a credit-no credit basis. One hour lecture, three hours laboratory. Offered: as needed.

Biology 160—Biology of Sexually Transmitted Diseases (2) (9 week course)

Designed to meet community needs and needs of those seeking transfer credit in a non-lab biology course in anatomy, physiology and immunology of sexually transmitted diseases. May be taken for grades or on a credit-no credit basis. Four hours. Offered: as needed.

Biology 181—Cell and Molecular Biology (4) (CAN BIOL 2)

Prerequisite: Chemistry 130 or one year of high school chemistry with a grade of "C" or better. Non-native speaking students must be eligible to enter ESL 131AB and 135AB.

This course is designed for the major in the biological sciences and the pre-health profession major. Emphasis is on the central concepts of biology, including biochemistry, cell biology, cell physiology, membrane dynamics, molecular genetics, classical genetics, virology, biotechnology, and immunology. Three hours lecture, three hours laboratory. **(UC)** Offered: F,S.

Biology 182—Zoology (3) (CAN BIOL 4)

Prerequisite: Biology 181 required for biology majors. No prerequisite for non-biology majors.

Includes the basic aspects of phylogeny, morphology, physiology and behavior of vertebrate and invertebrate animals. Emphasizes comparing the variety of mechanisms animals have evolved to solve common biological problems. Three hours. **(UC)** Offered: F,S.

Biology 182L—Zoology Lab (1) (CAN BIOL 4)

Prerequisite: Biology 182, or concurrent enrollment.

A laboratory course emphasizing animal phylogeny, anatomy, and physiology using representative types. One-half hour lecture, two and one-half hours lab. **(UC)** Offered: F,S.

Biology 183—Botany (3) (CAN BIOL 6)

Prerequisite: Biology 181 required for biology majors. No prerequisite for non-biology majors.

Includes the dynamics of plants and their processes with particular emphasis on the structure and function of living plants. Three hours. **(UC)** Offered: F,S.

Biology 183L—Botany Lab (1) (CAN BIOL 6)

Prerequisite: Biology 183, or concurrent enrollment.

A course in the dynamics of plants and their processes with particular emphasis on the structure and function of living things. Three hours laboratory. **(UC)** Offered: F,S.

Biology 186—Beginning Plant Taxonomy (2) (9 week course)

Principles and methods of plant taxonomy. Systems of classification, terminology of plant structures and the characteristics and distributions of important plant families of the native and introduced floras of Southern California. May be taken for grades or on a credit-no credit basis. Two hours lecture, three hours laboratory. Offered: as needed.

Biology 210—General Microbiology (5) (CAN BIOL 14)

Prerequisite: One semester of college chemistry or biology.

Fundamentals of bacteriology, mycology and virology. Includes food and industrial bacteriology, factors in infection and resistance to disease and microbial ecology. Recommended for biological science majors. Three hours lecture, six hours laboratory. **(UC)** Offered: F,S.

Biology 211—Food and Microorganisms (2) (9 week course)

Prerequisite: Biology 114 or 210.

Role of microorganisms in the production of and the spoilage of food. May be taken for grades or on a credit-no-credit basis. Two hours lecture, two hours laboratory. Offered: as needed.

Courses

Biology 220—General Human Anatomy (5) (CAN BIOL 10)

Introduction to the structure and design of the human body. Includes structural components and body system interactions. Students will participate in the laboratory. Appropriate for students interested in human anatomy. Satisfies requirements for nursing, physical therapy and physical education majors. Three hours lecture, six hours laboratory. **(UC credit limitation)** Offered: F;S;Sum.

Biology 220H—Honors General Human Anatomy (5)

Introduction to the structure and design of the human body. Includes structural components and body system interactions. Students will participate in the laboratory. Appropriate for students interested in human anatomy. Satisfies requirements for nursing, physical therapy, and physical education majors. Three hours lecture, six hours laboratory. **(UC credit limitation)** Offered: F;S.

Biology 221—Anatomy-Physiology (4)

A one semester course dealing with human anatomy and physiology as a combined discipline. Three hours lecture, three hours laboratory. **(UC credit limitation)** Offered: F;S;Sum.

Biology 223—Sectional Anatomy (4)

Prerequisite: Biology 221.
A study of the structures of the human body in serial sections. Three hours lecture, three hours laboratory. Offered: F.

Biology 225—Introduction to Physiology (5) (CAN BIOL 12)

Prerequisite: Biology 220 and Chemistry 110.
Presents the biological functions of the human body. Basic concepts and practical applications are stressed. Laboratory participation is required. Meets requirements for pre-nursing, physical therapy and physical education majors. Three hours lecture, six hours laboratory. **(UC credit limitation)** Offered: S.

Biology 225H—Honors Introduction to Physiology (5)

Prerequisite: Biology 220 or 220H and Chemistry 110.
Presents the biological functions of the human body. Basic concepts and practical applications are emphasized. Laboratory participation is required. Meets requirements for pre-nursing, physical therapy, and physical education majors. Three hours lecture, six hours laboratory. **(UC credit limitation)** Offered: S.

Biology 226—Advanced Sectional Anatomy (2)

Prerequisite: Biology 221 and 223.
An in-depth study of specific areas of the human body in serial sections. Designed for Diagnostic Medical Sonography and Radiologic Technology. Emphasis is on structures observable on ultrasound scans. Two hours lecture, three hours non-lecture. Offered: S.

Biology 280—Evolutionary Ecology (4)

Prerequisite: Biology 181.
For majors in the biological sciences. Evolutionary and ecological principles and their relevance at several levels of organization. Includes principles governing classification of life, principles of evolution, conditions for life, adaptations to the environment, analysis of ecological niches, population, and community/ecosystem ecology from an evolutionary viewpoint. 3.75 hours lecture, 2.25 hours lab. **(UC)** Offered: F;S.

Biology 281—Molecular Biology 1: Biochemistry (2) (9 week course)

Prerequisite: Biology 181 and completion of Chemistry 220 and concurrent enrollment in Chemistry 225.
An introduction to the chemistry of biology. This course is designed to satisfy transfer requirements for biology majors. Four hours. **(UC credit limitation)** Offered: S.

Information in italics designates the semester(s) in which the course is offered. The Division Office reserves the right to make changes as budget or other constraints warrant. F=Fall, S=Spring, Sum=Summer, Inter=Interession

Biology 281H—Honors Molecular Biology 1: Biochemistry (2) (9 week course)

Prerequisite: Biology 181 and completion of Chemistry 220, and concurrent enrollment in Chemistry 225.
An introduction to the chemistry of biology. Four hours. **(UC credit limitation)** Offered: as needed.

Biology 282—Molecular Biology 2: Molecular Biology (2) (9 week course)

Prerequisite: Biology 281.
An introduction to molecular biology emphasizing gene structure and function. This course is designed to satisfy transfer requirements for biology majors. Four hours. **(UC credit limitation)** Offered: S.

Biology 282H—Honors Molecular Biology 2: Molecular Biology (2) (9 week course)

Prerequisite: Biology 281 or 281H.
An introduction to molecular biology emphasizing gene structure and function. Four hours. **(UC credit limitation)** Offered: as needed.

BROADCASTING ARTS

Broadcasting Arts 105—Broadcast Journalism (3)

An overview of television news and documentary production. Practical experience including writing, producing, field reporting for cable news show. Three hours. Offered: F;S.

Broadcasting Arts 202—Agents, Actors, and Writers (1.5) (9 week course)

Introduction to the business relationship between an agent and actor, performer, or writer. The course will include preparation of a promotional portfolio, resume, contract, and the interview. Three hours. Offered: as needed.

BUSINESS

(For Business Mathematics see Business 125)

Business 100—Introduction to Business (3)

A survey of the many dimensions of business with a focus on careers: organization, management, marketing, legal aspects, international business, business climate, financial operations, the banking system, and investments. Three hours. **(UC)** Offered: F;S;Sum.

Business 105—Introduction to Law (3)

A study of the American legal system beginning with a historical overview and then moving through the courts system, the process of legislation, civil versus criminal issues, torts and contracts, and related business and property law. May be taken for grades or on a credit-no credit basis. Three hours. Offered: F;S.

Business 107—Windows 95 (1) (9 week course)

This course develops skills in using the Microsoft Windows 95 and DOS operating systems and includes configuring the desktop to meet individual needs and installing and using other software and hardware designed for Windows 95. Also, the student will be communicating with other computers and users and using the Internet and the e-mail. Same as Computer Information Systems 107. Students completing Business 107 may not receive credit for Computer Information Systems 107. May be taken for grades or on a credit-no credit basis. One and one-half hours lecture, one and one-half hours non-lecture. Offered: F;S;Sum.

Business 110—Business Law (3) (CAN BUS 12)

The course will have as its focus the legal system and its effect on the business environment including the sources of law, the law's impact on society and business, ethical considerations, business and personal torts and crimes, the regulatory environment, labor and management issues, international business, consumer rights, and personal and real property. Three hours. **(UC credit limitation)** Offered: F;S;Sum.

Business 115—Business Law 2 (3)

Fundamental laws of commercial paper, secured transactions, uniform commercial code, bankruptcy, insurance, partnerships, corporations, estates, and international transactions are discussed. Three hours. **(UC credit limitation)** Offered: F;S;Sum.

Business 117—International Business Law (3)

Examines the legal aspects of conducting business with a foreign country or a business within a foreign country. Includes legal organizations of business, bankruptcy, taxation, and possible ways to settle disputes within other countries. May be taken for grades or on a credit-no credit basis. Three hours. Offered: as needed.

Business 118—Introduction to International Business (3)

Provides the basic tools and perspective necessary to understand the international business environment. Explores the changing nature of the primary business, economic and political institutions. Explains the nature of the transnational, foreign trade, foreign exchange and world capital and money markets. Will attempt to better understand the strains and ruptures being created in a world comprised of post-industrial, developing and less-developed nations. Focus is on what the individual will need to know and understand to be an effective learner and performer in our rapidly developing world economy. Three hours. Offered: F;S.

Business 119—Advanced International Business (3)

Prerequisite: Business 118.
Advanced course provides the student with the operating knowledge necessary to be an effective professional in an international environment. Nation analysis, risk analysis, foreign trade flows, foreign capital flows, analysis and the critical problems and issues of the day are covered by working professionals in the field. Emphasis is on relevancy and bottom-line effectiveness. May be taken for grades or on a credit-no credit basis. Three hours. Offered: as needed.

Business 120—Personal Financial Success (3)

Personal financial planning addressing the fundamentals of career planning, budgeting, investments, housing, insurance, taxation, estate planning, retirement planning, consumer credit, and spending. May be taken for grades or on a credit-no credit basis. Three hours. Offered: F;S.

Business 125—Business Mathematics (3)

Mathematics as applied to business problems, such as interest, mortgages, consumer borrowing, annuities, installment buying, taxation, etc. Three hours. Offered: F;S.

Courses

Business 133—Professional Presentations Using PowerPoint (2)

This course demonstrates how proven, effective presentation techniques can blend with the technology of computer-generated graphics to create dynamic, colorful, and exciting presentations. May be taken for grades or on a credit-no credit basis. Two hours lecture, one hour non-lecture. Offered: F;S;Sum.

Business 134—Excel (3)

Topics include spreadsheet concepts, model building, formula development using functions, database features. The student will create graphs and keyboard macros. Same as Computer Information Systems 134. Students completing Business 134 may not receive credit for CIS 134. May be taken for grades or on a credit-no credit basis. Three hours lecture, one hour non-lecture. Offered: F;S;Sum.

Business 135—Advanced Microcomputer Applications (3)

A course in advanced microcomputer business applications using spreadsheet and database management software on the IBM PC. Topics include developing spreadsheet formulas, developing and using keyboard macros, building a comprehensive spreadsheet model, writing practical business programs using a database language and interfacing application software. Emphasis using application software as a decision-making tool. May be taken for grades or on a credit-no credit basis. Three hours lecture, one hour non-lecture. Offered: as needed.

Business 136—Business Planning Concepts (1.5) (9 week course)

Prerequisite: Basic knowledge of accounting and Lotus 1-2-3.

Designed to introduce and demonstrate to students the tools employed by Fortune 500 companies to solve actual business problems incorporating hands-on applications using LOTUS 1-2-3. May be taken for grades or on a credit-no credit basis. Three hours. Offered: as needed.

Business 137—Business English Mechanics (3)

Basic English mechanics for business writing including punctuation, reinforcement of business terminology, spelling of commonly used business terms and phrases, homonyms and pseudonyms essential for effective business writing. May be taken for grades or on a credit-no credit basis. Three hours. Offered: as needed.

Business 138—Business English (3)

Principles of editing written communication applicable to business. Emphasis on fundamentals of grammar and sentence structure. Recommended for all business majors. May be taken for grades or on a credit-no credit basis. Three hours. Offered: F;S.

Business 139—Business Communication (3)

Prerequisite: English 100 with grade of 'C' or better.

Designed to develop skills in applying, planning, writing, and verbalizing techniques essential to effective communication in business while emphasizing opportunities and responsibilities of business communicators. Critical and analytical thinking will be an essential component of all assignments, as will the current need for an awareness of the global business environment. Students will need a fundamental knowledge of English and the mechanics of writing. Three hours. Offered: F;S.

Business 140—Public Relations (3)

Recommended preparation: Typing skill.

Components of effective public relations including publicity, advertising, media relations and problem solving. Scope of present-day public relations practice. Three hours. Offered: as needed.

All courses numbered 100 or higher are transferable to the California State Universities (CSU).

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Courses that are non-credit or not AA applicable are designated with the letter "N" preceding the course number.

Business 144—Advanced LOTUS 1-2-3 (3)

Prerequisite: Keyboarding proficiency; Business 134 or equivalent, or a working knowledge of Lotus 1-2-3.

Advanced functions and commands in LOTUS 1-2-3 including advanced database commands. Concepts of programming in LOTUS using simple keyboard macros and LOTUS Command Language including menu substitution macros, program flow, subroutines, creating custom menus, debugging, worksheet design and documentation. Same as Computer Information Systems 144. Students completing Business 144 may not receive credit for CIS 144. May be taken for grades or on a credit-no credit basis. Three hours lecture, one hour non-lecture. Offered: F;S.

Business 161—Electronic Calculator - Touch Operations (1) (9 week course)

Develop speed and accuracy by touch on the electronic display/printing calculator. Emphasis on special timesaving device features. May be taken for grades or on a credit-no credit basis. One hour lecture, one hour non-lecture. Offered: F;S.

Business 170—Career and Professional Success Skills (3)

Learn skills and strategies to survive and succeed in a fast changing and highly competitive business environment. Emphasis on effective job search, marketing yourself, emerging career and business opportunities, professional image and project skills, mastering change, and key communication skills. Offered: as needed.

Business 200—Business Finance (3)

Prerequisite: Accounting 101.

Fundamentals of financial management addressing organization, financial analysis and planning, working capital, budget process, sources of financing, mergers and acquisitions. Three hours. Offered: as needed.

Business 210—Securities Investment (3)

Types of investment centering on stocks, technical and fundamental approach to analysis of price patterns, values in investment, development of a rational investment philosophy through a comprehensive study of equity and fixed income investments. May be taken for grades or on a credit-no credit basis. Three hours. Offered: F;S.

Business 240—Small Business Ownership (3)

Introduction to small business ownership and management. Starting/buying a business, legal requirements, financing, franchising, marketing and business plans, taxes, cash flow, pricing, advertising, site location, inventory control, and managing people are the topics. May be taken for grades or on a credit-no credit basis. Three hours. Offered: F;S;Sum.

CARDIOVASCULAR TECHNOLOGY

Cardiovascular Technology 100—Introduction to Electrocardiography (2)

Prerequisite: Biology 221.

Electrocardiographic interpretation and testing procedures for the ECG technician. Includes anatomy and electrophysiology of the cardiac conduction system; basic cardiac arrhythmias, including sinus, atrial, junctional, and ventricular arrhythmias and heart blocks. Two hours lecture, one hour laboratory. Offered: F.

Cardiovascular Technology 150—Advanced Electrocardiography (2)

Prerequisite: Cardiovascular Technology 100.

Advanced procedures in electrocardiographic testing including stress testing, Holter monitoring and pacemakers. Advanced arrhythmias including ventricular conduction disturbances, effects of drugs, electrolyte imbalances, myocardial infarction and cardiac pharmacology. Two hours lecture, one hour non-lecture. Offered: S.

Cardiovascular Technology 160—Cardiac Anatomy/Pathophysiology (3)

Prerequisite: Allied Health 111 and Biology 221.

Cardiac anatomy, physiology, and pathology. Course includes cardiovascular structures, hemodynamics, cardiac output and blood pressure, coronary artery disease and myocardial infarction, valvular diseases, infectious diseases, cardiac tumors and myopathies and congenital heart disease. Three hours. Offered: S.

Cardiovascular Technology 170—ECG Clinical Experience (3)

Prerequisite: Allied Health 115 and concurrent enrollment in Cardiovascular Technology 150 and 160.

Practice within a health care facility in areas of routine ECG testing, stress testing, monitor technician, Holter monitoring and pacemaker evaluation. Offered on a credit-no credit basis only. One hour lecture, sixteen hours clinical/laboratory. Offered: S.

Cardiovascular Technology 200—Introduction to Echocardiography (3)

Prerequisite: Cardiovascular Technology 160.

Corequisite: Cardiovascular Technology 205.

Theory, equipment, and procedures for echocardiography to include M-mode, 2D and Doppler. Recognition of specific echocardiographic patterns and abnormalities. Relates test finding to pathological states. Three hours. Offered: F.

Cardiovascular Technology 205—Introduction to Echocardiography Lab (1)

Prerequisite: ECG technician certificate of achievement, Physics 110, and concurrent enrollment in Cardiovascular Technology 200 and 210.

Skill development in using echocardiographic equipment and obtaining correct views on M mode and 2-D echocardiograms under direct supervision. Includes exercises in recognition of cardiac anatomy and pathology and use of Doppler in evaluating cardiac function. Three hours. Offered: F.

Cardiovascular Technology 210—Echocardiography Clinical Lab 1 (5)

Prerequisite: Cardiovascular Technology 160.

Corequisite: Cardiovascular Technology 200 and 205.

Experience in echocardiography in a clinical facility to include conferences or lectures by physicians, sonographers, and guest lecturers to relate patient clinical presentations to diagnostic findings. Offered on a credit-no credit basis only. Twenty-four hours clinical, one hour discussion/seminar. Offered: F.

Courses

Cardiovascular Technology 230—Introduction to Invasive Cardiology (3)

Prerequisite: Cardiovascular Technology 225 and Physics 110, and concurrent enrollment in Cardiovascular Technology 235 and 240.

Beginning concepts of cardiac catheterization primarily for diagnosis of coronary artery disease. Includes hemodynamics, cardiovascular radiology and safety, pressure monitoring equipment catheters, coronary artery disease and its catheterization findings, drugs used during cardiac catheterization and the complications of cardiac catheterization. Three hours. Offered: F.

Cardiovascular Technology 240—Invasive Cardiology Clinical Lab 1 (5)

Prerequisite: Cardiovascular Technology 225 and Physics 110, and concurrent enrollment in Cardiovascular Technology 230 and 235.

Clinical practice within a cardiac catheterization laboratory to include performance of patient monitoring, data collection and recognition of abnormalities primarily for coronary artery disease. Course includes one hour of discussion-seminar with physician lecturers each week. Offered on a credit-no credit basis only. Twenty-five hours. Offered: F.

Cardiovascular Technology 250—Advanced Echocardiography (2)

Prerequisite: Cardiovascular Technology 200, 205 and 210, and concurrent enrollment in Cardiovascular Technology 255, 260 and 265.

Advanced theory, equipment and procedures in echocardiography including Doppler, color flow Doppler, and pediatric and fetal echocardiography. Further development of techniques and evaluation of disease states using exercise and contrast echocardiographic studies. Two hours. Offered: S.

Cardiovascular Technology 255—Advanced Echocardiography Lab (1)

Prerequisite: Cardiovascular Technology 200, 205 and 210, and concurrent enrollment in Cardiovascular Technology 250, 260, and 265.

Skill development in advanced echocardiographic techniques under direct supervision. Includes Doppler, color flow Doppler, pediatric and fetal echocardiography and further evaluation of adult echocardiography. Three hours. Offered: S.

Cardiovascular Technology 260—Cerebrovascular Ultrasound (2)

Prerequisite: Cardiovascular Technology 200, 205, and concurrent enrollment in Cardiovascular Technology 250, 255 and 265.

Diagnosis of cerebrovascular disease by ultrasound and doppler testing. Includes normal anatomy and physiology of the cerebrovasculature, ultrasound instrumentation and testing techniques related to pathologies. Two hours. Offered: S.

Cardiovascular Technology 265—Echocardiography Clinical Lab 2 (5)

Prerequisite: Cardiovascular Technology 200, 205 and 210, and concurrent enrollment in Cardiovascular Technology 250, 255 and 260.

Experience in echocardiography and cerebrovascular ultrasound in a clinical facility to include conferences and lectures by physicians to relate actual patient situations to diagnostic findings. Offered on a credit-no credit basis only. Twenty-four hours clinical, one hour seminar. Offered: S.

Information in italics designates the semester(s) in which the course is offered. The Division Office reserves the right to make changes as budget or other constraints warrant. F=Fall, S=Spring, Sum=Summer, Inter=Intercession

CHEMISTRY

Chemistry 100—Principles of Chemistry (3)

Nonmathematical chemistry for students not majoring in science. Emphasis on relationship of chemistry to the human body with particular attention to drugs of all kinds, food, metabolism, cancer and environmental contaminants. Includes concepts of structure of matter, bonding, acid-base chemistry, organic chemistry and thermodynamics. May be taken for grades or on a credit-no credit basis. Three hours. **(UC credit limitation)** Offered: F,S.

Chemistry 100L—Chemistry in the Laboratory (1)

Prerequisite: Chemistry 100 or 101, or concurrent enrollment.

Chemical Laboratory experience to complement and supplement topics covered in Chemistry 100 and 101. Introduction to measurement methods, chemical analysis, chemical synthesis and various laboratory techniques. Includes experiments related to the chemistry of food, drugs, pollution and consumer products. May be taken for grades or on a credit-no credit basis. Three hours non-lecture. **(UC credit limitation)** Offered: as needed.

Chemistry 101—Chemistry and the Environment (3)

Nonmathematical chemistry for students not majoring in science. Emphasis on relationship of chemistry to the environment including the topics of energy resources, air pollution, water pollution, pesticides and toxic wastes. Chemical concepts are introduced as needed for understanding of topics. May be taken for grades or on a credit-no credit basis. Three hours. **(UC credit limitation)** Offered: as needed.

Chemistry 110—Introductory Chemistry (5) (CAN CHEM 6)

Prerequisite: Mathematics 010 with grade of 'C' or better.

An introduction to the basic principles of inorganic, organic and biochemistry. Not intended for students planning to take Chemistry 180 or 130. May be taken for grades or on a credit-no credit basis. Four and one-half hours lecture, two and one-half hours laboratory. **(UC credit limitation)** Offered: F,S;Sum.

Chemistry 130—Preparatory General Chemistry (4)

Recommended preparation: Within the last two years, the student must have either completed intermediate algebra with a grade of 'C' or better or passed the mathematics matriculation exam at a level resulting in placement in trigonometry or higher in CCCD or equivalent; and it is recommended that the student be eligible to enroll in ESL 160AB or in English 100 or have completed either.

Introduction to the principles, calculations and laboratory techniques of chemistry. For students planning to take Chemistry 180. May be taken for grades or on a credit-no credit basis. Three and one-half hours lecture, two and one-half hours laboratory. **(UC credit limitation)** Offered: F,S;Sum.

Chemistry 180—General Chemistry (5) (CAN CHEM 2)

Prerequisite: Math 030 (or appropriate placement) and Chemistry 130 or appropriate placement based on chemistry assessment plus one year of high school chemistry.

Safety prerequisite: ESL students must be eligible to enter ESL 131AB and ESL 135AB.

This course studies gases, solutions, reactions, bonding theories, acid-base, and redox theory. Four hours lecture, five hours laboratory. **(UC)** Offered: F,S.

Chemistry 185—General Chemistry (5) (CAN CHEM 4)

Prerequisite: Chemistry 180 with grade of 'C' or better.

Study of non-ideal solutions, chemical equilibria, thermodynamics, kinetics and nuclear chemistry. Four hours lecture, five hours laboratory. **(UC)** Offered: F,S.

Chemistry 220—Organic Chemistry (3)

Prerequisite: Chemistry 185 with grade of 'C' or better.

A study of organic compounds and their reactions from the standpoint of structure, mechanisms and kinetics. Introduction to spectroscopic methods of identification. Three hours. **(UC)** Offered: F.

Chemistry 221—Organic Chemistry Laboratory (2)

Prerequisite: Concurrent enrollment in Chemistry 220.

Theory and techniques of separation, purification, synthesis and analysis of organic compounds including instrumental methods of chromatography and spectroscopy. One hour lecture, five hours laboratory. **(UC)** Offered: F.

Chemistry 225—Organic Chemistry (3)

Prerequisite: Chemistry 220 with a grade of 'C' or better.

Further study of the structures, reactions, mechanisms and kinetics of organic compounds. Introduction to biologically important compounds and natural products. Three hours. **(UC)** Offered: S.

Chemistry 226—Organic Chemistry Laboratory (2)

Prerequisite: Chemistry 221.

Corequisite: Chemistry 225.

Further applications of laboratory theory and techniques in the synthesis and analysis of organic compounds including instrumental methods of chromatography and spectroscopy. Includes the separation and analysis of some biologically important compounds. One hour lecture, five hours laboratory. **(UC)** Offered: S.

Chemistry 250—Quantitative Analysis (4) (CAN CHEM 12)

Prerequisite: Chemistry 185 with grade of 'C' or better.

Principles and techniques of gravimetric, volumetric and instrumental methods. Two hours lecture, six hours laboratory. **(UC)** Offered: as needed.

COMMUNICATIONS

Communications 050AD—Supervised Tutoring (0)

Provides the tutee with supervised peer tutorial services necessary to increase the probability of succeeding in course work. Enrollment is open all semester. This course may be repeated as necessary. Offered on a no credit basis only. Two hours arranged. Offered: F,S.

Courses

Communications N060AD—Supervised Study (.25-2)

A laboratory-based course to improve reading, writing, listening, and speaking skills in English or other languages offered by the college. Students will work independently according to a diagnostic and prescriptive study plan completed under the supervision of the course instructor. Includes periodic tutorials, completion of individualized lab assignments, and a final assessment of student progress. Enrollment is open all semester. Offered on a credit-no credit basis only. One to four hours laboratory. Not applicable to AA degree. Offered: F;S;Sum.

Communications N070—Writing on the Job (1.5) (9 week course)

Recommended preparation: Eligibility for English 099 OR eligibility for ESL 151AB and ESL 155AB.

Introduction to the role of communication on the job and practice in common forms of writing at work and throughout a career. Provides an introduction to common communication technology and practice in writing for the world of work, including letters, resumes, memos, e-mail, and reports and proposals. May be taken for grades or on a credit-no credit basis. Three hours. Not applicable to AA degree. Offered: F;S.

Communications 100—Mass Communications (3) (CAN JOUR 4)

A study and analysis of the major media—newspapers, magazines, radio and television—covering how they function, how they affect society and society's effect upon them. Advertising, TV commercials, and their effects upon behavior will be stressed. Three hours. (UC) Offered: F;S;Sum.

Communications 110—News Writing and Reporting (3)

Prerequisite: English 100, or concurrent enrollment.

Beginning journalists will acquire the skills to write practical news stories under deadline pressure with a focus on accuracy, balance, and style. Writing assignments will include police stories, obituaries, speech coverage, round-ups, and feature stories. Also covered: basic interviewing techniques, journalistic style, editing, the importance of a free press, and the media's responsibilities in reporting the news. May be taken for grades or on a credit-no credit basis. Three hours. (UC) Offered: F;S;Sum.

Communications 111—Editing and Production Skills (1) (9 week course)

Prerequisite: Eligibility for English N098 or ESL 155AB or qualifying OCC placement.

Beginning journalists will acquire skills in accurate copy editing and newspaper production. Students will use the Associated Press Stylebook and learn various editing marks, beginning page layout, and paste-up skills. May be taken for grades or on a credit-no credit basis. Two hours. Offered: F;S.

Communications 112—Advanced News Writing and Reporting (3)

Prerequisite: Communications 110.

Taught on video display terminals, the course covers advanced reporting techniques, the handling of controversial stories, human interest stories, editorials and stories in which fairness is the critical issue. Three hours. Offered: as needed.

Communications 114—Advertising Copywriting (3)

A survey of advertising copywriting with exercises in techniques of writing copy for advertisements, radio and television commercials and merchandise packaging. Includes studies of advertising layout and design so that the copywriter can creatively prepare an entire ad. Discusses the relationships between ad creator and consumer, advertiser and merchandiser. Same as Marketing 114. Students completing Communications 114 may not receive credit for Marketing 114. May be taken for grades or on a credit-no credit basis. Three hours. Offered: F;S.

Communications 115AD—Newspaper Production (3-7)

Prerequisite: Communications 110 or concurrent enrollment.

Students will assist in all aspects of newspaper planning, writing, design, and production. Requires writing news and feature stories on deadline, commentary, writing headlines, designing pages, editing, and layout techniques. Students will use state-of-the-art computer design, graphics, and word processing software in a professional setting. May be taken for grades or on a credit-no credit basis. Two hours lecture, five to seventeen hours non-lecture. Offered: F;S.

Communications 117AD—Feature Writing (3)

Prerequisite: Communications 110 and English 100 or concurrent enrollment.

A writing workshop focusing on student writing and marketing in-depth non-fiction feature articles. Emphasis will be on guiding students and developing interesting non-fiction stories from the idea stage through publication and finding suitable markets for publication. The course is designed for beginning, intermediate, and advanced writers seeking practice and input in producing lengthy feature articles. Same as English 117AD. Students completing Communications 117AD may not receive credit for English 117AD. May be taken for grades or on a credit-no credit basis. Three hours. Offered: F;S.

Communications 118—Publication Design and Production (3)

Introductory overview of print media with emphasis on magazine and advertising design. Production techniques, layout and composition, typography, photography, printing, media selection, logo design, and the uses of color are examined. May be taken for grades or on a credit-no credit basis. Three hours. Offered: F;S;as needed.

Communications 119—Writing for Advertising and Public Relations (3)

In studying the basics of writing for the two distinct but related crafts of advertising and public relations, students will develop skills to tailor material for specific target markets and to customize styles for the broad array of both paid for and free-placement media. May be taken for grades or on a credit-no credit basis. Three hours. Offered: F;S.

Communications 120—Public Relations in Communications (3)

Recommended preparation: Communications 110.

Serves as an introduction to public relations as a profession. Students will survey job opportunities and develop skills necessary to perform in the field. Basic instruction in writing, publication layout and organizational skills. Projects will include production of a brochure, report or newsletter. Three hours. Offered: as needed.

Communications N150AD—Tutoring Skills/Tutorial Center (1)

Tutoring skill development and demonstration of competencies applied to a general and specific population. Learning modules in interpersonal relation skills, communication and study skills techniques, human and cultural awareness. Techniques in listening, speaking, reading and writing, as well as analysis of appropriate tutor behavior in classroom and/or tutorial center. Open registration. May be taken for grades or on a credit-no credit basis. Eleven hours lecture, forty-five hours field/clinical. Fifty-six hours total for the course. Not applicable to AA degree. Offered: F;S.

Communications N151AD—Tutoring Skills (1)

Tutoring skills and techniques development. Student will demonstrate competencies in techniques and skills that are factors for academic achievement through the tutoring process. This course is designed as an extension of Communications N150AD, however, enrollment is open to all students who wish training in tutoring. May be taken for grades or on a credit-no credit basis. One and one-half hours lecture, one and one-half hours laboratory. Not applicable to AA degree. Offered: F;S.

Communications N152AD—Classroom Tutoring (1)

Individual, small group, and/or in-class tutoring. Advanced exercises relating to tutoring techniques, group study sessions for vocabulary, English, and academic study development. Individual conferences with instructors, small group meetings with other tutors and continued self-evaluation activities. Student will demonstrate competencies in subject content and tutoring skills in classroom setting. Arranged hours with coordinator/instructor, classroom instructor, or small group tutor meetings. May be taken for grades or on a credit-no credit basis. One-half hour lecture, two and one-half hours laboratory. Not applicable to AA degree. Offered: F;S.

Communications N153AD—Master Tutoring (1)

Prerequisite: Communications N150AD or N151AD or N152AD.

Advanced tutors with at least one semester of tutoring experience with a minimum of 45 tutoring sessions will assist other peer tutors in related subject areas. Student shall demonstrate competencies in reasoning ability, critical thinking, creativity and problem-solving ability to assist in developing student self-esteem and discipline to establish higher and more challenging academic standards. May be taken for grades or on a credit-no credit basis. One-half hour lecture, two and one-half hours laboratory. Not applicable to AA degree. Offered: F;S.

Communications 161—Facilitating Study Groups (1.5) (9 week course)

Recommended preparation: Eligibility for English 099 OR eligibility for ESL 151AB and ESL 155AB.

Students will develop skills in the dynamics of interpersonal communication, discussion techniques, and preparation/study skills needed to facilitate group study activities in academic disciplines. One and one-half hours lecture, one and one-half hours arranged. Offered: F;S;Sum.

Communications 170—Braille Transcribing (3)

Operation of the Perkins braille-writer, braille alphabet, Arabic and Roman numbers and contractions. Production of braille books and materials. For sighted students. May be taken for grades or on a credit-no credit basis. Three hours. Offered: F;S.

Courses

Communications 171—Braille Transcribing 2 (3)

Prerequisite: Communications 170.

For sighted students. Increasing skill and accuracy in use and operation of the Perkins braille-writer and other braille production equipment, completion of the rest of the 189 contractions, methods and materials of production of braille books and their efficient distribution to blind students and adults. May be taken for grades or on a credit-no credit basis. Three hours. Offered: F;S.

Communications 172—Braille Textbook Format 1 (1)

Prerequisite: Communications 170.

Detailed discussion of the new Code of Braille Textbook Format and Techniques and its application to actual textbook transcription from elementary through college. May be taken for grades or on a credit-no credit basis. Two hours. Offered: as needed.

Communications 173—Braille Textbook Format 2 (1)

Prerequisite: Communications 172.

Continuation of Braille Textbook Format 1. May be taken for grades or on a credit-no credit basis. Two hours. Offered: as needed.

Communications 175—American Sign Language, Beginning (4)

Basic American Sign Language (ASL or Ameslan). Emphasis is on grammar, syntax, vocabulary and expressive and receptive skills. May be taken for grades or on a credit-no credit basis. Four hours. **(UC)** Offered: F;S.

Communications 215AD—Coast Report Editorial Board (1)

Prerequisite: Must be editor on Coast Report staff.

This course is for the editorial board of the student newspaper. The editors will meet once per week to discuss policy matters, the upcoming issue and the instructor's critique of the past one. The editors will also spend time supervising the paste-up of the paper. May be taken for grades or on a credit-no credit basis. One hour. Offered: F;S.

Communications 285AB—Photojournalism (3)

This course covers the fundamentals of photojournalism with students gaining practical experience in the creative process and techniques of making photographs for publication. Work will be assigned for publication in the campus newspaper, Coast Report. Two hours lecture, six hours non-lecture. Offered: F;S.

Communications 286AB—Photojournalism (3-5)

Prerequisite: Communications 285AB.

This course is a continuation of Communications 285AB. Instruction is offered at intermediate/advanced and advanced levels. Two hours lecture, six to twelve hours non-lecture. Offered: F;S.

Information in italics designates the semester(s) in which the course is offered. The Division Office reserves the right to make changes as budget or other constraints warrant. F=Fall, S=Spring, Sum=Summer, Inter=Interession

COMPUTER INFORMATION SYSTEMS

Computer Information Systems 060AB—Data Entry (1.5) (9 week course)

Prerequisite: Computerized Office Technology 109.

Data entry on the computer for students who can type by touch control and know alphabetic, numeric, and symbolic keys presented in Computerized Office Technology 109. The course is designed to develop entry-level to intermediate-level skills necessary to obtain employment as data entry operators. A high demand for alpha and numeric data entry operators exists throughout Orange County and the state of California. Offered on a credit-no credit basis only. Two hours lecture, three hours non-lecture. Offered: F;S;Sum.

Computer Information Systems 100—Introduction to Information Systems and Microcomputer Applications (3)

Provides students with a basic understanding of computers and their applications. Personal computers will be used to teach students how to use applications software such as word processing, electronic spreadsheet, database management, and graphics software. Open to all majors; no prior computer experience is necessary. Satisfies part of the lower division requirement for business majors at some California State University campuses. Three hours. Offered: F;S;Sum.

Computer Information Systems 103—Desktop Publishing (4)

An introductory course in producing brochures, newsletters and other print material using microcomputers and laser printers. Includes hands-on experience in desktop publishing software and its major features, specifically text processing, page layout, graphics and much more. Three and one-half hours lecture, one and one-half hours non-lecture. Offered: F;S.

Computer Information Systems 104—DOS and Utilities (2)

Prerequisite: Basic knowledge of a personal computer.

Course covers MS/DOS commands, effective use of a hard disk, creation and use of batch files. Commercially prepared utilities are also included. May be taken for grades or on a credit-no credit basis. Two hours lecture, one hour non-lecture. Offered: F;S;Sum.

Computer Information Systems 106—Introduction to Unix (4)

Prerequisite: Computer Information Systems 107 or Business 107 or Computer Information Systems 100 or Computer Science 111.

An introductory course in the UNIX operating system. Students will develop skills in using the UNIX file system and the standard UNIX commands for sorting and searching, as well as the vi editor and the sed, grep, and UNIX regular expressions. Students will write UNIX shell scripts and be introduced to the fundamentals of multi-user process control. Three and one-half hours lecture, one and one-half hours non-lecture. Offered: F;S.

Computer Information Systems 107—Windows 95 (1) (9 week course)

This course develops skills in using the Microsoft Windows 95 and DOS operating systems and includes configuring the desktop to meet individual needs and installing and using other software and hardware designed for Windows 95. Also, the student will be communicating with other computers and users and using the Internet and the e-mail. Same as Business 107. Students completing Computer Information Systems 107 may not receive credit for Business 107. May be taken for grades or on a credit-no credit basis. One and one-half hours lecture, one and one-half hours non-lecture. Offered: F;S;Sum.

Computer Information Systems 122—Introduction to the Internet (1.5) (8 week course)

This course will provide an overview of the Internet—past, present, and future. Browsers will be used to access email, search the World Wide Web, and subscribe to news groups. Students will use FTP to download and upload files, start a Telnet session, and create basic Web pages. May be taken for grades or on a credit-no credit basis. Three hours lecture, one and one-half hours non-lecture. Offered: F; S; Sum.

Computer Information Systems 123—Introduction to Web Page Design (2) (8 week course)

Recommended Preparation: Computer Information Systems 122.

This course will provide a practical understanding of the HTML tags to design a Web page. Notepad and other software tools will be used to teach text formatting commands, background formatting, hyperlinks, email links, tables, forms, image maps, and frames. Students will also learn to insert various types of images, videos, and sound files into a Web page. May be taken for grades or on a credit-no credit basis. Four hours lecture, two hours non-lecture. Offered: F; S; Sum.

Computer Information Systems 134—Excel (3)

Topics include spreadsheet concepts, model building, formula development using functions, database features. The student will create graphs and keyboard macros. Same as Business 134. Students completing CIS 134 may not receive credit for Business 134. May be taken for grades or on a credit-no credit basis. Three hours lecture, one hour non-lecture. Offered: F;S;Sum.

Computer Information Systems 175—Introduction to Systems Analysis (3)

To provide the student with an understanding of the philosophy, concepts and tools of systems analysis. Systems analysis will be viewed as the application of common sense to real problems and not as a mysterious science. Three hours. Offered: F;S.

Computer Information Systems 191—Local Area Networking (4)

Prerequisite: Computer Information Systems 104 or knowledge of DOS.

Course includes installing and maintaining a local area network. The commands, booting procedure, security and network management will be covered. Three and one-half hours lecture, one and one-half hours laboratory. Offered: F;S;Sum.

Courses

Computer Information Systems 195—Microcomputer Data Communications (3)

Terminology and technology used in data communications. Uses concepts of both hardware and software in order to understand principles of communication theory. Three hours. Offered: F,S.

COMPUTER SCIENCE

Computer Science 010—Introductory Programming Concepts through C (2) (9 week course)

Using the C programming language this course develops introductory programming techniques and concepts through lecture, demonstrations, and many in-class and out-of-class programming assignments. Offered on a credit-no credit basis only. Three and one-half hours lecture, one and one-half hours non-lecture. Offered: F,S;Sum.

Computer Science 111—Introduction to Information Systems and Programming (4) (CAN BUS 6)

Provides a general background in information systems and programming. Personal computers will be used to write programs in Visual Basic. In addition, students will learn file concepts, operating systems, and how to use application software such as electronic spreadsheet, database management, and Internet. Open to all majors and no prior computer experience is necessary. Satisfies lower division computer requirements for business majors at some California State University campuses. Three and one-half hours lecture, one and one-half hours non-lecture. (UC) Offered: F,S;Sum.

Computer Science 113—BASIC (1) (9 week course)

Features and applications of BASIC. May be taken for grades or on a credit-no credit basis. Two hours lecture, one hour laboratory. Offered: F,S;Sum.

Computer Science 115—PASCAL Programming (4) (CAN CSCI 12)

Recommended preparation: Computer Science 111. Designed to provide the student with a general background in computer programming concepts and applications using block structured approach and the programming language Pascal. Emphasis upon systematic approach to solving problems using the computer with other disciplines of study. OPEN TO ALL MAJORS. Three and one-half hours lecture, one and one-half hours laboratory. (UC) Offered: F,S;Sum.

Computer Science 116—Computer Architecture (4)

Prerequisite: Computer Science 115 or 150.

A course in the architecture of computers. Topics will include Boolean algebra and computer arithmetic, digital logic, micro and macro architecture, assembly language, performance, Datapath and control, memory hierarchies, interfacing and peripherals, and multiprocessing. Three and one-half hours lecture, one and one-half hours non-lecture. (UC) Offered: F,S;Sum.

All courses numbered 100 or higher are transferable to the California State Universities (CSU).

Courses that are transferable to the University of California are designated "UC". Some of these courses have limits on the amount of credit that is granted. See the UC transferable Course List available in the Counseling Center or Transfer Center for these limitations.

Course numbers followed by an AB, AC, or AD may be repeated once, twice or three times respectively.

Courses that are non-credit or not AA applicable are designated with the letter "N" preceding the course number.

Computer Science 118—First Course in Visual Basic (4)

Prerequisite: Computer Information Systems 107 or Business 107.

The first course in Visual Basic programming language includes the concept of object-based programming, forms, controls, properties, events, frames, menus, built-in functions, message boxes, programming in Visual Basic, file processing, and developing applications with multiple forms. May be taken for grades or on a credit-no credit basis. Three and one-half hours lecture, one and one-half hours non-lecture. (UC) Offered: F,S;Sum.

Computer Science 119—Second Course in Visual Basic (4) (18 week course)

Prerequisite: Computer Science 118.

Second course in Visual Basic programming language. Topics include the concept of multiple document interface forms, data bound controls, more advanced controls, use of Crystal reports control, Windows API calls, DDE, OLE, DLL files, RDO, ActiveX controls, building custom controls and building custom class objects. May be taken for grades or on a credit-no credit basis. Three and one-half hours lecture, one and one-half hours non-lecture. (UC) Offered: F,S;Sum.

Computer Science 120—Beginning COBOL (4)

Prerequisite: Computer Science 111 or 115 or 118.

Emphasis is on business applications programming. Three and one-half hours lecture, one and one-half hours laboratory. (UC) Offered: F,S;Sum.

Computer Science 121—Advanced Basic (1) (9 week course)

Prerequisite: Computer Science 113, or knowledge of BASIC.

File concepts, control breaks and system definition used in BASIC. May be taken for grades or on a credit-no credit basis. Two hours lecture, one hour laboratory. Offered: F,S;Sum.

Computer Science 125—Intermediate COBOL (4)

Prerequisite: Computer Science 120.

Includes master file update, input editing, sort feature, report writer, subprograms, VSAM, index sequential and direct files applications. Three and one-half hours lecture, one and one-half hours laboratory. (UC) Offered: S.

Computer Science 150—C++ Programming Language 1 (4) (CAN CSCI 16)

Prerequisite: Computer Science 115 or 118 or 170 or Computer Science 270 or Engineering 270 or Mathematics 270.

First course in ANSI/ISO Standard C++ programming language using structured programming techniques. Topics include data types, strings, operators, expressions, control flow, storage classes, input/output, functions, pointers, arrays, preprocessors, structures, unions, file I/O, enumerated data type, standard library routines, function overloading, function templates, and namespaces. May be taken for grades or on a credit-no credit basis. Three and one-half hours lecture, one and one-half hours discussion. (UC) Offered: F,S;Sum.

Computer Science 152—Windows Programming in C (4)

Prerequisite: Computer Science 150.

Students will build programs using the C programming language and the Windows Application Programming Interface (API). Students will use the Graphics Device Interface (GDI) library, child-window controls, and Windows resources to build a series of exploratory Windows applications. May be taken for grades or on a credit-no credit basis. Three and one-half hours lecture, one and one-half hours non-lecture. (UC) Offered: F,S.

Computer Science 165—Access Programming (4)

Prerequisite: Computer Science 115, or previous programming experience using a structured language.

Computer programming on a microcomputer such as IBM PC using Microsoft Access. Topics include database concepts, creating, editing, displaying, sorting, indexing, and summarizing data; generating reports; writing programs using structured programming techniques. May be taken for grades or on a credit-no credit basis. Three and one-half hours lecture, one and one-half hours non-lecture. Offered: F,S.

Computer Science 170—Java Programming (4)

Prerequisite: Computer Science 111 or Computer Information Systems 100.

A beginning course in the Java programming language, object-oriented programming, the Java run-time environment, and the core application programming interfaces (APIs) that will enable students to design and implement applets and stand-alone applications. In addition to the core language features, several of the Java API facilities will be introduced. May be taken for grades or on a credit-no credit basis. Three hours lecture, two hours non-lecture. (UC) Offered: F,S.

Computer Science 171—JavaScript Programming (2) (9 week course)

Recommended preparation: Computer Information Systems 209.

For students who already know how to create Web pages JavaScript is a scripting language that is used to create interactive Web pages. Students will use the JavaScript object model to write programs that access the JavaScript Window, Document, History, and Link objects. Students will also create and process interactive HTML forms. May be taken for grades or on a credit-no credit basis. Two hours lecture, four hours laboratory. Offered: F,S;Sum.

Courses

Computer Science 200—Data Structures (4)

Prerequisite: Computer Science 250.

A study of data abstraction, algorithmic analysis, and common data structures. Data structures studied include arrays and vectors, linked lists, stacks, queues, trees, priority queues, hash tables, sets, bags, dictionaries, tables, graphs, and files. Algorithms studied include searching, sorting, pattern-matching, tree traversal and balancing. This is a core course for students who want to study advanced programming, computer science, or engineering. Programming assignments in C++. Four hours lecture, one hour laboratory. **(UC)** Offered: F;S;Sum.

Computer Science 240—Microcomputer System Development (4)

Prerequisite: Computer Science 115 or 150.

A course in IBM PC Architecture and Assembly Language. May be taken for grades or on a credit-no credit basis. Three hours lecture, two hours non-lecture. **(UC)** Offered: F;S.

Computer Science 250—C++ Programming Language 2 (4)

Prerequisite: Computer Science 150.

Second course in ANSI/ISO Standard C++ programming language using object-oriented programming techniques. Topics include OOP concepts, function and operator overloading, inline functions, creating classes, constructors and destructors, new and delete operators, copy constructor, inheritance, friend functions and classes, data conversion, multiple inheritance, dynamic, abstract classes, static data and functions, class templates, exception handling RTTI and Standard Template Library. May be taken for grades or on a credit-no credit basis. Three and one-half hours lecture, one and one-half hours discussion. **(UC)** Offered: F;S.

Computer Science 270—Computer Programming for Engineering, Mathematics and Sciences (4) (CAN CSCI 20)

Prerequisite: Mathematics 157 or 180 or 182H.

Programming techniques and numerical analysis for digital computers emphasizing applications in science, mathematics, and engineering. Fortran programming with laboratory work on digital computers. Same as Engineering 270 and Math 270. Students completing C S 270 may not receive credit for Engineering 270 or Math 270. Four hours. **(UC)** Offered: S.

Computer Science 280AD—Current Topics in Computing (1-4) (9-18 week course)

Prerequisite: Depends on topic.

Course covers topics currently receiving attention by the computer industry. Topics will be determined at the time of course offering. May be taken for grades or on a credit-no credit basis. One to four hours lecture, 0-three hours non-lecture. **(UC credit limitation)** Offered: F;S;Sum.

COMPUTERIZED OFFICE TECHNOLOGY

Computerized Office Technology 109—Beginning Computer Keyboarding 1 (1.5) (9 week course)

The student will develop basic keyboarding skills on a computer keyboard using correct stroking techniques on letter, number, and symbol keys. Emphasis on developing accuracy and speed. No credit will be given to students who can already type 30 wpm. Offered on a credit-no credit basis only. Two hours lecture, three hours laboratory. Offered: F;S;Sum.

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Computerized Office Technology 111AB—Keyboarding Speed and Accuracy (1.5) (9 week course)

Prerequisite: Computerized Office Technology 109.

Development of keyboarding skill on a microcomputer for students who know how to type by touch. Speed and accuracy development using a variety of learning aids and software for diagnostic, prescriptive drills. May be taken concurrently with another typing course if desired. Offered on a credit-no credit basis only. Two hours lecture, three hours laboratory. Offered: F;S;Sum.

Computerized Office Technology 113—Beginning Computer Keyboarding 2 (1.5) (9 week course)

Prerequisite: Computerized Office Technology 109.

Keyboarding on the computer for students who can type by touch control and know alphabetic, numeric, and symbolic keys presented in COT 109. Speed and accuracy on straight copy material and formatting of memos, business letters, reports, and tables will be emphasized. May be taken for grades or on a credit-no credit basis. Two hours lecture, three hours laboratory. Offered: F;S;Sum.

Computerized Office Technology 116—Intermediate Computer Keyboarding (1.5) (9 week course)

Prerequisite: Computerized Office Technology 113.

Improving keyboarding skills on the microcomputer using Microsoft Word. Emphasis on formatting/typing personal and business letters, memos, lists, tables, reports with special features, and employee documents from increasingly difficult material. May be taken for grades or on a credit-no credit basis. Two hours lecture, three hours laboratory. Offered: F;S;Sum.

Computerized Office Technology 118—Advanced Computer Keyboarding (1.5) (9 week course)

Prerequisite: Computerized Office Technology 116.

Skill development on the microcomputer. Emphasis on the development of production competency using both typewritten and handwritten copy. Document processing will include multipage letters with special letter parts, multipage memos with headings, specialized reports, tables with calculations, and sorting. Enhancement of proofreading skills and language art skills will be included. May be taken for grades or on a credit-no credit basis only. Two hours lecture, three hours non-lecture. Offered: F;S;Sum.

Computerized Office Technology 150—Office Skills (3)

Prerequisite: Computerized Office Technology 113.

Personal qualities and office skills required of the office assistant working in a high tech, multicultural labor force. Office applications generated with Microsoft Word enhance skills such as verbal and written communication, software applications, reprographics, telephone and mail procedures, records management, time and stress management, office ethnics, and career planning. May be taken for grades or on a credit-no credit basis. Three hours. Offered: F.

Computerized Office Technology 217AB—Beginning Word Processing (1.5) (9 week course)

Prerequisite: Typing skill.

This course develops entry-level word processing skills and covers basic text editing, formatting, saving, retrieving, printing, text enhancements, spell check, moving, copying and deleting text, outlines, and multiple-page documents. May be taken for grades or on a credit-no credit basis. Two hours lecture, two hours non-lecture. Offered: F;S;Sum.

Computerized Office Technology 218AB—Intermediate Word Processing (1.5) (9 week course)

Prerequisite: Basic knowledge of WordPerfect and ability to type.

This course enhances the basic skills of word processing and covers advanced text enhancements, advanced print features, window and switch features, basic merge documents, creating, editing and deleting simple macros, decimal tabs, the math feature, and creating columns. May be taken for grades or on a credit-no credit basis. Two hours lecture, two hours non-lecture. Offered: F;S;Sum.

CONSTRUCTION TECHNOLOGY

Construction Technology 110AD—Wood Technology 1 (4)

A survey of basic woodworking as it relates to current practices, materials, procedures, machines and tools. Emphasis is placed on safety, hand tool use, machine woodworking and maintenance for the development of personal knowledge and skills in crafts for home improvement. Three hours lecture, three hours non-lecture. Offered: F;S;Sum.

Construction Technology 113AD—CNC Woodworking (3)

The rules and procedures for safely machining wood and other soft materials with the CNC router are taught in this course with emphasis on designing with Mastercam and machining with the CNC machine. Some time will be spent with students proficient in CAD, converting designs to the DXF format and converting that to Mastercam. Two hours lecture/discussion, three hours laboratory.

Construction Technology 114AD—Cabinet Making (4)

A study of cabinet making with emphasis on dwelling cabinet construction including hanging cabinets, base cabinets, pullmen, bookcases, custom cabinets, plastic laminates, door construction. Three hours lecture, three hours non-lecture. Offered: F;S.

Construction Technology 116AD—Furniture Making and Manufacturing (4)

The basic rules of furniture design and production are taught in this course with emphasis on wood selection, hand tool use, and a review of woodworking machinery. Advanced students will design and build more complex furniture pieces using more advanced techniques. Three hours lecture, three hours non-lecture. Offered: F;S;Sum.

Courses

Construction Technology 117AD—Cabinet Designing with Computers (4)

Recommended preparation: Computerized Office Technology 109.

This course will teach students the computer methodologies to design custom cabinets on a personal computer. Emphasis is on design and modeling of cabinets, including high-quality drawings and renderings of complete wall elevations, floor plans, and 3-D perspective drawings. Three hours lecture, three hours non-lecture. Offered: F.

Construction Technology 152—Residential Energy Standards (1) (6 week course)

Residential Title 24 building energy efficiency standards. Compliance methods using hands-on approach with computer software (comply 24 and Micropas). May be taken for grades or on a credit-no credit basis. Three hours. Offered: S.

Construction Technology 165—Construction Safety/CAL OSHA (3)

State and federal regulations related to general construction safety. Three hours. Offered: F,S.

Construction Technology 170—Introduction to Construction (3)

Fundamentals of the construction industry; terminology and procedures; an overview of trades, skills and processes. May be taken for grades or on a credit-no credit basis. Three hours. Offered: F,S.

Construction Technology 180—Building Construction (5)

Technical and practical experience to completely frame a house. Estimating of materials. Underpinning, wall layout, floor and wall construction and the application of various roofing materials are also covered. Three hours lecture, six hours laboratory. Offered: F.

Construction Technology 185—Building Construction (5)

The study of roof design and cutting. The use of the framing square in roof layout. Pre-fabrication techniques in housing with field research assignments. Frame estimating for the building trades and the application of various roofing materials are also covered. Three hours lecture, six hours laboratory. Offered: S.

Construction Technology 190—Blueprint Reading and Drafting (4)

The purpose and uses of blueprints, how to take measurements from blueprints, become familiar with symbols on the blueprints and understand the basic principles in planning a house. Some facility in drafting and diagramming or depicting ideas is a necessary means of communicating ideas and making simple revisions between those in the construction field. Four hours. Offered: F,S.

Construction Technology 195—Building Code and Law (2)

A complete analysis of the Uniform Building Code, FHA Code and city and county related building codes. Special ordinances and land usage are also covered. Two hours. Offered: F,S.

All courses numbered 100 or higher are transferable to the California State Universities (CSU).

Courses that are transferable to the University of California are designated "UC". Some of these courses have limits on the amount of credit that is granted. See the UC transferable Course List available in the Counseling Center or Transfer Center for these limitations.

Course numbers followed by an AB, AC, or AD may be repeated once, twice or three times respectively.

Courses that are non-credit or not AA applicable are designated with the letter "N" preceding the course number.

Construction Technology 210—Concrete Construction (5)

A study of various types of concrete structures and their materials. Surveying for form layout and elevations. Techniques of forming cast-in-place, reinforced and tilt-up concrete. Estimating form materials and concrete and bidding jobs. Hands-on concrete projects when available. Three hours lecture, six hours laboratory. Offered: S.

Construction Technology 220—Construction Estimating (3)

Construction estimating including bid preparation, material quantity take-off and analysis, labor and material pricing and quantities summation, subcontractor bids, bid correlation, bidding practices and final bid form compilation and submittal. Three hours. Offered: F,S.

Construction Technology 225—Land and Building Development (3)

A general survey of land development principles and procedures used prior to the actual construction of structures. Site analysis and planning, regulatory controls, obtaining entitlements, grading, road and street designs, utility systems, principles of real property, and project financing will be covered. Same as Architectural Technology 225. Students completing Construction Technology 225 may not receive credit for Architectural Technology 225. Three hours. Offered: F.

Construction Technology 230—Construction Inspection (3)

Inspection procedures and techniques of testing. A study of the various building code requirements in Uniform Building Code, Federal Housing Administration, and Title 21 of the California State Code. Plans, specifications, earthwork, grading foundations, concrete and framing are covered. Three hours. Offered: F.

Construction Technology 235—Contractor's Business Practice (3)

Functions and operations of a contractor's business organization, staffing, management policies, tool and equipment control, starting out, job bids, contracts, purchasing, accounting, planning and scheduling, and unions and labor. Three hours. Offered: S.

Construction Technology 240—Residential Finish Carpentry (4)

The study of various aspects of finish carpentry including interior and exterior millwork, cabinetry, doors, sash, trim, hardware, wall coverings and stairs. Finish estimating and cabinet construction are included. Three hours lecture, three hours laboratory. Offered: F.

Construction Technology 250—Construction Supervision and Project Management (3)

The combination of designing, estimating, contracting, financing and building must be understood and practiced. Leadership in this field means being responsible for many people, their work and their safety. Three hours. Offered: F.

Construction Technology 255—Construction Finance (3)

Basic financial concepts of the construction and development industries, assembling construction loan packages, establishing a new business, analyzing the basic principles of financial statements. Three hours.

Construction Technology 260—Masonry Construction (3)

Covers masonry history, employment, tools, materials, construction and blueprint reading with estimating, construction of walls, paving, veneering, tile, arches, fireplaces and concrete masonry block. Also grouting, ties, reinforcing, ornamental work, glass blocks, slump stone, power saws, lifts setting panels and miscellaneous masonry are practiced. Two hours lecture, three hours laboratory. Offered: F.

Construction Technology 265—Plumbing 1 (4)

A course designed to provide students with entry-level instruction involving the theory and skills of residential plumbing systems. Knowledge of basic principles, functions and design, as well as the physical ability to install and test the rough-in plumbing in a single family dwelling. Three hours lecture, three hours non-lecture. Offered: F.

Construction Technology 266—Plumbing 2 (4)

Prerequisite: Construction Technology 265.

A course designed to provide students with entry-level instruction involving the theory and skills of residential plumbing systems. Knowledge of the basic principles, functions and design, as well as the physical ability to: 1) install the finish plumbing, 2) repair and service plumbing systems, 3) install solar, spa/pool, sprinkler systems in a single family dwelling. Three hours lecture, three hours non-lecture. Offered: S.

Construction Technology 270AD—Contractor's License Law (1.5) (9 week course)

Preparation for the California State Contractor Examination in any classification. Includes state license law, civil code, civil procedure, labor law, contract law, and asbestos regulations. Three hours. Offered: F,S.

Construction Technology 275—Residential Electrical Wiring (5)

Wiring for interior electrical systems including layout and construction methods, code requirements, both sizing and installation standards, emphasis on material conservative practices, and compliance with the National Electrical Code. Three hours lecture, six hours laboratory. Offered: F,S.

Construction Technology 280—Introduction to Computers in Construction (1) (9 week course)

Prerequisite: Students of construction technology, contractors, subcontractors, estimators, supervisors, managers and others involved in the construction industry. Some basic math skills required.

An introductory course in the use of the personal computer for construction related activities including estimating, accounting, job scheduling and job cost control. May be taken for grades or on a credit-no credit basis. One hour lecture, three hours non-lecture.

Courses

Construction Technology 285—Residential Light Steel Frame Construction (5)

A comprehensive hands-on course that covers the fundamentals of utilizing light frame steel for residential framing in place of wood. Raised floor construction, wall framing and trussed roof fabrication and installation including applicable building codes, blueprint reading, estimating, and inspections are covered. Three hours lecture, six hours non-lecture. Offered: F,S.

Construction Technology 290—Construction Contracts and Specifications (3)

Prerequisite: Management level in construction.

A study of construction contracts and their administration, elements of contract law, contract documents, AIA general and supplementary conditions, competitive bidding, bonding and insurance, unions and wage rates, specifications. May be taken for grades or on a credit-no credit basis. Three hours.

CONTRACT STUDIES

(See Admission and Academic Information Section)

COOPERATIVE WORK EXPERIENCE

(See Internship Academy)

COUNSELING

Counseling 100—Introduction to College (1) (9 week course)

This course is recommended for all new students pursuing a college degree or certificate and is an extension of the assessment and orientation process. This course is designed to orient students to the college environment and educational opportunities. Included are an introduction to college services, study skills, time management, college facilities, academic policies, and an exploration of the various segments of higher education in California. Students will develop an academic plan to achieve their tentative educational goals. Offered: F,S.

Counseling 101—New Horizons for Men and Women (1) (9 week course)

Designed primarily to assist re-entry adult women and men to continue their educational goals. Objectives of the course include becoming aware of and exploring new opportunities for self-fulfillment in educational and/or vocational areas. Also included will be academic and career planning, group counseling and topics relating to the concerns of adults in a changing world. Interest and personality assessments will be available. May be taken for grades or on a credit-no credit basis. Testing fee required for this course. Two hours. Offered: F,S.

Counseling 102—Becoming a Master Student (2)

Designed to develop the skills required to become a Master Student. Topics covered include study techniques, orientation to higher education, stress management, time management, the transfer process, motivation, self-esteem and academic success. For designated populations such as Transfer Opportunity Program participants and students experiencing academic difficulty. May be taken for grades or on a credit-no credit basis. Two hours. Offered: F,S.

Information in italics designates the semester(s) in which the course is offered. The Division Office reserves the right to make changes as budget or other constraints warrant. F=Fall, S=Spring, Sum=Summer, Inter=Interession

Counseling 103—Introduction to College for Student Athletes (2-4) (9-18 week course)

This course is recommended for all new student athletes pursuing a college degree or certificate and is an extension of the assessment and orientation process. Designed to orient students to the college environment and educational opportunities, the course includes an introduction to college services, study skills, time management, college facilities, academic policies, and an exploration of the various segments of higher education in California. Additional topics include substance abuse, nutrition, performance, and athletic eligibility. May be taken for grades or on a credit-no credit basis. Two or four hours. Offered: F.

Counseling 110—Applied Stress Management (2) (9 week course)

This course is designed to respond to the need to understand and manage personal stress. Symptom identification and management techniques will be emphasized. Offered on a credit-no credit basis only. Four hours. Offered: F,S,Sum.

Counseling 120—Career Planning (2) (9-18 week course)

Designed primarily for students uncertain about educational-occupational plans. Standardized tests of aptitudes, interests, personality characteristics and values are used along with non-test data in appraising occupational fitness. The world of work is surveyed through selected occupational information and projects. Working with information about themselves and the world of work, students develop a tentative career plan. Offered on a credit-no credit basis only. Testing fee required for this course. Four hours or two hours. Offered: F,S,Sum.

Counseling 123—How to Get a Job (1.5) (9 week course)

Recommended preparation: Counseling 120.

An examination of the job search process with an emphasis on practical application. Topics to be covered include the field survey, resume and cover letter preparation, interviewing and follow-up procedures. Offered on a credit-no credit basis only. Three hours. Offered: as needed.

Counseling 130AC—Peer Helping (3.5)

Prerequisite: Psychology 125.

Development of effective peer helping skills through supervised volunteer service on campus. Topics to include listening, helping and referral strategies, factors affecting student success, self-care for helpers and supervision of campus service work. May be taken for grades or on a credit-no credit basis. Three hours plus one and one-half hours/week arranged. Offered: F,S.

Counseling 135—Principles of Effective Parenting (3)

This course is recommended for students who are interested in developing healthier communication patterns within the family system, workplace, and academic setting. Topics include in-depth self-exploration as it relates to family of origin and how it impacts an individual's level of functioning. Areas addressed include self-esteem, communication patterns, various realms of human growth and development, parent-child relationships, and stressors that impact a student's ability to function in a healthy manner. May be taken for grades or on a credit-no credit basis. Three hours. Offered: F,S.

Counseling 181—Assessment of Prior Learning (3)

Prerequisite: Advisory: Contact APL director at 432-5790.

Variable length course; open entry, open exit. Students who have non-collegiate learning experiences that qualify for college credit may prepare for a formal assessment of prior learning in this course. Students will prepare a portfolio which chronicles their past experiences, identifies what was learned, and documents the evaluation of that learning through examination, interview or other methods. Limit of 30 units. Offered on a credit-no credit basis only. Four hours. Offered: F,S,Sum.

Counseling 199AD—Topics in Counseling (.5-3) (1-18 week course)

Presentation, discussion and study of personal development issues. Topics may include motivation, values clarification, decision making, self-esteem and others. Units will vary depending on topic and number of meetings scheduled. Intended for students wishing to deal with issues relating to their own personal development and/or helping others with these issues. Offered on a credit-no credit basis only. Three to nine hours lecture. Offered: F,S.

CULINARY ARTS

Culinary Arts 050—Table Waiting (1) (3 week course)

Prepares for entry level skills as a waiter/waitress or bus person. Offered on a credit-no credit basis only. Student will be required to follow Food Service and Hotel Management departments dress standards. TB clearance required. Six hours lecture, nine hours practical. Offered: as needed.

Culinary Arts 100—Introduction to the Hospitality Industry (3)

Overview of the hospitality industry, its history and interrelationships of hotel, restaurant, travel and leisure industries. Economic and social influences of leisure. Emphasis on attitude required of a person seeking a position in the industry. Same as Food Service Management 100 and Hotel 100. Students completing Culinary Arts 100 may not receive credit for Food Service Management 100 or Hotel 100. Three hours. Offered: F,S.

Culinary Arts 120—Culinary Principles 1 (3)

Prerequisite: Food Service Management 160, or concurrent enrollment.

Fundamentals of food preparation and cookery, emphasizing high standards of production. Preparation and handling of vegetables, soups, stocks and sauces. Class requires purchase of a set of knives. Student will be required to follow Food Service and Hotel Management departments dress standards. TB clearance required. One and one-half hours lecture, four and one-half hours non-lecture. Offered: F,S.

Culinary Arts 122—Culinary Principles 2 (3)

Prerequisite: Food Service Management 160, or concurrent enrollment.

Fundamentals of food preparation and cookery emphasizing high standards of production. Preparation and handling of entrees, meat, poultry, meat cutting, broiling, sauteing, frying. Class requires purchase of a set of knives. Student will be required to follow Food Service and Hotel Management departments dress standards. TB clearance required. One and one-half hours lecture; four and one-half hours non-lecture. Offered: F,S.

Courses

Culinary Arts 124—Principles of Baking 1 (2)

Prerequisite: Food Service Management 160, or concurrent enrollment.

Study the fundamentals of baking including ingredient composition and function, preparation and evaluation of pie doughs, biscuits, quick breads, muffins, cookies, shortened cakes, creme anglaise, custards, blanc mange, yeast doughs, roll-in yeast doughs, specialty breads and recipe conversion. Student will be required to follow Food Service and Hotel Management departments dress standards. TB clearance required. One hour lecture, four hours laboratory. Offered: F,S.

Culinary Arts 126—Principles of Baking 2 (2)

Prerequisite: Food Service Management 160 and Culinary Arts 124.

Advanced course in culinary arts. Areas include puff pastry, foam cakes, classical European tortes, pastry fillings, meringues, cake decorating, chocolate handling, frostings and icings, tarts, pate a choux. Students will be required to follow Food Service and Hotel Management departments dress standards. TB clearance required. One hour lecture, four hours laboratory. Offered: S.

Culinary Arts 145—Nutrition Concepts and Culinary Art (1) (9 week course)

Principles of nutrition will be applied to commercial and institutional food service menus and recipes as they are modified to meet the USDA dietary goals. Course will focus on specific nutrients, such as fat, protein, carbohydrate, cholesterol and sodium. Food preparation, computer analysis and food label analysis will be included. (Course focuses on issues related to Culinary Arts/Cook Apprentice programs.) May be taken for grades or on a credit-no credit basis. Two hours. Offered: as needed.

Culinary Arts 149—Pantry (2)

Prerequisite: Food Service Management 160, or concurrent enrollment.

Methods of pantry or breakfast preparation including proper use of knife, proper vegetable and fruit cuts, vegetable and fruit identification and breakfast cookery. Students will also learn to use standardized recipes and practice quantity food preparation. Student will be required to follow Food Service and Hotel Management departments dress standards. TB clearance required. One hour lecture, three hours non-lecture. Offered: F,S.

Culinary Arts 150—Principles of Quantity Foods Preparation (4)

Prerequisite: Food Service Management 160, or concurrent enrollment.

The fundamentals of food preparation emphasizing high standards of quality. Includes preparation of various foods to demonstrate principles underlying food preparation and application of these principles to quantity food preparation. Course includes practice in using large quantity equipment in food preparation. Student will be required to follow Food Service and Hotel Management departments dress standards. TB clearance required. Two hours lecture, six hour laboratory. Offered: F.

Culinary Arts 199AD—Current Issues in Culinary Arts (.5) (1-9 week course)

This course deals with current issues in the field of culinary arts and food service management, rotation through a variety of topics such as sanitation, safety, nutrition, management. May be taken for grades or on a credit-no credit basis. One to nine hours. Offered: as needed.

All courses numbered 100 or higher are transferable to the California State Universities (CSU).

Courses that are transferable to the University of California are designated "UC". Some of these courses have limits on the amount of credit that is granted. See the UC transferable Course List available in the Counseling Center or Transfer Center for these limitations.

Course numbers followed by an AB, AC, or AD may be repeated once, twice or three times respectively.

Courses that are non-credit or not AA applicable are designated with the letter "N" preceding the course number.

Culinary Arts 200—Garde Manger (2)

Prerequisite: Food Service Management 160, or concurrent enrollment, and Culinary Arts 149, or enrollment as indentured apprentice.

This course emphasizes basic garde manger principles, the duties of the department and its relationship to other kitchen operations. Specific emphasis is placed on specialty work which includes garnishes, ice carving, buffet decorations, tallow, chaud-froid, aspic, and other decorative work. Class requires purchase of a set of knives. Student will be required to follow Food Service and Hotel Management departments dress standards. TB clearance required. One hour lecture, three hours laboratory. Offered: F.

Culinary Arts 255—Advanced Garde Manger (2)

Prerequisite: Culinary Arts 200.

An advanced course for culinary arts and apprenticeship students. Course covers special cold buffet preparation such as pates, tureens, gallantines, mousse, also advanced work in tallow and ice carving. Class requires purchase of a set of knives. Student will be required to follow Food Service and Hotel Management departments dress standards. TB clearance required. One hour lecture, three hours non-lecture. Offered: S.

Culinary Arts 265—Ala Minute Continental Cooking (2)

Prerequisite: Culinary Arts 120 and Food Service Management 160.

Preparation of international foods ala minute. Student will be required to follow Food Service and Hotel Management departments dress standards. TB clearance required. One hour lecture, four hours non-lecture. Offered: S.

DANCE

Dance 100—Introduction to Careers in Dance (1) (2-9 week course)

This course is designed to help students considering a career in dance identify the broad scope of dance-related career options, (professional dancer/choreographer, dance therapist, and arts administrator among others), the education and training needed to pursue these careers, availability of jobs, and salaries. Guest appearances by professionals in these careers. May be taken for grades or on a credit-no credit basis. Two hours. Offered: F,S;Sum;Inter.

Dance 101AD—Modern Dance (.5-2) (9-18 week course)

This course is designed to offer instruction, movement vocabulary and technical skills necessary to prepare the body as an instrument of expression in the dance style known as 'modern dance.' This dance style began in the United States in the early 1930's as a 'modern expression' of American themes, personal and artistic ideas. The style has continued to evolve to include dance themes expressive of contemporary times. This course offers instruction at the beginning, intermediate, intermediate/advanced and advanced levels. May be taken for grades or on a credit-no credit basis. .25-1.0 hour lecture, .75-3.0 hours activity. (UC) Offered: F,S;Sum.

Dance 102AB—Freestyle Dance (2)

Prerequisite: Successful audition.

Designed to teach intermediate and advanced level dancers the dance movement and technique based on principles of Humphrey-Weidman and other pioneers of American dance. The course will explore the principles of 'fall and recovery,' symmetry/asymmetry, stage space and ensemble work. May be taken for grades or on a credit-no credit basis. One hour lecture, three hours activity. (UC) Offered: F,S.

Dance 106AB—Strength and Stretch (.5-2) (9-18 week course)

A course emphasizing strength and flexibility exercises and their application to dance technique, but also applicable to any sport. Exercises will be selected to target major muscle groups in the body which need both strength and flexibility for their maximum efficiency and range of motion. The course will address both the adaptation of exercises to the individual for maximum benefit and application to movement patterns. May be taken for grades or on a credit-no credit basis. .25-1.0 hour lecture, .75-3.0 hours activity. (UC credit limitation) Offered: F,S.

Dance 107AD—Conditioning for Dance (.5-2) (9-18 week course)

A program combining skills from dance and exercise for body conditioning and strength. Non-dancers and dancers will improve alignment, endurance, movement memory, balance and coordination for greater technical ability in other dance studies. May be taken for grades or on a credit-no credit basis. .25-1.0 hour lecture, .75-3.0 hours non-lecture. (UC credit limitation) Offered: F,S;Sum.

Dance 108AD—Alignment and Correctives (.5-2) (9-18 week course)

A course in alignment and correctives work based on exercises and concepts developed by Joseph H. Pilates. The course will include 'mat work,' apparatus work, and will emphasize exercises for improved body alignment, strength, flexibility, control, coordination and breathing. It will also aid in dance injury rehabilitation. The course includes beginning, beginning/intermediate, intermediate and advanced levels of instruction. May be taken for grades or on a credit-no credit basis. .25-1.0 hour lecture, .75-3.0 hours activity. (UC credit limitation) Offered: F,S;Sum.

Dance 110AD—Ballet (.5-2) (9-18 week course)

Designed to introduce and develop movement principles and skills necessary for the study of classical ballet. The course will include ballet terminology, use of 'turn out,' positions of feet and legs, alignment of spine and placement of weight at the barre, in center floor and traveling patterns. This course offers instruction at the beginning, beginning/intermediate, intermediate and advanced levels. May be taken for grades or on a credit-no credit basis. .25-1.0 hour lecture, .75-3.0 hours activity. (UC) Offered: F,S;Sum.

Dance 113AC—Pointe Work (.5-2) (9-18 week course)

Recommended preparation: a minimum of intermediate level ballet technique skills.

A course teaching the technique and movement skills needed to perform classical ballet technique on 'pointe,' pointe shoe fitting process, preparation and care of pointe shoes, care of feet, and related injuries. Instruction at the high beginning, intermediate, and intermediate/advanced levels. May be taken for grades or on a credit-no credit basis. .25-1.0 hour lecture, .75-3.0 hours activity. (UC) Offered: F,S.

Courses

Dance 114AB—Ballet Floor Barre and Correctives (.5-2) (9-18 week course)

This course will improve technique and increase understanding of safe, efficient muscle use for ballet or other dance forms. With an emphasis on correct body alignment, breath, and efficient use of muscles, as well as corrective exercises for muscular reeducation, the student will perform a series of exercises "par terre" (on the floor) that simulate the standing ballet barre. May be taken for grades or on a credit-no credit basis. .25-1.0 hour lecture, .75-3.0 hours non-lecture. **(UC)**

Dance 115AC—Yoga for Dancers (.5-1) (9-18 week course)

Using traditional yoga postures and breathing techniques, this course is designed for the needs of the training dancer. Yoga postures to increase strength and flexibility, as well as restorative postures will be taught in order to bring about improvement in the execution of dance movements. May be taken for grades or on a credit-no credit basis. .25-.5 hour lecture, .75-1.5 hours non-lecture. **(UC)** Offered: F,S,Sum.

Dance 116AD—Latin Dance Styles (.5-2) (9-18 week course)

This course is designed to teach Latin dance styles, including the following dances: cha-cha, marenque, tango, and salsa. Styling, rhythm, and partnering will be taught, as well as the cultural and historical background on the evolution of these dance forms. This course offers instruction at the beginning, low intermediate, intermediate, and high intermediate levels. May be taken for grades or on a credit-no credit basis. .25-.5 hours lecture, .75-3 hours non-lecture. Offered: F,S,Sum,Inter.

Dance 117AD—American Social Dance Styles (.5-2) (9-18 week course)

This course is designed to teach American social dance styles, including the following dances: foxtrot, waltz, swing, and Lindy hop. Styling, rhythm, and partnering will be taught, as well as the cultural and historical background on the evolution of these dance forms. This course offers instruction at the beginning and intermediate levels. May be taken for grades or on a credit-no credit basis. .25-.5 hours lecture, .75-3 hours non-lecture. Offered: F,S,Sum,Inter.

Dance 118AB—Dance Workout for the Maturing Body (.5-2) (9-18 week course)

Using a basic dance workout combined with dance conditioning exercises, this course will consider the fitness and wellness needs in the maturing body. Coordination, efficient posture, an ease in body alignment, range of motion, strengthening of muscles, breathing, and improvement in functional movement will be addressed. May be taken for grades or on a credit-no credit basis. .25-1.0 hour lecture, .75-3.0 hours non-lecture. **(UC)**

Dance 120AD—Jazz Dance (.5-2) (9-18 week course)

Designed to introduce and develop movement principles and skills necessary to prepare the body as a instrument of expression in the jazz dance style with both historical and current dance trends. This course offers instruction at the beginning, intermediate, intermediate/advanced and advanced levels. May be taken for grades or on a credit-no credit basis. .25-1.0 hour lecture, .75-3.0 hours activity. **(UC)** Offered: F,S,Sum.

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Dance 123AB—Commercial Dance Workshop (.5-2) (3-18 week course)

Recommended preparation: A minimum of intermediate level jazz technique skills.

A course designed to emphasize movement for commercial dance work used in movies, concert dance, television and industrial shows, and offers current trends in popular dance and jazz styling. Designed Course is designed for the intermediate/advanced level dancer and those attending commercial auditions on a regular basis. May be taken for grades or on a credit-no credit basis. .25-1.0 hour lecture, .75-3.0 hours non-lecture. Offered: F,S,Sum.

Dance 124AD—Dance for Musical Theatre Workshop (.5-2) (9-18 week course)

Recommended preparation: Intermediate skills in ballet, jazz or tap.

Designed to teach dance forms used in musical theatre, including the basic dance vocabulary of 'period' dances of the 20's, 30's, etc., dance styles of such choreographers as Bob Fosse, dance/drama styles of DeMille and Robbins and current musical choreography. Student will be taught original 'Broadway style' choreography. Through the use of dance videos and learning dance patterns, the student will gain experience in the particular musical theatre dance style required. Student will learn to work as part of a dance chorus and basic audition skills. May be taken for grades or on a credit-no credit basis. .25-1.0 hour lecture, .75-3.0 hours activity. **(UC)** Offered: as needed.

Dance 125AD—Tap (.5-2) (9-18 week course)

A course designed to teach tap dance technique based on the style known as rhythm tap emphasizing fundamental skills and rhythms, time steps, flash footwork, short combinations, styling. This course offers instruction at the beginning, intermediate, intermediate/advanced and advanced levels. May be taken for grades or on a credit-no credit basis. .25-1.0 hour lecture, .75-3.0 hours activity. **(UC)** Offered: F,S,Sum.

Dance 130AD—Mid-Eastern Dance (.5-2) (9-18 week course)

A technique course emphasizing the social and stage dances from the region designated as the Near and Middle East. The course incorporates choreography, improvisation, movement vocabulary and styling, and finger cymbal playing. Instruction at the beginning, intermediate, intermediate/advanced and advanced levels. May be taken for grades or on a credit-no credit basis. .25-1.0 hour lecture, .75-3.0 hours activity. **(UC)** Offered: F,S,Sum.

Dance 133AB—Introduction to World Dance (.5-2) (9-18 week course)

This is an introductory level course designed to survey dances of selected world dance cultures. Through movement experiences and lecture/discussion, students will gain the movement technique and understanding necessary to perform dances from the West (United States), Africa, Asia, and other areas of the world. May be taken for grades or on a credit-no credit basis. .25-1.0 hour lecture, .75-3.0 hours activity. **(UC)** Offered: F,S.

Dance 135AD—Flamenco Dance (.5-2) (9-18 week course)

Dance activities designed to introduce the students to flamenco. Lectures and discussions on background information pertinent to this dance form will be included. Of interest to dancers and non-dancers. May be taken for grades or on a credit-no credit basis. .25-1.0 hour lecture, .75-3.0 hours activity. **(UC)** Offered: F,S.

Dance 136AD—Spanish Classical Dance (.5-2) (9-18 week course)

The course is designed to offer instruction in Spanish classical dance focusing on the 'school dances,' dances of Northern and Central Spain, as well as neo-classical forms. The course offers instruction at the beginning, intermediate, intermediate/advanced and advanced levels. May be taken for grades or on a credit-no credit basis. .25-1.0 hour lecture, .75-3.0 hours activity. **(UC)** Offered: F,S.

Dance 137AD—Classical Dance of India (.5-2) (9-18 week course)

A beginning level technique course designed to introduce students to the footwork, facial expression, gestures and styling of Indian classical dance with emphasis on the 'Bharatha Natyam' style. The mythology, history and theoretical background of dances of India and their development over 3,000 years will be covered. Of interest to dancers and choreographers, as well as non-dancers. May be taken for grades or on a credit-no credit basis. .25-1.0 hour lecture, .75-3.0 hours non-lecture. **(UC)** Offered: F,S.

Dance 138AD—Dances of Africa (.5-2) (9-18 week course)

A movement course in focusing on the learning of traditional and contemporary dances of various African cultures, especially those of Nigeria and Ghana. Students will learn the fundamental elements of dances including polyrhythms, 'call and response' (drummer/dancer), integration of movement to live drumming, as well as information about the integral link between dance and the social/religious aspects of African cultures. May be taken for grades or on a credit-no credit basis. .5-1.0 hour lecture, 1.5-3.0 hours non-lecture. **(UC)** Offered: F,S.

Dance 140AB—American Vernacular Dance (.5-2) (9-18 week course)

Prerequisite: Successful audition.

A course designed for intermediate or advanced dancers to study the American vernacular 'swing-rhythm' dance styles and key people (including King Rastus Brown, Bill Robinson, John W. Bubbles) responsible for these styles which are considered indigenous to the United States. Each semester will focus on two or more of these key figures and their contribution to American vernacular dance. Later contributors, such as Fred Astaire, Gene Kelly, Coles and Atkins and Gregory Hines, will also be included. May be taken for grades or on a credit-no credit basis. .25-1.0 hour lecture, .75-3.0 hours activity. **(UC)** Offered: F,S.

Dance 150AD—Improvisation Workshop (1)

Directed explorations of dance movements including use of space, dynamics and rhythm as expressed through individual movement vocabulary. Designed for all levels. May be taken for grades or on a credit-no credit basis. One-half hour lecture, one and one-half hours activity. **(UC)** Offered: S.

Dance 160—Introduction to Choreography (3)

Basic skills with practical experience in the creating and crafting of dance problems and compositions. Two hours lecture, two hours non-lecture. **(UC)** Offered: F.

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Dance 162AB—Advanced Dance Composition (3)

Prerequisite: Dance 160; elements of dance composition.

An intermediate/advanced level course emphasizing more advanced skills and methods of choreographing dances. May be taken for grades or on a credit-no credit basis. Two hours lecture, two hours activity. **(UC)** Offered: F.

Dance 170—Music for Dancers (2)

Assists the dancer-choreographer (non-musician) in building a knowledge of the fundamentals of music through the limited study of theory, terminology and notation. The course is designed to present the development of music and dance in historical perspective, to develop through listening an awareness of the musical literature available, to train dancer and musician to work together through development of a common vocabulary and a working knowledge of each other's craft. May be taken for grades or on a credit-no credit basis. Two hours. **(UC)** Offered: F; even yrs..

Dance 191AC—Classical Technique and Variations Workshop (.5-1) (4-9 week course)

Recommended preparation: A minimum of intermediate level ballet technique skills.

A short term intensive seminar/workshop designed to offer classical technique and variations for the intermediate/advanced and advanced level student. Dance 191A will focus on the Romantic Period and style, Dance 191B will focus on the Russian Imperial Period and style, and Dance 191C will focus on the Neo-Classical style of Balanchine and other contemporary ballet choreographers and their choreography. Offered on a credit-no credit basis only. 25-5 hours lecture, 75-1.5 hours non-lecture. **(UC)** Offered: Sum.

Dance 195AD—Summer Dance Workshop (.5-1.5) (1-3 week course)

Prerequisite: Eligibility based on successful audition at first class meeting.

An intensive dance experience with a guest dance artist. The movement material for this class will be from the guest artist's repertoire and will be designed for intermediate and advanced level dance students. Offered on a credit-no credit basis only. Nine to twenty-seven hours lecture, nine to twenty-seven hours activity. **(UC)** Offered: Sum.

Dance 199AD—Current Dance Topics (.5-3) (9-18 week course)

Movement and lecture/discussion of topics and issues of current interest in dance. Units vary according to the topic selected, semester offered and number of meetings scheduled. Designed for intermediate/advanced level dance students. May be repeated with different topics. May be taken for grades or on a credit-no credit basis. 3-1.8 hours lecture, 7-4.2 hours non-lecture. **(UC credit limitation)** Offered: F;S;Sum.

Dance 200—Appreciation of Dance (3)

Designed for students to view dance of all styles from a global perspective. Emphasis is on the basic components (space, energy, musical accompaniment, movement vocabulary, style) characteristic of classical ballet, contemporary, world dance, and entertainment dance forms. The student will attend a minimum of two live dance performances. Expense for tickets is the student's responsibility. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: F; odd yrs..

Dance 201AD—Rehearsal and Performance (1)

Prerequisite: Eligibility based on successful audition. Auditions held throughout the semester prior to this class.

Structured rehearsal time (36-40 hours) culminating in performance. Offered on a credit-no credit basis only. Three hours lecture, nine hours activity. **(UC)** Offered: S.

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Courses that are non-credit or not AA applicable are designated with the letter "N" preceding the course number.

Dance 203AD—Performing Dance Ensemble (3)

Prerequisite: Eligibility based on successful audition.

Corequisite: Dance 101AD or 110AD or 120AD or 125AD.

Recommended preparation: Intermediate dance skills in jazz or ballet or modern or tap or other dance forms and previous performing experience.

Performing Dance Ensemble provides an opportunity for intermediate and advanced level dancers to improve their performing skills in structured rehearsal time, culminating in performances in high schools and the community. This course will be scheduled fall and spring semesters with the majority of performances occurring in the spring semester. May be taken for grades or on a credit-no credit basis. One and one-half hours lecture, four and one-half hours non-lecture. **(UC)** Offered: F;S.

Dance 205—Dance as a Profession Seminar (2) (6-18 week course)

For students planning a career in dance, including dance-related career options, auditions, resumes, photos, video presentations, contracts, choreography and performance fees, resources, and other aspects of professional dance. Guest lecturers and field trips will be included. May be taken for grades or on a credit-no credit basis. Two to six hours lecture. Offered: F;S;Inter.

Dance 206—Introduction to Dance Technology (.5-2)

Designed for dancers to gain basic skills in computer technology applied specifically to the field of dance education, choreography, and research. Web design, CD-ROM, motion capture, software programs, and graphic presentations related to dance will be included. The student will create a personal dance web page. May be taken for grades or on a credit-no credit basis. One hour lecture, three hours non-lecture. Offered: F;S;Sum;Inter.

Dance 211AD—Repertoire (1-4)

Corequisite: Dance 101AD or 110AD or 120AD or 125AD or 130AD or 135AD or 137AD.

Recommended preparation: Intermediate dance skills in modern or ballet or jazz or tap or Mid-Eastern or flamenco or classical dance of India.

Designed to introduce students to rehearsal and performance skills and responsibilities. An opportunity for a dancer to learn and perform the choreography of another student, teacher, or guest artist. May be taken for grades or on a credit-no credit basis. One-half to two hours lecture, one and one-half to six hours activity. **(UC)** Offered: F;S;Sum.

DENTAL ASSISTING

Dental Assisting 100—Dental Anatomy (2)

Anatomical structures of the head and neck. Emphasis on tooth growth and development and their surrounding structures. Morphology of permanent and primary teeth. Identification of types of occlusions and related terminology. Two hours. Offered: F.

Dental Assisting 110—Chairside Techniques 1 (3)

Prerequisite: Concurrent enrollment in all first semester dental assisting courses.

Four-handed dentistry. History of the dental profession. Charting, sterilization procedures, utilization and maintenance of dental operatory equipment. Laboratory experience includes basic application of operative procedures. Two hours lecture, three hours laboratory. Offered: F.

Dental Assisting 115—Chairside Techniques 2 (2) (15 week course)

Prerequisite: Completion of the first semester dental assisting program with a grade of 'C' or better in all dental assisting courses.

A continuation of Chairside Techniques 1. Emphasis on dental specialties and application of coronal polishing. Two hours lecture, three hours laboratory. Offered: S.

Dental Assisting 120—Dental Materials (3)

Prerequisite: Concurrent enrollment in all first semester dental assisting courses.

A comprehensive study of materials related to restorative procedures. Emphasis on characteristics, composition and use. Laboratory exercises include manipulation of restorative materials, gypsum products, impression materials, waxes, compounds. Includes taking and pouring of impression and construction of casts. Casting and investing demonstration. Trimming models, construction of acrylic trays and temporaries. Students must purchase a uniform for this course. One and one-half hours lecture, three hours laboratory. Offered: F.

Dental Assisting 125—Expanded Functions (2) (15 week course)

Prerequisite: Completion of the first semester dental assisting program with a grade of 'C' or better in all dental assisting courses.

Emphasis on expanded functions for the dental assistant and registered dental assistant. Laboratory practice and evaluation. One and one-half hours lecture, three hours lab. Offered: S.

Dental Assisting 130—Preventive and Community Dentistry (1) (9 week course)

Prerequisite: Concurrent enrollment in all first semester dental assisting courses.

Discussion of current concepts of preventive dentistry. Nutrition, oral hygiene techniques and home care are covered in detail. Psychology of the dental auxiliary, dental team and dental patient are presented. Includes community dental project. Two hours. Offered: F.

Dental Assisting 140—Dental Radiography 1 (3)

Prerequisite: Concurrent enrollment in all first semester dental assisting courses.

A study of the principles of x-ray production, physics, biological effects, radiation safety procedures and monitoring. Film identification processing and mounting procedures and introduction to the bisection technique and practical application are presented. Two hours lecture, three hours laboratory. Offered: F.

Dental Assisting 145—Dental Radiography 2 (2) (15 week course)

Prerequisite: Completion of the first semester dental assisting program with a grade of 'C' or better in all dental assisting courses.

In-depth study of bisecting and paralleling techniques employed in intraoral radiographs. Analysis and correction of techniques and processing errors, clinical laboratory experience, bisecting and paralleling techniques for various radiographic examinations. Film processing and mounting. One hour lecture, three hours laboratory. Offered: S.

Courses

Dental Assisting 150—Biomedical Sciences (2)

Prerequisite: Concurrent enrollment in all first semester dental assisting courses.

An introduction to general anatomy and physiology including microbiology, study of pharmacology, oral pathology and basic fundamentals to prepare the student to recognize and assist in dental emergencies. Students must purchase a uniform for this course. Two hours. Offered: F.

Dental Assisting 160—Clinical Experience 1 (1) (9 week course)

Prerequisite: Concurrent enrollment in all first semester dental assisting courses. A designated uniform must be purchased for this course.

An introduction to clinical dentistry for the beginning dental assisting student. Each student will be assigned to a dental office, dental school or the Veterans Hospital. Students are required to follow the dress code standards set up by the program and ADA guidelines. Offered on a credit-no credit basis only. Eight hours clinical; one hour seminar. Offered: F.

Dental Assisting 165—Clinical Experience 2 (3) (15 week course)

Prerequisite: Completion of the first semester dental assisting program with a grade of 'C' or better in all dental assisting courses.

Opportunity to practice concepts of dental assisting in a dental office, dental school, or dental department of a hospital base. Experiences are selected for students on basis of individual interest, need, geographic location and type of experience provided. Students are required to follow the dress code standards set up by the program and ADA guidelines. Offered on a credit-no credit basis only. One hour lecture, twelve hours clinical. Offered: S.

Dental Assisting 168—Clinical Experience 3 (1.5) (3 week course)

Prerequisite: Completion of the first semester dental assisting program with a grade of 'C' or better in all dental assisting courses.

Student will be placed in selected dental office for practical application of dental assisting procedures. Students are required to follow the dress code standards set up by the program and ADA guidelines. Offered on a credit-no credit basis only. Forty hours clinical per week plus one hour seminar (8 hours per day, 5 days per week). Offered: S.

Dental Assisting 175—Principles of Business and Practice Management (1.5) (15 week course)

Prerequisite: Completion of the first semester dental assisting program with a grade of 'C' or better in all dental assisting courses.

An introduction to the business office procedures including dental records and charting, making appointments, banking, tax deductions (salary), communication, malpractice claims, payment plans and insurance forms. Two hours. Offered: S.

DIAGNOSTIC MEDICAL SONOGRAPHY

Diagnostic Medical Sonography 150—Sonographic Physics and Instrumentation (4.5)

Prerequisite: Allied Health 111.

Physics of diagnostic sonography. Instrumentation, equipment design, and application. Four hours lecture, two hours laboratory. Offered: F.

Information in italics designates the semester(s) in which the course is offered. The Division Office reserves the right to make changes as budget or other constraints warrant. F=Fall, S=Spring, Sum=Summer, Inter=Intercession

Diagnostic Medical Sonography 155—Introduction to Vascular Ultrasound (2.5)

Prerequisite: Diagnostic Medical Sonography 150 or RDMS registered.

Introduction to Doppler (color flow) including a hands-on approach. Overview of normal and pathological data in regards to peripheral vascular, abdominal vasculature, carotid. Two hours lecture, two hours non-lecture. Offered: S.

Diagnostic Medical Sonography 160—Pathophysiology 1 (3)

Prerequisite: Allied Health 120 and Biology 223.

Covers basic human general pathology and mechanisms of pathophysiology. Three hours. Offered: S.

Diagnostic Medical Sonography 165—Introduction to Scanning Practice (3)

Prerequisite: Diagnostic Medical Sonography 150

Corequisite: Biology 226, Diagnostic Medical Sonography 155 and 160.

Introduction to sonographic scanning protocol as applied to clinical practice. Course includes environment of department, emphasis on professionalism, student behavior, medico-legal aspects, and humanistic approach to patients. Two hours lecture, three hours laboratory. Offered: S.

Diagnostic Medical Sonography 166—DMS Clinical Experience 1 (1) (9 week course)

Prerequisite: Allied Health 115

Corequisite: Diagnostic Medical Sonography 165.

Introduction to clinical setting and exposure to departmental organization, patient flow, darkroom and processing procedures, observation of techniques employed, policies and procedures of clinical cases. Offered on a credit-no credit basis. Eight hours clinical. Offered: S.

Diagnostic Medical Sonography 167—DMS Clinical Experience 2 (4) (8 week course)

Prerequisite: Diagnostic Medical Sonography 166.

Continuation of clinical experience; exposure to departmental organization, patient flow, darkroom and processing procedures, observation of techniques employed, policies and procedures of clinical cases, beginning hands-on experience, equipment set-up. Offered summer only. Offered on a credit-no credit basis only. Thirty-two hours clinical. Offered: Sum.

Diagnostic Medical Sonography 265—Pathophysiology 2 (3)

Prerequisite: Diagnostic Medical Sonography 160.

Specific study of pathology and pathophysiological mechanisms related to diagnostic medical sonography. Three hours. Offered: F.

Diagnostic Medical Sonography 271—DMS Clinical Experience 3 (6)

Prerequisite: Diagnostic Medical Sonography 167

Corequisite: Diagnostic Medical Sonography 265, 274 and 275.

Clinical experience in ultrasound. Equipment handling and patient management. Departmental operation and scope. Offered on a credit-no credit basis only. Thirty-two hours clinical, one seminar every third week. Offered: F.

Diagnostic Medical Sonography 274—Sonographic Scanning Techniques 1 (3) (9 week course)

Prerequisite: Diagnostic Medical Sonography 165.

Interpretation of normal anatomy, sonographic and gross anatomy, comparing one disease to another and what to identify in the sonographic images. Six hours. Offered: F.

Diagnostic Medical Sonography 275—Sonographic Scanning Techniques 2 (3) (9 week course)

Prerequisite: Diagnostic Medical Sonography 274.

Review of advanced scanning techniques. Interpretation of normal and pathologic anatomy. Six hours. Offered: F.

Diagnostic Medical Sonography 276—DMS Clinical Experience 4 (1) (2 week course)

Prerequisite: Diagnostic Medical Sonography 271.

Intermediate clinical experience. Studies in the abdomen, small parts, and pelvis. Variety of real-time equipment, anatomical pathology recognition. Offered on a credit-no credit basis only. Thirty-two hours clinical. Offered: F.

Diagnostic Medical Sonography 281—DMS Clinical Experience 5 (11)

Prerequisite: Diagnostic Medical Sonography 276.

Advanced clinical experience in the ultrasound department practicing in a variety of sonographic studies with emphasis on the abdomen and pelvis. Recognition of pathology and scan interpretation are emphasized. Offered on a credit-no credit basis only. One hour lecture, thirty-six hours clinical. Offered: S.

DIETETIC TECHNOLOGY (See Nutrition Care and/or Food Service Management)

DIGITAL MEDIA ARTS

Digital Media Arts 181—Introduction to Computer Graphics (3)

Designed to introduce the lay person or computer professional to the rapidly expanding field of computer graphics. The subject will be approached from an application perspective. Course will include guest speakers and field trips. May be taken for grades or on a credit-no credit basis. Two hours lecture, three hours laboratory. Offered: F;S.

Digital Media Arts 190—Illustration and Computer Graphics 1 (4)

Prerequisite: Digital Media Arts 181.

Investigation into the use of computer graphics in various disciplines emphasizing illustration and the principles of color and design. Students will complete a portfolio of computer generated graphic designs and illustrations. Two hours lecture, six hours laboratory. Offered: S.

Digital Media Arts 191AB—Illustration and Computer Graphics 2 (4)

Prerequisite: Digital Media Arts 190.

Further investigation into the use of illustration and computer graphics as studied in Digital Media Arts 190. Existing software will be used to generate a more specialized portfolio of computer art. Lectures and demonstrations familiarize students with advanced techniques in computer graphics with an emphasis on output. Two hours lecture, six hours laboratory. Offered: as needed.

Courses

Digital Media Arts 193—Photography and Computer Graphics 1 (4)

Prerequisite: Photography 120 and Digital Media Arts 181.

This course integrates photography, art, design, and computer graphics processes and images. Lectures and demonstrations familiarize students with image processing software which alters photographs. Students will learn basic digital retouching skills, as well as image processing techniques. Two hours lecture, six hours laboratory. Offered: F;S.

Digital Media Arts 194AC—Photography and Computer Graphics 2 (4)

Prerequisite: Digital Media Arts 193 or Photography 125.

Lectures and demonstrations to familiarize students with advanced techniques in digital photography with an emphasis on output is the basis for this course. Both fine art and commercial applications are covered. Same as Photography 194AC. Students completing Digital Media Arts 194AC may not receive credit for Photography 194AC. Two hours lecture, six hours non-lecture. Offered: F;S.

Digital Media Arts 200AB—Interactive Multimedia (4)

Prerequisite: Digital Media Arts 181.

Explore the merger of traditional media, such as video, photography, books and audio by use of interactive multimedia on desktop computers. An interactive authoring language will be used to access all the media capabilities of the computer. The course is designed for students coming from different backgrounds, such as photography or computer graphics. Instruction is offered at the beginning and intermediate levels. Two hours lecture, six hours non-lecture. Offered: F;S.

Digital Media Arts 201AD—Interactive Master Class (4)

Prerequisite: Digital Media Arts 200AB.

Recommended preparation: CIS 122 or High Technology 109.

The use of the authoring tools necessary to achieve artistic mastery of interactive media will emphasize advanced techniques in interface design, authoring, scripting, programming, and communicating on the Internet. Students will create their own large interactive multimedia program. Offered: as needed.

Digital Media Arts 262AC—Image Processing for Digital Video (4)

Prerequisite: Digital Media Arts 181 and Film/Video 110.

Students learn the art of combining computer generated imagery with digital video to create fine art and commercial videos as seen on television and in music videos. Students will create their own videos on the computer using transitions, filters, alpha channels and keying effects, and digital animation. Two hours lecture, six hours non-lecture. Offered: F;S.

Digital Media Arts 263AC—Digital Video Compositing (4)

Prerequisite: Digital Media Arts 193 or 262AC.

Students will develop skills in the art of digital video compositing which is used in motion pictures, television, advertisements, and music videos to create new art forms. The ability to layer photography, video, text and graphics, and audio in complex ways gives the digital video artist complete control over the media. Masking with Bezier curves, keying, layering, transparency, and 3D controls allow compositions to be carefully controlled in a time based media. Two hours lecture, six hours laboratory. Offered: F;S.

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Course numbers followed by an AB, AC, or AD may be repeated once, twice or three times respectively.

Courses that are non-credit or not AA applicable are designated with the letter "N" preceding the course number.

Digital Media Arts 280AC—2D Animation (4)

Prerequisite: Digital Media Arts 181.

Recommended preparation: Art 120.

An investigation into the theory and practice of computer generated 2D animation. Lectures, demonstrations, and graphic examples introduce students to the technical and creative aspects of 2D animation as seen in communication media. Through classroom assignments students will investigate both commercial and fine art applications. Two hours lecture, six hours non-lecture. Offered: F;S.

Digital Media Arts 281AB—3D Computer Graphics Animation (4)

Prerequisite: Digital Media Arts 280AC.

Investigation into the practice of 3D temporal image handling utilizing computer graphics technology. Students will explore artistic applications in various fields. Instruction is offered at beginning and advanced levels. Two hours lecture, six hours laboratory. Offered: F;S.

Digital Media Arts 289AB—Portfolio Development (3)

Prerequisite: Digital Media Arts 181.

Recommended preparation: Knowledge of portfolio preparation as taught in Digital Media Arts 190 or 193 or 200AB or 262AC or 280AC.

Designed for intermediate and advanced level students wishing to pursue a career in digital media arts. Topics include image selection, sequencing, presentation, and selling or exhibiting work. May be repeated with different subject matter and presentation styles. Strongly recommended for digital media arts majors. Two hours lecture, four hours non-lecture. Offered: as needed.

Digital Media Arts 290AD—Digital Media Arts Lab (1-5)

Prerequisite: Digital Media Arts 181.

Assistance with projects using special software techniques for various digital media arts procedures in an interdisciplinary workshop context. Instruction is offered at beginning, intermediate, intermediate/advanced and advanced levels. Offered on a credit-no credit basis only. Three to six hours non-lecture. Offered: F;S.

DIRECTED STUDIES

(See Admission and Academic Information Section)

DISPLAY AND VISUAL PRESENTATION

Display and Visual Presentation 180—Elementary Display and Visual Presentation (3)

An opportunity to learn display design, trade show display, and exhibit design for theme parks, soft and hardline goods and furniture promotion. Three hours lecture, two hours laboratory. Offered: F.

Display and Visual Presentation 185—Intermediate Display and Visual Presentation (3)

Prerequisite: Display and Visual Presentation 180.

An opportunity to solve design, display and visual presentation problems represented in the community. Students work with local retail centers. An in-depth learning of design and display materials and construction. An increased understanding of the changing attitudes in visual promotion. Marketing affect on display and visual presentations. Introduction to professional organizations. Three hours lecture, two hours laboratory. Offered: F;S.

Display and Visual Presentation 190—Field Experience (2)

Prerequisite: Display and Visual Presentation 185.

A directed opportunity for students to experience on-the-job opportunities in display departments. Students will gain experience in performing select store functions found in the display and/or exhibit areas. A minimum of five hours on the job plus one hour weekly class. One hour lecture, five hours non-lecture. Offered: as needed.

DRAFTING TECHNOLOGY

Drafting Technology 100—Blueprint Reading (3)

This course, taught in a traditional classroom setting or via the Internet, is a study of blueprints that are used in the manufacturing world. Units of instruction include the alphabet of lines, multiviews, dimensions, sections, auxiliaries, and all facets of the print page. Three hours. Offered: F;S.

Drafting Technology 110—Basic Drafting Practices (4)

Prerequisite: Drafting Technology 150AB or concurrent enrollment.

Emphasis on the fundamentals of drafting practices and procedures, the use of CAD (computer aided drafting) and drafting instruments, lettering, geometric construction, orthographic projections, pictorials, including isometric and oblique, sketching, dimensioning practices, sectioning. Acceptable for transfer and various occupational majors. Three hours lecture, three hours laboratory. Offered: F;S.

Drafting Technology 115—Engineering Drafting Design 1 (4)

Prerequisite: Drafting Technology 110, or one year of high school drafting.

Use of CAD (computer aided drafting) to complete a thorough review and improvement of drafting practices. Instruction in precision dimensioning and tolerances, weldments, detail and assembly drawings, threads and fasteners, shop processes, machine drawing, sheet metal drawings, and auxiliary drawings. Required for electro/mechanical drafting certificate and mechanical design/drafting certificate. Three hours lecture, three hours laboratory. Offered: F;S.

Drafting Technology 120—Engineering Drafting Design 2 (4)

Prerequisite: Drafting Technology 115.

Continuing the engineering design concepts. Included will be specialty design areas used throughout industry: tool design, stress analysis, cam and linkage design, kinematics of motion, modern inking techniques, metrics, etc. For drafting majors only. Engineering majors should take Drafting 115. Three hours lecture, three hours laboratory. Offered: S.

Courses

Drafting Technology 140—Electro/Mechanical Drafting 1 (4)

Prerequisite: Drafting Technology 110.

Presents various drawing types used in industry such as sketching, basic mechanical drawings, block diagrams, logic diagrams, wiring and cable diagrams, cable assemblies, electronic symbols and schematics, electronic packaging, introduction to PWB documentation and design. Required for electro/mechanical drafting certificate. Three hours lecture, three hours laboratory. Offered: as needed.

Drafting Technology 150AB—Basic Computer Aided Design/Drafting (4)

A beginning computer aided drafting class for architectural, electronic, and mechanical drafters. Students will use an IBM compatible computer with AutoCAD software to develop two-dimensional "computer drawn" drawings. Three hours lecture, four hours laboratory. (UC) Offered: F;S.

Drafting Technology 156—Advanced Computer Aided Design/Drafting—Electro/Mechanical (4)

Prerequisite: Drafting Technology 150AB

Recommended preparation: Drafting Technology 140.

This is a second semester course which presents an intensive study utilizing a Computer Aided Drafting (CAD) system to obtain graphic solutions, design refinements, modifications and delineations of electro-mechanical drawings. The course emphasizes high technology skills which are necessary to function as an entry level CAD operator in the field of electronics. Students use IBM computers with AutoCAD software. Three hours lecture, four hours non-lecture. Offered: F;S.

Drafting Technology 157—Advanced Computer Aided Design/Drafting—Mechanical (4)

Prerequisite: Drafting Technology 150AB

Recommended preparation: Drafting Technology 120 or concurrent enrollment.

This is a second semester course which presents an intensive study utilizing a Computer Aided Drafting (CAD) system to obtain graphic solutions, design refinements, modifications and delineations of working technical mechanical drawings. The course emphasizes basic high technology skills which are necessary to function as an entry level CAD operator in the field of mechanical design drafting. Students use IBM Computers with AutoCAD software. Three hours lecture, four hours non-lecture. Offered: F;S.

Drafting Technology 158—Advanced Computer Aided Design/Drafting—Architectural (4)

Prerequisite: Drafting Technology 150AB

Recommended preparation: Architectural Technology 180 and 185.

This is a second semester course which presents an intensive study utilizing a Computer Aided Drafting (CAD) system to obtain graphic solutions, design refinements, modifications and delineations of architectural drawings. The course emphasizes basic high technology skills which are necessary to function as an entry level CAD operator in the field of architecture. Students use IBM computers with AutoCAD software. Three hours lecture, four hours non-lecture. Offered: F;S.

Drafting Technology 159AB—Advanced 3-D Computer Aided Design/Drafting (1.5)

Prerequisite: The satisfactory completion of Drafting Technology 150AB, and Drafting Technology 156 or 157 or 158.

A basic 3-dimensional computer aided design/drafting course for architectural, mechanical, or electro-mechanical drafters. Students will use Windows based personal computers and AutoCAD software to develop a series of 3-dimensional drawings. One hour lecture, two hours non-lecture. Offered: F.

Information in italics designates the semester(s) in which the course is offered. The Division Office reserves the right to make changes as budget or other constraints warrant. F=Fall, S=Spring, Sum=Summer, Inter=Intercession

Drafting Technology 160—Dimensioning (4)

Prerequisite: Drafting Technology 110.

Covers basic and precision dimensioning practices, geometric dimensioning and tolerancing according to ASME Y14.5M 1994. A requirement for the drafting technology certificate programs. Three hours lecture, three hours non-lecture. Offered: F.

EARLY CHILDHOOD

Early Childhood 100AD—Parent/Infant Workshop (1)

This course is designed for expectant parents or parents of babies not yet walking. Effective ways of encouraging all levels of infant development. Class members will have opportunities to interact with infants in a supervised setting. Offered on a credit-no credit basis only. One hour lecture, one hour workshop activity. Offered: as needed.

Early Childhood 101AD—Parent/Toddler Workshop (1)

Laboratory workshop designed for parents and their toddlers. Effective ways of encouraging all levels of development will be presented. Parents will have opportunities to interact with their children in a supervised setting. Offered on a credit-no credit basis only. One hour lecture, one and one-half hour workshop activity. Offered: F;S.

Early Childhood 102AD—Parent/Child Preschool Workshop (2)

Workshop designed for parents and their children between the ages of 27 and 60 months. Through active participation with their children in a preschool setting, parents will learn ways of stimulating their child's development, alternative methods of child management, and different styles of adult/child communication patterns. Offered on a credit-no credit basis only. One hour lecture, two hours workshop activity. Offered: F;S.

Early Childhood 105—Introduction to Early Childhood Education (3)

This course is designed to introduce students to the field of early childhood education for children birth through age 12. Included are objectives, philosophies, and history of these programs, as well as career opportunities. Field trips will be taken to see the various programs discussed. Three hours. Offered: F.

Early Childhood 126—Cross-Cultural Perspectives on Child Development (3)

Prerequisite: Human Development 180.

An overview of the different microcultures to which students belong and the importance of understanding their own culture. Microcultures discussed are class, ethnicity and race, gender, exceptionalism, and age. Emphasis will be placed on the social and cultural conditions that influence education. Three hours. Offered: F;S.

Early Childhood 130—Language Arts in the Preschool (2)

Prerequisite: Human Development 180, or concurrent enrollment.

Exploration of language development in preschool children and activities that stimulate its growth including book selection, story telling, finger plays and poetry, flannel books, puppetry, dramatic play, language centers and language games. Two hours lecture, one hour laboratory. Offered: F;S.

Early Childhood 131—Creativity for Children (3)

Prerequisite: Human Development 180.

Methods for fostering creativity in children and teachers. Emphasis will be on cultivating music and art expression through application of developmental theory. TB clearance required. Two hours lecture, one hour laboratory, two hours arranged. Offered: F;S.

Early Childhood 132—Science in the Preschool (3)

Prerequisite: Human Development 180.

Physical and natural science activities that encourage children's thinking and problem solving skills. Emphasis on the development of programs and materials that allow for exploration and/or experimentation. The course also covers the development of physical and logico-mathematical knowledge. A portion of the course will cover food and nutrition. Three hours. Offered: F;S.

Early Childhood 155—Early Childhood Development Through Play (3)

Prerequisite: Human Development 180.

Use of play in the classroom to support the developing child. Emphasis on the value of play as a tool for learning in the cognitive, psycho-social and physical domains. Includes role of the teacher, role of the environment and characteristics of developmentally appropriate programs. Three hours. Offered: F;S.

Early Childhood 156—Early Childhood Laboratory (2)

Prerequisite: Early Childhood 155.

Beginning practical experiences that focus on establishing relationships with children and developing guidance, observation, play entry, and collaboration techniques in facilitating learning. TB clearance required. One hour lecture, three and one-half hours laboratory. Offered: F;S.

Early Childhood 157—Guidance for Preschool (3)

Prerequisite: Early Childhood 155.

Course covers theories of behavior, guidance techniques and parent communication. Emphasis on developing an understanding of children's behavior and encouraging positive esteem while helping the child work toward self-control. Three hours. Offered: F;S.

Early Childhood 165—Observing and Recording Child Behavior (2) (12 week course)

Prerequisite: Human Development 180.

A variety of observation tools, individual anecdotal and running records, time and event samplings, checklists, rating scales and case studies are discussed and practiced. TB clearance required. Three hours lecture, one and one-half hours laboratory. Offered: F;S.

Early Childhood 199AD—Current Issues in Early Childhood (.5-2) (1-9 week course)

Current issues in the field of early childhood education, rotating through a variety of topics, such as working with parents, public policy, and curriculum updates. May be taken for grades or on a credit-no credit basis. Four to nine hours. Offered: as needed.

Early Childhood 200—Preschool Programs—The Curriculum (3)

Prerequisite: Early Childhood 155.

Curriculum planning for preschool programs based on the individual developmental needs of the child. Emphasis on the importance of observations, schedule, routines, and parent communication. Introduction to the philosophy and history of early childhood education. Three hours. Offered: F;S.

Courses

Early Childhood 201—Early Childhood Field Experience (3)

Prerequisite: Early Childhood 200, or concurrent enrollment, and Early Childhood 156.

Practical experiences in preschool programs that focus on the individualized curriculum that addresses all areas of development, routines, and the role of the teacher. Course also covers observation and evaluation of children in play situations, the development of indoor and outdoor environments, positive guidance techniques, and staff relationships. TB clearance required. Two hours lecture, seven hours field experience. Offered: F,S,Sum.

Early Childhood 211—CDA Portfolio for Classroom Teachers (3)

Prerequisite: At least 600 hours of experience with 3 to 5 year old children within the past 5 years as a primary caregiver of at least 8 children.

Preparation of portfolio to demonstrate competency in meeting the specific needs of children in an early childhood classroom as required for the Child Development Associate credential. Approved for Head Start program. Three hours. Offered: as needed.

Early Childhood 220—Infant/Toddler Programs (3)

Prerequisite: Human Development 184.

Various kinds of programs for infants and toddlers including philosophies and program emphasis, appropriate routine learning experiences, environments, and provisions for health and safety of the infant and toddlers. Focus on the development of curriculum to meet the individual needs of the children and the role of the teacher in facilitating the child's growth through play. Three hours. Offered: S.

Early Childhood 221—Infant and Toddler Field Experience (3)

Prerequisite: Human Development 184 and Early Childhood 220 or concurrent enrollment.

Participation in day care and half-day programs for infants and toddlers. TB clearance required. Two hours lecture, seven hours field/clinical. Offered: F,S.

Early Childhood 229—School-Age Creative Activities (3)

Prerequisite: Human Development 182.

School-age movement, recreation, and creative activities suitable for after school child care. The course also includes planning and implementing an appropriate program. Two hours lecture, one hour non-lecture, two hours arranged. Offered: S.

Early Childhood 230—Early Primary Curriculum: Materials and Methods (3)

Prerequisite: Human Development 182.

Developmental characteristics of the child age 5-8 years. Course covers cognitive learning theory, developmentally appropriate curriculum practices, role of the teacher, staff relationships, and parent communication. Three hours. Offered: F,S.

Early Childhood 231—School-Age Field Experience (3)

Prerequisite: Early Childhood 229.

Assigned participation in routines and activities in after-school child care programs. TB clearance required. Two hours lecture, six hours non-lecture. Offered: F,S.

Early Childhood 232—Primary Aide Field Experience (3)

Prerequisite: Early Childhood 230 or concurrent enrollment.

The student will participate in routines and activities in an early primary school classroom. TB clearance required. Two hours lecture, six hours non-lecture. Offered: F,S.

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Course numbers followed by an AB, AC, or AD may be repeated once, twice or three times respectively.

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Early Childhood 261—Learning Title 22 (.5) (1-9 week course)

Point by point discussion of California Code of Regulations, Title 22, Division 12, Chapters 1 and 2 regulations for child care program. Offered on a credit-no credit basis only. One to nine hours. Offered: F.

Early Childhood 262—Disaster Preparedness for Child Care (.5) (1-9 week course)

A study of considerations of natural or man-made disasters to assist child care providers in the development of a comprehensive plan to ensure an effective response to emergency situations. Offered on a credit-no credit basis only. One to nine hours. Offered: S.

Early Childhood 263—Child Abuse I.D. and Referral (.5) (1-9 week course)

Ways to identify children who are abused and programs to assist both the child and the offender. Discussion of state mandated reporting system and procedures in recordkeeping for the teacher and director in a child care program. Offered on a credit-no credit basis only. One to nine hours. Offered: F,S.

Early Childhood 275—Early Childhood Administration—Program (3)

Prerequisite: Early Childhood 200.

Supervision and administration of an early childhood program with emphasis on theories, principles, concepts of program and curriculum development, legal, financial, and administrative policies, and program evaluation. Three hours. Offered: F.

Early Childhood 276—Early Childhood Management (3)

Prerequisite: Early Childhood 275.

Supervision and administration of an early childhood program with emphasis on leadership, personnel management, communication, problem solving, working with parents, financial, and ethical issues. Three hours. Offered: S.

Early Childhood 277—Adult Supervision in Early Childhood Programs (2) (12 week course)

Prerequisite: Early Childhood 200.

Methods and principles of supervising adults in early childhood programs. Emphasis on the role of experienced teachers who function as mentors while simultaneously addressing the needs of children, parents, and staff. Three hours. Offered: as needed.

ECOLOGY (See Biology)

Ecology 100—Environment and Man (3)

A lecture course which includes the physical and biological components of the environment, their interrelationships, and the human population influence on these components. Physical, biological and political means of reversing environmental deterioration will be considered, as well as conservation and management of natural resources. The course is suitable as a general education elective for the non-science major and also for students in environmental science or other natural sciences. Three hours. (UC) Offered: F,S.

Ecology 110—Island Ecology (3)

The principles of ecology will be applied to islands of the world, discussing both terrestrial and marine ecology. Tropical and temperate islands will be used as examples ranging from California's Channel Islands to islands in every ocean area of the world. May be taken for grades or on a credit-no credit basis. Three hours. (UC credit limitation) Offered: as needed.

Ecology 120—Wildlife of Southern California (3)

Mammals, reptiles, amphibians, birds and tidepool organisms common to Southern California will be studied. Identification, behavior and effects of urbanization will be emphasized. May be taken for grades or on a credit-no credit basis. Three hours. (UC) Offered: S.

Ecology 121—Marine Intertidal Ecology (1) (9 week course)

Aspects of the marine intertidal environment of Southern California. A field oriented laboratory experience for non-biology majors. May be taken for grades or on a credit-no credit basis. One hour lecture, three hours laboratory. Offered: as needed.

Ecology 122—Desert Ecology (1) (9 week course)

A course which acquaints the student with the basic ecological aspects of the desert southwest. May be taken for grades or on a credit-no credit basis. Two hours. Offered: as needed.

Ecology 122L—Desert Ecology Lab (.5) (9 week course)

A field study course designed to acquaint students with the ecology of our local deserts. Two all-day field trips. May be taken for grades or on a credit-no credit basis. Two hours laboratory/field. Offered: as needed.

Ecology 124—Ecology of the Gray Whale (1) (9 week course)

Ecology and history of the California Gray whale. Completion qualifies students as docents on whale watching boats. May be taken for grades or on a credit-no credit basis. Two hours. Offered: as needed.

Ecology 130—Endangered Species (3)

Endangered animal and plant species. Causes of extinction, protection and preservation. Course covers both terrestrial and aquatic species worldwide with a special emphasis on California. May be taken for grades or on a credit-no credit basis. Three hours. (UC) Offered: F.

ECONOMICS

Economics 100—Economics: General Concepts (3)

Provides the student with a general understanding of the concepts, principles, and methods of microeconomics and macroeconomics at the introductory level. May be taken for grades or on a credit-no credit basis. Three hours. (UC credit limitation) Offered: F,S.

Courses

Economics 110—Consumer Economics (3)

An applied approach to the problems and possibilities confronting the consumer in today's economy. Emphasis is placed on the development of skills in personal financial planning: decision making, use of credit and principles of saving and investment. Special attention is given to the problems in housing, transportation, health services and insurance. Issues of personal taxation, government regulation and environmental protection are considered in relation to consumer interest. May be taken for grades or on a credit-no credit basis. Three hours. Offered: F;S.

Economics 180—Macroeconomics (3) (CAN ECN 2)

An introduction to the principles and problems of macroeconomics. Covers economic concepts and principles as applied to markets, national income, unemployment, inflation, economic growth, fiscal and monetary policy, banking, the Federal Reserve System, and international economics. Three hours. (UC) Offered: F;S;Sum.

Economics 185—Microeconomics (3) (CAN ECN 4)

An introduction to the principles and problems of microeconomics. Covers economic concepts and principles as applied to markets, analysis of costs, consumer behavior, determining consumer optimum conditions, behavior of producers, determining the producers optimum in the goods and services market and in the factors markets, the structure of markets and how they influence and limit competition, labor, capital, information and entrepreneurship, public goods, and international economics. Three hours. (UC) Offered: F;S;Sum.

EDUCATION

(See also Psychology 125, Communications N151AD and N153AD)

Education 100—The Teaching Profession (3)

Examination of opportunities, requirements, responsibilities and rewards in teaching. Skills needed and problems encountered by volunteer classroom assistants. Classroom experience. Offered on a credit-no credit basis only. Two hours lecture, two hours laboratory. Offered: S.

Education 101—Approaches to Classroom Teaching (3)

An introductory course for students interested in working in a multicultural or bilingual educational setting with focus on methods of teaching reading, writing and critical thinking across the disciplines. Three hours. Offered: as needed.

Education 110—Introduction to Bilingual Classroom Methods (3)

Prerequisite: English 100.

An introduction to bilingual teaching methodology including various approaches and techniques used in the classroom and model bilingual programs. Effective techniques for bilingual classroom aides will also be presented. Three hours. Offered: as needed.

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ELECTRONICS TECHNOLOGY

Electronics Technology 047—Electronic Problem Solving (3)

Topics from basic algebra and trigonometry will be applied toward the solution of both DC and AC passive circuitry problems. Three hours. Offered: F;S.

Electronics Technology 135—Basic Digital Technology (3)

Binary numbers, boolean algebra, logic circuits, De Morgan's Theorems, binary addition, flip-flops, and registers. Two and one-half hours lecture, one and one-half hours laboratory. Offered: F;S.

Electronics Technology 140—Technical Electronics (3)

An introduction to electronics using simple mathematics. Students learn schematic symbols and their use in wiring diagrams. Emphasis is on the operation of basic electronic circuits and various components. Students investigate circuitry by performing basic test procedures. Two hours lecture-demonstration, two hours laboratory. Offered: F;S.

Electronics Technology 146—Introduction to Basic Computer Installation (3)

Introductory overview of personal computer installation, peripheral interfacing and software installation. Troubleshooting techniques leading to the identification and solution of simple hardware and software problems. Replacement of peripheral devices. This course is targeted for the person with little or no computer experience. Two hours lecture, two hours non-lecture. Offered: F;S.

Electronics Technology 150—Introductory Electronics, D.C. (3)

Prerequisite: Electronics Technology 047, or concurrent enrollment.

Principles of DC circuitry. Analysis of circuits covers simple DC circuits with Ohm's Law, series, parallel DC circuits. Lab work covers operation of electronic voltmeters and power supplies. Students with credit for Electronics Technology 180 may not receive credit for Electronics Technology 150. Two and one-half hours lecture, two hours laboratory. Offered: F;S.

Electronics Technology 153AB—Programmable Logic Controller (1.5) (9 week course)

Recommended preparation: Electronics Technology 150.

Introduction to ladder logic programming applied to PLC's. Coursework covers writing programs, installation, and wiring of PLC modules and racks to external sensors and loads. Initialization, setup, program loading, system monitoring, and debugging are covered. Laboratory covers PC to PLC interface, program run, monitoring, and use of DMM in system troubleshooting. Two hour lecture, one and one-half hours laboratory. Offered: F;S.

Electronics Technology 155—Introductory Electronics, A.C. (3)

Prerequisite: Electronics Technology 150.

Principles of AC circuitry. Analysis of circuits covers AC circuits with reactance and impedance, series and parallel resonance, and transient circuits with time constant concepts. Lab work covers operation of electronic voltmeters, oscilloscopes, power supplies, and signal generators for circuit measurements. Students with credit for Electronics Technology 180 may not receive credit for Electronics Technology 155. Two and one-half hours lecture, two hours laboratory. Offered: F;S.

Electronics Technology 160—Analog Semiconductor Circuits (4)

Prerequisite: Electronics Technology 155 or 180.

Fundamentals and applications of semiconductor devices in basic electronic circuits including power supplies, voltage amplifiers and power amplifiers. Devices include diodes, bipolar transistors and field-effect transistors. Labs involve breadboarding circuits, using electronic instrumentation to observe proper operation and troubleshooting. Three hours lecture, three hours laboratory. Offered: F;S.

Electronics Technology 165—Pulse Circuits (4)

Prerequisite: Electronics Technology 155 or 180.

The study of decibels, pulse waveforms, RC networks, switching diodes and transistors, regulators, operational amplifiers, signal conditioners and pulse generating circuits. Three hours lecture, three hours laboratory. Offered: F;S.

Electronics Technology 170—Electronic Construction Techniques (3)

Recommended preparation: Electronics Technology 155 or 180, or concurrent enrollment.

Skill development in the areas of safety, recognition, and reading of various schematic, wiring and servicing diagrams, component familiarization and testing, use of hand tools as they apply to soldering, desoldering, wiring, and electronic assembly, use of equipment to test and troubleshoot electronic circuitry. Students are provided the opportunity to incorporate all these skills in the building of a final project which involves printed circuit board assembly, testing, troubleshooting, and packaging. Student must furnish safety glasses. Two hours lecture, four hours laboratory. Offered: F;S.

Electronics Technology 180—Basic Electronics (6)

Prerequisite: Electronics Technology 047, or concurrent enrollment.

Principles of DC and AC circuitry. Analysis of circuits covers simple DC circuits with Ohm's Law, series, parallel DC circuits, AC circuits with reactance and impedance, series and parallel resonance, and transient circuits with time constant concepts. The lab work covers operation of electronic voltmeters, oscilloscopes, power supplies, and signal generators for circuit measurements. This course combines the content of Electronics Technology 150 and 155. Five hours lecture, four hours laboratory. Offered: F;S.

Electronics Technology 206—Integrated Circuit Manufacturing (3)

Recommended preparation: Electronics Technology 180 and Chemistry 110.

Integrated circuit manufacturing techniques, practices and methods will be presented and the electrical, mechanical, physical and chemical principles undertaken to fabricate integrated circuits will be introduced. The tools and machinery utilized in the production of integrated circuits and their installation will be described. Access to the various knowledge bases required by integrated circuit manufacturers including the Internet will be included. The course will conclude with a field trip to a local manufacturer of integrated circuits. May be taken for grades or on a credit-no credit basis. Three hours lecture, 1.0 hour non-lecture. Offered: as needed.

Courses

Electronics Technology 215—Communications Systems (3)

Prerequisite: Electronics Technology 160 or Aviation Technology 182.

A study of basic communications systems, including AM, FM, television, radar, antennas, and transmission lines. Three hours. Offered: S.

Electronics Technology 241—Digital Computers and Microprocessors (4)

Prerequisite: Electronics Technology 135.

Architecture, hardware, and programming of digital computers and microprocessors. Instruction sets, bus control, input/output interface, support chips, memory, microprocessor applications. Four hours. Offered: F;S.

Electronics Technology 245—Applied Digital Circuits (4)

Prerequisite: Electronics Technology 241.

An advanced course designed to develop hands-on skills and knowledge of integrated circuits commonly used in digital systems and microcomputers. Emphasis is on the Z80 microprocessor. Three hours lecture, three hours laboratory. Offered: F;S.

Electronics Technology 246—Computer Installation and Repair (3)

Prerequisite: Electronics Technology 180 or 155 and 241.

Overview of personal computer microprocessor, motherboard and peripheral interfaces. Troubleshooting techniques leading to the identification and solution of hardware and software problems. Replacement of some components and most peripheral devices. Two hours lecture, two and one-half hours laboratory. Offered: S.

Electronics Technology 286—Electronic Measurements (3)

Prerequisite: Electronics Technology 135 and 180.

An in-depth investigation of electronic measurements, devices and instruments, controllers, peripherals, and interfaces. Equipment includes DVM's, oscilloscopes, counters, microprocessors, printers, and other readouts. Three hours. Offered: F.

Electronics Technology 290—Electronic Troubleshooting (3)

Prerequisite: Electronics Technology 135, 170 and 180.

A course focusing on the technician's approach to circuit fault diagnosis. Applications of various test equipment necessary to troubleshoot to component level will be discussed. Both single and multi-stage devices will be examined in analog and digital systems. Two hours lecture, three hours laboratory. Offered: F;S.

EMERGENCY MEDICAL TECHNOLOGY

Emergency Medical Technology 100—Emergency Medical Care (3)

Advanced first aid and cardiopulmonary resuscitation. Upon completion, a first aid card from the National Safety Council and Heartsaver CPR card from the American Heart Association will be issued. Three hours. Offered: F;S;Sum.

Emergency Medical Technology 145—Emergency Medical Care for Children (1) (9 week course)

Pediatric CPR and first aid for the licensed child care provider. Completion qualifies the participant for CPR and first aid certification. Meets the California Child Care Standards. Two and one-half hours lecture, one-half hour non-lecture. Offered: F;S.

All courses numbered 100 or higher are transferable to the California State Universities (CSU).

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Course numbers followed by an AB, AC, or AD may be repeated once, twice or three times respectively.

Courses that are non-credit or not AA applicable are designated with the letter "N" preceding the course number.

Emergency Medical Technology 150—EMT-1 (5.5)

Prerequisite: Standard first aid and CPR, or Emergency Medical Technology 100. This prerequisite will be validated in class during the first week of the course.

Corequisite: Emergency Medical Technology 151.

An overview of the EMT-1 role and responsibilities. The evaluation and treatment of medical, traumatic, environmental, obstetrical, pediatric, and psychological emergencies including extrication and transport of the sick or injured patient. Performance of the skills necessary to treat prehospital emergencies. Qualifies the student to sit for the EMT-1 certifying exam. Five hours lecture, one hour laboratory. Offered: F;S.

Emergency Medical Technology 151—EMT-1 Clinical Internship (.5) (6 week course)

Corequisite: Emergency Medical Technology 150.

Application and practice of skills and knowledge gained from EMT 150 in the emergency room of an acute hospital and on a BLS ambulance unit. Offered on a credit-no credit basis only. Three hours clinical. Offered: F;S.

ENGINEERING

Engineering 180—Engineering Graphics (3) (CAN ENGR 2)

Prerequisite: Mathematics 170, or concurrent enrollment.

Graphical representation in the analysis and computation of space problems, empirical data, and mathematical relationships. Two hours lecture, four hours laboratory. (UC) Offered: F;S.

Engineering 270—Computer Programming for Engineering, Mathematics and Sciences (4) (CAN CSCI 20)

Prerequisite: Mathematics 157 or 180 or 182H.

Programming techniques and numerical analysis for digital computers emphasizing applications in science, mathematics, and engineering. Fortran programming with laboratory work on digital computers. Same as Computer Science 270 and Mathematics 270. Students completing Engineering 270 may not receive credit for Computer Science 270 or Mathematics 270. Four hours. (UC) Offered: S.

Engineering 280—Statics (3) (CAN ENGR 8)

Prerequisite: Physics 185 and Mathematics 185.

Vector mechanics, covering force diagrams, moment of a force, centroids, beams, trusses, friction, hydrostatics, and moments of inertia. Three hours. (UC) Offered: F;S.

Engineering 285—Engineering Circuits (4)

Prerequisite: Physics 280 and Mathematics 185.

Analysis of electric circuits, including DC circuits, network theorems, energy sources, transient analysis, sinusoidal, analysis, phasers, AC power, complex frequency and frequency response of circuits. Lab will include connection of circuits and observation of circuit behavior using electronic instrumentation. Three hours lecture, three hours laboratory. (UC) Offered: S.

ENGLISH Basic Skills

Native fluency in English required. Not intended for students in English as a Second Language.

English N005AB—Basic Reading Skills (3)

A sequence of reading lessons for students who wish to improve basic reading skills. May be taken for grades or on a credit-no credit basis. Three hours. Not applicable to AA degree. Offered: F;S.

English 050—Introduction to College Reading (3)

Theory and practice of fundamental reading skills, finding main idea, identifying supporting details, drawing inferences, and increasing rate. Special attention will be given to critical reading and to particular problems in content areas. Recommended for all students. May be taken for grades or on a credit-no credit basis. Three hours. Offered: F;S.

English N051—How to Survive in College (2) (9 week course)

Prerequisite: Concurrent enrollment in a lecture course.

Applying reading and writing skills to taking lecture notes, studying from texts, performing on essay and objective exams. Effective use of the dictionary and other writing sources, as well as techniques to improve spelling and increase vocabulary. A brief review of basic grammar is included. Instruction and practice in time management, organizational procedures and memory improvement. Discovery and awareness of the self and other cultures to enhance individual and group learning. May be taken for grades or on a credit-no credit basis. Four hours. Not applicable to AA degree. Offered: F;S.

English N055—Writing in College (2) (9 week course)

Applying reading, writing, and computer skills to taking lecture notes, studying from texts, performing on essay and objective exams, and researching. Effective use of both text- and computer-based resources to improve college writing. Instruction and practice in incorporating time management, organization, and memory improvement in college study and writing. Understanding of the dynamics of the college classroom to enhance individual and group learning. May be taken for grades or on a credit-no credit basis. Four hours lecture. Not applicable to AA degree. Offered: F;S;Sum.

English N057—Spelling Techniques (1.5) (9 week course)

Training in phonics, prefix-root-suffix combinations, applying rules and memory strategies and using the dictionary to improve spelling. May be taken for grades or on a credit-no credit basis. Three hours. Not applicable to AA degree. Offered: as needed.

English N060—Grammar (1.5) (9 week course)

Basic concepts and definition of terms in grammar applied to writing and speaking the English language and the study of foreign languages. Offered on a credit-no credit basis only. Three hours. Not applicable to AA degree. Offered: as needed.

Courses

English N061—Vocabulary Building 1 (1.5) (9 week course)

Roots and history of the English language to facilitate vocabulary building and retention. Not designed for non-native speakers of English. This course is offered as a complement to English 062. May be taken for grades or on a credit-no credit basis. Three hours. Not applicable to AA degree. Offered: F;S.

English N062—Vocabulary Building 2 (1.5) (9 week course)

Vocabulary study and development including history of the English language, word roots and meaning comparisons. Students need not have taken English 061 to enter and benefit from the course. Not intended for non-native speakers. May be taken for grades or on a credit-no credit basis. Three hours. Not applicable to AA degree. Offered: F;S.

Composition and Related Studies

English N098—English Skills (4)

Prerequisite: Appropriate English placement score.

Study skills, reading, vocabulary, grammar, elemental principles of sentence structure, paragraph development, organization of ideas, punctuation and spelling. May be taken for grades or on a credit-no credit basis. Four hours. Not applicable to AA degree. Offered: F;S.

English 099—Fundamentals of Composition (3)

Prerequisite: English N098 with a grade of 'C' or better, OR appropriate English placement score.

Instruction in the fundamentals of grammar, sentence structure, pre-compositional techniques, paragraph development, and essay construction. Practice in reading and textual analysis, critical thinking skills and clear writing. Emphasis on writing structurally varied and grammatically correct sentences and clearly organized, appropriately detailed paragraphs leading to and frequent practice in the construction of the expository essay. May be taken for grades or on a credit-no credit basis. Four hours. Offered: F;S;Sum.

English 100—Freshman Composition (3) (CAN ENGL 2)

Prerequisite: English 099 or ESL 199AC with a grade of 'C' or better, OR appropriate English placement score.

Expository essay writing, reading and analysis, and the application of critical thinking skills. Emphasis upon analytical thinking, clear writing and the reasoned support of ideas. Instruction and practice in choosing a thesis, assembling supporting evidence, analyzing textual materials, organizing and synthesizing information, and developing a clear style and appropriate tone. Includes reading and analysis of published essays, practice in research techniques and the production of a research paper. Four hours. (UC) Offered: F;S;Sum.

English 101—Critical Reasoning, Reading, and Writing Through Literature (3) (CAN ENGL 4)

Prerequisite: English 100.

Course focuses on critical thinking skills, close textual analysis, and composition of the college essay. Students will apply critical thinking skills and research practices in writing analytical and argumentative essays about literature (fiction, poetry, drama). May be taken as a second composition course following English 100. Four hours. (UC credit limitation) Offered: F;S;Sum.

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English 101H—Honors Critical Reasoning, Reading, and Writing Through Literature (3)

Prerequisite: English 100.

Course focuses on critical thinking skills, close textual analysis, and composition of the college essay. Students apply critical thinking skills and research practices in writing analytical and argumentative essays about literature (fiction, poetry, drama). May be taken as the second composition course following English 100. Four hours. (UC credit limitation) Offered: as needed.

English 102—Critical Reasoning, Reading, and Writing Through Nonfiction (3)

Prerequisite: English 100.

Course focuses on critical thinking skills, close textual analysis, and composition of the college essay. Students apply critical thinking skills and research practices in reading and writing essays of exposition and argumentation. The literature that serves the development of these thinking, reading, and writing skills is primarily nonfiction that addresses significant human and social issues and that represents various academic fields. May be taken as the second composition course following English 100. Four hours. (UC credit limitation) Offered: F;S.

English 102H—Honors Critical Reasoning, Reading, and Writing Through Nonfiction (3)

Prerequisite: English 100.

Course focuses on critical thinking skills, close textual analysis, and composition of the college essay. Students apply critical thinking skills and research practices in reading and writing essays of exposition and argumentation. The literature that serves the development of these thinking, reading, and writing skills is primarily nonfiction that addresses significant human and social issues and that represents various academic fields. May be taken as the second composition course following English 100. Four hours. (UC credit limitation) Offered: as needed.

English 104—College Reading Mastery (3)

A college-level course emphasizing critical reading and learning skills in academic or vocational courses. Course content includes critical thinking skills, vocabulary mastery, textbook reading strategies, and techniques to build reading speed. May be taken for grades or on a credit-no credit basis. Three hours. Offered: F;S.

English 105—Technical Report Writing (3)

Designed primarily as a course for students who have been introduced to the kind of materials presented in English 110. Required for students in the technical writing program, and recommended for students in occupational programs and for students wanting to explore technical writing as a career. Designed to help technical majors understand the structure and content of technical report writing used in industry. Emphasizes writing, editing and evaluating the student's own written projects, which may include such documents as instructions, procedures, scientific reports, technical articles, feasibility reports and proposals. May be taken for grades or on a credit-no credit basis. Four hours. Offered: S.

English 106—Documentation/Computer Graph-

ics (3)

Prerequisite: Programming course or experience.

An adjunct course for students in programming courses in computer graphics and other computer applications to learn written English skills and technical format used in documenting computer software. Emphasis on writing and testing student work. May be taken for grades or on a credit-no credit basis. Four hours. Offered: as needed.

English 108—Introduction to Library Resources (1)

How to cope with the ever expanding world of information through the use of the library. Designed to develop investigative methods for research useful in any size or type of library. Students may enroll any time during the semester. Offered on a credit-no credit basis only. Two hours. (UC) Offered: F;S;Sum.

English 110—Technical Writing (3)

Recommended preparation: English 100.

An introduction to the basic principles and practices of technical writing which includes short reports, planning, scheduling, format, graphics and layout. Recommended for introductory students, as well as those majoring in such fields as business, technology, sciences, engineering, human services and political science. Four hours. Offered: as needed.

English 117AD—Feature Writing (3)

Prerequisite: Communications 110 and English 100 or concurrent enrollment.

A writing workshop focusing on student writing and marketing in-dept non-fiction feature articles. Emphasis will be on guiding students and developing interesting non-fiction stories from the idea stage through publication and finding suitable markets for publication. The course is designed for beginning, intermediate, and advanced writers seeking practice and input in producing lengthy feature articles. Same as Communications 117AD. Students completing English 117AD may not receive credit for Communications 117AD. May be taken for grades or on a credit-no credit basis. Three hours. Offered: F;S.

Creative Writing

English 119—Introduction to Creative Writing (3) (CAN ENGL 6)

Prerequisite: English 100, or concurrent enrollment.

Designed to familiarize the student with techniques in fiction, poetry and scriptwriting. The student will become acquainted with the techniques of creative writing through: 1) close reading of short stories, poetry and plays, and 2) writing exercises which involve these forms. May be taken for grades or on a credit-no credit basis. Four hours. (UC) Offered: F;S.

English 121AD—Short Story Workshop (3)

Prerequisite: English 100.

Recommended preparation: English 119.

Emphasizes student production of the short story form and includes readings and lectures on the theory and practice of short story writing. Primarily centers upon discussion and evaluation of student work. Designed for beginning, intermediate or advanced writers desiring practice in the form. May be taken for grades or on a credit-no credit basis. Four hours. (UC credit limitation) Offered: F;S.

English 122AD—Novel Workshop (3)

Prerequisite: English 100.

Recommended preparation: English 119.

A course focusing on student production in the novel form with emphasis on discussion, criticism and evaluation of student novel fragments or completed manuscripts. The course is designed for beginning, intermediate or advanced writers seeking practice and guidance in the novel craft. May be taken for grades or on a credit-no credit basis. Four hours lecture. (UC credit limitation) Offered: F;S.

Courses

English 124AB—Intensive Journal Writing (1.5) (9 week course)

An introductory course in creative journal writing designed for anyone interested in a unique method of personal exploration. This journal method makes use of writing techniques that create an interplay between past, present, conscious and unconscious experience. The method will aid in clarifying or restructuring the person's immediate and life goals through writing. Offered on a credit-no credit basis only. Three hours. Offered: F;S.

English 126AD—Poetry Workshop (3)

Prerequisite: English 100.

Recommended preparation: English 119.

A course emphasizing student writing in poetic forms. The course, which includes lectures and discussions on the theory and practice of poetry, focuses primarily on the discussion and evaluation of student work. This course is designed for beginning, intermediate and advanced writers seeking practice and guidance in poetry writing. May be taken for grades or on a credit-no credit basis. Three hours. **(UC credit limitation)** Offered: as needed.

English 127—Scriptwriting (3)

Prerequisite: English 100.

Recommended preparation: English 119.

This is a writing workshop in which students gain professional insight into scriptwriting techniques for stage, television and feature films. Students learn how to write a beginning and ending, synopsis, treatment, step outline, and a brief scene designated for the stage as well as television or the movies. The class focuses upon the discussion of student works and their evaluation by the instructor. May be taken for grades or on a credit-no credit basis. Three hours. **(UC credit limitation)** Offered: F;S.

English 128AC—Advanced Scriptwriting (3)

Prerequisite: English 127.

An advanced writing workshop continuing the skills introduced in English 127. May be taken for grades or on a credit-no credit basis. One hour lecture, six hours non-lecture. **(UC credit limitation)** Offered: S.

English 131—Writing Reviews and Criticism (3)

Prerequisite: English 100.

Techniques and principles of writing reviews and criticism. Includes the study of the works of noted critics and involves attendance and notetaking at concerts, play, films, recitals and exhibitions. Students should expect to pay for tickets to at least four events. May be taken for grades or on a credit-no credit basis. Three hours. Offered: as needed.

Literature

English 140—Introduction to Literature (3)

Recommended preparation: English 100.

Read, analyze, and write on important texts of literature taken from a wide variety of literary genres, forms, themes, periods, and nationalities. Examine the philosophical, cultural, mythic, religious, and/or historical elements related to these texts. Appreciate the literary devices and styles evident in individual works and the commentary made by these works on moral, social, and aesthetic issues. See schedule of classes for special focus. Not open to students who have credit in English 103. May be taken for grades or on a credit-no credit basis. Three hours. **(UC credit limitation)** Offered: as needed.

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Course numbers followed by an AB, AC, or AD may be repeated once, twice or three times respectively.

Courses that are non-credit or not AA applicable are designated with the letter "N" preceding the course number.

English 141—The Bible As Literature (3)

Recommended preparation: English 100.

Read, analyze, and write about important texts of the Old and New Testament. Examine the philosophical, cultural, mythic, religious, and/or historical elements related to Bible literature. Appreciate the literary devices and styles evident in the books of the Bible and the commentary made by individual works in the Bible on moral, social, and aesthetic issues. Examine the influence of the Bible on the student's own cultural background. Same as Religious Studies 180. Students completing English 141 may not receive credit for Religious Studies 180. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: F;S.

English 143—Children's Literature and Film (3)

Recommended preparation: English 100.

Read, analyze, and write on important texts of children's literature. Examine the philosophical, cultural, mythic, religious, and/or historical elements related to children's literature. Appreciate the literary devices and styles evident in individual works and the commentary made by these works on moral, social, and aesthetic issues. Includes discussion of adolescent literature and a survey of art as an integral part of the written story. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: as needed.

English 144—Introduction to the Short Story (3)

Recommended preparation: English 100.

Read, analyze, and write on important short stories. Examine the philosophical, cultural, mythic, religious, and/or historical elements related to short stories. Appreciate the literary devices and styles evident in individual works and the commentary made by these works on moral, social, and aesthetic issues. Includes discussion of literary periods such as romanticism, realism, modernism, and post-modernism. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: as needed.

English 147—Introduction to Science Fiction (3)

Prerequisite: English 100.

Read, analyze, and write on important texts of primarily American and British science fiction. Examine the philosophical, cultural, mythic, religious, and/or historical elements related to science fiction. Appreciate the literary devices and styles evident in individual works and the commentary made by these works on moral, social, and aesthetic issues. Includes discussion of the ways writers interested in science and technical achievement link those concerns with other literary and philosophical issues. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: as needed.

English 148—Film As Literature (3)

Recommended preparation: English 100.

View, analyze, and write on important foreign and American films. Examine the philosophical, cultural, mythic, religious, and/or historical elements related to film. Appreciate the literary devices and styles evident in individual works and the commentary made by these works on moral, social, and aesthetic issues. Includes discussion of the literary elements of film as opposed to the historical development or production aspects of film. Some discussion of the strengths and weaknesses of adapting novels to films. Typical film makers include Allen, Bergman, Bertolucci, Chabrol, Losey, Lynch, Oshima, Yimou. May be taken for grades or on a credit-no credit basis. Four hours. **(UC)** Offered: F;S.

English 149—Introduction to Dramatic Literature (3)

Recommended preparation: English 100.

Read, analyze, and write on important texts of drama from the ancient classical periods through the present. Examine the philosophical, cultural, mythical, religious, and/or historical elements related to these texts. Appreciate the literary devices and styles evident in individual works and commentary made by these works on moral, social, and aesthetic issues. Typical writers include Sophocles, Aristophanes, Shakespeare, Ibsen, Shaw, Chekhov, Anouilh, Miller, and Tennessee Williams. May be taken for grades or on a credit-no credit basis. Three hours. Offered: F;S.

English 150—American Literature Before the 20th Century (3) (CAN ENGL 14)

Recommended preparation: English 100.

Read, analyze, and write on important texts of America from the Colonial period through the periods of early Realism and Naturalism. Examine the philosophical, cultural, mythic, religious, and/or historical elements related to these texts. Appreciate the literary devices and styles evident in individual works and the commentary made by these works on moral, social, and aesthetic issues. Typical writers include indigenous Americans, Apess, Dickinson, Franklin, Poe, Hawthorne, Jacobs, Melville, Thoreau, Twain, Whitman. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: S.

English 151—American Literature in the 20th Century (3) (CAN ENGL 16)

Recommended preparation: English 100.

Read, analyze, and write on important texts of America from the early part of the 20th century through the present. Examine the philosophical, cultural, mythic, religious, and/or historical elements related to these texts. Appreciate the literary devices and styles evident in individual works and the commentary made by these works on moral, social, and aesthetic issues. Typical writers include Bishop, Ellison, Faulkner, Frost, Gilman, Ginsberg, Hemingway, Hong Kingston, James, Morrison, O'Connor, Stevens, Wharton. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: F;S.

English 152—American Ethnic Literature (3)

Recommended preparation: English 100.

Read, analyze, and write on important texts by Native, Hispanic, African, and Asian Americans, and other multicultural writers of the United States. Examine the philosophical, cultural, mythic, religious, and/or historical elements related to these texts. Appreciate the literary devices and styles evident in individual works and the commentary made by these works on moral, social, and aesthetic issues. Includes discussion of the ethnic contribution to mainstream American literature, as well as the diversity of the ethnic literary voice. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: as needed.

Courses

English 156—California Literature (3)

Prerequisite: English 100.

Read, analyze, and write on a range of California literature texts including poetry, essay, drama, short story, and novel. Examine the philosophical, cultural, mythical, religious, and/or historic elements related to these texts. Typical writers include Twain, Norris, Steinbeck, Chandler, Tan, Ginsberg, and Kingston. May be taken for grades or on a credit-no credit basis. Three hours. Offered: as needed.

English 157—Literature of the American West (3)

Recommended preparation: English 100.

Read, analyze, and write on important texts of the American West. Examine the philosophical, cultural, mythic, religious, and/or historical elements related to these texts. Appreciate the literary devices and styles evident in individual works and the commentary made by these works on moral, social, and aesthetic issues. Typical writers include Abbey, Bierce, Norris, Silko, Steinbeck, Twain. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: as needed.

English 160—World Literature Through Renaissance (3)

Recommended preparation: English 100.

Read, analyze, and write on important texts of the Eastern and Western world from classical periods through the Renaissance. Examine the philosophical, cultural, mythic, religious, and/or historical elements related to these texts. Appreciate the literary devices and styles evident in individual works and the commentary made by these works on moral, social, and aesthetic issues. Typical writers include Euripides, Sophocles, Aeschylus, Biblical writers, Virgil, Ovid, Li Po, Dante, and Rabelais. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: F,S.

English 161—World Literature Since Renaissance (3)

Recommended preparation: English 100.

Read, analyze, and write on important texts of the world from the Baroque and Neo-classical period to the present. Examine the philosophical, cultural, mythic, religious, and/or historical elements related to these texts. Appreciate the literary devices and styles evident in individual works and the commentary made by these works on moral, social, and aesthetic issues. Typical writers include Achebe, Basho, Camus, Dostoevsky, Flaubert, Cao Kuegun, Mann, Moliere, Rousseau, Tolstoy, Wu Ch'eng-en, Voltaire. Includes discussion of writers outside the Western world. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: F,S.

English 165—Introduction to Irish Literature (3)

Recommended preparation: English 100.

Read, analyze, and write on important texts of Irish literature from the earliest periods to the present. Examine the philosophical, cultural, mythic, religious, and/or historical elements related to these texts. Appreciate the literary devices and styles evident in individual works and the commentary made by these works on moral, social, and aesthetic issues. Typical writers include anonymous writers of Irish myths, legends, and folklore, early poets, O'Casey, Lady Gregory, Joyce, Shaw, Synge, Wilde, Yeats. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: as needed.

Information in italics designates the semester(s) in which the course is offered. The Division Office reserves the right to make changes as budget or other constraints warrant. F=Fall, S=Spring, Sum=Summer, Inter=Intercession

English 170—Survey of Contemporary Literature (3)

Recommended preparation: English 100.

Read, analyze, and write on important texts of contemporary literature. Examine the philosophical, cultural, mythic, religious, and/or historical elements related to these texts. Appreciate the literary devices and styles evident in individual works and the commentary made by these works on moral, social, and aesthetic issues. Includes discussion of modern writers, post-modern writers, and upcoming writers important to the twenty-first century. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: F,S.

English 172—Unique Topics in Literature (3)

Recommended preparation: English 100.

Read, analyze, and write on important texts chosen because of their timeliness and focus on a common theme, form, geographical area, or cultural group. An umbrella course that may focus on literature that ties to other academic disciplines such as science or history. Examine the philosophical, cultural, mythic, religious, and/or historical elements related to these texts. Appreciate the literary devices and styles evident in individual works and the commentary made by these works on moral, social, and aesthetic issues. May be taken for grades or on a credit-no credit basis. Three hours. **(UC credit limitation)** Offered: as needed.

English 173—Women Writers (3)

Recommended preparation: English 100.

Read, analyze, and write on important texts written by women from a cross-section of literary periods, nationalities, and cultural heritages. Examine the philosophical, cultural, mythic, religious, and/or historical elements related to these texts. Appreciate the literary devices and styles evident in individual works and the commentary made by these works on moral, social, and aesthetic issues. Typical writers include Austen, Brontes, Cather, Hong Kingston, Morrison, Tan, Wharton. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: as needed.

English 175—Shakespeare (3)

Prerequisite: English 100.

Read, analyze, and write on a range of Shakespearean texts including histories, comedies, tragedies, and problem plays. Examine the philosophical, cultural, mythic, religious, and/or historical elements related to these texts. Appreciate the literary devices and styles evident in individual works and the commentary made by these works on moral, social, and aesthetic issues. Includes discussion of historical and theatrical backgrounds and the influence of Shakespeare on modern writers. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: F,S.

English 176—Man, Myth and Magic (3)

Recommended preparation: English 100.

Read, analyze, and write on both myths and the literature based on mythic traditions. Examine the philosophical, cultural, mythic, religious, and/or historical elements related to these texts. Appreciate the literary devices and styles evident in individual works and the commentary made by these works on moral, social, and aesthetic issues. Includes discussion of classical myths, epics, and folk literature. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: as needed.

English 179—Introduction to Gender Issues in Literature and Film (3)

Prerequisite: English 100.

Read, analyze, and write on literature of different genres, periods, and culture that focus on culturally constructed images of males and females. Examine the philosophical, cultural, mythic, religious, and/or historical elements related to these texts. Appreciate the literary devices and styles evident in individual works and the commentary made by these works on moral, social, and aesthetic issues. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: as needed.

English 280—Survey of British Literature Before 1800 (3) (CAN ENGL 8)

Prerequisite: English 100.

Read, analyze, and write on important British literature from the Anglo-Saxon period to 1800. Examine the philosophical, cultural, mythic, religious, and/or historical elements related to these texts. Appreciate the literary devices and styles evident in individual works and the commentary made by these works on moral, social, and aesthetic issues. Typical writers include anonymous Old English writers, Chaucer, Shakespeare, Donne, Milton, Swift, and Pope. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: F.

English 285—Survey of British Literature After 1800 (3) (CAN ENGL 10)

Prerequisite: English 100.

Read, analyze, and write on important British literature from 1800 to the present including Romantic, Victorian, and modern writers. Examine the philosophical, cultural, mythic, religious, and/or historical elements related to these texts. Appreciate the literary devices and styles evident in individual works and the commentary made by these works on moral, social, and aesthetic issues. Typical writers include Austen, Blake, Browning, Dickens, Carlyle, Hardy, Joyce, Keats, O'Brien, Yeats, Woolf, Wordsworth. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: S.

ENGLISH AS A SECOND LANGUAGE

English as a Second Language N011AB—Beginning Listening and Speaking (4)

Prerequisite: ESL placement test administered through the OCC Assessment Center.

Listening comprehension, oral communication and pronunciation skills for beginning students who are non-native speakers of English. Practice in spontaneous conversation and small group discussion. May be taken for grades or on a credit-no credit basis. Four hours. Not applicable to AA degree. Offered: F,S;Sum.

English as a Second Language N015AB—Grammar, Reading and Writing 1 (8)

Prerequisite: ESL placement test administered through the OCC Assessment Center. Students must demonstrate listening/speaking skills at the ESL 121AB level or higher or concurrently enroll in ESL N011AB.

Intensive introductory level of integrated basic grammar and reading of American English for non-native students who are matriculated and pursuing college coursework. Includes work on sentence structure, questions, short answers, pluralization, pronouns, simple and continuous tenses. Also includes decoding of English spelling system, vocabulary development, and comprehension of simple written material. May be taken for grades or on a credit-no credit basis. Eight hours. Not applicable to AA degree. Offered: F,S.

Courses

English as a Second Language N070AB—Intensive Individualized Reading 1 (2)

This intensive, individualized reading and vocabulary development course is intended for continuing beginning and intermediate students at the ESL N015AB, 125AB, and 135AB levels who need additional reading practice in order to progress to the next level of the ESL sequence. Students will build vocabulary and improve skills in identifying main ideas, recognizing supporting details, and making inferences. Students will also compose main idea statements, summaries, and responses to reading. Not intended for new students. Offered on a credit-no credit basis only. Two hours. Not applicable to AA degree. Offered: F;S.

English as a Second Language N071AB—Intensive Individualized Reading 2 (2)

This intensive, individualized reading and vocabulary development course is intended for continuing intermediate and advanced students at the ESL 155AB, 160AB, and 199AC levels who need additional reading practice in order to progress to the next level of the ESL sequence. Students will build vocabulary and improve skills in identifying main ideas, recognizing supporting details, and making inferences. Students will also compose main idea statements, summaries, and responses to reading. Not intended for new students. Offered on a credit-no credit basis only. Two hours. Not applicable to AA degree. Offered: F;S.

English as a Second Language N090AB—Intensive Grammar 1 (1.5) (9 week course)

Intensive study of the fundamentals of English grammar: be as a main verb, question formation, pluralization, pronouns, tenses, present modals, gerunds and infinitives, comparative and superlative, adverb and noun clauses, conjunctions, preposition and article usage. Designed for students in need of extra work in or review of grammar. Does not replace ESL N016AB, 126AB, 136AB, 156AB or 160AB. Four hours. Not applicable to AA degree. Offered: F;S;Sum.

English as a Second Language N091AB—Intensive Grammar 2 (1.5) (9 week course)

Intensive study of intermediate and advanced English grammar: tenses, continuous and past modals, gerunds and infinitives, comparative and superlative, adjective clauses, clause reduction, passives, sentence combination, tense sequences, showing cause and effect, preposition article usage, conjunctions. Designed for students in need of extra work in or review of grammar. Does not replace ESL N016AB, 126AB, 136AB, 156AB or 160AB. Four hours. Not applicable to AA degree. Offered: F;S;Sum.

English as a Second Language 121AB—Listening and Speaking Skills 1 (3)

Prerequisite: Qualifying score on the OCC ESL placement test or completion of ESL N011AB. Also, grammar/reading skills at the ESL 125AB level or higher.

Listening comprehension, oral communication, and pronunciation skills for low-intermediate students. Specific preparation for comprehending conversations, reports, presentations, and lectures. Introduction to note-taking. Practice in spontaneous conversation and small-group discussion. Work on American sound system in such areas as stress and intonation, reductions, pitch, and rhythm. May be taken for grades or on a credit-no credit basis. Four hours. Offered: F;S;Sum.

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Course numbers followed by an AB, AC, or AD may be repeated once, twice or three times respectively.

Courses that are non-credit or not AA applicable are designated with the letter "N" preceding the course number.

English as a Second Language 125AB—Grammar, Reading and Writing 2 (6)

Prerequisite: Qualifying score on the OCC ESL placement test or completion of ESL N015AB. Also, grammar/reading skills at the ESL 121AB level or higher.

Integrated intensive study of basic grammar and reading for low-intermediate students who are non-native speakers of English. Practice in reading and writing involving sentence structure, tenses, modals, comparative, superlative, and clauses. Work on the sound and spelling system of English, including dictionary skills, literal reading, and vocabulary development. May be taken for grades or on a credit-no credit basis. Eight hours. Offered: F;S;Sum.

English as a Second Language 131AB—Listening and Speaking Skills 2 (3)

Prerequisite: Qualifying score on the OCC ESL placement test or completion of ESL 121AB. Also, grammar/reading skills at the ESL 135AB level or higher.

Listening comprehension, oral communication, and pronunciation skills for intermediate students. Task-oriented discussion and group discussion techniques. Practice on basic note-taking from lectures. Review of basic patterns of American pronunciation and practice of patterns tied to more complex structures. May be taken for grades or on a credit-no credit basis. Four hours. Offered: F;S;Sum.

English as a Second Language 135AB—Grammar, Reading and Writing 3 (7)

Prerequisite: Qualifying score on the OCC ESL placement test or completion of ESL 125AB. Also, listening/speaking skills at the ESL 131AB level or higher.

Integrated intensive study of grammar, reading and writing for intermediate students who are non-native speakers of English. Review of basic grammar and reading skills. Practice in reading and writing involving sentence structure, continuous and past modals, passive, adjective clauses and articles. Writing practice for grammar, mechanics and fluency. Practice on literal and critical reading, analyzing, making inferences and evaluating. May be taken for grades or on a credit-no credit basis. Nine hours. Offered: F;S;Sum.

English as a Second Language 147AB—Nonfiction Analysis and Summary (4)

Prerequisite: Eligibility for ESL 155AB and 131AB.

Applies writing skills learned in ESL 135AB to analysis and summary-writing of basic unsimplified informational readings. Also, recommended for students who want to expand their English vocabulary. May be taken for grades or on a credit-no credit basis. Four hours. Offered: F;S;Sum.

English as a Second Language 151AB—Listening and Speaking Skills 3 (3)

Prerequisite: Qualifying score on the OCC ESL placement test or completion of ESL 131AB. Also, grammar/reading skills at the ESL 155AB level or higher.

Listening comprehension, oral communication and pronunciation for high-intermediate and advanced second language students. Practice on effective note-taking and listening for specific information. Interpersonal communication and oral presentation techniques. Pronunciation practice including reductions and grammar, hesitation and individual work. May be taken for grades or on a credit-no credit basis. Four hours. Offered: F;S;Sum.

English as a Second Language 153—Communication Skills for International Students (3)

Prerequisite: ESL placement test administered through the OCC Assessment Center, or recommendation of ESL 131AB instructor. Recommended for F1 Visa students.

Development of academic and cultural adjustment skills necessary to succeed in college. Listening comprehension, oral communication and pronunciation as applied to person-to-person and group communication for high-intermediate and advanced international students. Emphasis on effective notetaking from lectures designed to enhance cultural adjustment to the U.S. Offered: F;S.

English as a Second Language 155AB—Grammar, Reading and Writing 4 (6)

Prerequisite: Qualifying score on the OCC ESL placement test or completion of ESL 135AB. Also, listening/speaking skills must be at the ESL 151AB level or higher.

Integrated intensive study of grammar, reading and writing for high-intermediate students who are non-native speakers of English. Review of basic and intermediate grammar and reading skills and work on advanced grammatical structures. Introduction to the writing process with emphasis on writing paragraphs in response to reading selections intended for a general audience. Students will write 3,000 teacher-evaluated words. May be taken for grades or on a credit-no credit basis. Eight hours. Offered: F;S;Sum.

English as a Second Language 160AB—Composition and Reading 1 (3)

Prerequisite: Qualifying score on the OCC ESL placement test or completion of ESL 155AB. Also, listening/speaking skills at the ESL 151AB level or higher.

This course integrates college-level reading, writing and critical thinking skills. Intensive practice in writing original compositions using various methods of development and organization. Students will write 6,000 teacher-evaluated words. Individual attention given to structure and usage problems. May be taken for grades or on a credit-no credit basis. Four hours lecture, two hours non-lecture. (UC credit limitation) Offered: F;S.

English as a Second Language 165AB—Advanced Sentence Analysis and Construction (3)

Prerequisite: Eligibility for ESL 160AB and ESL 151AB.

Advanced work on complex sentence analysis and construction. Analysis of college-level texts and the relation between grammatical structures and meaning. Application of a wide variety of sentence development strategies. Especially suited for the advanced nonnative speaker who already has skill in essay writing and who wants to develop English sentence structure style and accuracy. May be taken for grades or on a credit-no credit basis. Four hours. Offered: F;S;Sum.

Courses

English as a Second Language 199AC—Composition and Reading 2 (3)

Prerequisite: ESL 160AB. Also, listening/speaking skills at the ESL 151AB level or higher.

A continuation of skills covered in ESL 160AB. This course integrates college-level reading, writing and critical thinking skills. Intensive practice in writing original compositions using various methods of development and organization. Students will write 6,000 teacher-evaluated words. Individual attention given to structure and usage problems. May be taken for grades or on a credit-no credit basis. Four hours lecture, two hours non-lecture. **(UC credit limitation)** Offered: F,S;Sum.

ETHNIC STUDIES

Ethnic Studies 100—Contemporary Ethnic America (3)

An examination of contemporary American dominant, ethnic and racial minority intergroup relations from historical, sociological and psychological perspectives. Addresses continuing issues of racism and discrimination in employment, education, politics and health care. Three hours. **(UC)** Offered: F,S;Sum.

Ethnic Studies 150—Ethnic Groups in the U.S.: Their Histories (3)

A survey of the history of the many ethnic groups originating in Europe, Asia (including the American Indian), the Americas, the Pacific Islands, Africa, and the Middle East that make up the population of the United States. Same as History 150. Students completing Ethnic Studies 150 may not receive credit for History 150. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: F,S.

Ethnic Studies 190—The Ethnic Family (3)

Ethnic and minority families in the United States today. Emphasis on family interaction, child training patterns, the family's relationship to society and community helping agencies. Same as Sociology 190. Students completing Ethnic Studies 190 may not receive credit for Sociology 190. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: odd yrs..

FAMILY AND CONSUMER SCIENCES

Family and Consumer Sciences 011—Exploring Community Resources (.5) (8 week course)

A workshop course providing insights into opportunities for personal improvement, family assistance and enrichment and occupational training. Offered on a credit-no credit basis only. Three hours lecture-seminar. Offered: as needed.

Family and Consumer Sciences 100—Careers in Family and Consumer Sciences (1) (9 week course)

Career opportunities and requirements in the field of family and consumer sciences are explored. Preparation for certificates in family and consumer sciences related occupations, the A.A. degree and transfer programs will be reviewed. Current and projected trends which relate to new and non-traditional careers in family and consumer sciences are discussed. Dual career preparation for role of homemaker/home manager along with gainful employment is evaluated. The decision-making process is applied to career choices. Speakers who are currently employed in fields of interest provide useful information. Two hours. Offered: as needed.

Family and Consumer Sciences 101—Family and Consumer Sciences Field Study (1)

Prerequisite: Family and Consumer Sciences 100, or concurrent enrollment.

Individualized interviews and observations of family and consumer sciences professionals are emphasized. Personal goals, interests and abilities are reviewed. Societal trends related to family and consumer sciences careers are explored. Nontraditional careers in family and consumer sciences related fields are investigated. Professional standards are identified. One hour. Offered: as needed.

Family and Consumer Sciences 102—Consumer Community Interaction (2)

Involvement in community consumer activities including field experience in various agencies, organizations and the on-campus Consumer Resource Center. One hour lecture, five hours field experience. Offered: as needed.

Family and Consumer Sciences 180—Life Management (3)

This course develops skills in using resources for effective functioning now and in the future. Explores theories of management, including systems thinking, time, energy, money, stress, and conflict. Topics include steps in goal setting, problem solving, value clarifications, and the effect of cultural forces and future trends on the individual. Three hours. Offered: F,S.

Family and Consumer Sciences 199AD—Current Issues in Family and Consumer Sciences (.5) (1-9 week course)

The study and review of current issues in the field of family and consumer sciences including a variety of topics related to family life, homes, resource management, personal improvement, hospitality, consumer problems, conservation and family and consumer sciences careers. May be taken for grades or on a credit-no credit basis. One to nine hours lecture. Offered: as needed.

FASHION

Fashion N050AD—Sewing Lab (.5-2)

A laboratory-based course to improve clothing construction skills. Students work independently according to a study plan they devise and complete under the supervision of the course instructor. Includes periodic student-teacher conferences, completion of individualized lab assignments, and a final self-assessment report. Enrollment is open all semester. Offered on a credit-no credit basis only. One and one-half to six hours arranged laboratory. Not applicable to AA degree. Offered: F,S;Sum.

Fashion 100—Beginning Clothing Techniques (3)

This course is basic clothing construction using the latest methods. Students will learn fifty basic clothing construction techniques and complete two easy-to-sew projects. One hour lecture, five hours laboratory. Offered: F,S.

Fashion 101—Intermediate Clothing Techniques (2)

Prerequisite: Fashion 100 or concurrent enrollment.

Intermediate techniques to increase skill level in garment construction. The student will complete a minimum of two projects. May be taken for grades or on a credit-no credit basis. One hour lecture, two hours laboratory, three hours arranged. Offered: F,S.

Fashion 102—Industrial Sewing Techniques (2)

Prerequisite: Fashion 100 or concurrent enrollment.

Advanced clothing construction techniques with emphasis on industrial equipment, techniques, use, and care. One hour lecture, two hours laboratory. Offered: as needed.

Fashion 105—Sewing Skills Assessment (3)

Prerequisite: Prior clothing construction recommended.

Assessment of sewing skills and performance of specified clothing techniques required for Fashion 100 and 101. Offered on a credit-no credit basis only. One hour lecture, five hours laboratory. Offered: F,S.

Fashion 108—Introduction to Fashion Design on the Computer (2) (18 week course)

An introductory course using computer-assisted fashion design software, SnapFashion, on the Macintosh. Proper usage and maintenance of computers, utilization of fashion design software, creation of flat sketches, hang tags and labels, development of textile prints, assembling storyboards, and exploration of Internet resources will be covered. One and one-half hours lecture, one and one-half hours laboratory. Offered: as needed.

Fashion 110—Applied Textiles and Design (3)

Selection, use, care, and performance standards for textile products for fashion apparel and interior textiles. Three hours. **(UC)** Offered: F,S.

Fashion 115—Careers in Fashion (3)

An overview and introduction to employment opportunities and careers related to fashion design, apparel construction, fashion merchandising, and costume. The course will profile jobs and job qualifications in the fashion industry. Three hours. Offered: F,S.

Fashion 120—History of Fashion (3)

A chronological study of costume designs from ancient times to the present. Emphasis is placed on the identification of apparel design details, the relation of recurring style trends to contemporary fashions, sociological, economic, and political factors affecting clothing through the centuries. Three hours. Offered: F,S.

Fashion 121—Street Style (1.5) (9 week course)

This course explores the significant and dynamic role street style plays in the 20th Century and surveys how youth defies and influences the fashion establishment. The street's ascent as a fashion force will be traced from its historical inception to how it makes history. Three hours. Offered: S.

Fashion 125—Cultural Textiles and Apparel Design (3)

A survey of the role textiles has played in the social, economic, religious, aesthetic, and technological developments of society which affect contemporary textiles and fashion. Three hours. Offered: as needed.

Fashion 130AB—Tailoring (2)

Prerequisite: Fashion 100.

The student will construct a lined, tailored jacket using traditional and speed tailoring techniques. Forty-eight basic clothing construction techniques will be featured. May be taken for grades or on a credit-no credit basis. One hour lecture, two hours laboratory. Offered: as needed.

Courses

Fashion 137—Alterations (2)

Prerequisite: Fashion 100.

Basic analysis and techniques related to fitting and altering ready-to-wear garments and commercial patterns. May be taken for grades or on a credit-no credit basis. One hour lecture, two hours laboratory. Offered: as needed.

Fashion 140—Evaluation of Apparel Quality (1.5) (9 week course)

The study and evaluation of garment structure, quality, and care. Three hours. Offered: S.

Fashion 150—Flat Pattern Techniques (3)

Interpretation of clothing design through the use of flat pattern techniques. Basic principles involved in designing and manipulating patterns. Creating a basic sloper and muslin garment for the individual. Two hours lecture, three hours laboratory. Offered: F.

Fashion 155—Flat Pattern Application (3)

Prerequisite: Fashion 150.

Application and use of flat pattern techniques in creative clothing design and construction. Two hours lecture, three hours laboratory. Offered: S.

Fashion 170—Clothing Design and Selection (3)

The psychology of clothing. Study of design, line, and color as they relate to dress and personal appearance. Fashion vocabulary, recognition and description of styles, fashion cycles and trends are emphasized. Three hours. Offered: F;S.

Fashion 175—Applied Color and Design Theory (4)

Basic design theory and application. Utilization of tools, materials, and equipment to develop technical skills applicable to interior, architectural, and other related fields of design. Exploration of cultural heritage and psychological implication of design. Three hours lecture, three hours non-lecture. Offered: F;S.

Fashion 176—Image Consulting (3)

Designed to assist in image development through an individualized working wardrobe, familiarizing students with the techniques of wardrobe planning, figure analysis, effective use of accessories and color. The study also includes consulting as a profession, meeting the needs of your client, establishing financial relations, store and client relationships, and marketing. May be taken for grades or on a credit-no credit basis. Three hours. Offered: as needed.

Fashion 177—Fashion Merchandising Concepts (3)

An introduction to the fashion merchandising industry to include vendors and products sold, special services, and resources. The student will evaluate a product presentation. May be taken for grades or on a credit-no credit basis. Three hours. Offered: as needed.

Fashion 180—Fundamental Principles of Clothing Construction (3)

Fundamental principles of clothing construction are studied and applied to selected problems with an emphasis on expanding knowledge in a variety of techniques. Fulfills the lower division college transfer requirement in clothing for the family and consumer sciences major. One hour lecture, five hours laboratory. Offered: F;S.

Fashion 181—Fashion Internship (3)

Recommended preparation: Fashion 110, 115, 120, 170.

Supervised internship related to classroom-based learning at a work site related to fashion. One hour lecture, eight hours arranged. Offered: F;S.

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Fashion 199AD—Current Issues in Fashion (.5-1.5) (3-9 week course)

Current issues in the field of fashion, rotating through a variety of topics, such as fashion design/production, apparel construction, fashion merchandising, and costume. May be taken for grades or on a credit-no credit basis. Three hours. Offered: as needed.

Fashion 225—Special Events Coordination and Promotion (3)

Principles of fashion coordination and promotion. Studies the functions of a special events coordinator to include techniques and procedures for presenting fashion. Three hours. Offered: F;S.

Fashion 233—Couture Techniques (2)

Prerequisite: Fashion 101.

Instruction and practice in techniques used to create couture and custom garments. Techniques of handling special and difficult fabrics, leather and furs. Features fine finishing details. Requires construction of one couture garment. One hour lecture, two hours laboratory. Offered: as needed.

Fashion 235—Draping (2)

Prerequisite: Fashion 110 and 150.

The creative design of garments through draping techniques emphasizing fabric manipulation and design creation. May be taken for grades or on a credit-no credit basis. One hour lecture/demonstration, two hours laboratory arranged in open laboratory. Offered: as needed.

Fashion 245—Pattern Drafting and Design (1.5) (9 week course)

Recommended preparation: Fashion 150.

Introduction to pattern drafting and advanced pattern design. Techniques for developing basic slopers and sportswear patterns for men, women, and children. Basics of developing pattern instruction sheets and writing pattern directions. May be taken for grades or on a credit-no credit basis. Two hours lecture, one hour laboratory. Offered: as needed.

Fashion 251—Pattern Grading (1.5)

Recommended preparation: Fashion 150.

The process of proportionally increasing or decreasing master patterns according to a prescribed set of measurements to create size ranges for the ready-to-wear market. May be taken for grades or on a credit-no credit basis. One hour lecture, two hours laboratory. Offered: as needed.

Fashion 255—Fashion Illustrating Techniques (2)

Presentation or promotion of fashion and garment design through elementary trade sketching and the use of the 'croqui', or undressed fashion figure, as used in the fashion trade or industry. May be taken for grades or on a credit-no credit basis. One hour lecture, two hours laboratory. Offered: F;S.

Fashion 260—Fashion Production Concepts and Application (3)

Recommended preparation: Fashion 110 and 150 or industry experience.

An overview of the steps involved in fashion production, including equipment, labeling, cost analysis, assembly steps, and an introduction to computers in the fashion industry. The course will include the application of these concepts in producing a project. May be taken for grades or on a credit-no credit basis. Three hours. Offered: as needed.

Fashion 265—Introduction to Digitizing and Marker Making (1) (9 week course)

Recommended preparation: Fashion 150.

An introductory course on the operation of a computer-assisted fashion industry software package Accurmark by Gerber Garment Technology. System management, digitizing, plotting, and marker making will be covered. Two hours lecture, one hour non-lecture. Offered: F;S.

Fashion 266AB—Pattern Design System (1) (9 week course)

Recommended preparation: Fashion 265.

An introductory course on the operation of a computer-assisted pattern making software package (Gerber PDS). Pattern development, library structures of pattern data, development of pattern blocks, pattern design and drafting system features/functions will be covered. Two hours lecture, one hour non-lecture. Offered: F;S.

FILM/VIDEO

Film/Video 100—History and Appreciation of the Cinema (3)

Review of cinema history with viewing and analysis of landmark films, directors, actors and technical work. Consideration of the film/video as an art form. Suggested for art, drama and film/video majors. Meets humanities requirement for UC transfer. Three hours. **(UC)** Offered: F;S.

Film/Video 103—Contemporary Films (1.5-3) (9-18 week course)

View and analyze contemporary films from the point of view of social impact, psychological meaning, and how these films both reflect and affect society. May be taken for grades or on a credit-no credit basis. Four hours. **(UC)** Offered: F;S.

Film/Video 104AB—The Great Directors of the Cinema (3)

Topics delving into aspects of film/video history, criticism and aesthetics which can be described as extensions of the film directors' point of view. The specific topics will be described each semester in the class schedule. The course is intended for film/video majors and other students with an interest in film/video. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: F;S;Sum.

Courses

Film/Video 105—Technology and Culture: Social Significance of Science Fiction Films (1.5-3) (9-18 week course)

An introduction, broad in scope, to the science fiction film as a cultural object. Films will be viewed and analyzed in terms of their social significance and from their sociological, psychological and mythological bases. It will be seen that science fiction films are a unique form of expression of the social and technological concerns of the culture. May be taken for grades or on a credit-no credit basis. Four hours lecture/discussion. Offered: as needed.

Film/Video 110—Video Workshop (3)

Introductory course covering basic video production including composition, continuity, lighting, sound recording and editing utilizing the 1/2" video format. Students must supply their own camcorders. One hour lecture, one hour laboratory, two hours arranged. (UC credit limitation) Offered: F;S.

Film/Video 112—Home Video Marketing and Distribution (3)

Students will learn how to make and distribute a video production. Topics will include development, marketing, packaging, release strategies, financing, publicity and advertising. Three hours. Offered: F;S.

Film/Video 150—Introduction to Broadcasting (3)

Introduction to telecommunication. This course covers the theory and development of radio and television broadcasting including their historical, cultural and financial impact on American society. Programming, star value and present/future job prospects will also be covered. Three hours. Offered: F;S.

Film/Video 192—Basic Film/Video Production (4)

Prerequisite: Film/Video 110 and Photography 120 or 180.

Production of short 16mm films and 1/2" videos, music videos, commercials, documentary and theatrical films. Production techniques will be discussed and used by the student including camera operation, scripting, editing and sound techniques. Three hours lecture, five hours laboratory. (UC credit limitation) Offered: F;S.

Film/Video 193—Film/Video Sound (3)

Explores uses of equipment and techniques used in the production of a 1/2" and 3/4" video and a 16mm motion picture sound track. Fundamentals in film/video sound will be discussed as the basis for completing assignments in sound track production. Topics covered will include location dialogue recording, sound effects, music, signal processing equipment, and procedures for sound track assembling and mixing. May be taken for grades or on a credit-no credit basis. Two hours lecture, two hours laboratory. Offered: S.

Film/Video 194—Film/Video Editing (3)

Explores the principles, theory and mechanics of film/video editing. Emphasis will be on the creative aspects of editing while developing professional techniques from logging dailies to negative cutting. May be taken for grades or on a credit-no credit basis. Two hours lecture, two hours laboratory. Offered: F.

Film/Video 250—Television Production 1 (3)

Beginning course in the use and operation of television equipment including camera, studio lighting, sound recording and the use of titles, graphics and special effects. The student will have the opportunity to operate all equipment and assume the various roles of a functioning TV studio crew such as camera person, floor manager, writer, producer, director and talent coordinator. Production will include a live talk show, news format, music videos and contemporary commercials. Two hours lecture, three hours laboratory. Offered: F;S.

Information in italics designates the semester(s) in which the course is offered. The Division Office reserves the right to make changes as budget or other constraints warrant. F=Fall, S=Spring, Sum=Summer, Inter=Intercession

Film/Video 255AC—Television Production 2 (3)

Prerequisite: Film/Video 250.

Second semester advanced television production in which students continue to conceive, write, produce and direct music videos, commercials and live talk show formats. There will be an emphasis on each student to oversee total programming utilizing studio equipment, multicamera, chroma key and advanced special effects. Two hours lecture, three hours laboratory. Offered: F;S.

Film/Video 260AB—Special Projects (2)

Prerequisite: Minimum of ten (10) units of film/video at OCC.

Assists students in developing specialized non-production film/video related projects. May be taken for grades or on a credit-no credit basis. One hour lecture, three hours non-lecture. Offered: F;S.

Film/Video 261AD—Television Lab (2)

Prerequisite: Film/Video 250.

Participation in the production and technical support of special television programs for students interested in gaining further experience with TV. May be taken for grades or on a credit-no credit basis. One hour lecture, three hours laboratory. Offered: as needed.

Film/Video 265AD—Electronic Field Production (4)

Prerequisite: Film/Video 110.

Techniques of on-location video production including lighting, sound, videography and post-production editing. Students will function as producers, directors, talent and crew. Productions will include news, documentary, drama, industrials and music videos. Three hours lecture, five hours non-lecture. Offered: F;S.

Film/Video 270AB—Advanced Film Production (4)

Prerequisite: Film/Video 192.

Production of short films, commercials and music videos. Concepts and techniques of video production and composite 16mm film making will be discussed. Scripting, editing, A and B rolling, sync sound and release prints will be emphasized. Three hours lecture, five hours laboratory. Offered: S.

FOOD AND NUTRITION

Food and Nutrition 100—Careers in Dietetics and Food Science (1) (9 week course)

Career opportunities and requirements in the fields of dietetics and food science are explored. Discussion will include current and projected trends which relate to career opportunities. Course covers scope and responsibilities of professional members in various food-related careers. Same as Nutrition Care 100. Students completing Food and Nutrition 100 may not receive credit for Nutrition Care 100. Two hours lecture, one hour non-lecture. Offered: F;S.

Food and Nutrition 120—Meal Management (2)

Principles of meal planning and the scientific and aesthetic principles of food selection and preparation. Includes equipment usage, food preparation methods, and meal planning, the serving of food, as well as effective management of time, energy, and money. One and one-hours lecture, one and one-half hours non-lecture. Offered: S.

Food and Nutrition 125—Vegetarian Cuisine (2)

Vegetarian diets are explored, including information on healthy food choices, nutritional implications, and cooking techniques. Each class includes demonstrations and preparation of a wide variety of vegetarian foods. Vegetarian foods from different cultures are also included. May be taken for grades or on a credit-no credit basis. One hour lecture, three hours non-lecture. Offered: F.

Food and Nutrition 136—Nutrition, Fitness and Performance (2)

An applied nutrition course for individuals interested in health, fitness, and athletics. Principles of nutrition are studied and applied to the physically active lifestyle. Designed for the active individual and for the Fitness Specialist certificate. Pre-event food and fluid selection, nutrient requirements during activity, various nutrition supplements, muscle mass and body fat related to physical performance. Same as Physical Education 136 and Health Education 136. Students completing Food and Nutrition 136 may not receive credit for Physical Education 136 or Health Education 136. May be taken for grades or on a credit-no credit basis. Two hours. Offered: F;S.

Food and Nutrition 136L—Cooking for Health, Fitness and Performance (1) (9 week course)

Recommended preparation: Food and Nutrition 136 or 140 or 170.

Meets a need for those involved in demanding physical activity ranging from personal fitness to competitive sports, by bridging the gap between nutrition theory and food intake. Emphasis is placed on planning well-balanced meals, as well as on foods which are inexpensive to buy, easy to prepare, and a pleasure to eat. Food preparation experiences include time saving recipes for daily meals, in-training and pre-game event meals, and snacks for better health and an active lifestyle. One hour lecture, two hours non-lecture. Offered: F;S.

Food and Nutrition 140—Introduction to Nutrition Concepts (2)

Nutrition concepts and their application to daily living; basic nutrition, food product evaluation, menu modification, food and health issues, nutrition controversies, and environmental concerns. Two hours. Offered: F;S.

Food and Nutrition 144—Life Cycle Nutrition: Mother and Infant (1) (6 week course)

The importance of good nutrition for health and well-being of mothers and infants is emphasized. Community resources will be explored, including the WIC nutrition program. Three hours. Offered: F;S.

Food and Nutrition 145—Life Cycle Nutrition: Children (1) (6 week course)

Nutrient needs of children and appropriate feeding practices. Three hours. Offered: F;S.

Food and Nutrition 146—Life Cycle Nutrition: Later Years (1) (6 week course)

Factors affecting the nutritional status of the mature and aging adult will be addressed. Nutritional needs, disease intervention, and tips on handling feeding problems of the frail elderly are included. Three hours. Offered: F;S.

Courses

Food and Nutrition 147—Nutrition for Growing Children Ages 6-18 (1) (9 week course)

Nutritional needs of children ages 6 through 18. Methods of establishing and maintaining positive eating habits will be emphasized. Two hours lecture, one hour non-lecture. Offered: as needed.

Food and Nutrition 170—Nutrition (3) (CAN FCS 2)

Scientific concepts of nutrition relating to the functioning of nutrients in the basic life processes. Emphasis on individual needs, food sources of nutrients, current nutrition issues, and diet analysis. Three hours. (UC) Offered: F;S.

Food and Nutrition 171—Applied Nutrition (2)

Prerequisite: Food and Nutrition 170 or 140 or 136 or concurrent enrollment.

The preparation of foods for maximum nutrient retention. Calories, grams of protein, fat, carbohydrate, and nutrient density will be calculated, and the specific nutrients in foods identified. One hour lecture, two hours laboratory. Offered: S.

Food and Nutrition 173—Cooking Lite (2) (15 week course)

Practical information for establishing a lifelong eating plan for maintaining ideal weight and maximum health. Laboratory experience in preparing low fat foods. The emphasis will be on learning to identify the less desirable components of recipes and modifying or substituting them with more healthful, lower fat ingredients. One hour lecture, two hours non-lecture. Offered: F.

Food and Nutrition 180—Principles of Foods (3) (CAN FCS 8)

Basic knowledge of food science principles and food preparation techniques. Emphasis on ingredient interaction, technique and production standards, food safety, sanitation, nutrient values, and food presentations. Five hours. Offered: F.

Food and Nutrition 185—Cultural Foods (2)

Cuisines of the world are compared. America's diverse microcultures are explained through their traditional food ways. Origins of food, customs, psychological acceptance and nutrition information are included. Emphasis is placed on food preparation techniques, utensils, food service, and creation of an authentic atmosphere. Effects of changes on food habits and nutrition of ethnic groups are assessed. May be taken for grades or on a credit-no credit basis. One and one-half hours lecture, one and one-half hours laboratory. Offered: F;S.

Food and Nutrition 195—Food Science (4)

The scientific study of basic constituents of foods (carbohydrates, lipids, protein, and water) and the chemical, microbial, and physical actions and reactions that cause nutritional, sensory, and other changes before, during, and after processing. Includes hands-on experimentation and guest speakers. Three hours lecture, three hours laboratory. Offered: S.

Food and Nutrition 199AD—Current Issues in Food, Nutrition, and Food Science (.5) (1-9 week course)

The study and review of current issues in the field of food, nutrition, food science, and dietetics including a variety of topics, such as general nutrition, food research and technology, and nutrition related to health and disease, wellness, the life cycle, and fraud. May be taken for grades or on a credit-no credit basis. One to nine hours lecture. (UC credit limitation) Offered: as needed.

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Course numbers followed by an AB, AC, or AD may be repeated once, twice or three times respectively.

Courses that are non-credit or not AA applicable are designated with the letter "N" preceding the course number.

FOOD SERVICE MANAGEMENT

Food Service Management 100—Introduction to the Hospitality Industry (3)

Overview of the hospitality industry, its history and interrelationships of hotel, restaurant, travel and leisure industries. Economic and social influences of leisure. Emphasis on attitude required of a person seeking a position in the industry. Same as Hotel 100 and Culinary Arts 100. Students completing Food Service Management 100 may not receive credit for Hotel 100 or Culinary Arts 100. Three hours. Offered: F;S.

Food Service Management 145—Child Nutrition Program Management (2)

Role and responsibilities of unit school food service managers, child care administrators, or family day care sponsors in providing meals to children and youth which comply with legislative and budgetary parameters, which meet their nutritional, social, psychological and cultural needs, and the integration of food service programs with classroom nutrition education activities. Also includes safe and sanitary food handling techniques. Two hours. Offered: F;S.

Food Service Management 151—Food Production Management (2)

Prerequisite: Culinary Arts 150, or any two of the following: Culinary Arts 120, 122, 124, 149.

Techniques and practice in how to manage individuals responsible for producing food. The role of the supervisor in planning, organizing, supervising and controlling food production is discussed. Students will be required to follow Food Service and Hotel Management departments dress standards. TB clearance required. One hour lecture, three hours laboratory. Offered: S.

Food Service Management 160—Sanitation and Safety (3)

The basic principles of microbiology, sanitation, safety, equipment selection and facility layout for a food service operation. Also covered will be the environmental control application through the prevention of food borne illnesses, cleaning materials and procedures, general safety regulations, food processing methods, first aid and fire prevention. Three hours. Offered: F;S.

Food Service Management 161—Basic Concepts in Sanitation (1) (6 week course)

Principles of sanitation applied to the preparation and service of food within any public or private food operation including regulations of the California Health and Safety Code. Appropriate procedures for personal sanitation and hygiene to insure the safety of food for human consumption. Offered on a credit-no credit basis only. Three hours lecture-seminar. Offered: as needed.

Food Service Management 162—Basic Concepts in Safety (1) (6 week course)

Basic safety concepts for food service employees relative to the safe operation of equipment, first aid and accidents and pertinent State safety regulations. Offered on a credit-no credit basis only. Three hours lecture-seminar. Offered: as needed.

Food Service Management 163—Sanitation and Safety for Managers/Supervisors (1) (9 week course)

Prerequisite: Food Service Management 161 and 162, or mastery level achievement on a test of the basic concepts of sanitation and safety.

Supervision of the preparation or service of food which is reliably wholesome and which otherwise complies with Federal, State and local laws and regulations. Establish and maintain sanitation and safety standards which comply with legal State and local regulations. Two hours. Offered: as needed.

Food Service Management 190—Dining Room Service (2)

Prerequisite: Food Service Management 160.

Orientation to all functions of restaurant dining room operations including dishwashing, pot and pan washing, floor care, equipment maintenance and line preparation techniques. Emphasis will be placed on learning dining room service techniques of table waiting and accompanying dining room skills. Students will be required to follow Food Service and Hotel Management departments dress standards. TB clearance required. One hour lecture, four hours non-lecture. Offered: S.

Food Service Management 210—Dining Room Management (3)

Prerequisite: Food Service Management 190.

Management of a restaurant dining room including good housekeeping techniques, fine food and efficient service. Types of dining service include: (French, Russian, American, English) waited table service, limited service, counter, tray service and catering. Emphasis will be placed on staffing, scheduling, controls and skills required to effectively supervise a dining room operation. Students will be required to follow Food Service and Hotel Management departments dress standards. TB clearance required. Two hours lecture, four hours laboratory. Offered: F.

Food Service Management 240—Food Service Math/Accounting (4)

Mathematical and accounting concepts applied to food service problems such as food costing, payroll computations, recipe adjusting, gross profit analysis, guest check mechanics and metric conversions. Mathematical skills will be applied in completing accounting control forms to include cost reports, financial statements, budgets, break-even analysis and general financial decision making problems. Four hours. Offered: F;S.

Food Service Management 250—Menu Planning/Purchasing (3)

Prerequisite: Food and Nutrition 140 or 170.

The basic principles of menu planning, purchasing, writing specifications for food and supplies and proper receiving/storage techniques. Planning interesting and satisfying meals for restaurants and institutions. Emphasis on type of operation, psychological needs, available equipment, skill of personnel, merchandising, menu pricing and operating budget. Three hours. Offered: F;S.

Food Service Management 260—Supervision and Training Techniques (3)

Procedures and problems met by lodging operations in developing responsibility of selection, placement, orientation, training, counseling, evaluation, promotion and/or transfer of hotel employees. Same as Hotel 260. Students completing Food Service Management 260 may not receive credit for Hotel 260. Three hours. Offered: F;S.

Courses

Food Service Management 284—Catering (3)

Prerequisite: Food Service Management 160, 250, or concurrent enrollment.

The theory and practice of managing a catering operation. Students will be required to follow Food Service and Hotel Management departments dress standards. TB clearance required. Three hours lecture, one-half hour laboratory. Offered: S.

Food Service Management 285—Restaurant Management (3)

The principles of operating a food service which are common to all types of commercial, industrial and institutional food service. Course covers such areas as beverage control, sales promotion, advertising, personnel, legal aspects, insurance, labor management relations, etc. Experience is given in operating a set of books using the Uniform System of Accounts. Three hours. Offered: F,S.

Food Service Management 286AB—Directed Practice in Food Service Management (2)

Prerequisite: Enrollment in third or fourth semester of food service or culinary arts programs.

A directed opportunity for students in food service or culinary arts to gain on-the-job training in the area in which the student expects to graduate. This directed practice is repeated for each option the student elects in order to earn a certificate of achievement. Students will be required to follow Food Service and Hotel Management departments dress standards. TB clearance required. Ten hours field experience; six hours seminar (per semester). Offered: F,S.

FOREIGN LANGUAGE

Foreign Language 090—Foreign Language Tutoring (1.5)

Prerequisite: Competency equal to at least the 280 level in the tutored foreign language.

Tutoring skill and language practice as applied to tutoring beginning students of the target language. Students will learn the basic principles of language tutoring including communication and study skills techniques for learning the specified foreign language. Students will demonstrate competencies in subject content and tutoring skills by assisting beginning foreign language students in a language laboratory setting. May be taken for grades or on a credit-no credit basis. One hour lecture, two hours non-lecture. Offered: as needed.

Foreign Language N095—Grammar for Foreign Language Students (1.5) (9 week course)

Designed specifically for anyone studying a foreign language. Covers basic concepts and definitions of grammatical terms and their application to English and any foreign language generally. May be taken for grades or on a credit-no credit basis. Three hours. Not applicable to AA degree Offered: as needed.

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FRENCH

French 110—French Conversation 1 (3)

French conversation, pronunciation, oral practice, vocabulary study. Fundamental grammatical principles as necessary for use in conversational situations. Emphasis on speaking and comprehension of the spoken language. Designed for students whose primary goal is to speak French. May be taken concurrently with French 180 by the student who wishes additional practice in speaking French. May be taken for grades or on a credit-no credit basis. Three hours. Offered: as needed.

French 120—French Conversation 2 (3)

Continuation of French 110. May be taken for grades or on a credit-no credit basis. Three hours. Offered: as needed.

French 130—French Conversation 3 (3)

Continuation of French Conversation 2. May be taken for grades or on a credit-no credit basis. Three hours. Offered: as needed.

French 180—Elementary French (5) (CAN FREN 2)

The focus is on beginning competence in listening and speaking, then writing and reading through competency-based instruction and communication and communicative activities. Many aspects of everyday French culture are discussed. This course is designed for students who need to fulfill a foreign language requirement and for those who wish a thorough introduction to the more important aspects of the language and culture. May be taken for grades or on a credit-no credit basis. Five hours. (UC) Offered: F,S;Sum.

French 185—Elementary French (5) (CAN FREN 4)

Prerequisite: French 180.

Continuation of French 180. Emphasis on correct use of French through basic conversations describing one's immediate environment. Comprehension is expanded through discussions on school activities, professions, health matters, travels, family life, social activities, and customs. French literature and culture will also be presented. Comprehension, speaking, reading, and writing are the basics of the course. May be taken for grades or on a credit-no credit basis. Five hours. (UC) Offered: F,S.

French 280—Intermediate French (4) (CAN FREN 8)

Prerequisite: French 185.

Continuation of French 185. Further study and review of French grammar and idioms. Reading of contemporary French materials. Written composition of current topics and oral work at an intermediate level. May be taken for grades or on a credit-no credit basis. Four hours. (UC) Offered: F.

French 285—Intermediate French (4) (CAN FREN 10)

Prerequisite: French 280.

Continuation of French 280 with concentration on oral and written expression based on grammar review and readings on literature and culture. May be taken for grades or on a credit-no credit basis. Four hours. (UC) Offered: S.

GEOGRAPHY

Geography 100—World Regional Geography (3)

An introduction to the regions and nations of the world. The major countries including their population, resources, general development and physical setting will be investigated. Three hours. (UC credit limitation) Offered: F,S;Sum.

Geography 100H—Honors World Regional Geography (3)

An introduction to the regions and nations of the world. The major countries, including their population, resources, general development, and physical setting will be investigated. Three hours. (UC credit limitation) Offered: as needed.

Geography 150—California Geography (3)

A study of California's topography, natural resources and economic patterns. Emphasis is on current problems related to geographic factors. Three hours. (UC) Offered: as needed.

Geography 160—Economic Geography (3)

A systematic investigation into the distribution of the world's resources and their use in an emerging global economy. Includes a study of the environmental impact of industrialization, agriculture, mining, forestry, manufacturing, pollution, depletion of resources, multinational commerce, and their geographical implication. Three hours. (UC) Offered: F;odd yrs..

Geography 180—Physical Geography (3) (CAN GEOG 2)

A study of the basic physical elements of geography and their integrated patterns of world distribution. Particular emphasis is given to climate, land forms, soils and natural vegetation. Three hours. (UC credit limitation) Offered: F,S;Sum.

Geography 180H—Honors Physical Geography (3)

A study of the basic physical elements of geography and their integrated patterns of world distribution. Particular emphasis is given to climate, land forms, soils, and natural vegetation. Three hours. (UC credit limitation) Offered: as needed.

Geography 185—Cultural Elements (3) (CAN GEOG 4)

A study of the basic cultural elements of geography and their correlation with the physical elements. Particular emphasis is given to population distribution, land-use patterns and trade. Three hours. (UC) Offered: F;even yrs..

GEOLOGY

Credit in Geology courses means 'C' performance or better.

Geology 100—General Geology (3)

Composition and structure of the earth and the processes which modify the crust and the surface and their effect on man. Not open to students who are taking or have successfully completed Geology 180. One field trip required during semester. May be taken for grades or on a credit-no credit basis. Three hours. (UC credit limitation) Offered: F,S;Sum.

Courses

Geology 100H—Honors General Geology (3)

Composition and structure of the earth and the processes which modify the crust and the surface and their effect on man. Not open to students who are taking or have successfully completed Geology 180. One field trip required. May be taken for grades or on a credit-no credit basis. Three hours. **(UC credit limitation)** Offered: as needed.

Geology 100L—General Geology Laboratory (1)

Prerequisite: Geology 100 or concurrent enrollment.

A laboratory study of materials and processes in the earth. A beginning laboratory course for the non-science major. May be taken for grades or on a credit-no credit basis. Three hours laboratory. Same as Natural Science 100LG. **(UC credit limitation)** Offered: F,S,Sum.

Geology 100LH—Honors General Geology Lab (1)

Prerequisite: Geology 100 or 100H or concurrent enrollment.

A laboratory study of materials and processes in the earth. A beginning laboratory course for the non-science major. May be taken for grades or on a credit-no credit basis. Three hours laboratory. **(UC credit limitation)** Offered: as needed.

Geology 130—Rocks and Minerals (2)

A study of the origin and use of the common rocks and minerals. Methods and practice of rock and mineral identification. May be taken for grades or on a credit-no credit basis. One and one-half hours lecture, one and one-half hours laboratory. Offered: as needed.

Geology 135—Geology of National Parks and Monuments (3)

Geology of national parks, seashores and monuments and its influence on land forms, climate and human history. Classes will vary each semester in order to develop particular skills in interpreting field problems and relationships unique to a given area. Approximate locations will be selected from one of four geologic provinces—The Mojave Desert, Basin and Range, Sierra Nevada, or Colorado Plateau. Field trip required. May be taken for grades or on a credit-no credit basis. Three hours. Offered: as needed.

Geology 140—California Geology (3)

The study of a geologic showcase—California. The geologic framework of our state and its corresponding geologic provinces and geologic factors which have influenced California's human history. The intimate inter-relationships of geology with our agriculture, transportation, construction, mining, oil and gas industry, recreation and public welfare. May be taken for grades or on a credit-no credit basis. Field trip required. Three hours. **(UC)** Offered: as needed.

Geology 145—Geology of Orange County (2)

Introduction to local geology and the effect of land changes and land use. Field trips and laboratory experiences. May be taken for grades or on a credit-no credit basis. One and one-half hours lecture, one and one-half hours laboratory. Offered: as needed.

Geology 160—Environmental Geology (4)

Prerequisite: English 100 or concurrent enrollment.

This course is the study of natural environments and the impact of humans on geologic systems and will focus on studies of environmental problems associated with soils, water resources and pollution, energy and mineral utilization, coastal erosion, natural geologic hazards, and global atmospheric changes. Principles of sound management of the geologic environment will be emphasized. Three hours lecture, three hours laboratory. **(UC)** Offered: F,Sum.

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Geology 165—Earthquakes (3)

Prerequisite: English 100 or concurrent enrollment.

Earthquakes and their relationship to global plate tectonics. Emphasis will be on the structure of the earth's interior, basic seismic wave types and their essential properties. Three hours. **(UC)** Offered: F,Sum.

Geology 180—Physical Geology (4) (CAN GEOL 2)

Prerequisite: High school chemistry.

A study of materials and processes in the earth. A beginning course in physical geology for science and engineering majors and students desiring a science emphasis. May be taken for grades or on a credit-no credit basis. One field trip required during semester. Three hours lecture, three hours laboratory. **(UC)** Offered: F.

Geology 185—Evolution of the Earth (3) (CAN GEOL 4)

Recommended preparation: Geology 100 or 180.

Geologic evolution of the earth as shown by the changing patterns of land and sea and by the succession of fauna and flora. A second course in geology for science majors. May be taken for grades or on a credit-no credit basis. One field trip required during semester. Three hours lecture. **(UC)** Offered: S.

Geology 185L—Evolution of the Earth Lab (1) (CAN GEOL 4)

Prerequisite: Geology 185 or concurrent enrollment.

Laboratory and field exercises to learn how the geologic history of the earth may be determined. Extended weekend field trip required. May be taken for grades or on a credit-no credit basis. Three hours laboratory. **(UC)** Offered: S.

Geology 280—Introduction to Mineralogy (4)

Recommended preparation: Chemistry 110 or 130.

A study of the properties, origin, relationships, identification of minerals, simple chemical tests and crystallography of minerals. May be taken for grades or on a credit-no credit basis. Two hours lecture; six hours laboratory. Offered every other year. Offered: as needed.

Geology 285—Petrology (4)

Prerequisite: Geology 280.

Origin, occurrence, identification, and classification of rocks and rock-forming minerals. Emphasis is on hand lens/microscopic identification and field occurrences. Two hours lecture, six hours laboratory. **(UC)** Offered: S.

GERMAN

German 110—German Conversation 1 (3)

German conversation, pronunciation, oral practice, vocabulary study. Fundamental grammatical principles as necessary for use in conversational situations. Emphasis on speaking and comprehension of the spoken language. Designed for students whose primary goal is to speak German. May be taken concurrently with German 180 by the student who wishes additional practice in speaking German. May be taken for grades or on a credit-no credit basis. Three hours. Offered: as needed.

German 120—German Conversation 2 (3)

Continuation of German Conversation 1. May be taken for grades or on a credit-no credit basis. Three hours. Offered: as needed.

German 130—German Conversation 3 (3)

Continuation of German Conversation 2. May be taken for grades or on a credit-no credit basis. Three hours. Offered: as needed.

German 180—Elementary German (5) (CAN GERM 2)

Fundamentals of German language and culture with practice in reading, speaking, writing, and comprehension of German at the beginning level. An introduction of selected literary works by leading German authors and an awareness of German culture. Designed for students needing to fulfill foreign language requirements and for those who wish an introduction to the German language and culture. May be taken for grades or on a credit-no credit basis. Five hours. **(UC)** Offered: F,S.

German 185—Elementary German (5) (CAN GERM 4)

Prerequisite: German 180.

Emphasis on language competency at a high novice/low intermediate level, writing, and mastery of real life situations including basic conversation and German customs and lifestyles. May be taken for grades or on a credit-no credit basis. Five hours. **(UC)** Offered: F,S.

German 280—Intermediate German (4) (CAN GERM 8)

Prerequisite: German 185.

Emphasis on control of basic content areas and language functions, comprehension of main ideas and facts, and development of writing skills. May be taken for grades or on a credit-no credit basis. Four hours. **(UC)** Offered: F.

German 285—Intermediate German (4)

Prerequisite: German 280.

Emphasis on the continuing development of conversational skills ranging from every day topics to certain abstract ideas from literary works. Writing and comprehension provide enhanced communication skills. May be taken for grades or on a credit-no credit basis. Four hours. **(UC)** Offered: S.

HEALTH EDUCATION

Health Education 100—Health Education (3)

Provides basic knowledge of healthful living. Emphasis is on positive health behavior and personal responsibility. Content includes personal health (stress, drugs, disease), social health (sexuality, safety), consumer health and environmental health. May be taken for grades or on a credit-no credit basis. Three hours. **(UC credit limitation)** Offered: F,S.

Courses

Health Education 102—The Healer Within (2)

Health enhancement and self-healing methods consisting of movement, breath, self-massage, and meditation will be presented with the emphasis on developing a self-care plan for creating optimal health. May be taken for grades or on a credit-no credit basis. One and one-half hours lecture, one hour non-lecture. Offered: F,S.

Health Education 111—Cardiopulmonary Resuscitation (.5) (3 week course)

Techniques and theory of cardiopulmonary resuscitation. May be taken for grades or on a credit-no credit basis. Three hours. Offered: F,S,Sum.

Health Education 112—First Aid and CPR (2)

The course emphasizes injury prevention, early medical care, first aid for common injuries and life saving skills. Successful completion qualifies a student for the Standard First Aid Card and CPR Certification. May be taken for grades or on a credit-no credit basis. Two hours. **(UC)** Offered: F,S.

Health Education 120—Women's Health Issues (3)

Provides knowledge in health problems and considerations unique to women. Topics will include fitness, nutrition, anatomy and physiology, biological and psychological disorders, birth control, abortion, pregnancy and related subjects. May be taken for grades or on a credit-no credit basis. Three hours. **(UC credit limitation)** Offered: as needed.

Health Education 122—Drugs, Health and Society (3)

Examination of trends, philosophical and behavioral practices associated with drug use and dependence. Includes psychosocial, legal, historical and political aspects; treatment/rehabilitation and prevention education. Focuses on the impact of psychoactive drugs on the individual and society. May be taken for grades or on a credit-no credit basis. Three hours. Offered: F,S.

Health Education 132—Introduction to Wellness (1) (9 week course)

Identification and analysis of cardiovascular disease risk factors in order to improve cardiovascular health and general well-being. Same as Physical Education 132. Students completing Health Education 132 may not receive credit for P E 132. May be taken for grades or on a credit-no credit basis. Two hours. Offered: F,S.

Health Education 133—Sport Safety Training (2) (9-18 week course)

This course prepares participants with the knowledge and skills necessary to help provide a safe environment for athletes. Emphasis is on helping sustain life and minimize the consequences of injury or sudden illness until medical help arrives. Same as Physical Education 133. Students completing Health Education 133 may not receive credit for Physical Education 133. May be taken for grades or on a credit-no credit basis. Two to four hours lecture. Offered: F,S.

Health Education 134—Fitness and Health (3)

Theory and benefits of physical activity to fitness-related health. The study of human adaptation to exercise including such topics as cardiovascular conditioning, neuromuscular training, body composition, nutrition for performance, stretching, sports injuries and aging. Same as P E 134. Students completing Health Education 134 may not receive credit for P E 134. May be taken for grades or on a credit-no credit basis. Three hours. **(UC credit limitation)** Offered: F,S.

Information in italics designates the semester(s) in which the course is offered. The Division Office reserves the right to make changes as budget or other constraints warrant. F=Fall, S=Spring, Sum=Summer, Inter=Intercession

Health Education 136—Nutrition, Fitness and Performance (2)

An applied nutrition course for individuals interested in health, fitness, and athletics. Principles of nutrition are studied and applied to the physically active lifestyle. Designed for the active individual and the the Fitness Specialist certificate. Pre-event food and fluid selection, nutrient requirements during activity, various nutrition supplements, muscle mass and body fat related to physical performance. Same as Food and Nutrition 136 and P E 136. Students completing Health Education 136 may not receive credit for Food and Nutrition 136 or P E 136. May be taken for grades or on a credit-no credit basis. Two hours. Offered: F,S.

Health Education 138—Drugs and Sports (2) (9 week course)

An in-depth look at substance abuse among athletes. The focus will be on the athletic environment, drug effects, reasons for drug usage, the impact on the team, and positive alternatives. Same as P E 138. Students completing Health Education 138 may not receive credit for P E 138. May be taken for grades or on a credit-no credit basis. Four hours. Offered: F,S.

Health Education 199AD—Current Health Issues (.5-3) (1-18 week course)

Study and discussion of topics and issues of current interest in health. Units vary according to topic selected, semester offered and number of meetings scheduled. Of interest to students majoring in health related fields or general. May be repeated with different topics. May be taken for grades or on a credit-no credit basis. Variable hours. Offered: as needed.

HEALTH RECORDS

Health Records 190—Beginning Medical Transcribing (3)

Prerequisite: Allied Health 111 and Medical Assisting 175, or concurrent enrollment. Keyboarding speed of 40 wpm and proficiency in word processing.

Instruction and experience in beginning medical transcribing procedures. Special emphasis on medical terminology and techniques of preparing discharge summaries, operative reports, histories and physicals and consults. Two hours lecture, two hours laboratory. Offered: F,S.

Health Records 195—Advanced Medical Transcribing (2)

Prerequisite: Health Records 190.

Instruction and experience in advanced medical transcribing procedures. Special emphasis on transcription of history and physicals, consultations, operative reports, progress notes, discharge summaries and various reports relating to laboratory/special procedures. One hour seminar, three hours laboratory. Offered: F,S.

HEATING AND AIR CONDITIONING

Heating and A/C 100—Refrigeration Principles (3)

Basic refrigeration theory for those with no experience in the field. Course covers heat principles, refrigeration cycle, cycle components, refrigerant properties, system operation, trouble shooting and servicing. Three hours. Offered: F,S.

Heating and A/C 101—Air Conditioning Principles (3)

Prerequisite: Heating and A/C 100.

Study of the properties of air, air movement, air requirements, control, comfort zone, heat loads, psychometric chart and air measuring instruments. Three hours. Offered: F.

Heating and A/C 102—Absorption Air Conditioning Systems (3)

Prerequisite: Heating and A/C 101.

Theory, operation, maintenance and trouble-shooting of the lithium bromide absorption system. Three hours. Offered: as needed.

Heating and A/C 103—Air Conditioning Service (3)

Prerequisite: Heating and A/C 100.

Operation, maintenance and repair of refrigeration and air conditioning. Three hours. Offered: as needed.

Heating and A/C 104—Air Conditioning—Air Balance (3)

Prerequisite: Heating and A/C 101.

Operation and maintenance of air conditioning and heating ducts and their controls. Three hours. Offered: F.

Heating and A/C 105—Air Conditioning Controls (3)

Heating, ventilating, refrigeration and air conditioning controls, control systems. Three hours. Offered: as needed.

Heating and A/C 106—Centrifugal Refrigeration (3)

Recommended preparation: Heating and A/C 100 or 101.

Fundamentals of centrifugal refrigeration, operations, maintenance of equipment and systems and trouble shooting. Three hours. Offered: S.

Heating and A/C 107—Steam Plant Operation and Maintenance 1 (3)

Basic steam cycle, boilers and accessories, water and water treatment, turbines, heat balance and performance monitoring, nuclear powered steam plants. May be taken for grades or on a credit-no credit basis. Three hours. Offered: as needed.

Heating and A/C 108—Steam Plant Operation and Maintenance 2 (3)

Prerequisite: Heating and A/C 107.

Electricity, instrumentation, control systems, water chemistry and water treatment, motors, generators, boiler start-up and shut-down. Stationary Engineering License exam preparation. May be taken for grades or on a credit-no credit basis. Three hours. Offered: as needed.

Heating and A/C 109—Building Energy Systems (3)

Prerequisite: Heating and A/C 100.

A practical introduction to air conditioning systems and their application in commercial, industrial and residential buildings. The primary emphasis will be on conservation from an engineering viewpoint. May be taken for grades or on a credit-no credit basis. Three hours. Offered: as needed.

Courses

Heating and A/C 110—Pneumatic Controls (3)

Operation and maintenance of pneumatic controls in building HVAC systems with emphasis on energy conservation practice. May be taken for grades or on a credit-no credit basis. Three hours. Offered: S.

Heating and A/C 120—Applied Electricity (3)

Application, use, and trouble-shooting of electricity in institutional or commercial buildings with emphasis on code compliance. May be taken for grades or on a credit-no credit basis. Three hours. Offered: S.

Heating and A/C 140—Building Automation/EMS (3)

Fundamental applications and design of building automation systems including, but not limited to, HVAC control, lighting control, fire and security systems. Three hours lecture. Offered: F.

All courses numbered 100 or higher are transferable to the California State Universities (CSU).

Courses that are transferable to the University of California are designated "UC". Some of these courses have limits on the amount of credit that is granted. See the UC transferable Course List available in the Counseling Center or Transfer Center for these limitations.

Course numbers followed by an AB, AC, or AD may be repeated once, twice or three times respectively.

Courses that are non-credit or not AA applicable are designated with the letter "N" preceding the course number.

High Technology 105—DOS for CAD/CAM (1) (9 week course)

Designed to provide students with the basic understanding of computers and their applications under the DOS operating system as applied to CAD/CAM. May be taken for grades or on a credit-no credit basis. Two hours. Offered: S.

High Technology 106—Manufacturing Computer Simulation (2) (9 week course)

Introduction to the design and development of simulations for manufacturing processes using software and computers. The design will consist of analyzing a manufacturing process, identifying individual components of the process and building software elements to represent those components. May be taken for grades or on a credit-no credit basis. One and one-half hours lecture, two and one-half hours non-lecture. Offered: as needed.

High Technology 107—Electronic Circuit Computer Simulation (2) (9 week course)

Prerequisite: Electronics Technology 180 or 155.
Introduction to the design and development of simulations for electronic circuits using software and computers. The design will consist of analyzing the circuit, obtaining components from software component database, and building circuits. Circuit will then be activated and tested in the software. Troubleshooting techniques using software instrumentation will be covered. May be taken for grades or on a credit-no credit basis. One and one-half hours lecture, two and one-half hours non-lecture. Offered: as needed.

High Technology 108—Survey of High Technology (3)

An exploratory course in areas of high technology which includes computer applications in industry, digital electronics, robotics and automation trends, blueprint reading and CAD/CAM. Course is geared for students who have no prior experience in any of the topic areas and for the general education or general interest student. May be taken for grades or on a credit-no credit basis. Three hours. Offered: F.

High Technology 109—Internet for Technology (2) (9 week course)

This course will examine browsers, search engines and other tools for accessing information from the Internet, and will concentrate on the most recent methods of searching the Internet such as Mosaic and Mosaic Netscape, World Wide Web, WAIS, Gopher, Veronica andarchie. Usenets and e-mail will be introduced with an emphasis on Netiquette. May be taken for grades or on a credit-no credit basis. Two hours lecture, four hours non-lecture. Offered: F,S.

High Technology 196—Laser Technology (3)

An introduction to the theory and practical application of lasers in modern industry. The course is designed for technical majors who want a program on how lasers are utilized in communications, measurement, optical scanners, machining, calibration, avionics holography, welding and safety. Three hours. Offered: S.

High Technology 209—Internet Web Publishing for Technology (2) (9 week course)

Prerequisite: High Technology 109

Design, development, and authoring of World Wide Web home pages using HTML tags and other software tools with an emphasis toward business and industry. Comparisons of commercial editors to HTML will be analyzed and contrasted. May be taken for grades or on a credit-no credit basis. Two hours lecture, four hours non-lecture. Offered: F,S.

HEBREW

Hebrew 180—Elementary Hebrew (5)

An intensive study of the Hebrew language. The course introduces the essentials of grammar and vocabulary necessary for basic oral and written communication in Hebrew. It also provides an insight into Jewish and Israeli culture and civilization. Designed for students seeking to fulfill foreign language requirements and for those who wish an introduction to Hebrew language and culture. May be taken for grades or on a credit-no credit basis. Five hours. **(UC)** Offered: as needed.

Hebrew 185—Elementary Hebrew (5)

Prerequisite: Hebrew 180.

Continuation of Hebrew 180. Correct use of Hebrew through basic conversation. Comprehension and speaking skills are expanded through discussion of school activities, professions, health matters, travel, family life, social activities, and customs. Reading, writing, grammatical basics, and cultural awareness are emphasized through selected literary works of Jewish authors. May be taken for grades or on a credit-no credit basis. Five hours. Offered: as needed.

HIGH TECHNOLOGY

High Technology 100—Computer Use in Technology (3)

An introduction to the current state of computer hardware and software technology for the student enrolled in technical courses. An overview for the person who wants to understand computers and automation in industry. Not a programming course. Three hours. Offered: F,S.

High Technology 101—Robotics (3)

An introductory course in robotics theory and operation designed for technical majors desiring a background in robotics and automation techniques. The course will include the following topic areas: robot history, terminology, robot classification, programming, specifications for work cells, servo-control systems, path control safety. Three hours. Offered: as needed.

High Technology 104—Alternate Energy Vehicle Construction and Conversion (4)

This course will investigate, compare and contrast alternate energy sources for use in transportation including electric, solar, fuel cells, hydrogen storage, flywheels and other energy sources. Students will engage in hands-on experiments. An on-going project in electric car construction and/or conversion will be part of the course. May be taken for grades or on a credit-no credit basis. Three hours lecture, four hours non-lecture. Offered: F,S.

HISTORY

History 100—Survey of American History (3)

A survey of the national, international, political, economic and social growth of the United States from its discovery to the present utilizing a topical and chronological approach. Designed to meet the state requirements in American History. Not designed for history majors. May be taken for grades or on a credit-no credit basis. Three hours. **(UC credit limitation)** Offered: F,S,Sum.

History 101—Afro-American History (3)

Political, legal, economic and social themes of blacks in the United States. Emphasis is given to the Afro-American experience from African origins, through slavery, into the 20th Century. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: F,S.

History 102—World Civilizations to the 17th Century (3) (CAN HIST 14)

The history of world civilizations from the earliest beginnings to the 17th century, giving a general outline of political, social, economic, and cultural institutions. May be taken for grades or on a credit-no credit basis. Three hours. **(UC credit limitation)** Offered: F,S.

History 102H—Honors World Civilizations to the 17th Century (3)

The history of world civilizations from the earliest beginnings to the 17th Century, giving a general outline of political, social, economic, and cultural institutions. May be taken for grades or on a credit-no credit basis. Three hours. **(UC credit limitation)** Offered: F,S.

History 103—World Civilizations Since the 17th Century (3) (CAN HIST 16)

The history of world civilizations since the 17th century, giving a general outline of political, social, economic, and cultural institutions. May be taken for grades or on a credit-no credit basis. Three hours. **(UC credit limitation)** Offered: F,S.

History 103H—Honors World Civilizations Since the 17th Century (3)

The history of world civilizations since the 17th Century, giving a general outline of political, social, economic, and cultural institutions. May be taken for grades or on a credit-no credit basis. Three hours. **(UC credit limitation)** Offered: F,S.

Courses

History 105—Family History and Genealogy (3)

Principles, procedures, and materials for developing family genealogy and history. Emphasizes practical aspects of historical research. Relates personal family history to general social, economic, and political history. May be taken for grades or on a credit-no credit basis. Three hours. Offered: as needed.

History 110—Mexican-American Heritage (3)

A study of the cultural development of the Mexican-American from the Pre-Columbian period to the present. Emphasis will be placed on Mexican-American contributions to the development of the American southwest. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: as needed.

History 115—The Other Americas (3)

A survey of Latin American civilization with an emphasis on the economic, social and political development since independence. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: as needed.

History 120—East Asia to 1800 (3)

An interdisciplinary survey of major political, social, economic and cultural traditions of East Asia with an emphasis upon India, China, Japan and South-East Asia. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: as needed.

History 125—East Asia Since 1800 (3)

A continuation of History 120 with an emphasis on problems associated with modernization, adaptation and cultural change since 1800. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: as needed.

History 128—History of Modern China (3)

A survey of political, economic, social and cultural developments in Chinese civilization since the 17th century emphasizing problems and personalities associated with modernization and revolution. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: S.

History 130—Survey of African History (3)

A survey of Africa, particularly as it interrelates with Europe, with emphasis on the period from the 18th century to the present. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: as needed.

History 140—The California Experience (3)

This introductory course surveys the uniqueness of the California experience. It explains the state's history with emphasis on the Indians, Spanish missions, Mexican ranchos, Gold Rush, transcontinental railroads, global population, colorful figures, 20th Century contributions to atomic and space developments and multinational corporations. Recommended for elementary education majors. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: F,S.

History 143—History of Orange County (1.5) (9 week course)

People of Orange County from discovery to the present. Emphasis on heritage and change, problems and issues of today, trends toward the future. May be taken for grades or on a credit-no credit basis. Three hours. Offered: as needed.

History 145—History of Mexico (3)

Mexican history from the Pre-Columbian period to the present. Social, political, economic and cultural growth of the Mexican nation. Emphasis on Indian, Spanish and European contributions. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: as needed.

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History 150—Ethnic Groups of the United States: Their Histories (3)

A survey of the history of the many ethnic groups originating in Europe, Asia (including the American Indian), the Americas, the Pacific Islands, Africa, and the Middle East that make up the population of the United States. Same as Ethnic Studies 150. Students completing History 150 may not receive credit for Ethnic Studies 150. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: F,S.

History 160—The American West (3)

A study of the trans-Mississippi west and the westward movement with special emphasis upon the roles played by the Indians, the Spanish, the Mexicans, the Anglo and the Black Americans in its exploration, settlement and development. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: F;even yrs..

History 170—History of the United States to 1876 (3) (CAN HIST 8)

A survey of American historical development from the founding of the English colonies to 1876. Emphasis is placed on the evolution of the nation's political and economic institutions, social and intellectual history and foreign policy. Satisfies the state university requirement in American History. May be taken for grades or on a credit-no credit basis. Three hours. (See also American Studies.) **(UC credit limitation)** Offered: F,S;Sum.

History 170H—Honors History of the United States to 1876 (3)

A survey of American historical development from the founding of the English colonies to 1876. Emphasis is placed on the evolution of the nation's political and economic institutions, social, and intellectual history, and foreign policy. May be taken for grades or on a credit-no credit basis. Three hours. **(UC credit limitation)** Offered: as needed.

History 175—History of the United States Since 1876 (3) (CAN HIST 10)

A continuation of the survey of American history development since 1876. Satisfies the state university requirement in American History. May be taken for grades or on a credit-no credit basis. Three hours. (See also American Studies.) **(UC credit limitation)** Offered: F,S;Sum.

History 175H—Honors History of the United States Since 1876 (3)

A continuation of the survey of American history development since 1876. May be taken for grades or on a credit-no credit basis. Three hours. **(UC credit limitation)** Offered: as needed.

History 176—Women in United States History (3)

The political, economic, social and cultural history of women within the context of United States history. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: as needed.

History 177—Economic History of the United States (3)

The economic history of the United States from the colonial period to the present. Emphasis is placed on factors and forces contributing to American economic development and attempted solutions to economic problems. Satisfies the state university requirement in American History. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: F.

History 178—The United States Between World Wars (3)

A survey of American political, diplomatic, economic and social trends during the Nineteen Twenties and Thirties. Emphasis upon changing life styles and emerging political and economic adjustments. May be taken for grades or on a credit-no credit basis. Three hours. UC+2 **(UC credit limitation)** Offered: as needed.

History 179—History of the United States Since 1945 (3)

Political, economic, social and cultural development of the United States from the end of World War II (1945) to the present with special emphasis on the emergence of general trends and themes which condition and characterize the contemporary American way of life. May be taken for grades or on a credit-no credit basis. Three hours. **(UC credit limitation)** Offered: F,S.

History 180—History of Western Civilization (3) (CAN HIST 2)

The development of present day western culture from the earliest beginnings to 1715, giving a general outline of the development of social, economic, political and cultural institutions that have had a major impact on our civilization. May be taken for grades or on a credit-no credit basis. Three hours. **(UC credit limitation)** Offered: F,S;Sum.

History 180H—Honors History of Western Civilization (3)

The development of present day Western culture from the earliest beginnings to 1715, giving a general outline of the development of social, economic, political, and cultural institutions that have had a major impact upon our civilization. May be taken for grades or on a credit-no credit basis. Three hours. **(UC credit limitation)** Offered: as needed.

History 185—History of Western Civilization (3) (CAN HIST 4)

A study of western culture from 1715 to the present with particular emphasis on the persons, ideas, movements, and institutions which help to interpret our present day civilization. May be taken for grades or on a credit-no credit basis. Three hours. **(UC credit limitation)** Offered: F,S;Sum.

History 185H—Honors History of Western Civilization (3)

A study of Western culture from 1715 to the present with particular emphasis on the persons, ideas, movements, and institutions which help to interpret our present day civilization. May be taken for grades or on a credit-no credit basis. Three hours. **(UC credit limitation)** Offered: as needed.

History 187—Women in History (3)

Political, economic, social and cultural history of women within the context of western civilization. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: as needed.

Courses

History 188—20th Century Europe (3)

The political, economic, social and cultural developments in recent European history. Topics include World War I and the consequences of Versailles, the Bolshevik Revolution and the rise of Communism, Italian Fascism and German Nazism, the diplomacy of World War II, the Cold War, and current developments in Western Europe and the Soviet Bloc. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: F;S.

History 190—History of Russia and the Soviet Union (3)

A survey of the political, economic, social and cultural history of Russia from the earliest times to the present day with an emphasis on Russian institutional development. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: F;S.

History 195—History of England and Greater Britain (3)

A survey of the political, economic, social and cultural history of England and Greater Britain from the earliest times to the present day with an emphasis placed on the development of Anglo-American institutions and the evolution of the British Commonwealth of Nations. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: as needed.

History 197—Vietnam War (3)

A survey of the struggle for control of Indochina since 1946 in its military, diplomatic, political and economic aspects. Emphasis is placed on the role of the United States in the war, as well as the war's impact on the United States. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: S.

History 198—The World at War (3)

Political, military, diplomatic, economic, social and cultural developments of World War II. Emphasis on the role of the United States. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: F;S.

History 199—Fifteen Significant Battles of World Civilization (3)

Fifteen decisive battles that have molded the shape of human destiny in the course of world civilization. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: as needed.

HOME ECONOMICS

(See Family and Consumer Sciences)

HOTEL MANAGEMENT

Hotel Management 100—Introduction to the Hospitality Industry (3)

Overview of the hospitality industry, its history and interrelationships of hotel, restaurant, travel and leisure industries. Economic and social influences of leisure. Emphasis on attitude required of a person seeking a position in the industry. Same as Food Service Management 100 and Culinary Arts 100. Students completing Hotel 100 may not receive credit for Food Service Management 100 or Culinary Arts 100. Three hours. Offered: F;S.

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Course numbers followed by an AB, AC, or AD may be repeated once, twice or three times respectively.

Courses that are non-credit or not AA applicable are designated with the letter "N" preceding the course number.

Hotel Management 101—Housekeeping Room Management (1) (6 week course)

This is part of three modules (Hotel Management 101, 102, and 103) that examine the technical functions of and coordination between the housekeeping and maintenance departments in a hotel. The fundamentals of management are emphasized through proper communication skills, appropriate training, detailing work methods, quality assurance, and management techniques. Students wishing to apply this course towards certification and/or an AA degree in hotel management must complete all three modules. One hour. Offered: F;S.

Hotel Management 102—Housekeeping Operations and Maintenance (1) (6 week course)

This is part of three modules (Hotel Management 101, 102, and 103) that examine the technical functions of and coordination between the housekeeping and maintenance departments in a hotel. The fundamentals of management are emphasized through proper communication skills, appropriate training, detailing work methods, quality assurance, and management techniques. Students wishing to apply this course towards certification and/or an AA degree in hotel management must complete all three modules. One hour. Offered: F;S.

Hotel Management 103—Housekeeping Techniques and Strategies (1) (6 week course)

This is part of three modules (Hotel Management 101, 102, and 103) that examine the technical functions of and coordination between the housekeeping and maintenance departments in a hotel. The fundamentals of management are emphasized through proper communication skills, appropriate training, detailing work methods, quality assurance, and management techniques. Students wishing to apply this course towards certification and/or an AA degree in hotel management must complete all three modules. One hour. Offered: F;S.

Hotel Management 110—Front Office Procedures (3)

Front office operation in a hospitality lodging enterprise. Public and employee relations, guest accommodations, office routines and reports, machine operation, room rates and the application of data processing to the front office accounting and records system. Three hours. Offered: F;S.

Hotel Management 115—Hotel Accounting and Night Audit (3)

The application of accounting principles and procedures to the hotel industry. Practice is given in bookkeeping methods, the operation of a set of books and accounting records, and the preparation of financial statements. The duties and responsibilities of the night auditor including the auditing of guests' accounts and preparation of the transcript. Three hours. Offered: S.

Hotel Management 116—Internship 1 (2)

Prerequisite: Completion of required courses for certificate of achievement in Hotel Management-Operations, or concurrent enrollment.

A directed internship opportunity for students completing the first year of the hotel management program. Students will be required to follow dress standards set by the facility in which they are working. Students must have medical accident insurance coverage. One hour lecture, ten hours field experience. Offered: F;S.

Hotel Management 230—Hospitality Purchasing (3)

The basic purchasing principles used in a hotel including writing specifications, ordering, receiving, storing, inventory, and controlling, purveyor selection and relations, and professional ethics, purchasing of supplies, equipment, furniture, food and beverage. Three hours. Offered: F;odd yrs..

Hotel Management 240—Hotel Sales (3)

The organization and function of a sales department with emphasis on planning and analysis of product competition and markets. Sales tools and techniques, advertising, community relations and the importance of guest contact are covered. Three hours. Offered: F.

Hotel Management 260—Supervision and Training (3)

Procedures and problems met by lodging operations in developing responsibility of selection, placement, orientation, training, counseling, evaluation, promotion and/or transfer of hotel employees. Same as Food Service Management 260. Students completing Hotel 260 may not receive credit for Food Service Management 260. Three hours. Offered: F;S.

Hotel Management 265—Principles of Meeting and Convention Management (3)

A practical introduction to meeting management where students gain professional insight into site selection, travel arrangements, assignment of lodging accommodations and billing. Students learn how to arrange programs, and coordinate meetings, banquet and recreation schedules. Contracting for photography, music and entertainment, plus post meeting responsibilities are also covered. Hotel management majors must take for grade only. May be taken for grades or on a credit-no credit basis. Three hours. Offered: F.

Hotel Management 270—Hotel Marketing (3)

The organization and function of hotel marketing with emphasis on people, product, packaging, pricing and promotion. The need for and use of product, competitor, market and departmental analysis. How to establish and operate a marketing plan to develop the maximum flow of business and to serve the patron most effectively and efficiently for the highest possible profit. Three hours. Offered: S.

Hotel Management 279AC—Internship 2 (2)

Prerequisite: Students may enroll only in the semester in which they will complete an associate in arts degree with a certificate of achievement in Hotel Management-Advanced Studies.

A directed internship for students completing the two-year program in the selected area of specialization. To be repeated for each certificate. Students must have medical accident insurance coverage. Students will be required to follow dress standards set by the facility in which they are working. A minimum of ten hours on the job plus one hour weekly seminar. Offered: F;S.

Courses

Hotel Management 285—Hotel Operation (3)

Management responsibilities in the hospitality industry including the rooms division, food and beverage, recreation, entertainment facilities, franchises, referral and management organizations, market analyses, feasibility studies, ethics, and statistics. Three hours. Offered: S.

Hotel Management 286—Hotel/Restaurant Law (3)

Introduction to law applicable to the hospitality industry. Laws dealing with discrimination, liability, torts, and negligence. Interpretation of statutes and regulations, labor laws, laws relating to building, health, and safety, and laws relating to food, liquor and entertainment are covered. Three hours. Offered: S.

Hotel Management 288—Human Resource Management (3)

The management of the human resources function in hotels including labor supply, governmental regulations, safety and worker's compensation, training, unions and labor relations and immigration requirements. The course also covers the administration and management of personnel. Three hours. Offered: F.

HUMAN DEVELOPMENT

Human Development 130—Working With the Developmentally Disabled Child (1) (9 week course)

For parents and caregivers of children with developmental disabilities. Assistance in designing and implementing appropriate early intervention activities, guidance techniques and supportive community resources. Three hours. Offered: as needed.

Human Development 180—Child Development (3) (CAN FCS 14)

A study of growth and development from conception through adolescence. Emphasis on theories of physical, cognitive and psychosocial development. Observations directed to further insight into change during childhood years. Three hours. (UC) Offered: F;S;Sum.

Human Development 182—Middle Childhood Development and Guidance (3)

Growth and development of the child from 5-12 years of age including characteristics of physical, cognitive, and psychosocial development, as well as techniques for guidance of the school-age child. Focus is on learning to identify common developmental qualities of children 5-12 years of age and find positive approaches to individual, group, and environmental management. Three hours. Offered: F;S.

Human Development 184—Infant Development and Relationships (3)

Growth and development of the child from birth to 2 years: current theories and adult-infant relationships along with practical applications for relating to and caring for infants. Three hours. Offered: F;S.

Human Development 190—The Child, Family and Community (3)

The community and the family as it relates to the socialization of the young child. Racial, cultural, social and economical factors, and the developmental tasks throughout the family life cycle, family crisis and community resources are explored. Three hours. (UC) Offered: F;S.

Information in italics designates the semester(s) in which the course is offered. The Division Office reserves the right to make changes as budget or other constraints warrant. F=Fall, S=Spring, Sum=Summer, Inter=Intercession

Human Development 210—Introduction to the Exceptional Child (3)

Prerequisite: Human Development 180.

Introduction to the exceptional child including the gifted, developmentally delayed, emotionally disturbed, speech and hearing impaired, visually impaired, orthopedically and neurologically impaired. The role of the teacher in supporting these children and their families and vocational opportunities are discussed. Three hours. Offered: S.

Human Development 280—Language and Literacy Development (3)

Prerequisite: Human Development 180 or 182.

Comprehension and production of language. Emphasis on literacy and language development birth through age 8. Course covers theories of language, reading, and writing acquisition, as well as steps involved in the development of programs for infants, toddlers, preschool, and early primary age children. Three hours. Offered: F;S.

HUMANITIES

Humanities 100—Introduction to the Humanities (3)

A survey of the European humanities (history, philosophy, literature, and the fine arts) and their contribution to artistic, cultural, and social expression in Western civilization. May be taken for grades or on a credit-no credit basis. Three hours. (UC) Offered: F;S;Sum.

Humanities 101—Themes in Humanities (3)

Great works of art through the ages as they relate to the problems of man and also as they relate to the student. A search for similarities and differences in some of the more important attempts to define the human. An examination of how, at widely separated points in time, artists and writers have viewed significant aspects of humanity and the world. May be taken for grades or on a credit-no credit basis. Three hours. (UC credit limitation) Offered: as needed.

Humanities 101H—Honors Themes in Humanities (3)

An examination of how literature, philosophy, history, and the arts intersect to explore the problems of man; how the humanities have viewed significant aspects of the human and his culture over widely separated points of time. May be taken for grades or on a credit-no credit basis. Three hours. (UC credit limitation) Offered: as needed.

Humanities 110A—Arts and Ideas of the Orient (1.5) (9 week course)

An introduction to the humanities of the Orient, focusing on an historical overview of the region through its visual arts, religion, and literary traditions. May be taken for grades or on a credit-no credit basis. Three hours. (UC credit limitation) Offered: as needed.

Humanities 110B—Arts and Ideas of Latin America (1.5) (9 week course)

An introduction to the humanities of Latin America with emphasis on an historic overview of the region through its religions, visual arts, and literary traditions. May be taken for grades or on a credit-no credit basis. Three hours. (UC credit limitation) Offered: as needed.

INTERDISCIPLINARY STUDIES

Interdisciplinary Studies 110—Introduction to Environmental Planning (3)

An introduction and precise survey of environmental planning. Analysis, description, and application of the planning process. Emphasis on group research into regional environmental problems. Three hours. Offered: as needed.

Interdisciplinary Studies 140—Introduction to Student Leadership (1)

An introductory course designed for all students interested or presently serving in leadership roles which may include clubs and organizational positions on campus or within the community. Emphasis on general leadership philosophy, governing structure, policies and operations of the Associated Students. Basic parliamentary procedure through development of leadership and organizational skills. May be taken for grades or on a credit-no credit basis. One hour. Offered: F;S.

Interdisciplinary Studies 150AD—Student Leadership and Governance (3)

Recommended preparation: Interdisciplinary Studies 140 or concurrent enrollment.

An introductory lab designed for continued development of advanced leadership skills. Class members will serve as student board of trustees, president, vice president, ASOCC staff members, or in clubs or organizational positions. Emphasis will be on participation in advanced governing operation and policy making. May be taken for grades or on a credit-no credit basis. One hour lecture, two hours non-lecture, four hours arranged. Offered: F;S.

Interdisciplinary Studies 200—Leadership Styles and Theories (3)

This course will explore a variety of theories and styles of leadership. Topics of discussion will include ethical theories and current and historical styles/models of leadership. Principle focus will be on the dynamics of decision making. Students will further develop analytical skills and will identify leadership skills applicable to their own lives. May be taken for grades or on a credit-no credit basis. Three hours. Offered: F;S.

INTERIOR DESIGN

Interior Design 100—Fundamentals of Interior Design (3)

Application of design principles and elements in planning of total interior environments that meet individual, functional, legal, and environmental needs. Selection of all materials and products used in interior environments will be emphasized for the functional aesthetic quality. Three hours. Offered: F;S.

Interior Design 105—Interior Design Studio 1 (2)

Recommended preparation: Interior Design 100 or concurrent enrollment.

This studio course will apply concepts and theories presented in the lecture course, Interior Design 100. Therefore, it is recommended that both courses be taken concurrently. Emphasis is placed on the design process in developing solutions for design projects. One hour lecture, three hours studio. Offered: F;S.

Interior Design 120—Interior Design Careers (2)

A survey of the interior design profession, industry, related occupations and work sites. The course will emphasize personal, educational, and professional qualifications required for entry into the interior design profession. Two hours. Offered: F;S.

Courses

Interior Design 150—Interior Materials and Products (4)

Analysis, application and evaluation of products and materials used in interior design. Includes interior textiles, furnishings, and finish materials and products. Four hours. Offered: as needed.

Interior Design 170—Space Planning (3)

Recommended preparation: Interior Design 100 and Architectural Technology 105.

The application of programming, theory, and techniques in residential and commercial space planning. Drafting and presentation techniques are emphasized in the studio. Two hours lecture, three hours non-lecture. Offered: F.

Interior Design 180—History of Interior Architecture and Furnishings 1 (3)

The historical relationship between the decorative arts, period furniture, and interior architecture is illustrated in this overview of design heritage from Antiquity through the 19th century in France. Emphasis on style development as it relates to social, economic, and political influences. Three hours. Offered: F;S.

Interior Design 190—History of Interior Architecture and Furnishings 2 (3)

The historical relationship between the decorative arts, period furniture, and interior architecture is illustrated in this overview of design heritage. This course begins with 16th century England and America and analyzes the influences and changes in design to the present. Style development as it relates to social, economic, and political forces is emphasized. Three hours. Offered: S.

Interior Design 200—Interior Illustration (2)

Recommended preparation: Architectural Technology 105.

Application of the methods, techniques, and tools used for illustrating interior spaces and products. One hour lecture, three hours non-lecture. Offered: as needed.

Interior Design 210—Fundamentals of Lighting (3)

Recommended preparation: Interior Design 100 and Architectural Technology 105.

The fundamentals of lighting, design, theory, and application including the history and vocabulary of lighting, how light affects color and vision, incandescent and fluorescent lamps, lighting techniques for interior designers, codes, and energy efficient lighting practices. Three hours. Offered: S.

Interior Design 215—Interior Design Studio 2 (2)

Recommended preparation: Fashion 175 and Interior Design 170.

Develop, analyze, and apply design concepts to interior environments. Universal design, 'green' design, space planning, lighting systems, interior components, architectural elements, and specification writing will be integrated into research projects emphasizing a problem solving approach. One hour lecture, three hours studio. Offered: S.

Interior Design 230—Business and Professional Practice (3)

Recommended preparation: Interior Design 100 and 120.

The business and professional management of an interior design practice including legal issues, project management, and business practices. Three hours. Offered: as needed.

All courses numbered 100 or higher are transferable to the California State Universities (CSU).

Courses that are transferable to the University of California are designated "UC". Some of these courses have limits on the amount of credit that is granted. See the UC transferable Course List available in the Counseling Center or Transfer Center for these limitations.

Course numbers followed by an AB, AC, or AD may be repeated once, twice or three times respectively.

Courses that are non-credit or not AA applicable are designated with the letter "N" preceding the course number.

Interior Design 240—Interior Design Internship (3)

Recommended preparation: Architectural Technology 180 and Interior Design 170.

Supervised internship related to classroom-based learning at a work site related to interior design. One hour lecture, eight hours arranged. Offered: F;S.

Interior Design 250—Codes and Specifications for Interior Design (2)

This course explores federal regulations, codes and specifications concerning life-safety issues, barrier-free access (ADA and universal design requirements relative to residential and contract design). Special attention is given to performance, health-safety, and universal design when estimating and preparing specifications for interior materials and products. Two hours. Offered: as needed.

Interior Design 260—Interior Design Rendering and Rapid Visualization (2)

Recommended preparation: Architectural Technology 105 and Interior Design 200.

Application of the methods, techniques, and tools used for illustrating interior spaces and products with an emphasis on rapid production. One hour lecture, three hours non-lecture. Offered: as needed.

Interior Design 265—Interior Design Studio 3 (2)

Recommended preparation: Interior Design 215 and 260.

Analysis and application of the design process to the space planning, materials and finish choices, codes application, and selection of specialized equipment unique to planning office spaces. Design solutions for offices will be developed in the studio. One hour lecture, three hours studio. Offered: as needed.

Interior Design 275—Interior Design Studio 4 (2)

Recommended preparation: Interior Design 215 and 260.

Analysis and application of the design process to space planning, materials and finish choices, codes application, and selection of specialized equipment unique to planning hospitality spaces. Design solutions for hospitality to be developed in the studio. One hour lecture, three hours studio. Offered: as needed.

INTERNATIONAL STUDIES

International Studies 100—Introduction to Global Perspectives (3)

Prerequisite: Eligibility for English 100.

Designed for all majors as an approach to understanding the contemporary world. The course integrates most college disciplines in an international way. Systems, change, developing technologies and methods will be discussed. May be taken for grades or on a credit-no credit basis. Three hours. Offered: as needed.

INTERNSHIP ACADEMY

Internship 392AB—Internship Academy-Level 2 (1-4)

Prerequisite: Concurrent enrollment in a course related to the student's identified major.

Supervised internship for the student who has identified a major area of study. Job site experience will train the student in additional job skills that will enhance academic learning. Courses in the career field will be taken concurrently with the student's job site experience. May be either a paid or unpaid position. Three and one-half to sixteen and one-half hours. Offered: F;S;Sum.

Internship 393AB—Internship Academy-Level 3 (1-4)

Prerequisite: Advanced standing in career program.

Supervised internship related to classroom-based learning at an on-the-job learning site related to student's career goal. This is an advanced internship course. May be either a paid or unpaid position. Three and one-half to sixteen and one-half hours. Offered: F;S;Sum.

ITALIAN

Italian 110—Italian Conversation 1 (3)

Italian conversation, pronunciation, oral practice, vocabulary study. Fundamental grammatical principles as necessary for use in conversational situations. Emphasis on speaking and comprehension of the spoken language. Designed for students whose primary goal is to speak Italian. May be taken concurrently with Italian 180 by the student who wishes additional practice in speaking Italian. May be taken for grades or on a credit-no credit basis. Three hours. Offered: as needed.

Italian 120—Italian Conversation 2 (3)

Continuation of Italian Conversation 1. May be taken for grades or on a credit-no credit basis. Three hours. Offered: as needed.

Italian 130—Conversational Italian 3 (3)

Continuation of Italian Conversation 2. May be taken for grades or on a credit-no credit basis. Three hours. Offered: as needed.

Italian 180—Elementary Italian (5)

Fundamentals of Italian language and culture with practice in reading, writing, speaking, and comprehension of Italian at the beginning, first semester level. An introduction of selected literary works by leading Italian authors and an awareness of Italian culture. Designed for students needing to fulfill foreign language requirements and for those who wish an introduction to the Italian language and culture. May be taken for grades or on a credit-no credit basis. Five hours. **(UC)** Offered: F;S.

Italian 180A—Beginning Elementary Italian (2.5)

An extended course equivalent to the first half of Italian 180 and intended for students seeking more time to acquire Italian 180. Taken together, Italian 180A and 180B equal Italian 180. Includes fundamentals of the Italian language and culture with practice in reading, writing, speaking, and comprehension of Italian at the beginning, first semester level. An introduction to selected literary works by leading Italian authors depicting cultural and philosophic points of view. May be taken for grades or on a credit-no credit basis. Three hours. **(UC credit limitation)** Offered: as needed.

Courses

Italian 180B—Continuing Elementary Italian (2.5)

An extended course continuing Italian 180A and equivalent to the second half of Italian 180 and intended for students seeking more time to acquire Italian. Taken together, Italian 180A and 180B equal Italian 180. Includes fundamentals of the Italian language and culture with practice in reading, writing, speaking and comprehension of Italian at the beginning, second semester level. An introduction to selected literary works by leading Italian authors depicting cultural and philosophic points of view. May be taken for grades or on a credit-no credit basis. Three hours. **(UC credit limitation)** Offered: as needed.

Italian 185—Elementary Italian (5)

Prerequisite: Italian 180.

Continuation of Italian 180. Emphasis on developing effective and correct skills in conversation, reading, writing, and comprehension in the Italian language at a second semester level, and a broader scope to selected literary works and cultural awareness. May be taken for grades or on a credit-no credit basis. Five hours. **(UC)** Offered: F,S.

Italian 185A—Beginning Elementary Italian (2.5)

Prerequisite: Italian 180.

An extended course continuing Italian 180A and 180B and intended for students seeking more time to acquire Italian. Equivalent to the first half of Italian 185. Stress on developing effective and correct skills in conversation, reading and writing in the Italian language at a second semester level. Taken together, Italian 185A and 185B equal Italian 185. May be taken for grades or on a credit-no credit basis. Three hours. **(UC credit limitation)** Offered: as needed.

Italian 185B—Continuing Elementary Italian (2.5)

An extended course continuing Italian 185A and intended for students seeking more time to acquire Italian. Equivalent to the second half of Italian 185. Stress on developing effective and correct skills in conversation, reading and writing in the Italian language at a second semester level. Taken together, Italian 185A and 185B equal Italian 185. May be taken for grades or on a credit-no credit basis. Three hours. **(UC credit limitation)** Offered: as needed.

Italian 199—Current Topics in Italian (1-5)

Prerequisite: One semester of college-level Italian.

Group participation by level to develop skills in using Italian in oral and written form. Study and discussion of major current social, economical and political issues in Italy and their impact on Italian traditions through a historical perspective. Students will be assigned to groups according to their existing levels of Italian. May be taken for grades or on a credit-no credit basis. One to five hours. **(UC credit limitation)** Offered: as needed.

Italian 280—Intermediate Italian (4)

Prerequisite: Italian 185.

Continuation of Italian 185. Includes further study of Italian language, culture and literature with practice in reading, writing, speaking and comprehension of Italian at the third semester level. A broader scope to selected literary work and cultural awareness. May be taken for grades or on a credit-no credit basis. Four hours. **(UC)** Offered: as needed.

Italian 285—Intermediate Italian (4)

Prerequisite: Italian 280.

Continuation of Italian 280. A review of grammar with concentration on original oral and written expression based on selected readings and lectures on Italian literature and culture. May be taken for grades or on a credit-no credit basis. Four hours. **(UC)** Offered: as needed.

Information in italics designates the semester(s) in which the course is offered. The Division Office reserves the right to make changes as budget or other constraints warrant. F=Fall, S=Spring, Sum=Summer, Inter=Intercession

Italian 289—Advanced Italian (3)

Prerequisite: Italian 285.

A general consolidation of the four language skills: reading, comprehension, composition and conversation. Practical conversation, composition and reading on everyday topics, cultural material exploring new insights into Italian life, history, institutions, folklore and Italian grammar review. This course is taught in Italian. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: as needed.

JAPANESE

Japanese 180—Elementary Japanese (5)

Fundamentals of Japanese grammar. Reading, writing, speaking, and comprehension of Japanese at the beginning level. An introduction to selected literary works by leading Japanese authors and an awareness of Japanese culture. Designed for students who need to fulfill a foreign language requirement and for those who wish a thorough introduction to all aspects of the language. May be taken for grades or on a credit-no credit basis. Five hours. **(UC)** Offered: F,S.

Japanese 180A—Beginning Elementary Japanese (2.5)

An extended course equivalent to the first half of Japanese 180, intended for students seeking more time to acquire Japanese. Taken together, Japanese 180A and Japanese 180B equal Japanese 180. Includes fundamentals of the Japanese language and culture with practice in reading, writing, speaking and comprehension of Japanese at the beginning, first semester level. May be taken for grades or on a credit-no credit basis. Three hours. **(UC credit limitation)** Offered: as needed.

Japanese 180B—Continuing Elementary Japanese (2.5)

Prerequisite: Japanese 180A.

An extended course continuing Japanese 180A and equivalent to the second half of Japanese 180, intended for students seeking more time to acquire Japanese. The combinations of Japanese 180A and Japanese 180B equal Japanese 180. May be taken for grades or on a credit-no credit basis. Three hours. **(UC credit limitation)** Offered: as needed.

Japanese 181—Elementary Japanese (3)

Prerequisite: Japanese 180 or two years of high school Japanese.

Continuation of Japanese 180 for students who wish to take more time and have more aural practice. Emphasis on correct use of Japanese in reading, writing, speaking, and comprehension at the secondary level, and a broader scope to cultural awareness. (Course content of Japanese 181 and 182 together exceeds that of Japanese 185.) May be taken for grades or on a credit-no credit basis. Three hours. **(UC credit limitation)** Offered: as needed.

Japanese 182—Elementary Japanese (3)

Prerequisite: Japanese 181.

Continuation of Japanese 181 for students who wish to take the second semester level work at a more leisurely pace with more practice of an aural nature. Emphasis on correct use of Japanese in reading, writing, speaking and comprehension at the secondary level with a broader scope to cultural awareness. (Course content of Japanese 181 and 182 together exceeds that of Japanese 185.) May be taken for grades or on a credit-no credit basis. Three hours. **(UC credit limitation)** Offered: as needed.

Japanese 185—Elementary Japanese (5)

Prerequisite: Japanese 180.

Continuation of Japanese 180. Emphasis on correct use of Japanese in reading, writing, speaking and comprehension at the secondary level, and a broader scope to cultural awareness. May be taken for grades or on a credit-no credit basis. Five hours. **(UC)** Offered: F,S.

Japanese 280—Intermediate Japanese (4)

Prerequisite: Japanese 185.

This course includes further study of Japanese grammar and idioms, and includes oral exercises, reading, written compositions, and the study of Japanese culture. May be taken for grades or on a credit-no credit basis. Four hours. **(UC)** Offered: F.

Japanese 285—Intermediate Japanese (4)

Prerequisite: Japanese 280.

A continuation of Japanese 280 completing grammar study, polishing student's oral and written work in Japanese. Increasing emphasis on spontaneous conversation and free composition. May be taken for grades or on a credit-no credit basis. Four hours. **(UC)** Offered: S.

JOURNALISM

(See Communications and English)

LEARNING SKILLS

Learning Skills N001AD—Basic Skills Remediation (1-3)

Prerequisite: Completion of the California Community College Learning Disabilities Assessment.

Provides individualized remedial instruction to students with learning disabilities. The program is designed to help a student improve the basic academic skills of reading, spelling and arithmetic. Offered on a credit-no credit basis only. Three-nine hours non-lecture. Not applicable to AA degree. Offered: F,S.

MACHINE TECHNOLOGY

Machine Technology 100—Introductory Machine Shop (3)

This course familiarizes the student with the basics of machine shop safety practices, common non-precision and precision measuring tools, hand tools, simple blueprint reading, simple lathe, mill, and drill press operations. Two hours lecture, three hours laboratory. Offered: F,S;Sum.

Machine Technology 105—Lathe (5)

Recommended preparation: Machine Technology 100 and 120 and Technology 040 or related experience.

A basic course in engine lathe operation to include ID and OD threading, knurling, boring, turning, facing, and cutting tapers. This course also includes exposure to the chucker lathe, tracer lathe, and the turret lathe. Safety and measurement are also emphasized. Three hours lecture, five hours laboratory. Offered: F,S.

Machine Technology 110—Milling Machine (5)

Recommended preparation: Machine Technology 100 and 120 and Technology 040 or related experience.

A basic course in milling machine operation to include both the vertical and horizontal milling usage, theory and usage of tools and accessories. Safety is also emphasized. Three hours lecture, five hours laboratory. Offered: F,S.

Courses

Machine Technology 115—Production Machining Techniques (3)

Recommended preparation: Machine Technology 100 and 105 and 110 or related experience.

This course emphasizes production machining. Set up and running of more than one part on the following machines: turret lathe, chucker lathe, tracer lathe, turret drill, ID & OD grinder, vertical mill, horizontal mill. Two hours lecture, four hours laboratory. Offered: F,S.

Machine Technology 120—Measurement and Blueprint Reading (3)

A study of blueprint reading and measuring systems used in manufacturing, including an in-depth study of the basic and advanced measuring tools used by machinists. Common blueprint formats and dimension practices will be explored. Geometric dimensioning and tolerancing will be discussed. Three hours. Offered: F,S.

Machine Technology 125—Computerized Numerical Control Machine Operation (3)

Recommended preparation: Machine Technology 105 and 110 or related experience.

A basic course in the operation of a computerized numerically controlled lathes and mills, including machine functions, tooling set up, reading machine language, part set up, and machine manipulation. Includes production of parts on both lathes and mills. Two hours lecture, three hours laboratory. Offered: F,S.

Machine Technology 126—Advanced CNC Machine Operation (2)

Recommended preparation: Machine Technology 125 or related experience.

Designed to fine tune the skills of CNC machine set up. Students will learn advanced features of state-of-the-art CNC lathes and mills, make their own fixtures, write the necessary programs, and produce the parts on CNC machines. One hour lecture, three hours non-lecture. Offered: F,S.

Machine Technology 130—Introduction to Computerized Numerical Control and Manual Programming (4)

Recommended preparation: Machine Technology 105 and 110 or related experience.

A basic course in computerized numerical control of machine tools. Types of control systems, capabilities, and the different machine languages are examined. Elementary parts programming in two axis systems, including all steps necessary to complete a part on both CNC lathes and mills. Four hours. Offered: F,S.

Machine Technology 131AB—CNC Programming-Surfcam (3)

Prerequisite: Machine Technology 130.

Recommended preparation: High Technology 100 or Computer Information Systems 100.

Students will receive hands-on training in the use of Surfcam CNC programming software. The basics of two-dimensional part programming, including geometry development, milling, drilling, tapping, pocketing, and more will be explored. Three hours lecture, one hour laboratory. Offered: F,S.

Machine Technology 132AB—Advanced CNC Programming-Surfcam (2.5)

Prerequisite: Machine Technology 131AB.

Students will receive training in advanced concepts of computer-assisted parts programming using Surfcam. Students will develop relatively complex part programs to include surfacing and cutter movement. Two hours lecture, two hours laboratory. Offered: S.

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Course numbers followed by an AB, AC, or AD may be repeated once, twice or three times respectively.

Courses that are non-credit or not AA applicable are designated with the letter "N" preceding the course number.

Machine Technology 133AB—CNC Programming-Mastercam (3)

Prerequisite: Machine Technology 130.

Students will receive hands-on training in the use of Mastercam CNC programming software. The basics of two-dimensional part programming, including geometry development, milling, drilling, tapping, pocketing, and more will be explored. Three hours lecture, one hour laboratory. Offered: F,S.

Machine Technology 134AB—Advanced CNC Programming-Mastercam (2.5)

Prerequisite: Machine Technology 133AB.

The course is designed to train students in the advanced concepts of computer-assisted parts programming using Mastercam CNC programming software. Students will develop relatively complex part programs to include surfacing. Two hours lecture, two hours laboratory. Offered: S.

Machine Technology 137AB—CNC Programming-Virtual Gibbs (3)

Prerequisite: Machine Technology 130.

Recommended preparation: High Technology 100 or Computer Information Systems 100.

Students will receive hands-on training in the use of Virtual Gibbs CNC programming software. The basics of two- and three-dimensional part programming, including geometry development, milling, drilling, tapping, pocketing, and more will be explored. Three hours lecture, one hour laboratory. Offered: F,S.

Machine Technology 138AB—Advanced CNC Programming-Virtual Gibbs (2.5)

Prerequisite: Machine Technology 137AB.

Students will receive training in advanced concepts of computer-assisted parts programming using Virtual Gibbs CNC programming software. Students will develop relatively complex part programs to include surfacing. Two hours lecture, two hours laboratory. Offered: F,S.

Machine Technology 150—Tool and Cutter Grinding (3)

Recommended preparation: Machine Technology 100.

A basic course in the sharpening of common cutting tools such as drills, reamers, countersinks, counter bores, and end mills. Emphasis is on the tool and cutter grinder, but several other types of sharpening machines will be included. Two hours lecture, three hours non-lecture. Offered: S;even yrs..

Machine Technology 161—Beginning Molding Techniques (3) (16 week course)

Recommended preparation: Machine Technology 100 and 120 and Technology 040 or related experience.

A basic course that develops the necessary skill and knowledge for operating state-of-the-art plastic injection molding machines. The machine, the process, parts, molding cycles, and machine controls will be discussed. Three hours lecture, one hour laboratory. Offered: F,S.

Machine Technology 162—Intermediate Molding Techniques (3) (16 week course)

Recommended preparation: Machine Technology 161 or related experience.

This course explores the characteristics of plastic materials that are used in the plastic injection molding industry, including thermoplastics, thermoset plastics, copolymers, blends, and additives. Recycling, economics, and defects will be discussed. Three hours lecture, one hour laboratory. Offered: F,S.

Machine Technology 163—Advanced Molding Techniques (3) (16 week course)

Recommended preparation: Machine Technology 162 or related experience.

An advanced course in the set up and operation of state-of-the-art plastic injection molding machines, including preproduction checks, operating methods, and economics. Troubleshooting problems such as voids, sink marks, short shots, flash, splay, cracks, and breakage will be covered. Three hours lecture, one hour laboratory. Offered: F,S.

Machine Technology 175—Dimensioning and Tolerancing (3)

Recommended preparation: Technology 040 or one year of high school math.

A course in reading and using the latest ANSI standards for geometric dimensioning and tolerancing. Three hours. Offered: S.

Machine Technology 190—Elementary Metallurgy (4)

An elementary course describing the relationship between microstructure, composition, heat and mechanical treatment, and physical properties of metals and alloys, their relationship to design, machining, welding, and fabrication. Four hours. Offered: F;even yrs..

Machine Technology 195—Manufacturing Processes (3)

A study of engineering materials and manufacturing processes from the viewpoint of the machinist, draftsman, and designer. Course discusses the problems of material selection coupled with economical manufacturing methods. Three hours. Offered: F.

Machine Technology 200—Tooling (4)

Recommended preparation: Machine Technology 100, 105, 110 and 120.

A basic course in the making of jigs, fixtures, and molds. Three hours lecture, three hours laboratory. Offered: S.

MANAGEMENT

Management 100—Applied Management for Public and Private Organizations (3)

Provide the learner with the knowledge necessary to understand and apply the tools, practices, policies and concepts of management. Emphasis will be on management, the functions of planning, organizing, leading and controlling. Communications, decision making and effective time management will also be covered. Three hours. Offered: F,S.

Management 115—Human Relations and Supervision (3)

A behavioral science approach to human relations in business with special emphasis on developing a student's leadership qualities, understanding, personal characteristics, and attitudes desirable for advancement to greater responsibilities in business management. The course is designed for on-the-job trainees, or mid-management trainees who are seeking further insights in dealing with co-workers and management. Three hours. Offered: F,S;Sum.

Courses

Management 130—Fundamentals of Personnel Management (3)

Techniques and theories of personnel/human resource management as one of the major management functions. Effective acquisition, utilization and maintenance of human resources in business organizations. May be taken for grades or on a credit-no credit basis. Three hours. Offered: as needed.

Management 210—Applied Communications (3)

Designed for persons wanting communication skills for supervisory and management positions. Study of communication functions, choices, and roles within work settings. Practice in routine information exchange, oral reporting, negotiating conflict, and e-communication. Focuses on both verbal and nonverbal skills necessary to communicate successfully in one-to-one, small- and large-group settings. Additional emphasis will be placed on written communications skills. Three hours. Offered: F;S.

MARINE ACTIVITIES

Marine Activities 147AB—Introduction to Sailing (1) (9 week course)

Prerequisite: Ability to swim 50 yards and tread water for five minutes.

Introduces the novice to the fundamentals of sailing through dockside lectures and hands-on experience in Lido 14 dinghies. Points of sail, basic terminology, tacking, jibing, theory, and safety are emphasized. Same as Physical Education 147AB. Students completing Marine Activities 147AB may not receive credit for Physical Education 147AB. May be taken for grades or on a credit-no credit basis. One hour lecture, three hours non-lecture. **(UC credit limitation)** Offered: F;S.

Marine Activities 148AB—Introduction to Keel Boats (1) (9 week course)

Prerequisite: Ability to swim 50 yards and tread water for five minutes. Basic sailing ability.

This course introduces the intermediate sailor to the fundamentals of sailing through dockside lectures and hands-on experience in Shields 30 sloops. Points of sail, basic terminology, tacking, jibing, theory, and safety are emphasized. Same as Physical Education 148AB. Students completing Marine Activities 148AB may not receive credit for Physical Education 148AB. May be taken for grades or on a credit-no credit basis. One hour lecture, three hours non-lecture. Offered: F;S.

Marine Activities 149AB—Introduction to Ocean Sailing (1) (9 week course)

Prerequisite: Ability to swim 50 yards and tread water for five minutes. Knowledge of basic sailing principles.

This course introduces the fundamentals of ocean sailing through dockside lectures and hands-on experience aboard large sailing vessels. Sail handling, winch operation, steering, reefing, and line handling are emphasized. Same as Physical Education 149AB. Students completing Marine Activities 149AB may not receive credit for Physical Education 149AB. May be taken for grades or on a credit-no credit basis. One hour lecture, three hours non-lecture. Offered: F;S.

MARINE SCIENCE

Marine Science 100—Oceanography (3)

An orientation to the marine sciences including considerations of physical and chemical properties of the sea, the sea-air interface, the biology of the sea, the geology of the ocean basins, the sea as a physical, chemical, biological and recreational resource, and the obligation of mankind to control further contamination of the environment. Three hours. **(UC credit limitation)** Offered: F;S.

Information in italics designates the semester(s) in which the course is offered. The Division Office reserves the right to make changes as budget or other constraints warrant. F=Fall, S=Spring, Sum=Summer, Inter=Intercession

Marine Science 100H—Honors Oceanography (3)

An orientation to the marine sciences, including considerations of physical and chemical properties of the sea, the sea-air interface, the biology of the sea, the geology of the ocean basins, the sea as a physical, chemical, biological and recreational resource, and the obligations of mankind to control further contamination of the environment. Three hours. **(UC credit limitation)** Offered: as needed.

Marine Science 100L—Oceanography Laboratory (1)

Prerequisite: Marine Science 100 with a grade of 'C' or better, or concurrent enrollment. (If student drops from Marine Science 100, the student must also drop Marine Science 100L.)

An orientation to marine science research process, techniques, equipment, institutions, and training/education centers. Investigations of physical and chemical properties of the sea, conditions of the air/sea/land interface, review of biological taxonomy and classification, study of longitude, latitude, ocean basin geography and geology. Evaluation of the sea as a physical, chemical, biological and recreational resource. Analysis of human efforts to control pollution, manage fisheries and monitor the ocean world. Three hours laboratory. **(UC credit limitation)** Offered: F;S.

Marine Science 100LH—Honors Oceanography Laboratory (1)

Prerequisite: Marine Science 100 or 100H, or concurrent enrollment.

An orientation to marine science research process, techniques, equipment, institutions, and training/education centers. Investigations of physical and chemical properties of the sea, conditions of the air/sea/land interface, review of biological taxonomy and classification, study of longitude, latitude, ocean basin geography and geology. Evaluation of the sea as a physical, chemical, biological, and recreational resource. Analysis of human efforts to control pollution, manage fisheries, and monitor the ocean world. Three hours laboratory. **(UC credit limitation)** Offered: as needed.

Marine Science 120—Marine Aquarium Science (1)

Recommended preparation: Marine Science 100 or concurrent enrollment.

This course introduces students to the science of Aquariumology and provides experience working in a small public aquarium. Students will learn animal husbandry, disease control, aquarium water chemistry, and methods of filtration and cleaning. One hour lecture, two hours non-lecture. Offered: F;S;Sum.

Marine Science 141—Mariculture (Sea Farming) (2)

Prerequisite: Marine Science 100 or Biology 100 or Marine Science 180.

A study and analysis of the new marine science of sea farming, mariculture. Survey of animals cultured, techniques used, economics, and national plus international efforts. Visits to field sites of mariculture in California. Two hours lecture, two hours laboratory. Offered: as needed.

Marine Science 180—Marine Biology (3)

Prerequisite: Marine Science 100 or Biology 100.

Recommended preparation: Marine Science 185.

The life of the world's oceans including principles of cell biology as it relates to the marine situation, energy flow through living systems, the evolution of marine life, the taxonomy of marine plants and animals, an overview of marine habitats and their organisms, intertidal zonation, plankton biology, marine mammals, pollution and its relations to marine biology, and discussion of currently applicable topics. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: F;S.

Marine Science 180L—Marine Biology Lab (1)

Prerequisite: Marine Science 180, or concurrent enrollment.

An exploration of the principles of marine biology using, whenever possible, living organisms in natural surroundings. Included will be plankton biology, the taxonomy and habits of common eastern Pacific marine plants and animals, aspects of intertidal zonation, analysis of fouling communities, and field trips to sea to observe marine birds and mammals. May be taken for grades or on a credit-no credit basis. Three hours non-lecture. **(UC)** Offered: F;S.

Marine Science 185—Coastal Oceanography (3)

Prerequisite: Marine Science 100.

Study of the physical, chemical, geological, and biological oceanography of the coastal ocean of Southern California and northeast Pacific Ocean. May be taken for grades or on a credit-no credit basis. Three hours. **(UC credit limitation)** Offered: F;S.

Marine Science 185L—Coastal Oceanography Lab (1)

Prerequisite: Marine Science 185, or concurrent enrollment.

Scientific laboratory and field investigation of physical, geological and chemical oceanography related to the Southern California coastal ocean. May be taken for grades or on a credit-no credit basis. Three hours laboratory. **(UC credit limitation)** Offered: F;S.

Marine Science 187—Marine Mammals (3)

Prerequisite: Marine Science 100.

Recommended preparation: Marine Science 180 and 185.

The natural history, ecology population dynamics, communications and intelligence of marine mammals including whales, dolphins, seals and sea lions, sea otters, sea cows and polar bears. May be taken for grades or on a credit-no credit basis. Three hours. Offered: as needed.

Marine Science 291ADH—Honors Directed Study in Marine Science (1)

A student may taken advanced course work in a field of study, after having completed the introductory courses. In unusual cases, students may enroll in directed studies without completing the pertinent beginning courses. Those students also must have written approval of the instructor, Division Dean, and the Vice President of Instruction. Three hours non-lecture. Offered: as needed.

MARKETING

Marketing 100—Introduction to Marketing (3)

A survey of the major marketing topics of interest to marketing students and practitioners. Studies include: major institutions involved in the marketing process, major tools used by marketers, and environmental forces affecting the marketing process. Emphasis is placed on effective marketing strategy. Three hours. Offered: F;S;Sum.

Courses

Marketing 110—Professional Selling (3)

An introductory course in personal selling that covers the basic steps in organizing, developing, and preparing a professional sales presentation. Emphasizes the relational selling process by focusing on sales communication skills that are used to build effective buyer and seller relationships. May be taken for grades or on a credit-no credit basis. Three hours. Offered: F;S;Sum.

Marketing 113—Computer Advertising Design and Copywriting (3)

A course covering the fundamentals of advertising copywriting, advertising layout and paste-up, with an introduction to and hands-on experience using the Macintosh computer. This course will prepare art and advertising students to think in both the graphic and verbal modalities. Same as Art 113. Students completing Marketing 113 may not receive credit for Art 113. May be taken for grades or on a credit-no credit basis. Three hours lecture, three hours non-lecture. Offered: F;S.

Marketing 114—Advertising Copywriting (3)

A survey of advertising copywriting with exercises in techniques by writing copy for advertisements, radio and television commercials, merchandise packaging. Includes studies of advertising layout and design so that the copywriter can creatively prepare an entire ad. Discusses the relationships between ad creator and consumer, advertiser and merchandiser. Same as Communications 114. Students completing Marketing 114 may not receive credit for Communications 114. May be taken for grades or on a credit-no-credit basis. Three hours. Offered: F;S.

Marketing 115—Sales Management (3)

This course explores the function of sales and the relationship to the overall marketing program. Topics include setting sales objectives, formulation of sales strategy, development of a sales organization, selecting and working with distributors and dealers, control of sales operations, and the functions of management. May be taken for grades or on a credit-no credit basis. Three hours. Offered: as needed.

Marketing 130—Principles of Advertising (3)

This course examines the major components of modern advertising and promotion. Key areas explored include the social and economic role of advertising, controls over advertising, planning of the campaign, the role of research, media playing, advertising strategy, and coordination with other elements of marketing. Three hours. Offered: F;S.

Marketing 131AD—Advertising 2 (3)

The class functions as an advertising agency. Clients include small and medium size businesses in the area and ASOCC project. Includes defining the marketing objective, the target market, the advertising objective, copy, layout, production of camera ready art and production management. Three hours. Offered: F;S.

Marketing 142—Direct Mail and Marketing (1.5) (9 week course)

Selling to consumers by mail, catalogs, telemarketing, consumer publications, broadcast media, and business-to-business direct marketing. Includes planning, segmentation, budgeting, creating the message, and the legal environment. Three hours. Offered: F;S.

Marketing 150—International Marketing (3)

Theoretical and practical concepts of international marketing, market surveys, distribution, advertising, and pricing policies are discussed relative to the cultural, political, legal, and economic conditions found overseas. Changing international marketing conditions will be studied in conjunction with the total global business environment. Three hours. Offered: F.

All courses numbered 100 or higher are transferable to the California State Universities (CSU).

Courses that are transferable to the University of California are designated "UC". Some of these courses have limits on the amount of credit that is granted. See the UC transferable Course List available in the Counseling Center or Transfer Center for these limitations.

Course numbers followed by an AB, AC, or AD may be repeated once, twice or three times respectively.

Courses that are non-credit or not AA applicable are designated with the letter "N" preceding the course number.

Marketing 152—Export-Import Procedures (3)

An overview of documentation practices and procedures used in international trade and an introduction to government laws and regulations affecting the flow of foreign commerce. Changing international market conditions will be studied in conjunction with the total global business environment. Three hours. Offered: S.

Marketing 200—Retail Store Management (3)

Studies dealing with the operations of an established retail business. Problems of merchandising include buying, pricing, stock control, credit control, public and personnel relations. Emphasis upon solution of actual retail problems using the case study method. Three hours. Offered: as needed.

Marketing 210—Professional Selling, Advanced (3)

Prerequisite: Marketing 110.

Intensive skill building and sales training in the following areas: building, buyer rapport, prospecting, time and territory management, determining buyer's needs, effective product presentation, managing buying resistance, active listening, recognizing buying signals, closing, taking leave and servicing the account. May be taken for grades or on a credit-no credit basis. Three hours. Offered: as needed.

Marketing 220—Buying and Store Operations (4)

Recommended preparation: Business 125.

A study of the principles and techniques of buying for retail organizations including merchandise selection, pricing, stock-keeping, selling, planning, control and use and interpretation of merchandise management reports. Emphasis is also placed on subjects closely integrated with the retail buying function: store operation procedures, sales promotion, personnel management, merchandising and finance. Four hours. Offered: S.

Marketing 221AB—Retail Business Training (2-3)

Practical experience in operating a retail fashion store. Students perform the buying, accounting, advertising, visual display, merchandising, management training, and sales at Windjammer Fashions, an on-campus store. One hour lecture, five to ten hours on the job. Offered: F;S.

MATHEMATICS

Competence in arithmetic is expected for students enrolling in all mathematics courses. The passing of a placement test is required in most mathematics courses. A grade of 'C' or better is required in prerequisite courses.

Students who have had a lapse in the mathematics sequence of two years or more are strongly advised to retake the previous mathematics course (excluding plane geometry) before continuing in the mathematics sequence.

In all mathematics courses except Mathematics 021 and Business 125, students other than majors in mathematics, engineering and physical sciences will have the option of credit-no credit or grade. Credit in mathematics courses means 'C' performance or better.

*Courses marked with an * are offered in both conventional and self-paced sections. In self-paced sections, students may start anytime and complete at their own rate.*

*Mathematics N005—Practical Math (3)

Prerequisite: Math placement test required.

Practical Math involves the fundamental operations of arithmetic (with and without hand calculators) and consumer application. Basic algebra is also introduced with emphasis on solving word problems. A diagnostic test will be taken in class during the first week. May be taken for grades or on a credit-no credit basis. Three hours. Not applicable to AA degree. Offered: F;S;Sum.

*Mathematics N008—Pre-Algebra (3)

Prerequisite: Math N005 or qualifying OCC mathematics placement score. See mathematics assessment requirement.

Pre-algebra will introduce basic operations of algebra including signed numbers, exponents, first degree equations, special products, applied problems, factoring, rational expressions, radicals, proportions, and the rectangular coordinate system. These topics will utilize the student's working knowledge of decimals, fractions, and percents. May be taken for grades or on a credit-no credit basis. Three hours. Not applicable to AA degree. Offered: F;S;Sum.

*Mathematics 010—Elementary Algebra (4)

Prerequisite: Math N008 or qualifying OCC mathematics placement score. See mathematics assessment requirement.

Operations of algebra including first degree equations and inequalities, exponents, special products and factoring, rational expressions, graphing, radicals, and quadratic equations will be presented. May be taken for grades or on a credit-no credit basis. Four hours. Offered: F;S;Sum.

*Mathematics 020—Plane Geometry (3)

Prerequisite: Math 010 or qualifying OCC mathematics placement score. See mathematics assessment requirement.

Definition of basic geometry terms: point, line, plane, angle. Postulates and theorems involving angles, congruence, lines, circles, general polygons, triangles, inequities, and solid geometry will be covered. May be taken for grades or on a credit-no credit basis. Three hours. Offered: F;S;Sum.

*Mathematics N021—Topics in Geometry (Self-paced only) (1)

Prerequisite: Math 010 or qualifying OCC mathematics placement score. See mathematics assessment requirement.

Basic terminology and facts of geometry including angles, triangles, polygons, congruence, similarity, area, circles, and constructions presented informally. Offered on a credit-no credit basis only. (Credit at 75 percent mastery.) One hour non-lecture. Not applicable to AA degree. Offered: F;S;Sum.

Courses

*Mathematics 030—Intermediate Algebra (4)

Prerequisite: Math 010 or qualifying OCC mathematics placement score. See mathematics assessment requirement.

Topics covered will be functions, linear and quadratic equations, curve sketching, exponents, rational expressions, rational exponents, logarithms, variations, systems of equations, determinants, Cramer's Rule, and conic sections. May be taken for grades or on a credit-no credit basis. Four hours. Offered: F,S,Sum.

Mathematics 070—Intermediate Algebra and Trigonometry (5)

Prerequisite: Math 010 or qualifying OCC mathematics placement score. See mathematics assessment requirement.

Recommended preparation: Math 020.

Topics covered will be functions, linear and quadratic equations, curve sketching, exponents, rational expressions, rational exponents, logarithms, variation, systems of equations, determinants, Cramer's Rule, conic sections, trigonometric (circular) and inverse trigonometric functions, graphs of trigonometric functions, identities and conditional equations, solutions for triangles, vectors, complex numbers and applications. May be taken for grades or on a credit-no credit basis. Five hours. Offered: F,S,Sum.

Mathematics 100—Liberal Arts Mathematics (3) (CAN MATH 2)

Prerequisite: Math 030 or qualifying OCC mathematics placement score. See mathematics assessment requirement.

Designed for students whose majors do not require calculus, this applications-oriented course emphasizes management science optimization techniques, introductory descriptive and inferential statistics, weighted voting systems analysis, game theory principles, decision making strategies, growth trends, and pattern analysis. May be taken for grades or on a credit-no credit basis. Three hours. (UC) Offered: F,S,Sum.

Mathematics 104—Mathematics for Elementary Teachers 1 (3)

Prerequisite: Math 020 and 030 or qualifying OCC mathematics placement score. See mathematics assessment requirement.

Designed for prospective elementary school teachers, the course emphasizes mathematical structure and problem solving techniques associated with the real number system, elementary number theory, ratio and proportion, set theory, elementary logic, and percent. Instructional delivery design techniques and technological applications will be explored. May be taken for grades or on a credit-no credit basis. Three hours. (UC) Offered: F.

Mathematics 106—Mathematics for Elementary Teachers 2 (3)

Prerequisite: Math 104 or qualifying OCC mathematics placement score. See mathematics assessment requirement.

Designed for prospective teachers, the course emphasizes elementary school applications of probability, statistics, geometric shapes and tessellations, measurement, congruence and similarity, and coordinate and transformational geometry. Instructional delivery design techniques and technological applications will be explored. May be taken for grades or on a credit-no credit basis. Three hours. (UC) Offered: S.

*Mathematics 120—Trigonometry (3) (CAN MATH 8)

Prerequisite: Math 030 or qualifying OCC mathematics placement score. See mathematics assessment requirement.

Recommended preparation: Mathematics 020.

Topics covered will be trigonometric (circular) and inverse trigonometric functions, graphs of trigonometric functions, identities and conditional equations, solutions for triangles, vectors, complex numbers and applications. May be taken for grades or on a credit-no credit basis. Three hours. Offered: F,S,Sum.

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Mathematics 130—College Algebra (4) (CAN MATH 10)

Prerequisite: Math 030 or qualifying OCC mathematics placement score. See mathematics assessment requirement.

Topics include linear, quadratic, rational, logarithmic, and exponential functions and their graphs, systems of equations, matrices, sequences, series, and basic combinations. This course prepares students to enter Math 157 but does not provide sufficient preparation to enter Math 180. May be taken for grades or on a credit-no credit basis. Four hours. (UC credit limitation) Offered: F,S.

Mathematics 154—Finite Mathematics with Applications (4) (CAN MATH 12)

Prerequisite: Math 030 or qualifying OCC mathematics placement score. See mathematics assessment requirement.

Mathematical models, properties of sets, functions, elementary curve fitting, finance, matrix operations, linear programming by the graphic and simplex methods, Markov matrices, elementary probability, and game theory. May be taken for grades or on a credit-no credit basis. Four hours. (UC) Offered: F,S,Sum.

Mathematics 157—Calculus for Biological, Management and Social Sciences (5) (CAN MATH 34)

Prerequisite: Math 130 or 154 or 170 or qualifying OCC mathematics placement score. See mathematics assessment requirement.

Analytic geometry and limits; introduction to differential and integral calculus with applications to include polynomial, rational, exponential and logarithmic functions and their graphs. Multivariate calculus to include partial differentiation and multiple integration. Introduction to the calculus of probability with applications. May be taken for grades or on a credit-no credit basis. Five hours. (UC credit limitation) Offered: F,S,Sum.

Mathematics 160—Introduction to Statistics (3) (CAN STAT 2)

Prerequisite: Math 030 or qualifying OCC mathematics placement score. See mathematics assessment requirement.

A general education course covering descriptive statistics, probability, binomial and normal distributions, variation, linear regression, correlation and hypothesis testing. Applications taken from natural sciences, social sciences, business, and everyday life. Students completing Mathematics 160 may petition for credit for Psychology 160. May be taken for grades or on a credit-no credit basis. Three hours. (UC credit limitation) Offered: F,S,Sum.

Mathematics 160H—Honors Introduction to Statistics (3)

Prerequisite: Math 030 or qualifying OCC mathematics placement score. See mathematics assessment requirement.

A general education course. Topics include descriptive statistics, probability, binomial and normal distributions, variation, linear regression, correlation and hypothesis testing. Applications taken from natural sciences, social sciences, business, and everyday life. May be taken for grades or on a credit-no credit basis. Three hours. (UC credit limitation) Offered: F,S.

Mathematics 170—Precalculus Mathematics (5) (CAN MATH 16)

Prerequisite: Math 070 or 120 or qualifying OCC mathematics placement score. See mathematics assessment requirement.

The course includes structure and properties of number systems; applications, solution and graphs of polynomials, rational, exponential, logarithmic and trigonometric functions; matrices, sequences and series; analytic geometry. Prepares students for Mathematics 180. May be taken for grades or on a credit-no credit basis. Five hours. (UC credit limitation) Offered: F,S,Sum.

Mathematics 180—Calculus 1 (5) (CAN MATH 18)

Prerequisite: Math 170 or qualifying OCC mathematics placement score. See mathematics assessment requirement.

Elements of analytic geometry and introduction to differential and integral calculus, including logarithmic, exponential, and trigonometric functions and some applications. May be taken for grades or on a credit-no credit basis. Five hours. (UC credit limitation) Offered: F,S,Sum.

Mathematics 181—Problem Solving in Calculus Using Technology (2)

Prerequisite: Mathematics 180.

Solving calculus problems using graphing calculators and computer algebraic systems: limits, derivatives, integrals, iterative functions, infinite series, 2-D and 3-D graphing. May be taken for grades or on a credit-no credit basis. Two hours. (UC) Offered: as needed.

Mathematics 182H—Honors Calculus 1 and 2 (5)

Prerequisite: Math 170 and either advanced placement calculus in high school or Mathematics 157 or 180.

An in-depth honors level study of elementary differential and integral calculus which includes exponential, logarithmic and trigonometric functions, techniques of integrations, sequences and series, and applications. Combines contents of Math 180 and 185 with emphasis on theory and challenging problems in a fast-paced course for well-prepared students with previous calculus experience. May be taken for grades or on a credit-no credit basis. Five hours. (UC credit limitation) Offered: F.

Mathematics 185—Calculus 2 (5) (CAN MATH 20)

Prerequisite: Mathematics 180.

Techniques and some applications of integral and differential calculus, analytic geometry, sequences, series and vectors. May be taken for grades or on a credit-no credit basis. Five hours. (UC) Offered: F,S,Sum.

Mathematics 220—Introduction to Symbolic Logic (3) (CAN PHIL 6)

Translate simple, quantified, and multiple quantified English sentences to symbolic form. Determine the validity of arguments containing simple sentences and sentences involving single quantification. Prove arguments composed of simple sentences, sentences involving single and multiple quantification. Same as Philosophy 220. Students completing Philosophy 220 may not receive credit for Mathematics 220. May be taken for grades or on a credit-no credit basis. Three hours. (UC) Offered: F,S.

Mathematics 230—Discrete Math (5) (CAN CSCI 26)

Prerequisite: Mathematics 185 or 182H.

Introduction to sets, algorithms, proofs, counting methods, recursion, graphs, trees, algebraic structures, homomorphisms, Boolean algebra, automata and formal languages. May be taken for grades or on a credit-no credit basis. Five hours. (UC) Offered: F.

Courses

Mathematics 235—Applied Linear Algebra (3) (CAN MATH 26)

Prerequisite: Mathematics 185 or 182H.

Introduction to linear algebra, classical linear algebra problems, and applications to computer science and related technologies including matrices, determinants, linear spaces, linear transformations, and eigenvalues. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: S.

Mathematics 260—Probability (3)

Prerequisite: Mathematics 182H or 180 or 157.

Calculus based probability with practical applications. For science majors and students expecting to do advanced work in biological, management or social sciences. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: S.

Mathematics 270—Computer Programming for Engineering, Mathematics and Science (4) (CAN CSCI 20)

Prerequisite: Mathematics 157 or 180 or 182H.

Programming techniques and numerical analysis for digital computers emphasizing applications in science, mathematics, and engineering. Fortran programming with laboratory work on digital computers. Same as Computer Science 270 and Engineering 270. Students completing Mathematics 270 may not receive credit for Computer Science 270 or Engineering 270. Four hours lecture-laboratory. **(UC)** Offered: S.

Mathematics 280—Calculus 3 (5) (CAN MATH 22)

Prerequisite: Mathematics 182H or 185.

Vectors, calculus of functions of several variables: partial derivatives, multiple integrals, and calculus of vector fields. Matrices, linear functions, and Jacobian matrices. May be taken for grades or on a credit-no credit basis. Five hours. **(UC credit limitation)** Offered: F;S;Sum.

Mathematics 280H—Honors Calculus 3 (6)

Prerequisite: Mathematics 182H or 185.

Vectors, calculus of functions of several variables: partial derivatives, multiple integrals, and calculus of vector fields. Matrices, linear functions, and Jacobian matrices. Introduction to differential geometry, including Frenet equations and fundamental forms. May be taken for grades or on a credit no-credit basis. Six hours. **(UC credit limitation)** Offered: S.

Mathematics 285—Introduction to Linear Algebra and Differential Equations (5) (CAN MATH 24)

Prerequisite: Mathematics 182H or 185 or 280 or 280H.

Introduction to linear algebra and differential equations. Matrices, Jacobian matrices, inverse and implicit function theorems, determinants, vector spaces, linear systems of algebraic equations, linear product spaces, systems of differential equations, Laplace transforms, numerical methods, Fourier series, and introduction to partial differential equations. May be taken for grades or on a credit-no credit basis. Five hours. **(UC credit limitation)** Offered: F;S;Sum.

Mathematics 285H—Honors Introduction to Linear Algebra and Differential Equations (6)

Prerequisite: Mathematics 182H or 185 or 280 or 280H.

Introduction to linear algebra and differential equations. Matrices, Jacobian matrices, inverse and implicit function theorems, determinants, vector spaces, linear systems of algebraic equations, linear product spaces, systems of differential equations, Laplace transforms, numerical methods, Fourier series, and introduction to partial differential equations, dual spaces, and the topology of real numbers are covered. May be taken for grades or on a credit-no credit basis. Six hours. **(UC credit limitation)** Offered: F.

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Course numbers followed by an AB, AC, or AD may be repeated once, twice or three times respectively.

Courses that are non-credit or not AA applicable are designated with the letter "N" preceding the course number.

Mathematics 290H—Honors Introduction to Tensors and Calculus on Manifolds (5)

Prerequisite: Mathematics 280 or 280H AND 285 or 285H.

Introductory study of elementary tensor algebra and calculus, differential and integral calculus in higher dimensions, differential forms, and calculus on manifolds. May be taken for grades or on a credit no-credit basis. Five hours. **(UC)** Offered: S.

MEDICAL ASSISTING

Medical Assisting 115—Medical Bookkeeping (4)

Terminology, techniques, application, hands-on training of accounts receivable and accounts payable systems, and payroll as it pertains to the medical office. Course includes computerized procedures. Same as Accounting 115. Students completing Medical Assisting 115 may not receive credit for Accounting 115. Four hours. Offered: F;S.

Medical Assisting 135—Clinical Lab Procedures (2)

Prerequisite: Allied Health 115.

Basic microbiology and methods of collecting and conducting routine tests on blood and urine as performed in a medical office. The use and care of clinical laboratory equipment. Other laboratory tests will be discussed. Two hours lecture, one hour non-lecture. Offered: F.

Medical Assisting 175—Introduction to Medical Assisting and Transcription (3)

Prerequisite: Allied Health 111, or concurrent enrollment.

The role of medical assisting and transcription in health care delivery, medical ethics/law, communication, records management and the study of structures and functions of the body. Three hours. Offered: F;S.

Medical Assisting 180—Administrative Assisting Medical Procedures (2)

Prerequisite: Medical Assisting 175 and keyboarding skill of 40 wpm.

Prepares student to function as an administrative medical assistant to the physician in an office group practice, medical clinic, hospital or allied health facility. Two hours. Offered: S.

Medical Assisting 185—Medical Insurance Billing (3)

Prerequisite: Allied Health 111 or concurrent enrollment.

Manual and computer assisted medical insurance claims processing including utilization of ICD and CPT codes. Special emphasis on out-patient claims. Three hours. Offered: F;S.

Medical Assisting 186—Administrative Experience (2) (9 week course)

Prerequisite: Medical Assisting 115, 180 and 185.

Administrative medical assisting experience in a medical office, clinic, hospital or allied health facility. Discussion of experiences and problems encountered. One hour lecture, sixteen hours non-lecture. Offered: F;S.

Medical Assisting 281—Clinical Experience (2) (9 week course)

Prerequisite: Medical Assisting 135, 286, 287, 288 and 289.

Provides supervised clinical experience in a medical office or clinic, hospital or allied health facility. Class sessions include discussion of experiences and problems encountered by the student in the administrative and clinical situation. One hour lecture, sixteen hours clinical. Offered: S.

Medical Assisting 286—Medications and Injections (1) (9 week course)

Prerequisite: Allied Health 115 and Medical Assisting 175.

Methods of handling medications and instruction in techniques of intramuscular, subcutaneous and intradermal injections. One hour lecture, three hours non-lecture. Offered: F.

Medical Assisting 287—General Physical and Specialty Exams (1.5) (9 week course)

Prerequisite: Allied Health 115 and Medical Assisting 175.

Theory and techniques in preparation of patients for general physical examinations, pediatric exams, obstetrical exams, gynecological exams, EENT exams, urological exams, and proctological exams. Two hours lecture, three hours laboratory. Offered: F.

Medical Assisting 288—Sterile Techniques and Minor Surgery (1) (9 week course)

Prerequisite: Allied Health 115 and Medical Assisting 175.

Sterilization techniques and methods of assisting a physician with common medical office minor surgery. Two hours lecture, two hours non-lecture. Offered: F.

Medical Assisting 289—Medical Assisting Specialty Procedures (1) (9 week course)

Prerequisite: Allied Health 111 and 115 or concurrent enrollment in both.

Basic concepts of preparing patients for special diagnostic tests and techniques in the medical office including pulmonary function, electrocardiography and physical therapy. Two hours lecture, two hours non-lecture. Offered: F;S.

MEDICAL TRANSCRIPTION (See Health Records 190 and 195)

METEOROLOGY (See Aviation and Space 133)

MUSIC

Music 100—History and Appreciation of Music (3)

A survey of music, the universal language and social cohesion in Western Civilization. Antiquity through the Contemporary periods with emphasis on the paradigm shift in music as it reflects the cultural reaction to the human condition. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: F;S.

Courses

Music 101AB—Rhythm Study (2)

Prerequisite: Minimal musical experience.

Reading rhythm. Open to all levels of instrumental and vocal performers. Instruments will be used in learning a wide variety of patterns including jazz and rock. Various note values and their subdivisions will be used. Two hours. **(UC)** Offered: F;S.

Music 102AD—Computers in Music (3)

Designed to introduce the layman or computer professional to the rapidly evolving use of computers and related digital technology in music. Emphasis will be given to professional music software, dedicated music systems, MIDI (Musical Instrument Digital Interface), and digital audio. May be taken for grades or on a credit-no credit basis. Two hours lecture, three hours non-lecture. Offered: F;S;Sum.

Music 103AB—Rhythm Study 2 (1)

Prerequisite: Music 101AB, or examination.

A class designed to help solve basic problems in rhythmic perception starting at Level 3. Open to all instrumental and vocal students. Two hours. **(UC)** Offered: as needed.

Music 104AB—Ear Training (3)

A study of scales and musical interval recognition. Students will learn to identify, sing and notate musical intervals including access to computer assisted learning. Basic piano skills or concurrent enrollment in Music 141 recommended. May be taken for grades or on a credit-no credit basis. Four hours lecture, one hour non-lecture. **(UC)** Offered: F;S.

Music 105—History and Appreciation of Music (3)

Music composition from Russian nationalism of 1860 to music of the present day. Music of Russia, France, Czechoslovakia, Vienna and American composers. Emphasis on aural analysis of the music and the listening experience. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: as needed.

Music 109—History of Rock Music (3)

The study of social and musical influences on rock music and the influence of rock music on society and the music industry. 1950s through modern rock. CD's, videos, computer-generated multimedia presentations, and live performances. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: F;S.

Music 115—Fundamentals of Music (3)

For those with no previous musical theory background. Fundamentals of music and harmonization of simple melodies. Use of accompaniment instruments and melody instruments for the development of musicianship. Three hours. **(UC credit limitation)** Offered: F;S;Sum.

Music 116—Basic Guitar (2)

Fundamentals of guitar, music and musicianship. Notation, terminology scales, key signatures, basic chords, rhythms and fingering techniques are emphasized. Students furnish guitar and music stand. May be taken for grades or on a credit-no credit basis. One and one-half hours lecture, one and one-half hours studio. **(UC)** Offered: F;S;Sum.

Music 120AD—College Choir (1)

Open to all students interested in college singing experience. Prerequisite training not necessary. Besides singing fine chorale literature, course includes: basic music theory for singers, vocal training, music fundamentals, listening experiences and public performances. Three hours performance preparation. **(UC)** Offered: F;S.

Information in italics designates the semester(s) in which the course is offered. The Division Office reserves the right to make changes as budget or other constraints warrant. F=Fall, S=Spring, Sum=Summer, Inter=Intercession

Music 127AD—Swing Band (1)

Prerequisite: Eligibility based on successful audition.

Study and performance of swing era music. Special emphasis on swing music for dancing and concerts. Performances are scheduled in local hotel ballrooms and lounges. Three hours non-lecture, one hour arranged. **(UC)** Offered: F;S;Sum.

Music 129AD—Guitar Ensemble (.5-1) (9-18 week course)

Prerequisite: Eligibility based on successful audition.

Designed for performers who read musical notation on guitar. Rehearsal and performance of guitar ensemble literature from Renaissance to present. Styles include Renaissance, Baroque, Classical, Romantic, and modern music. New transcriptions, arrangements, compositions, and concertos for guitar ensemble will be encouraged. Public performance on a concert program with guest artists. May be taken for grades or on a credit-no credit basis. Two hours. **(UC)** Offered: F;S.

Music 132AD—Wind Ensemble (1)

Prerequisite: Eligibility based on successful audition.

Open to advanced performers on brass, woodwind and percussion instruments. Rehearsal and performance of music from standard symphonic and wind ensemble literature. Regularly scheduled public concerts. May be taken for grades or on a credit-no credit basis. Three hours non-lecture, one hour arranged. **(UC)** Offered: F;S.

Music 133AD—Orchestra (1)

Prerequisite: Eligibility based on successful audition.

Open to advanced performers of string, brass, woodwind and percussion instruments. Rehearsal and performance of music from the standard symphonic orchestral literature. Regularly scheduled public concerts during the school year. Three hours non-lecture. **(UC)** Offered: F;S.

Music 140AB—Beginning Instruments (2)

Elementary instruction on a selected band or orchestra instrument. Three hours lecture/studio. **(UC)** Offered: F;S;Sum.

Music 141—Piano 1 (2)

Group instruction for the beginner that develops musicianship and basic piano technique. Recommended for elementary teachers, required of music majors in many transfer schools. One-half to one hour minimum daily practice. Practice pianos available on campus. Two hours lecture/studio. **(UC)** Offered: F;S;Sum.

Music 142—Piano 2 (2)

Prerequisite: Music 141.

Continuation of Piano 1 toward improvement of playing skills. Major scales for both hands, rhythms through sixteenth notes, harmonizing of folk tunes and pieces by contemporary masters will be studied. One-half to one hour daily practice. Practice pianos available on campus. Two hours lecture/studio. **(UC)** Offered: F;S.

Music 144AB—Popular Vocal Techniques (2)

Popular solo and group singing styles and interpretation. May be taken for grades or on a credit-no credit basis. One hour lecture, two hours studio. Offered: F;S;Sum.

Music 145—Voice 1 (1)

Beginning voice production for singing and speaking. Aims: to develop free, flexible tone quality, to perfect interpretive and performance skills, to overcome nervousness and self-consciousness. Class and individual singing opportunities. Two hours lecture/studio. **(UC)** Offered: F;S.

Music 146—Voice 2 (1)

Prerequisite: Music 145.

A continuation of Voice 1. Two hours lecture/studio. **(UC)** Offered: F;S.

Music 148—Classical Guitar 1 (2)

Prerequisite: Music 116, or audition.

Continuation of fundamentals relating to the classical guitar, music notation, note and rest values, key and time signatures, dynamics, chromatic scales, music which is applicable to the classical guitar, and basic instruction on correct posture for the left and right hand. Student must furnish own soft string classical guitar and foot stool. Student will receive instruction on classical guitar performance. Two hours lecture/studio. **(UC)** Offered: F;S.

Music 149—Classical Guitar 2 (2)

Prerequisite: Music 148, or audition.

Note: Students must provide their own classical guitar and music stand.

Continuation of Classical Guitar 1 with emphasis on advanced classical guitar performance techniques and literature. Two hours lecture/studio. **(UC)** Offered: F;S.

Music 150AB—Intermediate Band/Orchestra (2)

Prerequisite: Music 140AB, or successful audition.

Intermediate instruction on a selected band or orchestra instrument. Three hours lecture/studio. **(UC)** Offered: F;S;Sum.

Music 151—Studio Guitar 1 (1.5)

Prerequisite: Music 116, or audition.

Studio guitar techniques for playing guitar in styles such as jazz, rock and other popular styles. Students must provide their own guitar. May be taken for grades or on a credit-no credit basis. Three hours lecture/studio. **(UC)** Offered: F;S.

Music 152—Studio Guitar 2 (1.5)

Prerequisite: Music 151.

Continuation of Studio Guitar 1. Emphasis on picking techniques, note reading in positions, scales, chords, music theory, sight reading, solo and ensemble performance. May be taken for grades or on a credit-no credit basis. Three hours lecture/studio. **(UC)** Offered: F;S.

Music 155—Music Industry Studies (3)

A survey of musical careers and related professions. Emphasis on creative, business and performance aspects. Includes recording, songwriting, management, copyright and other aspects of the music industry. Guest industry lecturers and field trips. May be taken for grades or on a credit-no credit basis. Three hours. Offered: F;S.

Music 170—Music in America (3)

A survey of American music and musicians from early colonial days to current times. A historical overview with an emphasis upon contributions to the world of music considered to be uniquely 'American.' Includes study of America's growing period, religious music, folk songs, nationalistic elements and composers, jazz, musical theatre and contemporary developments. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: F;S.

Courses

Music 173—History of Jazz (3)

The roots of jazz in African and western music. Development of jazz in the United States including evolving styles and important musicians. Influence of pre-1900 popular music: ragtime, blues and Dixieland. Recognition of playing styles. Merging of other musical forms with the jazz idiom. Jazz as an art form. The composer/improvisor in jazz today. Taped and live performances including student participation. May be taken for grades or on a credit-no credit basis. Three hours lecture, utilizing audio/visual media. **(UC)** Offered: F,S.

Music 180—Harmony and Sightsinging 1 (5) (CAN MUS 2)

Recommended preparation: Ability to locate treble and bass clef pitches on a keyboard and name the notes.

Includes the study of notation, terminology, scales, key signatures, intervals, triads, rhythms and form. Correlation of music theory with aural, keyboard, history/literature and performance applications. For transferring music major. Five hours. **(UC)** Offered: F,S.

Music 185—Harmony and Sightsinging 2 (5) (CAN MUS 4)

Prerequisite: Completion of Music 180. Concurrent enrollment in a selected music performing group (choose from Music 120AD, 121AD, 122AD, 129AD, 133AD, 134AD, 135AD). Evidence by student of development of a music performing medium.

Continuation of Harmony and Solfege 1. Includes the study of inversions of triads and sevenths, non-harmonic tones, chord connections to secondary chords and use of dominant ninths. A development of performing skills in aural dictation, sight singing, keyboard and rhythm performance. Correlation of harmony and solfege with history/literature, performance and listening applications for the transferring music major and minor. Five hours. **(UC)** Offered: F,S.

Music 200—Opera History (2)

An introduction to the musical theatre through history, literature, criticism and performance attendance. Includes field trips to local operatic productions. Students may be required to pay for transportation and admission costs. Three hours. **(UC)** Offered: as needed.

Music 230AD—Jazz Improvisation (1)

Prerequisite: Eligibility based on successful audition.

Development of the individual musician's technical tools and performing skills in jazz music improvisation. Includes usage of appropriate idiomatic forms, harmonies, scales, stylistic articulations. May be taken for grades or on a credit-no credit basis. One hour lecture, two hours studio. **(UC)** Offered: F,S,Sum.

Music 231AD—Studio Big Band (1)

Prerequisite: Eligibility based on successful audition.

Student and professional musicians in a recording studio environment. Students will select repertoire to be recorded in a professional studio for distribution on compact disc. Student projects will include marketing, publicity and promotion. Three hours non-lecture, one hour arranged. Offered: F,S.

Music 233AD—Symphonic Chamber Orchestra (1)

Prerequisite: Eligibility based on successful audition.

Open to advanced performers of string, brass, woodwind and percussion instruments. Rehearsal and performance of music from the standard symphonic and chamber orchestra literature. Regularly scheduled public concerts during the school year. May be taken for grades or on a credit-no credit basis. Three hours non-lecture, one hour arranged. **(UC)** Offered: F,S.

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Course numbers followed by an AB, AC, or AD may be repeated once, twice or three times respectively.

Courses that are non-credit or not AA applicable are designated with the letter "N" preceding the course number.

Music 234AD—Jazz Workshop (1)

Prerequisite: Eligibility based on successful audition.

A group of advanced instrumentalists that will discuss, write, rehearse and perform jazz music. Emphasis on a laboratory environment that will stress articulation, phrasing, improvisation and style for the professional performer. Students will have the opportunity to write, rehearse and conduct their own jazz oriented compositions. Guest jazz artists will meet and work with the group periodically. Public performances will be scheduled during the semester. May be taken for grades or on a credit-no credit basis. Three hours studio. **(UC)** Offered: F,S.

Music 236AB—Introduction to Sound Reinforcement (3)

Designed to introduce the student to business and skills of concert sound reinforcement. State-of-the-art electronic equipment is used with hands-on experience for the student. There will be an opportunity for the student to engineer rehearsals and a concert performance. May be taken for grades or on a credit-no credit basis. Two and one-half hours lecture, four hours non-lecture. Offered: F,S.

Music 237AB—Concert Sound Engineering (3)

Prerequisite: Music 236AB.

A continuation of Music 236AB. Advanced concepts and usage of state-of-the-art electronic sound equipment. Hands-on experience with concert sound equipment and real-life concert situations. Mandatory off-campus concerts where students must set up, mix, and tear down. May be taken for grades or on a credit-no credit basis. Two and one-half hours lecture, four hours non-lecture. Offered: F,S.

Music 240—Sophomore Recital (.5)

Prerequisite: Three semesters of Music 290AD or 291AD; sophomore standing.

Assists the sophomore music student to organize, arrange and schedule recital performance to meet department and associate in arts degree requirements. Includes the selection of literature, programming, memorization and scheduling of performance. One hour studio. Offered: F,S.

Music 241—Piano 3 (2)

Prerequisite: Music 142.

Early intermediate classical piano literature. Emphasis on development of technical proficiency and stylistically appropriate interpretation. One and one-half hours lecture, one and one-half hours laboratory. **(UC)** Offered: F,S.

Music 242—Piano 4 (2)

Prerequisite: Music 241.

Intermediate/advanced classical piano literature in master class performance. Emphasis on artistic development of student performers. One and one-half hours lecture, one and one-half hours laboratory. **(UC)** Offered: F,S.

Music 244AB—Voice 3-4 (1)

Prerequisite: Music 146.

Emphasizes the continual development of individual vocal skills. Frequent class performance opportunities. Two hours lecture/studio. **(UC)** Offered: F,S.

Music 247AB—Advanced Pop Vocal Techniques (2)

Prerequisite: Music 144AB.

A class for the serious student/performer of popular vocal music. Stylistic development, showmanship, stage presence and image. Solo and background studio techniques in student projects. Guest artists/lecturers. Requires outside preparation. May be taken for grades or on a credit-no credit basis. One hour lecture, two hours non-lecture. Offered: F,S.

Music 248—Classical Guitar 3 (2)

Prerequisite: Music 149, or audition.

Designed for the serious music student who seeks more extensive awareness in technical facility, musical literature, musicianship and self discipline. Two hours lecture/studio. **(UC)** Offered: F,S.

Music 249—Classical Guitar 4 (2)

Prerequisite: Music 248, or audition.

Designed for the serious music student who seeks more extensive awareness in technical facility, musical literature, musicianship and self discipline. Two hours lecture/studio. **(UC)** Offered: F,S.

Music 250AD—Instrument Repair (2)

General instruction of theory and procedures used in the repair of string, brass, woodwind and percussion instruments. Includes the proper use of tools and equipment. Students will successfully perform major repairs to representative instruments from each family of instruments in a four semester sequence. First semester is of special interest to music teachers and retail music employees. Students may work on their own instruments. Certificate of completion awarded for successful completion of the four semester sequence. Two hours lecture, one hour non-lecture. Offered: F,S.

Music 261AB—Recording Techniques Workshop (2)

An introductory workshop for musicians and sound engineers who will devise and develop recorded performances in a studio environment. Emphasis on analyzing studio acoustics, vocal and instrumental recording techniques, mixing board characteristics, and the total recording studio process. Particular emphasis on studio techniques and demeanor, and creating a finished and marketable product. May be taken for grades or on a credit-no credit basis. Two hours lecture, three hours studio. Offered: F,S,Sum.

Courses

Music 262—Music as a Business (2)

For students planning a career in the music industry including contracts, negotiations, taxes, agents, producers, club owners, contractors and managers. Guest lecturers from the industry. May be taken for grades or on a credit-no credit basis. Two hours. Offered: F;S.

Music 265AD—Advanced Recording Techniques (2)

Prerequisite: Music 261AB.

An advanced workshop for students and performers. Pre- and post-production planning to create a marketable product. Requires basic knowledge of studio acoustics, vocal and instrumental mic techniques, control board and off-board effects units and general studio activity. Students will develop their own recorded material including support musicians and production staff. May be taken for grades or on a credit-no credit basis. One hour lecture, five hours studio. Offered: F;S.

Music 271—Studio Guitar 3 (1.5)

Prerequisite: Music 152.

Continuation of Studio Guitar 1 and 2. Emphasis on linear note reading across the guitar fretboard, chord substitutions, altered chords, chordal progressions, turn arounds, music theory, chordal analysis, sight reading, ensemble and solo performance, arranging for solo guitar. May be taken for grades or on a credit-no credit basis. Three hours lecture-studio. **(UC)** Offered: F;S.

Music 272—Studio Guitar 4 (1.5)

Prerequisite: Music 271 and concurrent enrollment in Music 129AD.

Continuation of Studio Guitar 1, 2 and 3. Emphasis on intermediate and advanced picking techniques, analysis of styles, history and appreciation, improvisation, arranging and performance of chordal solos for the guitar. May be taken for grades or on a credit-no credit basis. Three hours lecture-studio. **(UC)** Offered: F;S.

Music 273AD—Guitar Making (2)

Students will design, obtain materials, and fabricate their own instrument. Construction theory, wood selection, bracing patterns, tools, construction of forms, preparation of wood segments, assembly, regulation and finishing. May be taken for grades or on a credit-no credit basis. One hour lecture, two hours studio. Offered: F;S.

Music 280—Harmony and Sightsinging 3 (5)

Prerequisite: Completion of Music 185. Concurrent enrollment in a selected music performing group (choose from Music 120AD, 121AD, 122AD, 129AD, 132AD, 133AD, 134AD, 233AD). Evidence by student of development of a music performing medium.

Study of advanced harmonic, rhythmic and melodic materials. This includes church modes, ninth-eleventh-thirteenth chords, neapolitan sixths, augmented sixths, modulation to remote keys. Correlation of theory with creative, keyboard, history, literature and performing applications. For the transferring music major. Five hours. **(UC)** Offered: F.

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Music 282—Counterpoint (3)

Prerequisite: Completion of Music 185. Concurrent enrollment in a selected music performing group (choose from Music 120AD, 121AD, 122AD, 129AD, 132AD, 133AD, 134AD or 233AD). Evidence by student of continuing development of a music performing medium.

Principles of eighteenth century tonal counterpoint in two, three and four parts. For the transferring music major. Three hours. **(UC)** Offered: as needed.

Music 285—Harmony and Sightsinging 4 (5)

Prerequisite: Completion of Music 280. Concurrent enrollment in a selected music performance group (choose from Music 120AD, 121AD, 129AD, 134AD, 233AD). Evidence by student of development of a music performing medium.

Continuation of Harmony and Solfege 3. Includes the study of augmented sixth chords, diminished seventh chords, modulation of remote keys, embellishment chords. A development of performing skills in aural dictation, sight singing, keyboard and rhythm performance. Correlation of harmony and solfege with history/literature, performance and listening applications for the transferring music major and music minor. Five hours. **(UC)** Offered: S.

Music 287AB—Jazz/Rock Theory (3)

Prerequisite: Music 185.

For students with a goal of writing or playing as studio musicians. Includes the practical use of traditional theory and the harmonic, melodic, and rhythmic devices used by performing groups in today's market. Strong emphasis on ear training and acquiring advanced songwriting skills. Four hours. **(UC)** Offered: S.

Music 290AD—Applied Music (2 or 4)

Prerequisite: Demonstrated ability in the area of study; concurrent enrollment in a music performing group.

Students will arrange for and take private lessons in applied music, composition, theory, orchestration, arranging or computer music. Student performances. One hour lecture, five or ten hours non-lecture. **(UC)** Offered: F;S.

Music 291AD-295AD—Directed Study (1-5)

A class coordinating the development of the student's music performing proficiency with approved off-campus instructors in voice, piano, organ and selected band or orchestral instruments. Students will pay an average of \$10.00 per week for this off-campus instruction. This course may also be utilized for advanced work in music for those who have completed all beginning level courses listed above. The student, in cooperation with the instructor and Division Dean, will prepare and execute an academic written contract (proposal for learning) and upon its completion to the satisfaction of the instructor will receive credit for this course. In very unusual cases students may be enrolled in independent study without completing the beginning level courses; such student must also have written approval of the Vice President of Instruction of the college. (See UC agreement) **(UC credit limitation)** Offered: as needed.

NATURAL SCIENCE

Natural Science 100—Evolution of the Cosmos (6)

An overview of the full breadth of natural history encompassing the origin and evolution of the universe, the solar system, the earth with its atmosphere, oceans and geologic features, and earth life from primordial through prehistoric to contemporary, including humans. The philosophy and development of science and technology will also be discussed along with their impact on society and our future options regarding energy, the preservation of the environment and space exploration. May be taken for grades or on a credit-no credit basis. Six hours. **(UC credit limitation)** Offered: F;S.

Natural Science 100LA—Natural Science Laboratory—Astronomy (1)

Prerequisite: Natural Science 100 or 110, or concurrent enrollment.

Recommended preparation: Math 010.

A beginning laboratory experience for natural science students with emphasis on outdoor astronomical observations and indoor analysis of experimental astronomical data. May be taken for grades or on a credit-no credit basis. Three hours laboratory. Same as Astronomy 100L. **(UC)** Offered: F;S.

Natural Science 100LG—Natural Science Laboratory—Geology (1)

Prerequisite: Natural Science 100, or concurrent enrollment.

Beginning laboratory experience for natural science students with emphasis on geology. May be taken for grades or on a credit-no credit basis. Three hours laboratory. Same as Geology 100L. **(UC)** Offered: F;S;Sum.

Natural Science 105—The Physical Universe (3) (9 week course)

An overview of the physical aspects of natural history encompassing the origin and evolution of the universe, the solar system, and the earth with its atmosphere, oceans and geologic features. The philosophy and development of science and technology and their impact on society, our future options regarding energy, the preservation of the environment and space exploration will be discussed. May be taken for grades or on a credit-no credit basis. Six hours. **(UC credit limitation)** Offered: as needed.

Natural Science 106—The Biological Universe (3) (9 week course)

Prerequisite: Natural Science 105.

An overview of the biological aspects of natural history encompassing the origin and evolution of earth life from primordial through prehistoric to contemporary, including humans. The functions of the living cell are emphasized with brief discussions of overpopulation, ecology, medicine, and the possibility of extraterrestrial life. May be taken for grades or on a credit-no credit basis. Six hours. **(UC credit limitation)** Offered: as needed.

Natural Science 110—Cosmos—A Personal Voyage (3)

The goal is to achieve a 'cosmic perspective'... an understanding of the kinship between the human race and the universe. Important discoveries by the earth, life and space sciences will be highlighted along with examples of the history and philosophy behind science and its love-hate relationship with society. The main viewpoint will be Carl Sagan's, whose 'Cosmos' book and television series (viewed during class), will be the core of the course with extensive class discussion of other views. May be taken for grades or on a credit-no credit basis. Three hours. Offered: as needed.

Courses

Natural Science 120—Natural History and Cultures of the Southwest (3)

An introduction to the natural history of the Southwest including the geology, ecology and cultures of the region. The interrelationship between the human populations and their environments, past and present, is examined. A six-day field trip is required during spring break. Same as Anthropology 120. Students completing Natural Science 120 may not receive credit for Anthropology 120. May be taken for grades or on a credit-no credit basis. Three hours. (UC) Offered: S;odd yrs..

NEURODIAGNOSTIC TECHNOLOGY

Neurodiagnostic Technology 110—Basic Electroencephalography (4)

Prerequisite: Allied Health 010 and Technology 040.

Fundamentals of EEG including application of electrodes, using the International 10/20 system, basic EEG wave forms, artifacts, and introduction to the EEG machine. Opportunity is given to perform EEG tests and to observe EEG labs in health care facilities. All enrollees must be accepted into either the Neurodiagnostic or Polysomnography program. Two hours lecture, six hours laboratory. Offered: F.

Neurodiagnostic Technology 115—Advanced EEG (4)

Prerequisite: Neurodiagnostic Technology 110.

Review of fundamentals of EEG. Introduction to the abnormal EEG and the basic electronic principles upon which successful EEG technique is based. Three hours lecture, three hours laboratory. Offered: S;odd yrs..

Neurodiagnostic Technology 116—Clinical Experience 1 (3)

Prerequisite: Neurodiagnostic Technology 110 and Allied Health 115.

Beginning clinical practice of electroencephalographic testing on patients at various affiliated neurodiagnostic labs. This will include observation, application of electrodes, performance of EEG testing on clinical patients, medical recordkeeping, and clinical history reporting. Students must purchase a uniform for this course. Offered on a credit/no credit basis only. One hour lecture, sixteen hours non-lecture. Offered: S;odd yrs..

Neurodiagnostic Technology 117—Clinical Experience 2 (3) (8 week course)

Prerequisite: Neurodiagnostic Technology 115 and 116.

Continued clinical experience in electroencephalography at a selected neurodiagnostic lab in an affiliated health care facility under the direct supervision of a physician and/or EEG technologist. This clinical will build on skills attained in NDT 116 and will include performance of EEG testing on clinical patients, medical recordkeeping, and clinical history taking. Offered on a credit/no credit basis only. Thirty-two hours clinical. Offered: Sum;odd yrs..

Neurodiagnostic Technology 190—Introduction to Neuro Anatomy and Physiology (3)

Prerequisite: Biology 221.

An introduction to the anatomy of the central and peripheral nervous systems and their function in correlation to the related pathologies and symptomatology of these areas as needed by a neurodiagnostic and/or polysomnographic technologist. Provider approved by the California Board of Registered Nursing, Provider #CEP 12655 for 54 hours. Three hours. Offered: S.

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Courses that are non-credit or not AA applicable are designated with the letter "N" preceding the course number.

Neurodiagnostic Technology 191—EEG Record Review—Normal (1) (9 week course)

Prerequisite: Concurrent enrollment in Neurodiagnostic Technology 115.

Practice in EEG record review of normal adult and pediatric patients. Interpretation and description of EEG test. Two hours. Offered: S.

Neurodiagnostic Technology 200AC—Neurodiagnostic Lab Practice (.5) (4 week course)

Prerequisite: Neurodiagnostic Technology 110.

Application of basic technical skills to successfully record routine EEG, PSG, and EP procedures according to published ACNS guidelines. Six hours laboratory. Offered: Inter.

Neurodiagnostic Technology 280—Neurologic Disorders (3)

Prerequisite: Neurodiagnostic Technology 115 and 190.

Clinical and electroneurodiagnostic correlations to various physical conditions and disease state which are commonly dealt with in neurodiagnostic technology. Relationship of technician to various medical specialties: neurology, neurosurgery, pathology, radiology, internal medicine, and psychiatry. Three hours. Offered: F;odd yrs..

Neurodiagnostic Technology 285—Neurodiagnostic Testing (2)

Prerequisite: Neurodiagnostic Technology 117.

Various non-invasive neurodiagnostic procedures and recording techniques. Includes nerve conduction velocity, electronystagmography, electromyography, carotid Doppler and ultrasound, EEG telemetry and surgical applications of EEG. Two hours. Offered: F;odd yrs..

Neurodiagnostic Technology 286—Clinical Experience 3 (1.5)

Prerequisite: Neurodiagnostic Technology 117.

Continued clinical experience in electroencephalography at a selected neurodiagnostic lab in an affiliated health care facility under the direct supervision of an EEG technologist or physician. This clinical will build on skills attained in NDT 117 and will include performance of EEG testing on clinical patients, medical recordkeeping, and clinical history taking. There will also be opportunities to observe and possibly perform evoked potential studies. Offered on a credit/no credit basis only. Twelve hours clinical laboratory. Offered: F;odd yrs..

Neurodiagnostic Technology 287—EEG Record Review—Abnormal (1.5) (12 week course)

Prerequisite: Neurodiagnostic Technology 117, and concurrent enrollment in Neurodiagnostic Technology 280.

Practice in EEG record review of neurological subjects covered in Neurodiagnostic Technology 280. Classification of EEG activities with correlation to clinical disorders. Two hours. Offered: F;odd yrs..

Neurodiagnostic Technology 288—Basic Evoked Potentials (3)

Prerequisite: Neurodiagnostic Technology 110 and 190.

Concepts, terminology, and techniques of evoked potentials (EP) recording with testing modalities of visual, auditory, and somatosensory systems to be discussed individually. An overview of computers and EP instrumentation will be discussed, as well as the application of EP testing in neonates, the operating room, and the computation and collection of normative data. Two hours lecture, two hours laboratory. Offered: F;odd yrs..

Neurodiagnostic Technology 289—Clinical Experience 4 (1.5) (14 week course)

Prerequisite: Neurodiagnostic Technology 286 and 288.

Clinical practice in neurodiagnostic testing with an emphasis to include evoked potential testing in the auditory, visual, and somatosensory modalities. May include observation and performance of other more specialized neurodiagnostic testing such as surgical monitoring, quantitative analysis of EEG and evoked potentials, transcranial doppler, ambulatory or telemetry monitoring, and others. This clinical also further develops advanced skills in electroencephalographic recording and analysis. Offered on a credit/no credit basis only. Twelve hours clinical. Offered: S;even yrs..

Neurodiagnostic Technology 296—Advanced Evoked Potentials (1.5) (14 week course)

Prerequisite: Neurodiagnostic Technology 288.

This course will analyze the clinical correlations of evoked potential testing. Modalities of auditory, visual and somatosensory testing will be analyzed separately. The course will focus on waveform analysis correlating to common neurological diseases. Additional analysis of evoked potentials in intraoperative monitoring, neonatal recordings, and advanced applications will be discussed. Two hours. Offered: S;even yrs..

Neurodiagnostic Technology 297—Microcomputer Applications in Neurodiagnostics (2) (14 week course)

Prerequisite: Computer Information Systems 100 and Neurodiagnostic Technology 115.

Current application of microcomputers in neurodiagnostic technology. Testing modalities of electroencephalography, evoked potentials, epilepsy monitoring, and automated diagnostic techniques will be presented. Opportunities for hands-on use of digital equipment in the classroom will be integrated. Two hours lecture, one hour non-lecture. Offered: S;even yrs..

Courses

Neurodiagnostic Technology 298—Clinical Internship (1) (4 week course)

Prerequisite: Neurodiagnostic Technology 289.

Clinical internship to perform neurodiagnostic testing at affiliated hospital sites. Students will apply for a specialized training area in the field. Emphasizes cumulative application of knowledge and skills in clinical assessment, diagnostic testing, and analysis of test results. Specialized areas may include intraoperative monitoring, neonatal testing, epilepsy monitoring, pediatric testing, research applications, brain mapping, and others. Offered on a credit-no credit basis only. Thirty-two hours clinical. Offered: S;even yrs..

NUTRITION CARE

Nutrition Care 100—Careers in Dietetics and Food Science (1) (9 week course)

Career opportunities and requirements in the fields of dietetics and food science are explored. Discussion will include current and projected trends which relate to career opportunities. Course covers scope and responsibilities of professional members in various food-related careers. Same as Food and Nutrition 100. Students completing Nutrition Care 100 may not receive credit for Food and Nutrition 100. Two hours lecture, one hour non-lecture. Offered: F;S.

Nutrition Care 175—Health Care Field Experience (3)

Prerequisite: Culinary Arts 150 and Food and Nutrition 170

Corequisite: Nutrition Care 180.

Importance and scope of providing food and nutritional services in health care or community facilities to include clinical experience. Team concept approach and public relations will be emphasized. Students will be required to follow dress standards set by the facility in which they are working. TB clearance required. One and one-half hours lecture, eight hours field experience (lab). Offered: S.

Nutrition Care 180—Introduction to Medical Nutrition Therapy (3)

Prerequisite: Food and Nutrition 170.

The principles of nutrition as they relate to special and abnormal physical conditions. Includes the effect of proper nutrition upon the human body, the medical or surgical problems which can arise and the dietary modifications necessary as a result. Routine hospital diets are studied and planned. Two hours lecture, two hours laboratory. Offered: S.

Nutrition Care 280—Intermediate Nutrition Care (2) (9 week course)

Prerequisite: Nutrition Care 180.

Nutrition education principles and techniques for individual, family, and small group instruction in normal and preventive nutrition care. Consideration is given to community and cultural influences on nutrition. Two hours lecture, six hours non-lecture. Offered: F.

Information in italics designates the semester(s) in which the course is offered. The Division Office reserves the right to make changes as budget or other constraints warrant. F=Fall, S=Spring, Sum=Summer, Inter=Intercession

Nutrition Care 281—Supervised Practice 1 (3) (9 week course)

Prerequisite: Nutrition Care 280.

Supervised practice in community facilities/agencies dealing with the nutritional health of people. Rotation through agencies or experiences in public health, community agencies, and schools. Students will be required to follow dress standards set by the facility in which they will work. Includes dietary evaluation and nutrition counseling. One hour lecture, twenty hours field experience. Offered: F.

Nutrition Care 285—Advanced Nutrition Care (2) (9 week course)

Prerequisite: Nutrition Care 281.

Planning nutrition care through menu writing, liquid nutrition evaluation and case studies. Application of menu planning principles to people in various stages of the life cycle, of different cultures, and with varying diet modifications. Two hours lecture, six hours non-lecture. Offered: S.

Nutrition Care 286—Supervised Practice 2 (3) (9 week course)

Prerequisite: Nutrition Care 285.

Supervised experience in an acute care medical facility. Rotation through the various job responsibilities of the dietetic technician. Students will be required to follow dress standards set by the facility in which they will work. One hour lecture, twenty hours field experience. Offered: S.

ORNAMENTAL HORTICULTURE

Ornamental Horticulture 090—Orientation to Horticulture (.5) (6 week course)

Educational opportunities at Orange Coast, further education, careers in horticulture, professional organizations and licensing. Job finding. Offered on a credit-no credit basis only. Two hours. Offered: F;S.

Ornamental Horticulture 100—Horticulture Science (3)

The science and culture of plants upon which man's very existence depends. The principles and practices used to grow plants for food and environmental enhancement will be emphasized. Three hours. Offered: as needed.

Ornamental Horticulture 109—Knowing Your Soils (3)

A nontechnical study of the fundamental concepts of soil science. Methods of investigations for the management of soils and soil substitutes. Three hours. Offered: F;S.

Ornamental Horticulture 111—Landscape Drafting Technique (1) (9 week course)

Basic landscape drafting practices, lettering, linework, symbols, sheet composition and dimensioning. One hour lecture, two hours laboratory. Offered: F;S.

Ornamental Horticulture 163—Maintenance and Repair of Small Gasoline Engines and Other Gardening Equipment (2)

Principles of small internal combustion gasoline engines, servicing and preventive maintenance, tune-ups and adjustment. Care and maintenance of other gardening equipment. One hour lecture, two hours laboratory. Offered: as needed.

Ornamental Horticulture 170—Pest Control

Applicators and Gardeners P.C.O. Certification (1) (9 week course)

Preparation for California Certification Exam as Pesticide Applicator and Gardeners Maintenance Pest Control Operators. Emphasis on safe use of pesticides, alternative pest management. Ornamental, turf grass, industrial, right-of-way and seed treatment control. Two hours. Offered: as needed.

Ornamental Horticulture 181—Ornamental Trees (3)

Identification, habits of growth, culture, propagation and use in landscape design for Southern California. Two hours lecture, three hours laboratory. **(UC credit limitation)** Offered: F.

Ornamental Horticulture 182—Ornamental Shrubs (3)

Habits of growth, culture, propagation and use in landscape design for Southern California. Identification will be emphasized. Two hours lecture, three hours laboratory. **(UC credit limitation)** Offered: S.

Ornamental Horticulture 183—Plant Propagation (3)

Principles and practice of propagation of horticultural plants. Propagation from seed, cuttings, layering, budding, grafting. Two hours lecture, three hours laboratory. **(UC)** Offered: S.

Ornamental Horticulture 184—Nursery Practices and Management (3)

Commercial nursery operations. Nursery layout, propagation, seed sowing, transplanting, potting, canning, fertilization, irrigation. Bedding plants, greenhouse plants, trees and shrubs. Retail and wholesale nursery practices and management. Two hours lecture, three hours laboratory. Offered: F.

Ornamental Horticulture 185—Plant Diseases (1.5) (9 week course)

Common diseases of plants, emphasis on ornamentals grown in Southern California. Their symptoms and control of salinity, air pollutants, fungi, bacteria, virus, nematodes and other causal agents of plant diseases. Three hours. Offered: S.

Ornamental Horticulture 186—Pests of Ornamentals (1.5) (9 week course)

Common mite, insect and other animal pests and common weeds of Southern California. Their economic importance, control, and their recognition and typical damage to ornamental plants and to agriculture will be emphasized with a section on structural pests and insects of medical importance. Two hours lecture, three hours laboratory. Offered: F.

Ornamental Horticulture 187—Interior Plantscaping (2)

Identification, selection, installation, care and maintenance of plants for interior situations. Two hours. Offered: as needed.

Courses

Ornamental Horticulture 188—Turf Culture and Management (3)

Maintenance and management of turf including such areas as golf courses, parks, playing fields and home lawns. Identification of turf grasses. Two hours lecture, three hours laboratory. Offered: as needed.

Ornamental Horticulture 189—Weeds and Their Control (1.5) (9 week course)

Recognition and control of weeds in the landscape and in nurseries with emphasis on practical application. Two hours lecture, three hours non-lecture. Offered: S.

Ornamental Horticulture 190—Xeriscape (2) (9 week course)

A course dealing with ways of reducing water application to existing landscapes and planning new landscapes with low water use as a major concern. Four hours. Offered: F,S.

Ornamental Horticulture 285—Introduction to Landscape Design (3)

Prerequisite: Ornamental Horticulture 111, or concurrent enrollment.

Landscape design, circulation, form, materials, scale. Preparation of landscape design plans. Two hours lecture, three hours laboratory. (UC) Offered: F.

Ornamental Horticulture 286—Landscape Design Elements (2) (9 week course)

Design of basic garden elements (i.e. walls, arbors, pools, steps, fences). Reviews construction materials and their inherent qualities. Preparation of construction drawings. Four hours. Offered: S.

Ornamental Horticulture 287—Planting Design (2) (9 week course)

Prerequisite: Ornamental Horticulture 181, 182, or concurrent enrollment.

Design and preparation of landscape planting plans. Emphasis on ecological and aesthetic considerations. Four hours. Offered: S.

Ornamental Horticulture 288—Sprinkler Irrigation Systems Design (1) (9 week course)

How to design irrigation sprinkler systems for small areas e.g. residential properties and small industrial sites. Two hours. Offered: S.

PHILOSOPHY

Philosophy 100—Introduction to Philosophy (3) (CAN PHIL 2)

A survey of the fundamental problems of philosophy: ethics and aesthetics, logic, philosophy of religion, metaphysics, persons and personal identity, freedom and/or determinism, theory of knowledge, society, and political issues. Basic questions asked about the universe and our place in it. Three hours. (UC) Offered: F,S,Sum.

Philosophy 110—World Religion (3)

An identification of the nature of religious thinking and belief. The variety of patterns developed in both the West and the East are explored with a special emphasis on the relevance to the contemporary intellectual world. May be taken for grades or on a credit-no credit basis. Same as Religious Studies 110. Students completing Philosophy 110 may not receive credit for Religious Studies 110. Three hours. (UC) Offered: F,S,Sum.

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Course numbers followed by an AB, AC, or AD may be repeated once, twice or three times respectively.

Courses that are non-credit or not AA applicable are designated with the letter "N" preceding the course number.

Philosophy 115—Philosophy of Religion (3)

An examination of the role of philosophy in shaping theological doctrine, in proving or disproving the existence of God, in evaluating religious experience, and in considering the implication of atheism and the existence of evil, etc. May be taken for grades or on a credit-no credit basis. Same as Religious Studies 115. Students completing Philosophy 115 may not receive credit for Religious Studies 115. Three hours. (UC) Offered: F,S.

Philosophy 118—Aesthetics/Philosophy of Art (3)

A philosophical approach to a critical evaluation of works of art (literary, musical, visual). May be taken for grades or on a credit-no credit basis. Three hours. (UC) Offered: as needed.

Philosophy 120—Ethics (3) (CAN PHIL 4)

An introduction to ethical theories and problems. An analysis of the theories and principles on which moral judgments are based and the way these judgments are used in moral problems such as abortion, euthanasia, capital punishment, sexual equality, discrimination, censorship and economic justice. Special attention will be given to the kinds of arguments used in ethical discussion. May be taken for grades or on a credit-no credit basis. Same as Religious Studies 120. Students completing Philosophy 120 may not receive credit for Religious Studies 120. Three hours. (UC) Offered: F,S.

Philosophy 125—History of Ancient Philosophy (3) (CAN PHIL 8)

Survey of ancient philosophy with an emphasis on its influence upon western civilization. May be taken for grades or on a credit-no credit basis. Three hours. (UC) Offered: as needed.

Philosophy 130—Social Philosophy (3)

Philosophical foundations of social and political thought; analysis of such concepts as state, law, obligation, sanction, education, property, right and justice through an analysis of the various types of states in which these concepts can play a significant role. May be taken for grades or on a credit-no credit basis. Three hours. (UC) Offered: as needed.

Philosophy 150—Logic and Critical Thinking (3)

Prerequisite: English 100.

An introduction to the critical analysis and rational evaluation of argument and other forms of expression. Course content covers the uses of language, distinctions between deductive and inductive reasoning, and practice in detecting formal and informal fallacies. The student will develop tools for distinguishing between and evaluating beliefs, opinions, claims, explanations and arguments. A strong emphasis is instruction in writing which models the critical thinking knowledge and skills examined in the course. May be taken for grades or on a credit-no credit basis. Three hours. (UC) Offered: F,S,Sum.

Philosophy 165—The Theory of Knowledge (3)

A critical survey of theories of truth, knowledge and belief, perception, and related problems. An evaluation of the limits and extent of human reasoning. The survey includes the mathematic-deductive method, the problem of induction, and an assessment of the conditions of the possibility of experience. The course assesses how evidence is assembled, interpreted, evaluated, and addresses what counts as a good reason to believe, i.e., the problems of justifying evidence. May be taken for grades or on a credit-no credit basis. Three hours. (UC) Offered: F,S.

Philosophy 185—Contemporary Philosophy (3)

A course dealing with the method and problems of twentieth century philosophy. It gives particular attention to the issues of consciousness, human nature, freedom, death, and the social dimensions. Three hours. (UC) Offered: as needed.

Philosophy 220—Introduction to Symbolic Logic (3) (CAN PHIL 6)

Translate simple, quantified and multiple quantified English sentences to symbolic form. Determine the validity of arguments containing simple sentences and sentences involving single quantification. Prove arguments composed of simple sentences, sentences involving single and multiple quantification. May be taken for grades or on a credit-no credit basis. Same as Mathematics 220. Students completing Mathematics 220 may not receive credit for Philosophy 220. Three hours. (UC) Offered: F,S.

PHOTOGRAPHY

Photography 101—Photography and Society (3)

The total photographic visual environment of modern man: magazines, news, advertising, snap shots, portraits, calendar art, family albums, political posters, post cards, greeting cards and fashions. Students will do no photography. May be taken for grades or on a credit-no credit basis. Fulfills '100' level optional course requirement for photography majors. Three hours. Offered: as needed.

Photography 103AB—Astrophotography (1) (9 week course)

Course presents a thorough grounding in the basics of astronomical photography, and with repetition, an opportunity to do intermediate level independent work. General topic is reviewed and the specific requirements for lunar, solar, planetary, and various kinds of stellar photography are outlined. Telescope set up and use is also covered. Field practice outside follows some of the discussions. Counts toward '100' level elective course requirement for photography majors. May be taken for grades or on a credit-no credit basis. One hour lecture, two hours non-lecture. Offered: Sum.

Photography 120—Basic Photography (3) (CAN ART 18)

Discussion and demonstration of basic black/white 35mm photography. Instruction in the theory and technique of camera use, processing film to negatives, and making contact prints and enlargements. Emphasis on photography as a means of communication and personal expression, and on the critical evaluation of student work in terms of those goals. Required for film/video majors. Also required for photography majors entering the program without prior training in photography. May be taken for grades or on a credit-no credit basis. Two hours lecture, two hours laboratory, two hours arranged. (UC) Offered: F,S,Sum.

Courses

Photography 121—View Camera (2) (9 week course)

Prerequisite: Photography 120.

View camera techniques. Camera movements; film handling, printing and developing methods; and working applications of view cameras. Required in combination with Photography 120 for photography majors entering the program without prior training in photography. May be taken for grades or on a credit-no credit basis. Two hours lecture, two hours laboratory, two hours arranged. Offered: F;S;Sum.

Photography 122AB—Personal Expression (3)

Prerequisite: Photography 120 or 180.

Creative black/white photography exploring the possibilities of the use of visual language in relation to thought processes. Advanced techniques of camera use, film handling and printing will be included, but the emphasis will be placed on the personal expression of ideas. Instruction is offered at beginning and intermediate levels. Fulfills '100' level optional course requirement for photography majors. May be taken for grades or on a credit-no credit basis. Two hours lecture, four hours laboratory. Offered: F;S;Sum.

Photography 125—Introduction to Digital Photography (3)

Prerequisite: Photography 120.

Designed to introduce the student to the field of digital photographic imaging and image processing with computers. Course will expose student to basic computer retouching methods, as well as simple image manipulation. May be taken for grades or on a credit-no credit basis. Two hours lecture, four hours non-lecture. Offered: F;S.

Photography 130—History and Aesthetics of Still Photography (3)

An overview of the history and technological development of the science-art of still photography from 1800 to the present and an examination of aesthetic trends within the medium during the twentieth century and their growth into contemporary styles of expression. Major emphasis will be placed on the practice of photography in the United States but comparisons and references will be made to work carried on in other countries. Required for photography majors with the strong recommendation it be taken concurrently with Photography 120 or 180. Three hours. (UC) Offered: F;S.

Photography 131—American Photography Since 1945 (3)

A critical history of American photography since 1945. The pictorial and written history of photography will be examined from social, political and art historical perspectives. The course will survey the major photographers, exhibitions and critical writings of the period. May be taken for grades or on a credit-no credit basis. Three hours. (UC) Offered: as needed.

Photography 132—Photo Analysis (3)

Prerequisite: Photography 120 or 180.

The analysis of photographs as a means of communication to assist the photographer in making better pictures. Photographs will be studied and analyzed for psychological content, political implications, composition theories, color theories, critical theories and historical significance. All forms of photography will be examined but commercial photography will be emphasized. No photographs will be made during class period. Three hours. Offered: as needed.

Information in italics designates the semester(s) in which the course is offered. The Division Office reserves the right to make changes as budget or other constraints warrant. F=Fall, S=Spring, Sum=Summer, Inter=Intercession

Photography 145AD—Photography Exhibition Gallery (2)

A course for students interested in procedures and concepts involved in the scheduling of exhibitions and operation of a photo gallery. Course will provide contact with fine arts photographers, experience in publicity, installation of work, and general working experience in the Orange Coast College Photo Gallery. Curatorial experience will vary each semester as students will be exposed to new exhibitions. Fulfills '100' level optional course requirement for photography majors. May be taken for grades or on a credit-no credit basis. One hour lecture, three hours laboratory. Offered: F;S.

Photography 150AD—Photo Lab (.5)

Prerequisite: Photography 120 or 180.

Assistance with projects using special darkroom techniques for various printing procedures in 35mm black/white photography. This is a workshop course providing supervised laboratory training and additional laboratory work for students simultaneously enrolled in other studio/production courses. Students determine own projects. Instruction is offered at beginning, intermediate, intermediate/advanced and advanced levels. Counts toward '100' level elective course requirement for photography majors. Offered on a credit-no credit basis only. Two hours laboratory. Offered: F;S;Sum.

Photography 151—Photo Non-Lab (1.5) (9 week course)

Photography for producing better pictures—scenery, family, travel or commercial. Emphasis is on lenses, film, lighting methods, flash systems and other accessories. May be taken for grades or on a credit-no credit basis. Three hours. Offered: as needed.

Photography 152AD—Photo Gallery (2)

Appreciation and critical analysis of fine art photography. Presentations and discussions provide a background for the viewing of work in this field trip oriented class while visiting most of the major galleries in the greater Los Angeles metropolitan area. This is a contemporary issues course and the course content varies each semester since the exhibitions are of different photographers and different periods. Fulfills '100' level optional course requirement for photography majors. May be taken for grades or on a credit-no credit basis. Three hours. Offered: F;S.

Photography 153—Portraiture (2)

Prerequisite: Photography 120 or 180.

Techniques of taking informal, formal, environmental and group portraits. Fulfills '100' level optional course requirement for photography majors. May be taken for grades or on a credit-no credit basis. One hour lecture, two hours laboratory. Offered: F;S.

Photography 155—Introduction to Color Photography (2)

Prerequisite: Photography 120 or 180.

Color theory and the aesthetics of color photography. Transparency production and printing emphasized. May be taken for grades or on a credit-no credit basis. Two hours lecture, two hours laboratory. Offered: F;S;Sum.

Photography 156AB—Basic Photographic Negative and Print Retouching (2)

Negative and print retouching with both black/white and color materials. Completion of this course will provide the student with an introduction to work as a professional photographic retoucher. Instruction is offered at beginning and intermediate levels. Fulfills '100' level course requirement for photography majors. May be taken for grades or on a credit-no credit basis. One hour lecture, three hours laboratory. Offered: S.

Photography 160AD—Advanced Photography Laboratory (1-2)

Prerequisite: Photography 120 or 180.

Assistance with studio, advanced black/white, or view camera projects. It provides supervised laboratory training to students preparing for careers in professional photography and additional laboratory work for students simultaneously enrolled in certificate studio/production courses. Students determine own projects. Instruction is offered at beginning, intermediate, intermediate/advanced and advanced levels. Counts toward '100' level elective course requirement for photography majors. May be taken for grades or on a credit-no credit basis. Three to six hours laboratory. Offered: F;S;Sum.

Photography 161AD—Advanced Color Photography Laboratory (1-2)

Prerequisite: Photography 155 or 280.

A course for students requiring additional color laboratory experience. Assistance with color negative and transparency printing projects. This is a workshop course intended as, but not limited to, an augmentative laboratory course for those enrolled in advanced color photography courses. Students determine own projects. Instruction is offered at beginning, intermediate, intermediate/advanced and advanced levels. Counts toward '100' level elective course requirement for photography majors. May be taken for grades or on a credit-no credit basis. Three to six hours laboratory. Offered: F;S;Sum.

Photography 180—Introduction to Professional Photography (4)

Prerequisite: Photography 120.

Instruction in the basic professional techniques of producing black and white still photographs including the use of professional cameras and darkroom procedures, stressing technical excellence in all phases. Required for photography majors entering the program with a solid instructional background in 35mm photography. Three hours lecture, four hours laboratory. Offered: F;S.

Photography 187—Laboratory Practices (3)

Prerequisite: Photography 120 or 180.

Study of professional black and white photographic techniques. Emphasis on film selection and testing, developer selection and testing, exposure and exposure meters, contrast control (Zone System), paper selection and testing, advanced fine printing techniques, alteration of photographic materials through intensification and reduction, basic sensitometry, practical photochemistry, and health and safety in photography. Required for photography majors. Two hours lecture, four hours laboratory. Offered: F.

Courses

Photography 188—Commercial Photography (5)

Prerequisite: Photography 120 and 121, or Photography 180.

Overview of the profession of photography. Study and application of the techniques of commercial black and white still photography. Emphasis in the following areas: incandescent, electronic flash and natural lighting; small and large products, copy, portrait and architectural photography; advertising illustration, special effects image techniques and basic business techniques. Required for photography majors. Five hours lecture, three hours laboratory. Offered: F,S.

Photography 189—Photograph Collecting and Connoisseurship (3)

The course is designed for photography collectors, gallery and museum personnel, investors and corporate investment counselors. Topics include an overview of the history and its processes, the economics of purchasing and marketing photographs, commercial galleries and auction houses, appraisal and evaluation, individual and corporate tax advantages, care and preservation, connoisseurship and aesthetic issues. The course will consist of lectures, class discussion and field trips to galleries, private collections and museums. Fulfills '100' level optional course requirement for photography majors. May be taken for grades or on a credit-no credit basis. Three hours. Offered: as needed.

Photography 194AC—Photography and Computer Graphics 2 (4)

Prerequisite: Photography 125 or Digital Media Arts 193.

Lectures and demonstrations to familiarize students with advanced techniques in digital photography with an emphasis on output. Both fine art and commercial applications are covered. Same as Digital Media Arts 194AC. Students completing Photography 194AC may not receive credit for Digital Media Arts 194AC. Two hours lecture, six hours non-lecture. Offered: F,S.

Photography 195AB—Photography for Publication (3)

Prerequisite: Photography 120 or 180.

Prepares students to plan, perform photography and layout photographs (by computer) for various print media such as newspapers, magazines, annual reports, public relations, brochures, etc. Business and ethical concerns in the industry will be covered. Strongly recommended for photography majors. May be taken for grades or on a credit-no credit basis. Two hours lecture, four hours non-lecture. Offered: as needed.

Photography 196AB—Photo Bookworks (3)

Prerequisite: Photography 120 or 180.

The use of photographs in artists' bookworks is discussed. Major course projects include the production of several unique photographic books. Layout, typography, editing of photos, and makeup of a book are additional topics covered. May be repeated with different subject matter and presentation style. Instruction is offered at intermediate and advanced levels. Recommended for photography majors. May be taken for grades or on a credit-no credit basis. Two hours lecture, four hours non-lecture. Offered: as needed.

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Course numbers followed by an AB, AC, or AD may be repeated once, twice or three times respectively.

Courses that are non-credit or not AA applicable are designated with the letter "N" preceding the course number.

Photography 200AB—Documentary Photography (3)

Prerequisite: Photography 120 or 180.

Provides advanced photo students with familiarization and exposure to documentary photography by completion of a group project. Instruction is offered at intermediate and advanced levels. Strongly recommended for photography majors with an interest in journalism, material culture and social issues. Counts toward '200' level optional course requirement for photography majors. Two hours lecture, two hours laboratory, two hours field/clinical. Offered: as needed.

Photography 220AD—Fashion Photography (3)

Prerequisite: Photography 120 and 121, or Photography 180.

Editorial and advertising fashion photography as it is practiced professionally. Knowledge of color materials is useful. Instruction is offered at beginning, intermediate, intermediate/advanced and advanced levels. For repeating students this becomes a contemporary issues course with course content and independent portfolio work varying according to evolutions in the field and selected area(s) of specialization. Counts toward '200' level optional course requirement for photography majors. Two hours lecture, two hours laboratory, two hours arranged. Offered: F,S.

Photography 240AB—Portfolio Evaluation and Development (3)

Prerequisite: Photography 188.

Instruction for students wishing to pursue a career in commercial photography on how to develop, present and sell their work. Topics range from image selection, sequencing and presentation to establishing of initial business contacts. May be repeated with different subject matter and presentation style. Instruction offered at intermediate and advanced levels. Strongly recommended for photography majors. May be taken for grades or on a credit-no credit basis. Two hours lecture, four hours non-lecture. Offered: S.

Photography 241—Business Practices for Photographers (3)

Presentation of basic business practices in photography including current pricing structures and marketing procedures. Emphasis is on establishing a photographic business, principles of accounting, calculating fixed and variable expenses, general small business practices, possible legal and ethical problems and a review of professional organizations. Helps students to identify and achieve professional photographic goals and objectives. Strongly recommended for Photography majors. Counts toward '200' level elective class requirement. May be taken for grades or on a credit-no credit basis. Three hours. Offered: S.

Photography 260AD—Special Projects (2)

Prerequisite: Minimum of ten (10) units of photography at Orange Coast College.

Faculty-directed in-depth study of a limited area of photographic concern. Topic(s) and faculty chosen by the student. Strongly recommended for photography majors. Instruction is offered at beginning, intermediate, intermediate/advanced and advanced levels. Counts toward '200' level optional course requirement. One hour conference with instructor, three hours laboratory. Offered: F,S.

Photography 261AD—Non-Lab Special Projects (2)

Prerequisite: Minimum of ten (10) units of photography at Orange Coast College.

Faculty-directed study into the history, criticism, interpretation or literature of photography, not involving any lab work. Topic(s) and faculty chosen by the student. Recommended for photography majors. Instruction is offered at beginning, intermediate, intermediate/advanced and advanced levels. Counts toward '200' level optional course requirement. One hour conference with chosen instructor, three hours arranged. Offered: F,S.

Photography 276AB—Printing from Color Transparencies (3)

Prerequisite: Photography 280 or 155.

A course in printing with Type-R materials to make prints from transparencies. Topics will include basic and advanced printing techniques and color sensitometry and a survey of materials, masking, chemical modification and print finishing. Counts toward '200' level elective course requirement for photography majors. Two hours lecture, four hours non-lecture. Offered: as needed.

Photography 280—Introduction to Professional Color Photography (3)

Prerequisite: Photography 180.

An introduction to all aspects of color photography at the professional level. A strong theoretical basis will be introduced, but primary orientation will be toward solving practical problems in color photography. Areas covered will include: color theory, exposure, small and large format transparencies, color negatives, printing from negatives (Type-C), printing from transparencies (Cibachrome), testing. Two hours lecture, four hours laboratory. Offered: S.

Photography 282—Professional Portraiture (3)

Prerequisite: Photography 120 and 121, or Photography 180; Photography 188, 280.

Prepares for employment in professional portrait studio. Includes studio lighting techniques, camera room practices, laboratory techniques and the variety of specialized services offered by a portrait studio. Counts toward '200' level optional course requirement for photography majors. Two hours lecture, two hours laboratory, two hours arranged. Offered: S.

Photography 283AB—Art Photography (3)

Prerequisite: Photography 120 or 180 and Photography 130.

Photography as a fine art medium. Topics include principles of photographic design, aesthetics and history of art photography. Students may use black/white or color photography. Instruction is offered at intermediate and advanced levels. Photo 283AB is required for photography majors. Two hours lecture, four hours laboratory. Offered: F.

Courses

Photography 284AB—Non-Silver Photography (3)

Prerequisite: Photography 120 or 180.

An introduction to non-silver photographic processes including Cyanotype, Calotype, Gum Bichromate, printing. Departing from the strict photographic print to allow the student to explore other printing processes, integrating technical proficiency with multi-media photographic aesthetics. Instruction offered at beginning and intermediate levels. Counts toward '200' level optional course requirement for photography majors. May be taken for grades or on a credit-no credit basis. Two hours lecture, four hours non-lecture. Offered: F.

Photography 287AB—Modern Print Making (3)

Prerequisite: Photography 120 or 180.

An intermediate and advanced course covering modern photographic medium. Technical and creative experimentation will be emphasized. Materials and processes such as hand coloring, solarizations, litho films, non-camera imagery, negative manipulation, reticulation and multiple printing will be covered. Counts toward '200' level optional course requirement for photography majors. Two hours lecture, four hours laboratory. Offered: S.

Photography 289—Architectural Photography (3)

Prerequisite: Photography 280.

Commercial photography intended for advanced students. Projects in black and white and color negatives, and color transparency materials. Some field work with instructor. Counts toward '200' level optional course requirement for photography majors. Two hours lecture, two hours laboratory, two hours arranged. Offered: S.

Photography 290—Advertising Illustration Photography (3)

Prerequisite: Photography 280.

For advanced photography students and professionals with specific interest in the commercial photography field of advertising illustration. Ability to work with black and white, color negative and color transparency materials required. Counts toward '200' level optional course requirement for photography majors. Two hours lecture, two hours laboratory, two hours arranged. Offered: F.

PHYSICAL EDUCATION

(For dance courses see Dance section)

It is strongly recommended that students not repeat beginning physical education courses but acquire a variety of experiences through a wide selection of activities.

Fitness Activities

Physical Education 102AD—Stretch and Flex (.5-1.5) (9-18 week course)

The course emphasizes proper techniques of movement, joint flexibility, breathing and body alignment for postural integration. The relationship between fitness and health related topics to improve, be part of, and maintain a wellness lifestyle. May be taken for grades or on a credit-no credit basis. .25-.75 hours lecture, .75-2.25 hours activity. **(UC credit limitation)** Offered: F,S.

Information in italics designates the semester(s) in which the course is offered. The Division Office reserves the right to make changes as budget or other constraints warrant. F=Fall, S=Spring, Sum=Summer, Inter=Interession

Physical Education 104AD—Hatha Yoga (.5-1.5) (9-18 week course)

Designed to teach a variety of beginning and intermediate yoga postures. Breathing, concentration/meditation, and relaxation techniques will be presented with an emphasis on Hatha Yoga as a method of personal development encompassing body, mind, and spirit. May be taken for grades or on a credit-no credit basis. .25-.75 hour lecture, .75-2.25 hours activity. **(UC credit limitation)** Offered: F,S.

Physical Education 105AD—T'ai Chi Chih (.5)

A newly developed system of Qigong discipline based upon ancient principles and consisting of 20 movement patterns designed to generate, circulate and harmonize internal energy flows for health enhancement. May be taken for grades or on a credit-no credit basis. .5 hour lecture, 1.5 hours non-lecture. **(UC credit limitation)** Offered: S.

Physical Education 106AB—Triathlon Techniques (2.5)

Design a multi-sport fitness program for the novice exerciser to competitor. Develop individual training programs and receive video analysis in swimming, cycling and running. Other topics include injury prevention, nutrition, equipment selection, equipment technology and maintenance. Guest speakers. May be taken for grades or on a credit-no credit basis. Two hours lecture, one hour non-lecture. **(UC credit limitation)** Offered: S.

Physical Education 107AD—Fitness Programs (.5-3) (9-18 week course)

This course allows students to use college facilities and attend day time PE activity classes. As part of the course requirement, students make selections from a series of computer-analyzed fitness and lifestyle evaluations, as well as attend seminars on physical fitness and wellness. This course will explore the relationship of fitness and health related topics to improve, be part of, and maintain a wellness lifestyle. One hour orientations detailing how this program functions are given during the first week of classes. Students are required to attend one orientation. Refer to semester class schedule for lab hours and orientation times. Offered on a credit-no credit basis. .3 to 1.8 hours lecture, 0.7 to 4.2 hours activity. Offered: F,S.

Physical Education 108AD—Strength and Conditioning (.5-3)

Individual strength and conditioning programs. May be taken for .5-3.0 units depending on the number of hours the student works out each week. Workouts must be done in the Strength Lab during the hours the lab is open. Student must first attend a one-hour session. Orientations will be held during the first two days of the semester. Offered on a credit-no credit basis only. 0.3 to 1.8 hours lecture, 0.7 to 4.2 hours laboratory. **(UC credit limitation)** Offered: F,S,Sum.

Physical Education 109AD—Sports Conditioning (.5-2.5)

This course is designed to develop fundamental skills and techniques specifically for athletic competition. Workouts and drills are held on athletic fields and in the fitness facilities. .25-1.5 hours lecture, .75-3.5 hours activity. **(UC credit limitation)** Offered: F,S.

Physical Education 110AD—Cardiovascular Fitness (.5-2.5)

Cardiovascular exercise program. Stretching, fast-walk, jogging, and running programs will be set up on an individual basis. Pulse monitoring, nutrition, and strength will also be emphasized. This course will explore the relationship between fitness and health related topics to improve, be part of, and maintain a wellness lifestyle. May be taken for grades or on a credit-no credit basis. One to five hours lecture/activity. **(UC credit limitation)** Offered: F,S,Sum.

Physical Education 111AD—Weight Training (.5-1.5) (9-18 week course)

The student will learn the basic principles of weight training and exercises and be able to demonstrate proper biomechanics of weight training exercises. May be taken for grades or on a credit-no credit basis. .25-.75 hour lecture, .75-2.25 hours activity. **(UC credit limitation)** Offered: F,S,Sum.

Physical Education 112AD—Step Aerobics (.5-1.5) (9-18 week course)

This is a contemporary workout designed to improve each participant's strength and cardiovascular fitness level through steady-state stepping movements. The student will be exposed to a graduated continuous system of rhythmic stepping at various platform heights, emphasizing strength, flexibility, and endurance which are basic components of physical fitness. May be taken for grades or on a credit-no credit basis. .25-.75 hours lecture, .75-2.25 hours non-lecture. **(UC credit limitation)** Offered: F,S,Sum.

Physical Education 113AD—Cardio Weight Training (.5-1.5) (9-18 week course)

This course emphasizes the five Olympic lifts along with a plyometric and technique training for speed and explosiveness. Cardiorespiratory endurance exercises are included. May be taken for grades or on a credit-no credit basis. .25-.75 hours lecture, .75-2.25 hours activity. **(UC credit limitation)** Offered: F,S.

Physical Education 114AD—Aerobic Exercise (.5-1.5) (9-18 week course)

A contemporary workout done to music designed to improve cardiovascular fitness, strength, flexibility, agility, balance, endurance, and coordination through exercise, general movement, and basic elements of dance. May be taken for grades or on a credit-no credit basis. .25-.75 hour lecture, .75-2.25 hours activity. **(UC credit limitation)** Offered: F,S,Sum.

Physical Education 115AD—Cross Training (.5-1.5) (9-18 week course)

A multi-dimensional approach to total body fitness. Cross training will encompass aerobics, running and weight training and provide the student the opportunity to develop and maintain a complete conditioning program which balances cardiovascular conditioning, strength, flexibility, and coordination. This course will explore, be part of, and maintain a wellness lifestyle. May be taken for grades or on a credit-no credit basis. .25-.75 hour lecture, .75-2.25 hours activity. **(UC credit limitation)** Offered: F,S.

Courses

Physical Education 119AD—Athletic Team Training (.5-5) (9-18 week course)

Course designed for students who are interested in improving their skills for competitive athletic performance. May be taken for grades or on a credit-no credit basis. .5-2.5 hours lecture, 1.5-7.5 hours non-lecture. **(UC credit limitation)** Offered: F,S;Sum.

Physical Education 125AD—Body Sculpting (.5-1.5) (9-18 week course)

Body sculpting is a contemporary workout designed to improve each participant's muscular tone, strength, endurance, and flexibility. The student will be exposed to a graduated continuous system of sculpting the body through the use of various resistance techniques. May be taken for grades or on a credit-no credit basis. .5-.75 hours lecture, 1.5-2.25 hours non-lecture. **(UC credit limitation)** Offered: F,S;Sum.

Defense Activities

Physical Education 120AD—Aikido (.5-1.5) (9-18 week course)

Aikido is a Japanese art of self-defense which is both non-aggressive and non-competitive. Besides offering students a method of self-defense and all-around physical conditioning, Aikido contributes greatly to self-confidence. In addition, it teaches patience, self-discipline, awareness, and respect. This course may be taken four times, allowing students to progress from basic fundamentals to refined techniques. May be taken for grades or on a credit-no credit basis. .25-.75 hour lecture, .75-2.25 hours activity. **(UC credit limitation)** Offered: F,S;Sum.

Physical Education 122AD—Karate (.5-1.5) (9-18 week course)

This course may be taken four times, giving the martial arts students an opportunity to progress from basic fundamentals to the refined techniques of karate. Skills in self-defense are included. May be taken for grades or on a credit-no credit basis. .25-.75 hour lecture, .75-2.25 hours activity. **(UC credit limitation)** Offered: F,S;Sum.

Physical Education 123AB—Self-Defense (.5-1.5) (9-18 week course)

Designed for women, this course emphasizes rape prevention and teaches physical skills while practicing and increasing awareness and alertiveness. May be taken for grades or on a credit-no credit basis. .25-.75 hour lecture, .75-2.25 hours activity. **(UC credit limitation)** Offered: F,S.

Performance & Health

Physical Education 132—Introduction to Wellness (1) (9 week course)

Identification and analysis of cardiovascular disease risk factors in order to improve cardiovascular health and general well-being. May be taken for grades or on a credit-no credit basis. Same as Health Education 132. Students completing Physical Education 132 may not receive credit for Health Education 132. Two hours. Offered: F,S.

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Course numbers followed by an AB, AC, or AD may be repeated once, twice or three times respectively.

Courses that are non-credit or not AA applicable are designated with the letter "N" preceding the course number.

Physical Education 133—Sport Safety Training (2) (9-18 week course)

This course prepares participants with the knowledge and skills necessary to help provide a safe environment for athletes. Emphasis is on helping sustain life and minimize the consequences of injury or sudden illness until medical help arrives. Same as Health Education 133. Students completing Physical Education 133 may not receive credit for Health Education 133. May be taken for grades or on a credit-no credit basis Two to four hours. Offered: F,S.

Physical Education 134—Fitness and Health (3)

Theory and benefits of physical activity to fitness-related health. The study of human adaption to exercise including such topics as cardiovascular conditioning, neuromuscular training, body composition, nutrition for performance, stretching, sports injuries and aging. Same as Health Education 134. Students completing Physical Education 134 may not receive credit for Health Education 134. May be taken for grades or on a credit-no credit basis. Three hours. **(UC credit limitation)** Offered: F,S.

Physical Education 136—Nutrition, Fitness and Performance (2)

An applied nutrition course for individuals interested in health, fitness, and athletics. Principles of nutrition are studied and applied to the physically active lifestyle. Designed for the active individual and for the Fitness Specialist certificate. Pre-event food and fluid selection, nutrient requirements during activity, various nutrition supplements, muscle mass and body fat related to physical performance. May be taken for grades or on a credit-no credit basis. Same as Food and Nutrition 136 and Health Education 136. Students completing Physical Education 136 may not receive credit for Food and Nutrition 136 or Health Education 136. Two hours. Offered: F,S.

Physical Education 138—Drugs and Sports (2) (9 week course)

An in-depth look at substance abuse among athletes. The focus will be on the athletic environment, drug effects, reasons for drug usage, the impact on the team, and position alternatives. Same as Health Education 138. Students completing Physical Education 138 may not receive credit for Health Education 138. May be taken for grades or on a credit-no credit basis. Four hours. Offered: F,S.

Water Activities

Physical Education 140AD—Aqua Fitness (.5-1.5) (9-18 week course)

Prerequisite: Ability to swim 25 yards and tread water for one minute.

Impact-free physical fitness through flotation-assisted, deep-water aerobics training. Designed to improve and increase cardiovascular fitness, flexibility, muscular tone, aerobic conditioning and physical rehabilitation. Combining the properties of weightlessness and resistance, the student will progress through a graduated training program without impact on bones and joints. May be taken for grades or on a credit-no credit basis. .25-.75 hours lecture, .75-2.25 hours activity. **(UC credit limitation)** Offered: as needed.

Physical Education 142AD—Aqua Aerobics (.5-1.5) (9-18 week course)

A class designed to improve physical fitness through prescribed exercises performed in the water. The class is conducted in the shallow pool and there is no prerequisite on swimming ability. May be taken for grades or on a credit-no-credit basis. .5-.75 hour lecture, 1.5-2.25 hours activity. **(UC credit limitation)** Offered: F,S;Sum.

Physical Education 143AD—Swimming (.5-1.5) (9-18 week course)

Course teaches the basics of freestyle, breaststroke, as well as breathing skills while enhancing endurance. May be taken for grades or on a credit-no credit basis. .25-.75 hour lecture, .75-2.25 hours activity. **(UC credit limitation)** Offered: F,S.

Physical Education 146AD—Swimming for Fitness (.5-2.5)

Prerequisite: Ability to swim.

Explains the theories and teaches the skills necessary to achieve fitness through swimming. Swimming programs are designed to attain desired levels of cardiovascular efficiency. May be taken for grades or on a credit-no credit basis. 0.3 to 1.5 hours lecture, 0.7 to 3.5 hours activity. **(UC credit limitation)** Offered: F,S;Sum.

Physical Education 147AB—Introduction to Sailing (1) (9 week course)

Prerequisite: Ability to swim 50 yards and tread water for five minutes.

This course introduces the novice to the fundamentals of sailing through dockside lectures and hands-on experience in Lido 14 dinghies. Points of sail, basic terminology, tacking, gybing, theory, and safety are emphasized. Same as Marine Activities 147AB. Students completing Physical Education 147AB may not receive credit for Marine Activities 147AB. May be taken for grades or on a credit-no credit basis. One hour lecture, three hours non-lecture. **(UC credit limitation)** Offered: F,S.

Physical Education 148AB—Introduction to Keel Boats (1) (9 week course)

Prerequisite: Ability to swim 50 yards and tread water for five minutes; basic sailing ability.

This course introduces the intermediate sailor to the fundamentals of sailing through dockside lectures and hands-on experience in Shields 30 sloops. Points of sail, basic terminology, tacking, gybing, theory, and safety are emphasized. Same as Marine Activities 148AB. Students completing Physical Education 148AB may not receive credit for Marine Activities 148AB. May be taken for grades or on a credit-no credit basis. One hour lecture, three hours non-lecture. Offered: F,S.

Courses

Physical Education 149AB—Introduction to Ocean Sailing (1) (9 week course)

Prerequisite: Ability to swim 50 yards and tread water for five minutes. Knowledge of basic sailing principles.

This course introduces the fundamentals of ocean sailing through dockside lectures and hands-on experience aboard large sailing vessels. Sail handling, winch operation, steering, reefing, line handling are emphasized. Same as Marine Activities 149AB. Students completing Physical Education 149AB may not receive credit for Marine Activities 149AB. May be taken for grades or on a credit-no credit basis. One hour lecture, three hours non-lecture. Offered: F,S.

Racquet Activities

Physical Education 150AD—Badminton (.5-1.5) (9-18 week course)

Development of skills necessary to participate in the game of badminton. The objective is to improve proficiency of skills through further repetition and instruction. May be taken for grades or on a credit-no credit basis. .5 hour lecture, 1.5 hours activity. **(UC credit limitation)** Offered: F,S.

Physical Education 154AD—Table Tennis (.5-1.5) (9-18 week course)

Introduction and practice in the essential stroke skills, rules, etiquette and competition in singles and doubles. May be taken for grades or on a credit-no credit basis. .5 hour lecture, 1.5 hours activity. **(UC credit limitation)** Offered: F,S.

Physical Education 155AD—Tennis (.5-1.5) (9-18 week course)

Introduction and practice in the essential stroke skills, rules, etiquette and competition in singles and doubles. May be taken for grades or on a credit-no credit basis. .25-.75 hours lecture, .75-2.25 hours activity. **(UC credit limitation)** Offered: F,S,Sum.

Physical Education 157AD—Indoor Racquetball (.5-1.5) (9-18 week course)

Practice in basic skills and introduction of game strategy. May be taken for grades or on a credit-no credit basis. .25-.75 hour lecture, .75-2.25 hours activity. **(UC credit limitation)** Offered: F,S,Sum.

Individual & Team Activities

Physical Education 167AD—Rock Climbing (.5-2) (9-18 week course)

Basic climbing techniques and safety fundamentals prepare the student for participation in rock climbing. Securing the climbing harness properly, properly tying to the harness, proper use of climbing commands, safely falling, and arresting falls will be covered. A fee for use of an off-campus facility will be required. .5-1.0 hours lecture, 1.5-3.0 hours non-lecture. **(UC credit limitation)** Offered: F,S,Sum.

Physical Education 173AD—Basketball (.5-1.5) (9-18 week course)

May be taken for grades or on a credit-no credit basis. .5-.75 hour lecture, 1.5-2.25 hours activity. **(UC credit limitation)** Offered: F,S,Sum.

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Physical Education 174AD—Bowling (.5-1.5) (9-18 week course)

Development of skills necessary to participate in bowling. League fee is required to cover the use of lanes, bowling shoes and tournament trophies. May be taken for grades or on a credit-no credit basis. .25-.75 hour lecture, .75-2.25 hours activity. **(UC credit limitation)** Offered: F,S.

Physical Education 177AD—Soccer (.5-2) (9-18 week course)

This course is designed for men and women with beginning, intermediate, and advanced soccer ability. Students will improve skills through application of rules, theory and study, improve flexibility and endurance, and participate in drills, scrimmages and games. The relationship between fitness and health-related topics to improve, be part of, and maintain a wellness lifestyle will be explored. May be taken for grades or on a credit-no credit basis. .5-1.0 hour lecture, 1.5-3.0 hours activity. **(UC credit limitation)** Offered: F,S,Sum.

Physical Education 178AD—Volleyball (.5-1.5) (9-18 week course)

Development of skills necessary to participate in a game of volleyball at the beginning, intermediate and advanced levels. May be taken for grades or on a credit-no credit basis. .25-.75 hour lecture, .75-2.25 hours activity. **(UC credit limitation)** Offered: F,S,Sum.

Physical Education 179AD—Golf (.5-1.5) (9-18 week course)

Beginning through intermediate levels with instruction in putting, chipping, pitching and sand strokes, as well as the basic fundamentals of the full swing. May be taken for grades or on a credit-no credit basis. .5-.75 hour lecture, 1.5-2.25 hours activity. **(UC credit limitation)** Offered: F,S,Sum.

Physical Education 181AD—Coed Slo-Pitch Softball (.5-2) (9-18 week course)

Instruction and practice in the basic skills of slo-pitch softball with emphasis on pitching, batting, base running, and fielding techniques. Strategy will be introduced in team play. May be taken for grades or on a credit-no credit basis. .5-1.0 hour lecture, 1.5-3.0 hours activity. **(UC credit limitation)** Offered: F,S.

Adapted Activities

Physical Education 190AD—Adapted Exercise for Back and Neck Disorders (.5-1.5) (9-18 week course)

Prerequisite: Verified physical disability.

This course is designed for students with back and/or neck problems who can benefit from an individualized exercise program in stretching, resistive exercises and relaxation techniques for improvement in strength, flexibility and tension reduction. May be taken for grades or on a credit-no credit basis. .25-.75 hour lecture, .75-2.25 activity. **(UC credit limitation)** Offered: as needed.

Physical Education 191AD—Adapted Strength Training (.5-1.5) (9-18 week course)

Prerequisite: Verified physical disability.

Course is designed for students with physical and/or motor disabilities requiring specialized activities. Instruction and practice in individualized circuit weight training and resistive exercises will be given for improvement in muscular strength and endurance and flexibility. May be taken for grades or on a credit-no credit basis. .25-.75 hour lecture, .75-2.25 hours activity. **(UC credit limitation)** Offered: F,S,Sum.

Physical Education 192AD—Adapted Individual Sports (.5-1.5) (9-18 week course)

Prerequisite: Verified physical disability.

This course is designed for physically disabled students. Instruction and practice in the methods, techniques and rules of one or more of the following individual sports will be given: tennis, racquetball, badminton, bowling. May be taken for grades or on a credit-no credit basis. .25-.75 hour lecture, .75-2.25 hours activity. **(UC credit limitation)** Offered: as needed.

Physical Education 194AD—Adapted Aquatics (.5-1.5) (9-18 week course)

Prerequisite: Verified physical disability.

Designed to help the exceptional student develop or improve swimming skills, strength and endurance and joint range-of-motion. May be taken for grades or on a credit-no credit basis. .25-.75 hour lecture, .75-2.25 hours activity. **(UC credit limitation)** Offered: F,S,Sum.

Physical Education 195AD—Adapted Aqua Calisthenics (.5-1.5) (9-18 week course)

Prerequisite: Verified physical disability.

Course is designed for students with physical and/or motor disabilities who can benefit from individualized non-impact aerobic type exercises in the pool. May be taken for grades or on a credit-no credit basis. .25-.75 hour lecture, .75-2.25 hours activity. **(UC credit limitation)** Offered: F,S,Sum.

Physical Education 196AD—Adapted Cardiovascular Fitness (1-3)

Prerequisite: Verified physical disability.

Designed to help the exceptional student improve cardiovascular fitness through individualized exercise programs. Class will include group stretching. May be taken for grades or on a credit-no credit basis. .5-1.5 hours lecture, 1.5-4.5 hours activity. **(UC credit limitation)** Offered: F,S,Sum.

Physical Education 197AD—Adapted Aerobic Exercise (.5-1.5) (9-18 week course)

Prerequisite: Verified physical disability.

Course is designed for students with physical and/or motor disabilities requiring an individualized exercise program. Students will develop cardiovascular and muscular endurance, strength and flexibility while exercising with musical accompaniment. May be taken for grades or on a credit-no credit basis. .25-.75 hour lecture, .75-2.25 hours activity. **(UC credit limitation)** Offered: F,S,Sum.

Physical Education 198AD—Adapted Stretching (.5-1.5) (9-18 week course)

Prerequisite: Verified physical disability.

Designed to help the exceptional student develop and improve joint range-of-motion and relaxation skills. May be taken for grades or on a credit-no credit basis. .25-.75 hour lecture, .75-2.25 hours activity. **(UC credit limitation)** Offered: F,S.

Courses

Intercollegiate Athletics

COED SPORTS

Physical Education 222AD—Pep Squad (2)

Prerequisite: Successful audition.

Cheer leaders and song leaders as members of the pep squad. May be taken for grades or on a credit-no credit basis. Two and one-half hours lecture, seven and one-half hours activity. Offered: F;S.

WOMEN'S SPORTS

Physical Education 235AD—Basketball Team (1) (9 week course)

May be taken for grades or on a credit-no credit basis. Two and one-half hours lecture, seven and one-half hours activity. **(UC credit limitation)** Offered: F;S.

Physical Education 236AD—Cross Country Team (2)

May be taken for grades or on a credit-no credit basis. Two and one-half hours lecture, seven and one-half hours activity. **(UC credit limitation)** Offered: F.

Physical Education 238AD—Crew Team (2)

May be taken for grades or on a credit-no credit basis. Two and one-half hours lecture, seven and one-half hours activity. **(UC credit limitation)** Offered: S.

Physical Education 239AD—Golf Team (2)

May be taken for grades or on a credit-no credit basis. Two and one-half hours lecture, seven and one-half hours activity. **(UC credit limitation)** Offered: F.

Physical Education 240AD—Soccer Team (2)

May be taken for grades or on a credit-no credit basis. Two and one-half hours lecture, seven and one-half hours activity. **(UC credit limitation)** Offered: F.

Physical Education 241AD—Softball Team (2)

May be taken for grades or on a credit-no credit basis. Two and one-half hours lecture, seven and one-half hours activity. **(UC credit limitation)** Offered: S.

Physical Education 242AD—Swimming Team (2)

May be taken for grades or on a credit-no credit basis. Two and one-half hours lecture, seven and one-half hours activity. **(UC credit limitation)** Offered: S.

Physical Education 243AD—Tennis Team (2)

May be taken for grades or on a credit-no credit basis. Two and one-half hours lecture, seven and one-half hours activity. **(UC credit limitation)** Offered: S.

Physical Education 244AD—Track and Field Team (2)

May be taken for grades or on a credit-no credit basis. Two and one-half hours lecture, seven and one-half hours activity. **(UC credit limitation)** Offered: S.

Physical Education 245AD—Volleyball Team (2)

May be taken for grades or on a credit-no credit basis. Two and one-half hours lecture, seven and one-half hours activity. **(UC credit limitation)** Offered: F.

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Physical Education 246AD—Water Polo Team (2)

May be taken for grades or on a credit-no credit basis. Two and one-half hours lecture, seven and one-half hours activity. **(UC credit limitation)** Offered: F.

MEN'S SPORTS

Physical Education 221AD—Golf Team (2)

May be taken for grades or on a credit-no credit basis. Two and one-half hours lecture, seven and one-half hours activity. **(UC credit limitation)** Offered: S.

Physical Education 250AD—Baseball Team (2)

May be taken for grades or on a credit-no credit basis. Two and one-half hours lecture, seven and one-half hours activity. **(UC credit limitation)** Offered: S.

Physical Education 251AD—Basketball Team (1) (9 week course)

May be taken for grades or on a credit-no credit basis. Two and one-half hours lecture, seven and one-half hours activity. **(UC credit limitation)** Offered: F;S.

Physical Education 252AD—Crew (2)

Designed to hone skills for intercollegiate crew competition and to make a commitment for athletic excellence. May be taken for grades or on a credit-no credit basis. Two and one-half hours lecture, seven and one-half hours activity. **(UC credit limitation)** Offered: S.

Physical Education 253AD—Cross Country Team (2)

May be taken for grades or on a credit-no credit basis. Two and one-half hours lecture, seven and one-half hours activity. **(UC credit limitation)** Offered: F.

Physical Education 254AD—Football Team (2)

May be taken for grades or on a credit-no credit basis. Two and one-half hours lecture, seven and one-half hours activity. **(UC credit limitation)** Offered: F.

Physical Education 257AD—Soccer Team (2)

May be taken for grades or on a credit-no credit basis. Two and one-half hours lecture, seven and one-half hours activity. **(UC credit limitation)** Offered: F.

Physical Education 258AD—Swimming Team (2)

May be taken for grades or on a credit-no credit basis. Two and one-half hours lecture, seven and one-half hours activity. **(UC credit limitation)** Offered: S.

Physical Education 259AD—Tennis Team (2)

May be taken for grades or on a credit-no credit basis. Two and one-half hours lecture, seven and one-half hours activity. **(UC credit limitation)** Offered: S.

Physical Education 260AD—Track and Field Team (2)

May be taken for grades or on a credit-no credit basis. Two and one-half hours lecture, seven and one-half hours activity. **(UC credit limitation)** Offered: S.

Physical Education 261AD—Volleyball Team (2)

May be taken for grades or on a credit-no credit basis. Two and one-half hours lecture, seven and one-half hours activity. **(UC credit limitation)** Offered: S.

Physical Education 263AD—Water Polo Team (2)

May be taken for grades or on a credit-no credit basis. Two and one-half hours lecture, seven and one-half hours activity. **(UC credit limitation)** Offered: F.

Professional Physical Education

Professional physical education courses are intended for physical education, recreation, and dance majors. Students should consult the Transfer Information section or their counselor for specific requirements.

Physical Education 199AD—Current Issues in Physical Education (.5-3) (9-18 week course)

Current issues in the field of physical education, rotating through a variety of topics, such as principles of coaching, mental aspects of sports, principles of fitness and performance, competition and the athlete, and careers in physical education and exercise science. May be taken for grades or on a credit-no credit basis. One to three hours. Offered: F;S;Sum.

Physical Education 268—Introduction to Adapted Physical Education (2.5) (9-18 week course)

Introduction to adapted physical education designed for majors in fitness specialist, physical education, physical therapy, sports medicine, nursing, and allied health fields. Theory and practice of strength, flexibility, cardiovascular, aquatics, gait and balance development, and assessment for persons with disabilities are topics covered. Instruction in specific disabilities, terminology, psychology, attitudes, and contraindicated and recommended exercises, posture evaluation and remediation, teaching methodologies, and individualizing exercise programs is provided. May be taken for grades or on a credit-no credit basis. Two hours lecture, two hours non-lecture. Offered: as needed.

Physical Education 272—Group Exercise Instructor Training (3)

This course is designed for people who want to be group fitness instructors or for current group fitness instructors who want to enhance their knowledge. Developing and teaching a fitness class, basic anatomy and kinesiology, proper stretching techniques, heart rate monitoring, correct body alignment and injury prevention will be covered. May be taken for grades or on a credit-no credit basis. Three hours. Offered: F.

Physical Education 274—Movement Analysis (3)

Courses

The musculo-skeletal system and its function in human movement. Analysis of movements in sport skills and the muscles and bones involved. Three hours. **(UC credit limitation)** Offered: F,S.

Physical Education 277—Coaching Theory and Techniques (3)

Motivation of the student athlete, meaningful practice schedules, preparation for the contest, dealing with winning and losing, influence of community support groups and a code of ethics. Three hours. **(UC credit limitation)** Offered: S.

Physical Education 278—Sports Management (3)

Introduction to sports and fitness management programs-operation, procedures, facilities and equipment. Three hours lecture, one hour non-lecture. Offered: S.

Physical Education 279—Theory of Soccer (1) (9 week course)

Designed for men and women to analyze the theory and techniques pertinent to the game of soccer. Two hours. **(UC credit limitation)** Offered: S.

Physical Education 281—Sports Medicine (3)

Technique and theory in prevention of athletic injuries. Includes modalities for therapy and prevention of injury through exercise. Three hours. **(UC)** Offered: F,S.

Physical Education 284—Fitness and Exercise Testing (3)

Prerequisite: Current CPR certification.

Theory and techniques of physical fitness evaluation, exercise testing and exercise prescription. Three hours. Offered: S.

Physical Education 285—Athletic Taping and Modalities (3)

The entry-level theory and technique of athletic strapping and physiological effects and the use of therapy modalities. Instruction in the use of ultrasound, electric stimulation, heat/cold, and whirlpool. Three hours lecture, one hour non-lecture. Offered: F,S.

Physical Education 287AD—Sports Medicine Practicum (2-4)

Designed to provide clinical experience for students interested in sports-related injury care and prevention. Experiences will include taping for prevention of injury, use of modalities, and exercise programs in rehabilitation of injuries. One hour lecture, three to nine hours non-lecture. Offered: F,S.

Physical Education 289—Strength and Conditioning Theory (3)

Theory and applications of strength development, muscular endurance, flexibility, neuromuscular coordination and nutrition. Includes planning and setting up programs designed to achieve the desired goals in the most efficient way. Also includes introduction to physical fitness testing. Three hours lecture, one hour laboratory. Offered: F.

Information in italics designates the semester(s) in which the course is offered. The Division Office reserves the right to make changes as budget or other constraints warrant. F=Fall, S=Spring, Sum=Summer, Inter=Intercession

Physical Education 299AD—Current Topics for the Fitness Specialist (.5-3) (9-18 week course)

Study and discussion of topics and issues of current interest to the fitness specialist, fitness specialist major and others interested in upgrading their knowledge in fitness and related areas. Units vary according to topic selected, semester offered and number of meetings scheduled. May be taken for grades or on a credit-no credit basis. One to three hours. Offered: as needed.

PHYSICS

Physics 110—Descriptive Introduction to Physics (3)

Recommended preparation: Elementary algebra and plane geometry.

A brief, but complete, presentation of the fundamental phenomena and laws in physics with experimental illustrations enhancing the development of conceptual scientific thinking. Not open to those who hold credit for any other college physics. May be taken for grades or on a credit-no credit basis. Three hours. **(UC credit limitation)** Offered: F,S;Sum.

Physics 111—Introductory Physics Laboratory (1)

Prerequisite: Physics 110, or concurrent enrollment.

Introductory physics laboratory for students to complement Physics 110. Not open to those who hold credit for any other college physics-laboratory course. May be taken for grades or on a credit-no credit basis. Three hours laboratory. **(UC credit limitation)** Offered: F,S.

Physics 120—General Physics: Mechanics, Waves, Thermodynamics (4) (CAN PHYS 2)

Prerequisite: Mathematics 120, or concurrent enrollment.

Satisfies requirements for biological sciences and technical programs except physics, chemistry and engineering. Suitable as an elective in liberal arts courses. May be taken for grades or on a credit-no credit basis. Four hours lecture and demonstration, two hours laboratory. **(UC credit limitation)** Offered: F,S;Sum.

Physics 125—General Physics: Electricity, Magnetism, Light, Modern Physics (4) (CAN PHYS 4)

Prerequisite: Physics 120.

Continuation of Physics 120. May be taken for grades or on a credit-no credit basis. Four hours lecture and demonstration, two hours laboratory. **(UC credit limitation)** Offered: F,S.

Physics 130—General Mechanics/Waves/Thermodynamics (4)

Prerequisite: Math 180.

Corequisite: Math 185.

A study of general principles of mechanics, waves, and thermodynamics. Emphasis will be on Newton's three laws of motion, theory of gravity, conservation laws, laws of thermodynamics, generation and propagation of mechanical waves. Three hours lecture, one hour discussion, three hours laboratory. **(UC credit limitation)** Offered: F.

Physics 135—General Electromagnetism/Light/Modern Physics (4)

Prerequisite: Physics 130 and two semesters of calculus.

A study of general principles of electricity, electromagnetism, optics, theory of relativity, and quantum theory with applications to atoms, nuclei and elementary particles. Three hours lecture, one hour discussion, three hours laboratory. **(UC credit limitation)** Offered: S.

Physics 185—General Physics: Mechanics, Waves (4) (CAN PHYS 8)

Prerequisite: Mathematics 180.

Corequisite: Mathematics 185.

Recommended preparation: One year of high school physics or a semester of college physics.

The Physics 185, 280, 285 sequence is required for students planning to major in physics, chemistry or engineering. Four hours lecture, three hours laboratory. **(UC credit limitation)** Offered: F,S.

Physics 280—General Physics: Electricity and Magnetism (4) (CAN PHYS 12)

Prerequisite: Physics 185 and two semesters of calculus.

Three hours lecture, one hour problem session, three hours laboratory. **(UC credit limitation)** Offered: F.

Physics 285—General Physics: Thermodynamics, Light, Relativity, Quantum Physics (4) (CAN PHYS 14)

Prerequisite: Physics 280 or 185 with grade of 'C' or better.

Three hours lecture, one hour problem session, three hours laboratory. **(UC credit limitation)** Offered: S.

PHYSIOLOGY (See Biology 225)

POLITICAL SCIENCE

Political Science 101—Survey of Current Issues (3)

An in-depth analysis of crucial current problems in American society and/or the world. Study will be directed toward a definition of issues, acquisition of pertinent factual data, assessment of the validity and relevancy of information, a determination of ideological and value conflict and the evaluation of problem solutions. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: F,S;Sum.

Political Science 110—Introduction to International Relations (3)

Introduction to international politics. Study of the relations of nation-states including the functions of power, ideology, diplomacy, international law and organization, as well as military and economic factors. Consideration of United States foreign policy and prominent cold war problems as they illustrate concepts of international politics. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: F,S.

Courses

Political Science 115—California Politics and Government (3)

A practical contemporary examination of the forces and factors which shape the making of public policy on the state and local levels of government in California. Current issues and problems will be emphasized. May be taken for grades or on a credit-no credit basis. Three hours. Offered: as needed.

Political Science 125—Introduction to Urban Politics and Government (3)

A study of governmental problems at the urban level. Particular emphasis is given to contemporary issues facing the Orange County urban community. Alternative solutions and conflicting viewpoints are examined. May be taken for grades or on a credit-no credit basis. Three hours. Offered: as needed.

Political Science 180—Introduction to Government (3) (CAN GOVT 2)

An introduction to the principles and problems of government with particular emphasis on the American political system at all levels. This course satisfies the state university requirements in the Constitution of the United States, state and local government. May be taken for grades or on a credit-no credit basis. Three hours. **(UC credit limitation)** Offered: F;S;Sum.

Political Science 180H—Honors Introduction to Government (3)

An introduction to the principles and problems of government with particular emphasis on the American political system at all levels. This course satisfies the state college requirements in the Constitution of the United States, state and local government. May be taken for grades or on a credit-no credit basis. Three hours. **(UC credit limitation)** Offered: as needed.

Political Science 185—Introduction to Comparative Government (3)

A comparative study of constitutional principles, governmental institutions and political problems of selected governments abroad. Particular attention is given to Great Britain, Soviet Union, France and Germany. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: F;S.

Political Science 190—Introduction to American Legal System (3)

The American legal system focusing on contemporary problems and controversies. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: as needed.

Political Science 195—Introduction to Community Organizing (3)

Problems and methods of organizing citizen action groups. Types of organizations, resource information, tactics and strategies. Review of existing citizen action organizations. May be taken for grades or on a credit-no credit basis. Three hours. Offered: as needed.

POLYSOMNOGRAPHY

Polysomnography 150—Introduction to Polysomnography (3)

Prerequisite: Corequisite: Polysomnography 160.

Beginning polysomnography includes a fundamental and detailed study of the various sleep disorders, their symptoms, consequences, treatments, and polysomnographic manifestations. Sleep stage scoring, pattern recognition, and data computation are covered. Instruction in patient examination and history taking for sleep disorders. Three hours. Offered: F;even yrs..

All courses numbered 100 or higher are transferable to the California State Universities (CSU).

Courses that are transferable to the University of California are designated "UC". Some of these courses have limits on the amount of credit that is granted. See the UC transferable Course List available in the Counseling Center or Transfer Center for these limitations.

Course numbers followed by an AB, AC, or AD may be repeated once, twice or three times respectively.

Courses that are non-credit or not AA applicable are designated with the letter "N" preceding the course number.

Polysomnography 160—Polysomnography Testing (2)

Prerequisite: Neurodiagnostic Technology 110 or concurrent enrollment.

Corequisite: Polysomnography 150.

Hands-on experience and instrumentation theory of various polysomnographic recording equipment utilized for recording polysomnographic studies and includes patient hookup, calibration, and simulated testing in the lab. Continuous Positive Airway Pressure and oxygen titration demonstration. One hour lecture, two hours non-lecture. Offered: F;even yrs..

Polysomnography 165—Polysomnography Clinical 1 (.5) (9 week course)

Prerequisite: Allied Health 115.

Corequisite: Polysomnography 150 and 160.

Clinical application of polysomnographic testing at an affiliated sleep disorder center to include patient interaction, application of testing equipment, and monitoring sleep behavior. Offered on a credit-no credit basis only. Five hours non-lecture. Offered: F;even yrs..

Polysomnography 170—Polysomnographic Practice (1)

Corequisite: Polysomnography 150 and 165.

Preparatory course for polysomnography clinical experience. Topics will include medical ethics, clinical emergencies, behavioral and performance objectives, and employability skills. One hour. Offered: F;even yrs..

Polysomnography 175—Polysomnography Clinical 2 (.5) (4 week course)

Prerequisite: Allied Health 115 and Polysomnography 160 and 165.

Clinical application of polysomnographic testing at an affiliated sleep disorder center to include patient interaction, application of testing equipment, and monitoring sleep behavior. Offered on a credit-no credit basis only. Twelve hours clinical. Offered: Inter.

Polysomnography 250—Polysomnography Record Review (2.5) (14 week course)

Prerequisite: Polysomnography 150, 160, and 165.

Review of normal and abnormal polysomnographic recordings. Learn to recognize normal and abnormal sleep and breathing patterns and behaviors, artifacts, titration of CPAP, BIPAP, and oxygen. Scoring and calculation of polysomnographic recordings. Three hours. Offered: S;odd yrs..

Polysomnography 260—Advanced Polysomnography (2) (14 week course)

Prerequisite: Polysomnography 160.

Advanced aspects of polysomnographic technology, testing, instrumentation, ancillary testing, basic management skills, and computerized scoring. Two hours lecture, one hour non-lecture. Offered: S;odd yrs..

Polysomnography 265—Polysomnography Clinical 3 (2) (12 week course)

Prerequisite: Polysomnography 175.

Corequisite: Polysomnography 250 and 260.

Continued clinical application of polysomnographic testing at an affiliated sleep disorder center. Includes patient interaction, application of testing equipment, and monitoring sleep behavior. Offered on a credit-no basis only. One hour lecture, 12 hours clinical arranged. Offered: S;odd yrs..

Polysomnography 270—Physician Lecture Series (1) (14 week course)

Prerequisite: Neurodiagnostic Technology 190 and Respiratory Care 185 or concurrent enrollment.

Physician lectures on current topics in polysomnography and related areas of medicine. Time will be allotted for discussion with physicians about individual clinical problems. 1.3 hours. Offered: S;odd yrs..

Polysomnography 285—Polysomnography Internship (2) (4 week course)

Prerequisite: Polysomnography 265.

Final clinical experience in an affiliated sleep disorders center. Students will work with patients and technologists at night in the laboratory to obtain interpretable polygraphs. Offered on a credit-no credit basis only. Thirty-six hours. Offered: Sum;odd yrs..

PSYCHOLOGY

Psychology 100—Introductory Psychology (3) (CAN PSY 2)

Introduction to the scientific study of human behavior. Designed to provide the student with a basic background in the principal areas, problems, and concepts of psychology. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: F;S;Sum.

Psychology 105—Psychology of Women (3)

This course evaluates traditional theories of the psychology of women and how they relate to women today. It will examine what science has taught us about the nature of women and how their psychology differs from that of men. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: F;S.

Psychology 110—Psychology of Adjustment (3)

The study of the concepts and principles of personal and social adjustment. Various theories of healthy adjustment are explored that include humanistic, cognitive, behavioral, psychodynamic, and biological approaches. These theories are coupled with the personal discipline and responsibility of the individual student. The material is geared to be relevant and applicable to contemporary society. May be taken for grades or on a credit-no credit basis. Three hours. **(UC credit limitation)** Offered: F;S;Sum.

Courses

Psychology 117—Stress Management (1-3) (9-18 week course)

The nature and causes of stress. The effects of stress on psychological and physical well-being. Methods and techniques of stress reduction. May be taken for grades or on a credit-no credit basis. One to six hours. Offered: F,S;Sum.

Psychology 125—Introduction to Counseling and Peer Helping (3)

An introductory course designed for students interested in counseling or helping roles: professional, paraprofessional, volunteer and peer. Basic theories and practices will be examined and analyzed within the human relations model. The student will learn techniques of attending, listening and responding, as well as ethics, intervention and referral. May be taken for grades or on a credit-no credit basis. Four hours lecture. Offered: F,S.

Psychology 126AB—Peer Counseling Practicum (3)

Prerequisite: Psychology 125.

Field experience in applying skills learned in Psychology 125. Designed to increase understanding of counseling process and to maximize effectiveness as a helper/counselor. May be taken for grades or on a credit-no credit basis. Two hours lecture, four hours laboratory. Offered: as needed.

Psychology 140—Psychology of Adult Development and Aging (3)

Traditional myths and stereotypes are examined in the light of scientific discoveries of the psychological aspects of aging. Special emphasis is placed on the 'unique' developmental needs, tasks, and roles which confront each of us as we progress through the middle and advanced years. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: F,S;Sum.

Psychology 156—An Introduction to Psychological Principles for Human Services (2) (9 week course)

Recommended preparation: Psychology 100.

Preparation for a career in the area of human services. Exposes the student to practical applications of Logotherapy, Axiotherapy, Direct Decision Theory, and Behavior Modification. Four hours. Offered: as needed.

Psychology 157—An Introduction to Psychological Principles for Business (3)

Recommended preparation: Psychology 100.

Psychology concepts applicable to business including humanism, interviewing techniques, psychological testing, decision making, stress management, crisis intervention, assertiveness training. Useful as in-service, as well as pre-employment training in business. May be taken for grades or on a credit-no credit basis. Three hours. Offered: as needed.

Psychology 158—Introduction to Abnormal Psychology (3)

Prerequisite: Psychology 100.

An introduction to emotional and mental disorders from a biological, sociological, and psychological approach. Recommended for, but not limited to, psychology and/or other mental health care career students, psychology technicians, human services personnel, MFCC and LCSW students. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: F,S.

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Psychology 160—Statistics for the Behavioral Sciences (3) (CAN PSY 6)

Prerequisite: Mathematics 030 or qualifying OCC mathematics placement score. See mathematics assessment requirement.

Basic statistical procedures and their application to research and practice in the various areas of the behavioral sciences. Calculation and meaning of descriptive and inferential statistics including estimation, correlation, regression, sampling theory, hypothesis testing, Z test, analysis of variance, T test and nonparametric statistics. May be taken for grades or on a credit-no credit basis. Students completing Mathematics 160 may petition for alternative credit for Psychology 160. Three hours. **(UC credit limitation)** Offered: F,S.

Psychology 165—Introduction to Human Sexuality (3)

Scientific analysis of human sexual behavior from the psychological, sociological, and physiological points of view. Designed to provide the academic and theoretical basis for the entire field of human sexuality. May be taken for grades or on a credit-no credit basis. Same as Sociology 165. Students completing Psychology 165 may not receive credit for Sociology 165. Three hours. **(UC credit limitation)** Offered: F,S;Sum.

Psychology 175—Advanced Human Sexuality (3)

Prerequisite: Psychology 165 or Sociology 165.

Personality and socialization as related to sexual behavior, problems, and sexual dysfunction. How knowledge, preferences, lifestyle, awareness, and education influence sexuality. May be taken for grades or on a credit-no credit basis. Same as Sociology 175. Students completing Psychology 175 may not receive credit for Sociology 175. Three hours. **(UC credit limitation)** Offered: F,S.

Psychology 185—Principles of Psychology (3)

Prerequisite: Psychology 100.

This course is a survey of contemporary research in the subfield of psychology and addresses the processes underlying behavior, biology and behavior, and social behavior with an emphasis on contemporary interests, recent discoveries, and innovations in the field of psychology. Recommended for general education and for students majoring in the behavioral sciences. Three hours. **(UC)** Offered: F,S.

Psychology 199AD—Current Topics in Psychology (.5-3) (1-18 week course)

Study and discussion of topics and issues of current interest in psychology. Units vary according to topic selected, semester offered, and number of meetings scheduled. Of interest to the student majoring in psychology, social science or general education. May be taken for grades or on a credit-no credit basis. One half hour to three hours. **(UC credit limitation)** Offered: F,S.

Psychology 215—Psychology of Behavior Modification and Assertion (2) (9 week course)

Learn cognitive and behavioral change techniques especially relevant to personal and social behaviors, such as assertiveness. May be taken for grades or on a credit-no credit basis. Four hours. Offered: F,S.

Psychology 220—Psychology of Personality (3)

Prerequisite: Psychology 100.

A survey of the individual intellectual and emotional components of personality and the cultural, social and individualistic influences on it in the context of major theories and current research. May be taken for grades or on a credit-no credit basis. Three hours. **(UC credit limitation)** Offered: F,S.

Psychology 250—Elementary Physiological Psychology (3)

Recommended preparation: Psychology 100.

An examination of the brain and its relationship to behavior. The following topics will be examined: the nervous systems, the split brain, the neuron, vision, hearing, taste, smell, sleep and dreaming, emotion, eating and drinking, memory, perception of pain, biofeedback, biological clocks, depression, and schizophrenia. Three hours. **(UC)** Offered: F,S.

Psychology 260—Introductory Social Psychology (3)

The scientific study that seeks to understand the nature and causes of individual behavior in social situations. Topics include awareness/cognition, attitudes/persuasion, prejudice/discrimination, attraction/love, conformity/obedience, aggression/violence, loafing/leadership, and illness prevention/wellness. Three hours. **(UC)** Offered: F,S.

Psychology 277—Psychology of Teaching Practicum (2)

Exposure to the actual classroom environment as a teacher assistant. The professor and student will arrange a suitable grade level placement in a public/private school for a minimum of five hours per week. Offered on a credit-no credit basis only. Offered: F,S.

Psychology 280—Introduction to Experimental Methods (4) (CAN PSY 8)

Prerequisite: Psychology 100.

This course addresses the principles and techniques which enter into experimental research concerning behavior and emphasizes designing, conducting, analyzing, and reporting research in the behavioral sciences. Three hours lecture, three hours laboratory. **(UC)** Offered: F,S.

RADIOLOGIC TECHNOLOGY

Radiologic Technology 105—Fundamentals of Radiation Protection Practices (1) (4 week course)

The fundamentals of radiation protection and radiobiology. A study of the effects of radiation in humans and the principles of protection as applied to potential CVT and other occupational radiation workers. This course will not meet the requirements of radiation protection for the Department of Radiological Health for limited permit or CRT radiographers. Four hours lecture, one-half hour arranged. Offered: F.

Courses

Radiologic Technology 110—Radiological Physics and Protection (3)

Prerequisite: Technology 040 and Biology 221.

The fundamentals of radiation and radiological physics. Operation of medical radiographic x-ray units. A study of the effects of radiation in humans and the principles of protection as applied to radiography. Introduction to health physics instrumentation with a study of radiation control regulations. Two and one-half hours lecture, one and one-half hours laboratory. Offered: F.

Radiologic Technology 165—Beginning Radiologic Practice (1.5) (9 week course)

Prerequisite: Allied Health 111.

Introduction to the radiology environment emphasizing professionalism, a humanistic approach to patients, medical/radiology records responsibilities, and medical/legal principles. Student obligations to clinical education are identified. Three hours. Offered: F.

Radiologic Technology 170—Radiographic Positioning and Critique 1 (3)

Prerequisite: Allied Health 111.

Introduction to radiographic positioning principles, study of contrast media, acquaintance with x-ray apparatus, and laboratory practice and film critique of chest, abdominal studies and upper extremities. Two hours lecture, four hours laboratory. Offered: F.

Radiologic Technology 171—Clinical Lab 1 (1.5) (9 week course)

Prerequisite: Radiologic Technology 165 and Allied Health 115.

Clinical experience in an affiliated radiology department under the supervision of certified radiology and health care personnel utilizing a condensed format. Radiographic skills in chest and abdomen procedures will be emphasized. Sixteen hours clinical. Offered: F.

Radiologic Technology 172—Clinical Lab 1A (1) (2 week course)

Prerequisite: Radiologic Technology 171.

Clinical experience in an affiliated radiology department under the supervision of certified radiology and health care personnel utilizing a condensed format. Radiographic skills to include assisting with routine contrast media studies of the GI and GU tracts. Thirty-two hours clinical. Offered: Inter.

Radiologic Technology 175—Radiographic Positioning and Critique 2 (3)

Prerequisite: Radiologic Technology 170.

Radiographic positioning principles, laboratory practice, and film critique of the lower extremities, vertebral column, and basic skull. Overview of common pathologies of identified areas. Two hours lecture, four hours laboratory. Offered: S.

Radiologic Technology 176—Clinical Lab 2 (6)

Prerequisite: Radiologic Technology 171 and 172.

Clinical experience in an affiliated radiology department under the supervision of certified radiology and health care personnel. Radiographic skills to be emphasized will be fluoroscopic procedures, GU tract, upper and lower extremities, and routine spinal column. Twenty-four hours clinical. Offered: S.

Radiologic Technology 177—Clinical Lab 3 (3) (8 week course)

Prerequisite: Radiologic Technology 176.

Clinical experience in an affiliated radiology department under the supervision of certified radiology and health care personnel. Radiographic skills to be emphasized will be routine skull radiography, portable radiography, minor special procedures, and introduction to pediatric and trauma radiography. Thirty-two hours. Offered: Sum.

Radiologic Technology 180—Radiographic Imaging (3)

Prerequisite: Technology 040.

Introduction to factors influencing radiographic image formation, principles of film processing, x-ray exposure techniques and essentials of radiographic quality. Radiographic image critique skills will be developed. Two hours lecture, three hours laboratory. Offered: F.

Radiologic Technology 185—Radiographic Pathology (1) (9 week course)

Prerequisite: Radiographic Technology 170.

Advanced study, identification, and critique of common radiographic pathologies in major body systems. Assists the learner in providing quality patient care. Two hours. Offered: S.

Radiologic Technology 265—Principles of Digital Imaging and Computer Applications (3)

Prerequisite: Radiologic Technology 165.

Introduction to digital imaging, CT and MRI and computer systems as utilized in radiology departments. Overview of digital and analog devices with emphasis on computers and required peripheral equipment. Basic imaging principles as applied to computerized tomography and magnetic resonance to include physics, imaging protocols, R/F electronics and gradient coil design and use. Software and display strategies for each modality will be discussed. Course does not include clinical experience. Three hours. Offered: F.

Radiologic Technology 270—Radiographic Positioning and Critique 3 (3)

Prerequisite: Radiologic Technology 175.

Radiographic positioning, film critique of advanced skull to include sinuses, TMJs, mastoids, mandible, facial bones, bony thorax and pelvic girdle. Introduction to ancillary imaging modalities including sectional anatomy. Two hours lecture, three hours laboratory. Offered: F.

Radiologic Technology 271—Clinical Lab 4 (6)

Prerequisite: Radiologic Technology 177.

Clinical experience in an affiliated radiology department under the supervision of certified radiology and health care personnel. Emphasis on independent radiography and decision making. Advanced cranial studies and torso exams will be emphasized. Thirty-two hours clinical. Offered: F.

Radiologic Technology 275—Radiographic Positioning and Critique 4 (3)

Prerequisite: Radiologic Technology 270.

Introduction to advanced imaging principles and procedures to include diagnostic specials, interventional angiography, CT and MR. Sectional anatomy as related to these imaging procedures will be discussed. Principles of mammographic imaging per California State (RHB) regulations. Introduction to quality assurance principles and techniques. Elements of professional development. Two hours lecture, two hours laboratory. Offered: S.

Radiologic Technology 276—Clinical Lab 5 (6)

Prerequisite: Radiologic Technology 271.

Clinical experience in an affiliated radiology department under the supervision of certified radiology and health care personnel. Radiographic skills emphasized are advanced contrast media procedures, trauma, portable radiography, pediatric and surgical exams. Twenty-four hours clinical. Offered: S.

Radiologic Technology 277—Clinical Lab 6 (2) (6 week course)

Prerequisite: Radiologic Technology 276.

Clinical experience in an affiliated radiology department under the supervision of certified radiology and health care personnel. Emphasis on independent radiography and decision making. Professional growth and program exit skills are expected. Thirty-two hours clinical. Offered: Sum.

Radiologic Technology 285—CRT/ARRT Board Preparation (1) (9 week course)

Prerequisite: Radiologic Technology 110.

Comprehensive categorical review of diagnostic radiologic technology in preparation for state and national certification boards. Two hours. Offered: S.

Radiologic Technology 290—Applied Physics & Fluoroscopy (4)

Prerequisite: Radiologic Technology 110.

Applied principles of physics to current radiographic equipment including fluoroscopy, image viewing, and recording systems, and tomography. Study of knowledge and skills required to qualify student for fluoroscopy component of state licensure exam. Review of imaging concepts, x-ray beam quantity and quality, and radiation protection. Four hours. Offered: S.

REAL ESTATE

Real Estate 110—Real Estate Principles (3)

Designed for those preparing for the state real estate license examination for those with investments in real estate. Includes real property laws on such subjects as estates, title transfer, encumbrances, contracts, landlord/tenant, escrow, title insurance, real estate finance, financial institutions, appraisal, subdivision laws, taxation, licensing, education, and real estate management. May be taken for grades or on a credit-no credit basis. Three hours. Offered: F;S;Sum.

Real Estate 120—Legal Aspects of Real Estate (3)

Prerequisite: Real Estate 110, or real estate license.

Escrows, sales contracts, trust deeds, landlord-tenant, liens, probate sales, joint tenancy, etc. Emphasizes the more complex aspects of real estate law as encountered by brokers and others who deal with real property. Three hours. Offered: S.

Real Estate 130—Real Estate Practice (3)

Prerequisite: Real Estate 110, or real estate license.

Listing procedures, advertising, closing of sales, financing, appraising, property management, leasing, etc. Three hours. Offered: as needed.

Courses

Real Estate 140—Real Estate Appraisal (3)

Prerequisite: Real Estate 110, or real estate license.

This is an introductory course designed for brokers or those seeking entry level appraisal positions. The basic principles, theories and methods of appraising are discussed. Analysis of data and factors influencing value conclusions are emphasized. Three hours. Offered: F;S.

Real Estate 150—Real Estate Finance (3)

Prerequisite: Real Estate 110, or real estate license.

Economics and legal aspects, sources of mortgage, money terms, math of real estate finance, appraisal for financing purposes. Three hours. Offered: F;S.

RELIGIOUS STUDIES

Religious Studies 100—Introduction to Religious Studies (3)

An introduction to the study of religion as an academic discipline with particular emphasis on the nature of religion, the methods used to study religious life, ways of expressing religious experience, the practice of religion. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: odd yrs..

Religious Studies 110—World Religion (3)

An identification of the nature of religious thinking and belief. The variety of patterns developed in both the West and the East are explored with a special emphasis on the relevance to the contemporary intellectual world. May be taken for grades or on a credit-no credit basis. Same as Philosophy 110. Students completing Religious Studies 110 may not receive credit for Philosophy 110. Three hours. **(UC)** Offered: F;S;Sum.

Religious Studies 115—Philosophy of Religion (3)

An examination of the role of philosophy in shaping theological doctrine, in proving or disproving the existence of God, in evaluating religious experience, and in considering the implication of atheism and the existence of evil, etc. May be taken for grades or on a credit-no credit basis. Same as Philosophy 115. Students completing Religious Studies 115 may not receive credit for Philosophy 115. Three hours. **(UC)** Offered: F;S.

Religious Studies 120—Ethics (3)

An introduction to ethical theories and problems. An analysis of the theories and principles on which moral judgments are based and the way these judgments are used in moral problems such as abortion, euthanasia, capital punishment, sexual equality, discrimination, censorship and economic justice. Special attention will be given to the kinds of arguments used in ethical discussion. May be taken for grades or on a credit-no credit basis. Same as Philosophy 120. Students completing Religious Studies 120 may not receive credit for Philosophy 120. Three hours. **(UC)** Offered: F;S.

Religious Studies 125—Introduction to the Bible (3)

This course covers the field of general Biblical introduction, including higher criticism, canonicity, methods of textual transmission, and history of the Bible in English. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: F;S.

Religious Studies 128—History of Christianity (3)

A history of Christianity focusing on its central periods, personalities and ideas from its origins to the present. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: as needed.

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Religious Studies 130—Life and Times of Jesus (3)

A study of the historical situation of the world of Jesus' day and an investigation of the main outlines of His life and teaching. The contribution of Judaism and the Greek and Roman world to the shaping of the Christian religion. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: F;S.

Religious Studies 140—History of Judaism (3)

The history of Judaism from Abraham to Martin Buber. Consideration of major developments, literature, ceremonies and religious impact on modern thought. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: as needed.

Religious Studies 145—Mysticism and Meditation (3)

An identification of the nature of mysticism. An examination of the varieties of mysticism in the world with special emphasis on their development and practices. Meditation techniques related to mysticism will be examined and explained. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: as needed.

Religious Studies 150—Eastern Thought (3)

An introduction to the religions of Asia including Hinduism, Buddhism, Taoism and Confucianism. In addition to historical background and the current status of the religion, the course will focus on the scripture of each religion. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: F;S.

Religious Studies 155—Contemporary Religious Topics: Religion Behind the Iron Curtain (3)

History of the life and activities of both legal and underground religion in Eastern Europe and the Soviet Union since the Bolshevik Revolution. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: as needed.

Religious Studies 160—Contemporary Religious Topics: Islam (3)

Islam, the youngest of the world's major religions, has evolved to play a significant role in world politics. The course will introduce students to the beliefs and practices of Islam, its history and development, its contribution to the arts and sciences, and its dominant role in the twentieth century. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: as needed.

Religious Studies 180—The Bible as Literature (3)

Recommended preparation: English 100.

Read, analyze, and write about important texts of the Old and New Testaments. Examine the philosophical, cultural, mythic, religious, and/or historical elements related to Bible literature. Appreciate the literary devices and styles evident in the books of the Bible and the commentary made by individual works in the Bible on moral, social, and aesthetic issues. Examine the influence of the Bible on the student's own cultural background. Same as English 141. Students completing Religious Studies 180 may not receive credit for English 141. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: F;S.

Religious Studies 185—Contemporary Religious Movements (3)

The nature of current sects and group cults in America, similarities and differences among them, the relation of current movements to the American culture and to the individual. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: as needed.

RESPIRATORY CARE

Respiratory Care 185—Respiratory Anatomy and Physiology (3)

Prerequisite: Biology 221.

Anatomy and physiology of the cardiopulmonary system with emphasis on abnormalities of function and clinical assessment by respiratory therapists. Includes anatomy of the pulmonary and cardiac systems, pulmonary ventilatory mechanics, pulmonary blood flow, diffusion, oxygen transport, hypoxemia and hypoxia, carbon dioxide transport, acid-base balance and regulation of respiration. Three hours. Offered: F.

Respiratory Care 190—Basic Respiratory Care Equipment (3)

Prerequisite: Respiratory Care 185

Corequisite: Respiratory Care 191 and 195.

The theories of equipment operation, procedures and rationale for treatment of cardiorespiratory illness including use of compressed gases, humidity, and aerosol equipment used in oxygen therapy, oxygen analysis, infection control, hyperinflation techniques, basic ventilation measurement, and intermittent positive pressure breathing (IPPB) and chest physiotherapy. Emphasizes clinical application of equipment and techniques. Two hours lecture, three hours laboratory. Offered: S.

Respiratory Care 191—Clinical Lab 1 (1.5)

Prerequisite: Concurrent enrollment in Respiratory Care 190 and 195.

Beginning clinical practice of procedures presented in Respiratory Care 190. Includes hospital and respiratory therapy department orientation, recordkeeping, patient chart evaluation, use of compressed gases, medical gas therapy, humidity and aerosol therapy, drug administration, sterilization and culturing of equipment, incentive spirometry, IPPB and chest physiotherapy, and patient assessment. Offered on a credit-no credit basis only. Eight hours laboratory/clinical. Offered: S.

Respiratory Care 192—Clinical Lab 2 (1) (4 week course)

Prerequisite: Respiratory Care 190, 191 and 195.

Continued applications of procedures and concepts of basic clinical therapy presented in the first year of the respiratory care program. Application and skills evaluations in advanced administration of aerosol therapy, IPPB, pharmacological agents, chest physiotherapy, medical gases, and patient assessment. Offered on a credit-no credit basis only. Twenty-four hours clinical. Offered: Sum.

Courses

Respiratory Care 195—Respiratory Pharmacology (1) (9 week course)

Prerequisite: Respiratory Care 185.

Corequisite: Respiratory Care 190 and 191.

A study of drugs and their administration in treating respiratory pathologies. Includes bronchodilators, steroids, mucokinetics, antibiotics and respiratory stimulants and depressants. Two hours. Offered: S.

Respiratory Care 255—Home Care and Rehabilitation (2)

Prerequisite: Respiratory Care 190

Corequisite: Respiratory Care 276.

Techniques and operation of respiratory home care and pulmonary rehabilitation. Includes special equipment set-up, patient and family education, patient evaluation, and care of the ventilator-dependent patient at home. Also includes regulations of home care and third-party reimbursement. Two hours. Offered: F.

Respiratory Care 260—Arterial Blood Gases, Theory and Practice (2.5)

Prerequisite: Respiratory Care 185.

Interpretation of arterial blood gases, arterial puncture technique, blood gas analysis. Interpretation of fluid and electrolyte imbalances, renal physiology and acid base control, phlebotomy theory. Two hours lecture, one hour non-lecture. Offered: F.

Respiratory Care 265—Pulmonary Pathology (3)

Prerequisite: Respiratory Care 185.

The study of cardiopulmonary disease processes with an emphasis on pathophysiology, manifestations and treatment. Relates each disease state to pulmonary evaluation, testing and treatment. Three hours. Offered: F.

Respiratory Care 270—Ventilators and Respiratory Management (2)

Prerequisite: Respiratory Care 260.

Corequisite: Respiratory Care 276.

Principles and techniques of management of patients requiring ventilatory support. Includes mechanical descriptions of ventilators in common use (including laboratory demonstrations and hands-on practice), as well as patient assessment of need for ventilatory support along with assessment for changes in ventilatory support techniques. One hour lecture, three hours laboratory. Offered: F.

Respiratory Care 275—Respiratory Care Procedures (3)

Prerequisite: Respiratory Care 185.

Corequisite: Respiratory Care 276.

Respiratory Care procedures including physical assessment of the chest, chest x-ray assessment, airway management, bronchoscopy, chest tube drainage, electrocardiogram performance and interpretation and ALS procedures. Two hours lecture, three hours laboratory. Offered: F.

Respiratory Care 276—Clinical Lab 3 (3)

Prerequisite: Respiratory Care 192.

Corequisite: Respiratory Care 270 and 275.

Clinical application of procedures and concepts presented in Respiratory Care 260, 270 and 275, as well as continuing experience in the skills utilized in Respiratory Care 191 and 192. Includes arterial puncture and analysis, airway management, artificial airways, mechanical aspiration of secretions, bronchoscopy, ventilatory management, patient assessment and monitoring, and other therapeutic measures as related to pathological processes. Offered on a credit-no credit basis only. Sixteen hours clinical. Offered: F.

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Course numbers followed by an AB, AC, or AD may be repeated once, twice or three times respectively.

Courses that are non-credit or not AA applicable are designated with the letter "N" preceding the course number.

Respiratory Care 278—Pulmonary Case Assessment (1) (4 week course)

Prerequisite: Respiratory Care 276.

Assessment of critical pulmonary patients with emphasis on assessment techniques, critical care procedures, and management techniques as applied to case studies. Includes use of both actual and simulated patient scenarios using information gathering and decision making by the respiratory care practitioner. Four hours seminar, eight hours clinical. Offered: Inter.

Respiratory Care 279—Physician Series 1 (1)

Corequisite: Respiratory Care 276.

Physician presentations on current topics in pulmonary medicine emphasizing patient assessment and treatment. Discussion with physicians about individual clinical problems. One hour. Offered: F.

Respiratory Care 280—Critical Care Monitoring (1) (14 week course)

Prerequisite: Respiratory Care 260 and 270.

Corequisite: Respiratory Care 286.

Discussion of theory, use, and application of medical techniques used to monitor cardiopulmonary status, and advanced techniques of diagnosis and treatment. Includes hemodynamic monitoring and in vivo blood gas monitoring. Two hours. Offered: S.

Respiratory Care 285—Pulmonary Function Testing (2) (14 week course)

Prerequisite: Respiratory Care 260 and 265.

Theory and application of function testing by mechanical and electronic devices. Two hours lecture, two hours non-lecture. Offered: S.

Respiratory Care 286—Clinical Lab 4 (2.5) (14 week course)

Prerequisite: Respiratory Care 276.

Corequisite: Respiratory Care 280 and 290.

Clinical application of respiratory therapy primarily in critical care areas. Includes airway management, patient assessment, ventilator mechanics and management, and monitoring of the critically ill patient. Offered on a credit-no credit basis only. Sixteen hours clinical. Offered: S.

Respiratory Care 287—Clinical Internship (2) (4 week course)

Prerequisite: Respiratory Care 286.

Advanced clinical utilization of knowledge and skills in critical care or specialty areas. Cumulative application of assessment, diagnostic, therapeutic, and judgmental skills acquired within the respiratory care program. Offered on a credit-no credit basis only. Forty hours laboratory/clinical. Offered: S.

Respiratory Care 289—Physician Series 2 (1) (14 week course)

Corequisite: Respiratory Care 286.

Advanced level physician presentations on current topics in pulmonary medicine emphasizing patient assessment and treatment. Discussion with physicians about individual clinical problems. 1.3 hours lecture per week. Offered: S.

Respiratory Care 290—Neonatal Intensive Care (2) (14 week course)

Prerequisite: Respiratory Care 260, 270 and 275.

Corequisite: Respiratory Care 286.

Theory and practice of neonatal intensive respiratory care with an emphasis on the role of the respiratory care practitioner. Includes fetal anatomy and physiology, delivery and assessment, resuscitation techniques, neonatal pathologies, respiratory care diagnostic techniques and therapeutic procedures, and techniques for mechanical ventilation. Two hours lecture, two hours non-lecture. Offered: S.

SOCIAL SCIENCE

Social Science 011—Career Opportunities in the Social Sciences (3)

Survey of the diverse career opportunities for the social science major including methods of securing positions. May be taken for grades or on a credit-no credit basis. Three hours. Offered: as needed.

Social Science 100—Cultural Dimensions of International Trade (3)

The understanding and study of the global corporation in its political, cultural, geographic, historical and ethical settings. Three hours. Offered: as needed.

Social Science 101—Great Treks: Expeditions in Time (3)

This course is designed to provide in-depth background information for those who plan to travel in Europe. Material covered will include the history, geo-politics, economics, art and architecture and migrations of people beginning with Ancient Egyptian traders, the Jewish Exodus, the Crusades, pilgrimages, the impact of religious exiles on Reformation governments, the expansion of the European commercial empires and the Grand Tour. May be taken for grades or on a credit-no credit basis. Three hours. Offered: as needed.

Social Science 153—International Trade with China (3)

Concerns the practical ways multi-national corporations can be successful in penetrating the China market. Such topics as contracts, marketing strategy, salesmanship techniques, legal requirements are included. May be taken for grades or on a credit-no credit basis. Three hours. Offered: as needed.

SOCIOLOGY

Sociology 105—Sociology of Nonverbal Behavior (3)

An analysis and individual awareness of nonverbal behavior in human interaction with emphasis on western cultural patterns. Attention is given to the various levels or segments of nonverbal human interaction including gesture, spatiality, body positioning and expression laughter. Foundations and developmental patterns of nonverbal dimensions are explored. May be taken for grades or on a credit-no credit basis. Same as Anthropology 105. Students completing Sociology 105 may not receive credit for Anthropology 105. Three hours. Offered: F;S.

Courses

Sociology 110—Introduction to Marriage and the Family (3)

The family, its structures and functions. Emphasis on the sociological theory and research on marriage, kinship systems, components of mate selection, intimate relationships, and child-rearing practices. The family is examined in historical perspective and in relation to social change. Three hours. **(UC)** Offered: F;S;Sum.

Sociology 112—Sociology of Divorce (3)

The sociological, psychological, economical, and legal aspects of divorce with emphasis on changes in self-concept, as well as parental and child adjustments. May be taken for grades or on a credit-no credit basis. Three hours. Offered: as needed.

Sociology 115—Contemporary Chicano (3)

An investigation and study of the concerns, issues, and problems facing the Chicano in American life, particularly in California, since the 1930s. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: as needed.

Sociology 120—Population: Issues and Trends (3)

Survey of trends, characteristics, and distributions of populations in various societies. Analyses of patterns of fertility, mortality, and migrations as affected by social, cultural, economic, and political factors. Attention to causes and consequences of different rates of growth. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: as needed.

Sociology 125—Introduction to Environment, Energy, and Society (3)

An introduction to the social and institutional factors contributing to environmental problems. The origins of environmental problems in social organization, the history of the environmental movement, and the sociology of energy and food production will be covered. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: F;S.

Sociology 150—Multicultural Behavior (3)

Multicultural approaches to cultural diversity including immigration policy, affirmative action, and bilingual debates. Intercultural comparisons including Native American, African American, Hispanic American, Asian American, and European American cultural traditions. Social science theories and methodologies for development of positive intercultural relationships. Same as Anthropology 150. Students completing Sociology 150 may not receive credit for Anthropology 150. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: F;S.

Sociology 165—Introduction to Human Sexuality (3)

Scientific analysis of human sexual behavior from the psychological, sociological and physiological points of view. Designed to provide the academic and theoretical basis for the entire field of human sexuality. May be taken for grades or on a credit-no credit basis. Same as Psychology 165. Students completing Sociology 165 may not receive credit for Psychology 165. Three hours. **(UC credit limitation)** Offered: F;S;Sum.

Sociology 175—Advanced Human Sexuality (3)

Prerequisite: Sociology 165 or Psychology 165.

Personality and socialization as related to sexual behavior, problems, and sexual dysfunction. How knowledge, preferences, lifestyle, awareness, and education influence sexuality. Same as Psychology 175. Students completing Sociology 175 may not receive credit for Psychology 175. May be taken for grades or on a credit-no credit basis. Three hours. **(UC credit limitation)** Offered: F;S.

Information in italics designates the semester(s) in which the course is offered. The Division Office reserves the right to make changes as budget or other constraints warrant. F=Fall, S=Spring, Sum=Summer, Inter=Intercession

Sociology 180—Introductory Sociology (3) (CAN SOC 2)

The study of social interrelationships and human group organization. Attention is given to the foundations of society, culture, group organization, social differentiation and the methods of sociological study. Emphasis is on American social institutions. Three hours. **(UC credit limitation)** Offered: F;S;Sum.

Sociology 180H—Honors Introductory Sociology (3)

The study of social interrelationships and human group organization. Attention is given to the foundations of society, culture, group organization, social differentiation, and the methods of sociological study. Emphasis is on American social institutions. Three hours. **(UC credit limitation)** Offered: as needed.

Sociology 185—Analysis of Social Problems (3) (CAN SOC 4)

An analysis of contemporary social problems. Topics include global ecology, political economy, sexual behavior, drug use, racism, sexism, ageism, education, environment, health issues, crime, and violence. Three hours. **(UC credit limitation)** Offered: F;S;Sum.

Sociology 185H—Honors Analysis of Social Problems (3)

An analysis of contemporary social problems. Topics include global ecology, political economy, sexual behavior, drug use, racism, sexism, ageism, education, environment, health issues, crime, and violence. Three hours. **(UC credit limitation)** Offered: as needed.

Sociology 190—The Ethnic Family (3)

Ethnic and minority families in the United States today. Emphasis on family interaction, child training patterns, the family's relationship to society and community-helping agencies. Same as Ethnic Studies 190. Students completing Sociology 190 may not receive credit for Ethnic Studies 190. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: odd yrs..

Sociology 280—Society and the Individual (3)

The development of the individual as group participant, the functions of norms, sanctions and social controls. Special attention to theories of socialization, conformity and deviance. Three hours. **(UC)** Offered: F.

Sociology 296—Sociology of Death and Dying (3)

An analysis of information and attitudes concerning death and bereavement in our society. Within this framework the following will be examined: dying as a social process, functions of bereavement behavior, fear of death and dying, death related rituals, demographic aspects of mortality, developmental responses to death, and ethical issues. May be taken for grades or on a credit-no credit basis. Three hours. Offered: as needed.

SPANISH

Spanish 180 and 185 are not recommended for native speakers of that language. Spanish 160 is more appropriate.

Spanish 110—Spanish Conversation 1 (3)

Fundamental principles of grammar, pronunciation, vocabulary and usage in conversational situations. Emphasis on speaking and comprehension of the spoken language. Designed for students whose primary goal is to speak Spanish. May be taken concurrently with Spanish 180 for additional practice in speaking Spanish. May be taken for grades or on a credit-no credit basis. Three hours. Offered: as needed.

Spanish 160—Spanish for Spanish Speakers (5)

Recommended preparation: Bilingual ability in Spanish and English.

Designed for bilingual students of English and Spanish who desire an introduction to Spanish spelling, grammar, reading comprehension and composition. The course formalizes for the students the Spanish they bring to the class and extends vocabulary, grammatical structures and cultural significance to standard Spanish. The course is taught in Spanish. May be taken for grades or on a credit-no credit basis. Five hours. **(UC credit limitation)** Offered: as needed.

Spanish 180—Elementary Spanish (5) (CAN SPAN 2)

Fundamentals of Spanish emphasizing the acquisition of elementary proficiency in listening comprehension, speaking, reading and writing; introduction to Hispanic culture through selected readings. Designed for students seeking to fulfill foreign language requirements and for those who wish an introduction to Spanish language and culture. May be taken for grades or on a credit-no credit basis. Five hours. **(UC credit limitation)** Offered: F;S;Sum.

Spanish 180A—Beginning Elementary Spanish (2.5)

An extended course equivalent to the first half of Spanish 180 and intended for students seeking more time to acquire Spanish. Taken together, Spanish 180A and 180B equal Spanish 180. Fundamentals of the Spanish language emphasizing comprehension, speaking, reading, writing, and introduction to selected literary works by leading Hispanic authors depicting culture and philosophic points of view. Not intended for native speakers. May be taken for grades or on a credit-no credit basis. Three hours. **(UC credit limitation)** Offered: as needed.

Spanish 180B—Continuing Elementary Spanish (2.5)

Prerequisite: Spanish 180A.

An extended course continuing Spanish 180A and equivalent to the second half of Spanish 180 and intended for students seeking more time to acquire Spanish. Includes fundamentals of the Spanish language and culture with practice in reading, writing, speaking, and comprehension of Spanish at the beginning, first semester level. Introduction to selected literary works by leading Hispanic authors depicting culture and philosophic points of view. Not intended for native speakers. May be taken for grades or on a credit-no credit basis. Three hours. **(UC credit limitation)** Offered: as needed.

Spanish 180H—Honors Elementary Spanish (5)

Fundamentals of Spanish emphasizing the acquisition of elementary proficiency in listening comprehension, speaking, reading and writing; introduction to Hispanic culture through selected readings. Designed for students seeking to fulfill foreign language requirements and for those who wish an introduction to Spanish language and culture. May be taken for grades or on a credit-no credit basis. Five hours. **(UC credit limitation)** Offered: F;S.

Courses

Spanish 185—Elementary Spanish (5) (CAN SPAN 4)

Prerequisite: Spanish 180.

Continuation of Spanish 180. Emphasis on correct use of Spanish through basic conversations describing one's immediate environment. Comprehension is expanded through discussion of school activities, professions, health matters, travel, family life, social activities, and customs. Reading, writing, and grammar basics are expanded through selected literary works and cultural awareness. May be taken for grades or on a credit-no credit basis. Five hours. **(UC credit limitation)** Offered: F,S.

Spanish 185A—Continuing Elementary Spanish (2.5)

Prerequisite: Spanish 180 or Spanish 180A and 180B.

An extended course continuing Spanish 180A and 180B and intended for students seeking more time to acquire Spanish. Equivalent to the first half of Spanish 185. Emphasis on developing effective and correct skills in conversation, reading, writing in the Spanish language at a second semester level. Taken together, Spanish 185A and 185B equal Spanish 185. May be taken for grades or on a credit-on credit basis. Three hours. **(UC credit limitation)** Offered: as needed.

Spanish 185B—Continuing Elementary Spanish (2.5)

Prerequisite: Spanish 180A.

An extended course continuing Spanish 185A and intended for students seeking more time to acquire Spanish. Equivalent to the second half of Spanish 185. Emphasis on developing effective and correct skills in conversation, reading and writing in the Spanish language at a second semester level. A broader scope to selected literary works and cultural awareness. Taken together, Spanish 185A and 185B equal Spanish 185. Not intended for native speakers. May be taken for grades or on a credit-no credit basis. Three hours. **(UC credit limitation)** Offered: as needed.

Spanish 185H—Honors Elementary Spanish (5)

Prerequisite: Spanish 180H.

Continuation of Spanish 180H. Emphasis on correct use of Spanish through basic conversation describing one's immediate environment. Comprehension is expanded through discussion of school activities, professions, health matters, travel, family life, social activities, and customs. Reading, writing, and grammar basics are expanded through selected literary works and cultural awareness. May be taken for grades or on a credit-no credit basis. Five hours. **(UC credit limitation)** Offered: as needed.

Spanish 199AB—Current Topics in Spanish (2-5) (2-18 week course)

Group participation by level of proficiency to develop skills using Spanish in oral and written form. Study and discussion of topics and issues of current interest in the Hispanic culture—Spain, Latin America, U.S.A. Units may vary according to topics selected and number of meetings scheduled. May be taken for grades or on a credit-no credit basis. Two to five hours. **(UC credit limitation)** Offered: as needed.

Spanish 260—Spanish for Spanish Speakers (5)

Designed to improve the communications skills of Spanish speaking students who need formal training in the language, the course focuses on formal speaking, reading, grammar, spelling, vocabulary building, and composition. The diversity of the Hispanic culture through literature, music, and film will be explored. The course will be taught in Spanish. May be taken for grades or on a credit-no credit basis. Five hours. Offered: as needed.

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Spanish 270—Spanish for International Business (3)

A beginning course in Spanish specifically designed for international business. The basic structures of Spanish and international business vocabulary will be practiced in order to communicate and do business in a Spanish speaking country. Students will also develop a greater understanding of the culture, economy, and social structure of the Spanish speaking countries. May be taken for grades or on a credit-no credit basis. Three hours.

Spanish 280—Intermediate Spanish (4) (CAN SPAN 8)

Prerequisite: Spanish 185.

Continuation of Spanish 185 or Spanish 185A and 185B. Includes further study of Spanish culture and language with practice in reading, writing, speaking and comprehension of Spanish at the third semester level. Equal to Spanish 280A and 280B when taken together. May be taken for grades or on a credit-no credit basis. Four hours. **(UC credit limitation)** Offered: F,S.

Spanish 280A—Beginning Intermediate Spanish (2)

Prerequisite: Spanish 185 or Spanish 185A and 185B.

Continuation of Spanish 185, or Spanish 185A and 185B. An extended course equivalent to the first half of Spanish 280 and intended for students seeking more time to acquire Spanish. Taken together, Spanish 280A and 280B equal Spanish 280. Includes further study of Spanish culture and language with practice in reading, writing, speaking and comprehension for Spanish at the third semester level. May be taken for grades or on a credit-no credit basis. Two hours. **(UC credit limitation)** Offered: as needed.

Spanish 280B—Continuing Intermediate Spanish (2)

Prerequisite: Spanish 280A.

An extended course continuing Spanish 280A and equivalent to the second half of Spanish 280. Intended for students seeking more time to acquire Spanish. Taken together, Spanish 280A and 280B equal Spanish 280. Includes further study of Spanish culture and language with practice in reading, writing, speaking and comprehension of Spanish at the third semester level. May be taken for grades or on a credit-no credit basis. Two hours. **(UC credit limitation)** Offered: as needed.

Spanish 280H—Honors Intermediate Spanish (4)

Prerequisite: Spanish 185H.

Continuation of Spanish 185H. Includes further study of Spanish culture and language, with practice in reading, writing, speaking, comprehension of Spanish at the third level. May be taken for grades or on a credit-no credit basis. Four hours. **(UC credit limitation)** Offered: F,S.

Spanish 285—Intermediate Spanish (4) (CAN SPAN 10)

Prerequisite: Spanish 280.

Continuation of Spanish 280. Emphasis is on culturally authentic reading and writing, along with continued development of listening/speaking competencies. Course generally continues formal study of language structure and will introduce basic literary concepts. There is a focus on development of cohesive written narratives and expository prose as preparation for higher level specialized work. May be taken for grades or on a credit-no credit basis. Four hours. **(UC)** Offered: F,S.

Spanish 286AC—Spanish Reading in Elementary School (.5) (9 week course)

Prerequisite: Spanish 185.

An introductory course for Spanish foreign language students interested in working in a multicultural or bilingual elementary school setting with focus on reading in Spanish to Limited English Proficiency children (K-5). Students will read in the classrooms at the elementary school sites in the area. One hour.

Spanish 289—Advanced Spanish (3)

Prerequisite: Spanish 285.

A general consolidation of the four language skills: reading, comprehension, composition and conversation. Practical conversation, composition and reading on everyday topics, current events and cultural material. The course is taught in Spanish. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: as needed.

Spanish 290—Advanced Spanish (3)

Prerequisite: Spanish 285. May be taken before Spanish 289.

Continuation of Spanish 289. A general consolidation of the four language skills: reading, comprehension, composition and speaking. Reading of plays and stories in Spanish. Consideration of Latin America from mid-nineteenth century to the present. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: as needed.

SPEECH

Speech N099—Fundamentals of Speech Communication (3)

This course is designed to give students preparation and experience in the fundamentals of speech communication (interpersonal, intercultural and oral presentation skills) that will enable them to participate more successfully in further speech courses. May be taken for grades or on a credit-no credit basis. Three hours. Not applicable to AA degree. Offered: as needed.

Speech 100—Interpersonal Communication (3) (CAN SPCH 8)

This course is designed to teach students effective communication skills through the study of self-concept, listening, perception, language usage, persuasion, and nonverbal communication. An emphasis is placed on developing and applying good communication skills and overcoming the barriers to effective communication. Writing and speaking skills are emphasized and evaluated. Three hours. Offered: F,S,Sum.

Speech 105—Intrapersonal Communications (3)

This course is designed to teach students effective communication processes with and about oneself. An emphasis is placed on developing greater self-awareness and self-esteem by studying perceptual and nonverbal communication skills. May be taken for grades or on a credit-no credit basis. Three hours. Offered: S.

Courses

Speech 110—Public Speaking (3) (CAN SPCH 4)

Overcoming stage fright and developing organization, research, and delivery skills. Students will learn to outline, write, and deliver various types of speeches. An emphasis is placed on speaking, listening, and critical thinking skills. Three hours. **(UC)** Offered: F;S;Sum.

Speech 112—Small Group Dynamics (3) (CAN SPCH 10)

This course focuses on the development of skills in the dynamics of group discussion. It is helpful to those who may have classes or careers that require group projects. It includes practice and presentation in group problem solving, participation, leadership, decision making, working in study groups, role-playing, panel-forum, and symposium forum assignments. Three hours. **(UC)** Offered: as needed.

Speech 114—Developing Leadership Potential (2)

Group participation, group leading, speaking in public to use as tools to help individuals operate more effectively in organizations of all kinds (service, civic, school, church, political). Includes aids to decision making, group problem solving, and positive intragroup relations which benefit both the individual and the group. May be taken for grades or on a credit-no credit basis. Two hours lecture, one-half hour laboratory. Offered: as needed.

Speech 120—Oral Interpretation of Literature (3)

This course explores the oldest performance tradition, storytelling, and focuses on the principles and methods of effective oral interpretation. Through analysis of poetry, plays and stories, in both individual and group performance, the student will learn to edit and construct a script, and to perform successfully. Three hours. **(UC)** Offered: F;S.

Speech 130—Argumentation and Persuasion (3) (CAN SPCH 6)

Theory and practice of argumentation and persuasion with emphasis on critical thinking skills as they apply in listening, speaking, and writing. May be taken for grades or on a credit-no-credit basis. Three hours. **(UC credit limitation)** Offered: F;S.

Speech 140—Debate and Critical Analysis (3)

Students will create strong written and oral arguments on both sides of major national or international issues. Critical thinking, writing, speaking, and listening skills will be emphasized. Students will develop skills in research, reasoning, tests of evidence, refutation, and the ability to recognize fallacies. Three hours. **(UC credit limitation)** Offered: F;S.

Speech 150AD—Forensics Workshop (1-4)

Speech competition in debate, extemporaneous, impromptu, persuasive speaking, informative speaking, reader's theatre, and interpretation events. May be taken for 1, 2, 3 or 4 units depending on the number of hours and the number of events and tournaments in which the student participates. One hour lecture, zero to nine hours non-lecture. Offered: F;S.

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Speech 155—Intercultural Communications (3)

The study, practice and application of communication theories as they relate to different cultural, subcultural, ethnic and racial groups. Emphasis on interpersonal effectiveness, including skills in nonverbal processing, assessment of different cultural interactional patterns, and the reduction of racism and ethnocentrism. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: F;S.

Speech 160—Listening Skills (3)

Improving listening ability in all situations with an emphasis on lecture listening and social listening. Understanding communication theory, overcoming bad listening habits and developing active listening skills through everyday practice. May be taken for grades or on a credit-no credit basis. Three hours. Offered: as needed.

Speech 170—Nonverbal Communication (3)

The study of nonverbal cues and their effect on interpersonal communication. Develop a greater understanding of nonverbal messages and strengthen mind/body awareness. An emphasis will be placed on developing effective communication skills as they relate to physical appearance and dress, body movement, face and eye communication, vocal cues which accompany spoken words, and the use of environment and space. May be taken for grades or on a credit-no credit basis. Three hours. Offered: F;S.

Speech 180—Health Communication (3)

A course which focuses on communication in the health care setting. Includes the study of interpersonal communication skills and the principles of intrapersonal, small group, organizational and mass communication as relevant to health care issues. Skills to be developed include interviewing (as in the recording of medical information) and negotiation (as relevant to compliance-gaining strategies), as well as informative speaking fundamentals (preparing patients for health regimens). May be taken for grades or on a credit-no credit basis. Three hours. Offered: as needed.

Speech 220—Communication in Organizations (3)

A course designed to improve the communication skills of those who are working, or planning to work, in any type of organization. Emphasis will be given to making decisions, achieving goals, motivation, leadership, conflict, organizational structure and climate and their practical application in organizations. May be taken for grades or on a credit-no credit basis. Three hours. Offered: as needed.

Speech 235—Reader's Theatre (3)

An introduction to Reader's Theatre, its techniques, its relation to interpretation and theatre. Techniques of adapting literary material to a Reader's Theatre script, staging of productions, performance and directing. Three hours. **(UC)** Offered: as needed.

Speech 240—Business and Professional Speech Communications (3)

Practical application of contemporary communication theory relevant to the technical, business and professional person. Includes technique in negotiation, behavior tracking activities, profiling, interviewing and resume preparation. May be taken for grades or on a credit-no credit basis. Three hours. Offered: as needed.

Speech 260—Experimental Topics in Speech (1-3)

Provides students with the opportunity to participate in a wide variety of speech-related activities which are not otherwise available, such as directing events at speech tournaments, working with a student speakers bureau, judging at speech contests, etc. May be taken for grades or on a credit-no credit basis. One hour lecture, zero to six hours non-lecture. **(UC credit limitation)** Offered: as needed.

SPEECH-LANGUAGE PATHOLOGY ASSISTANT

Speech-Language Pathology Assistant 100—Introduction to Speech-Language Pathology Assistant (2) (16 week course)

An introduction to the Speech-Language Pathology Assistant career. Professional standards and responsibilities, legal and ethical issues, government regulations, and management of individuals with speech-language and hearing disorders are emphasized. Consideration is given to cultural, ethnic, and linguistic diversity. Two hours lecture plus a one time four hours arranged. Offered: F.

Speech-Language Pathology Assistant 115—Speech, Language, and Hearing Development (2.5) (16 week course)

Prerequisite: Biology 221.

Structural human anatomy and physiology with emphasis on the developmental function of speech, hearing, and swallowing mechanisms. Development of phonation into speech production and language development. Two and one-half hours lecture, one hour lab. Offered: F.

Speech-Language Pathology Assistant 120—Speech-Language Administrative Procedures (2) (16 week course)

Organizational and functional skills required in the speech pathology workplace. Emphasis on office management, client interaction, communication techniques, technical writing, educational techniques, and computer applications. Two hours lecture, one hour lab. Offered: F.

Speech-Language Pathology Assistant 140—Introduction to Communication Disorders (3) (16 week course)

Prerequisite: Speech-Language Pathology Assistant 115.

Study of communication disorders in both children and adults to include classification and prevalence, types of disorders, diagnostic techniques, remediation of speech, and treatment protocols. The role of the speech-language pathologist and audiologist is covered. Three hours lecture and a one time six hours arranged. Offered: S.

Courses

Speech-Language Pathology Assistant 150—Introduction to Phonetics (3) (16 week course)

Corequisite: Speech-Language Pathology Assistant 140.

Introduction to phonetics, including the analysis, description, and transcription of speech. The course encompasses speech production, acoustics, International Phonetic Alphabet, phonetic measurements, dialects, and the analysis of both normal and abnormal speech sounds. Protocol techniques for therapy are covered. Three hours lecture, two hours lab. Offered: S.

Speech-Language Pathology Assistant 160—SLPA Clinical Experience 1 (.5) (4 week course)

Corequisite: Early Childhood 165.

Beginning clinical observation of practices and procedures required in the workplace. Patient interaction, observation skills, record keeping, and beginning practice of therapeutic protocols will be covered. Offered on a credit-no credit basis only. Four hours clinical observation, one hour arranged. Offered: S.

Speech-Language Pathology Assistant 180—Screening and Therapeutic Processes (3) (16 week course)

Prerequisite: Speech-Language Pathology Assistant 140.

Screening procedures and equipment used in evaluation of client status and development of treatment protocols. Administration of screening assessment tests, protocol forms, use of checklists and anecdotal records. The course includes therapeutic equipment and procedures used in client protocol applications and patient safety issues. Two hours lecture, three hours lab. Offered: F.

Speech-Language Pathology Assistant 190—SLPA Clinical Experience 2 (2) (16 week course)

Prerequisite: Speech-Language Pathology Assistant 160

Corequisite: Speech-Language Pathology Assistant 180.

Application of clinical practice procedures and therapeutic techniques under the guidance of a speech pathologist. Patient observation, assessment, treatment protocols and record keeping procedures. Offered on a credit-no credit basis only. Twelve hours clinical, one hour discussion. Offered: F.

Speech-Language Pathology Assistant 200—Adult and Geriatric Disorders (2) (16 week course)

Prerequisite: Speech-Language Pathology Assistant 180.

Therapeutic techniques and assessment directed at adult and geriatric conditions. Special emphasis on acquired conditions and specialized application/adaptation of screening, protocols, and therapy. Two hours lecture and a one time four hours arranged. Offered: S.

Speech-Language Pathology Assistant 250—SLPA Clinical Experience 3 (4) (16 week course)

Prerequisite: Speech-Language Pathology Assistant 180 and 190.

Advanced application of clinical practice procedures and techniques performed by a speech-language pathology assistant. Includes direct patient interaction and therapeutic techniques under the guidance of a speech pathologist. Patient observation, assessment, treatment protocols, record keeping procedures, and discussion of case study management issues are also covered. Offered on a credit-no credit basis only. Sixteen hours clinical, two hours discussion. Offered: S.

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Course numbers followed by an AB, AC, or AD may be repeated once, twice or three times respectively.

Courses that are non-credit or not AA applicable are designated with the letter "N" preceding the course number.

TECHNOLOGY

Technology 040—Technical Math (3)

An applied math course designed for the student with minimal background in mathematics to develop "need to know" skills necessary to be successful in technical, science, and vocational courses which require specific mathematical skills. Considerable review of essential math is emphasized. May be taken for grades or on a credit-no credit basis. Four hours. Offered: F,S,Sum.

Technology 100—A Taste of Tomorrow's Technology (3) (16 week course)

Examine and discuss technology as it relates to various occupational fields and its future impact on our society. Areas under discussion include architecture, building and construction, woodworking and furniture design, heating, ventilation and air conditioning, electronics, drafting, computer automated drafting, manual machining, computer numbered control machining, welding, high technology, aviation technology, and airline travel careers. Three hours. Offered: F.

THEATRE ARTS

Theatre Arts 100—Introduction to Theatre (3) (CAN DRAM 18)

A course designed for those who wish to explore more thoroughly the performing arts with special attention given to a survey of all the contributing elements. An examination through lecture, demonstration, laboratory participation, small group discussion, guest performers and speakers of all areas of theater production. A course designed to prepare the student for other course offerings in the theatre curriculum. Students are required to see two college-produced plays. Three hours. **(UC credit limitation)** Offered: F,S,Sum.

Theatre Arts 101—Introduction to History and Literature of the Theatre (3)

This course involves the general nature of dramatic presentation including elements of dramatic structure, types of drama, and the contributions of the playwright, actor, director, designer, technician and audience. This course includes an introduction to the important eras in theatre history and a study of several well-known plays. The student is required also to view at least two college productions and two films for credit. May be taken for grades or on a credit-no credit basis. Three hours. **(UC credit limitation)** Offered: as needed.

Theatre Arts 104—Improvisation (3)

The rehearsal and performance of individual and group scenes of improvisation. The goal of the course is to help students work with ease on the stage. Two hours lecture, two hours studio. **(UC)** Offered: as needed.

Theatre Arts 105—Drama and Acting (3)

Designed for the general education student, this course is an introduction in literature of theatre and an examination of the ways an actor interprets his role in a play. Included is a study of dramatic literature, the history of acting, acting fundamentals and a critical analysis of college-produced plays. Three hours. **(UC)** Offered: F,S,Sum.

Theatre Arts 106—Acting Fundamentals (3) (CAN DRAM 8)

An introduction to acting. Units of study will include interaction, characterization and emotion. Students are expected to participate in class exercises, prepare memorized scenes and criticize the acting techniques employed in two dramatic productions outside of class. Required for theatre arts majors. May be taken for grades or on a credit-no credit basis. Three hours lecture, one hour studio. **(UC)** Offered: F,S,Sum.

Theatre Arts 107—Acting 2 Fundamentals (3) (CAN DRAM 22)

A continuing study of the acting craft as begun in Theatre Arts 106. The students will focus with greater intensity on their relationships to characterization, movement, vocal technique and literature studies. The basis of study will be both improvisation and selected dramatic scenes. Three hours lecture, one hour studio. **(UC)** Offered: F,S.

Theatre Arts 110AD—Theatre Laboratory (2)

Technical theatre and general theatre process under faculty instruction. One hour lecture, five hours laboratory. **(UC)** Offered: F,S.

Theatre Arts 115—Acting for Camera and Stage (3)

Prerequisite: Theatre Arts 106.

This course will explore the comparative processes of stage, television and cinema acting. The focus of the exploration will be the similarities found in the creative acting process contrasted with the differences in the techniques applied in the three performance arenas of film, stage and television. The student will be introduced to both the artistic mode and practice all aspects of acting including agents, guilds, unions, commercials, feature films, industrial video, live theatre, equity waiver, soap operas, regional repertory and location work. The class will include scene work, exercises, on-camera experience, field trips to assorted professional acting environments, guest speakers, video comparison studies of prominent actors in the field and translation of acting exercises, scenes, etc., from one medium into the other two. May be taken for grades or on a credit-no credit basis. Two hours lecture, four hours non-lecture. **(UC)** Offered: as needed.

Theatre Arts 141AD—OCC Theatre Repertory (1-3)

Participation in workshop or experimental productions. Designed to extend and enrich basic theatre background established in beginning acting and technical courses. Students direct, act and mount one-act and experimental plays. During their study, students will also be involved in scenery, costuming, lighting, make-up and publicity. May be taken for grades or on a credit-no credit basis. One hour lecture, two to eight hours non-lecture. **(UC)** Offered: F,S,Sum.

Courses

Theatre Arts 144AD—Summer Theatre Festival (4) (8 week course)

The production of major plays, one acts, and scenes in repertory. Students will be assigned to work in at least two of several different areas of theatre; acting, scenery, construction and painting, lighting, costuming, make-up and theatre management. May be taken for grades or on a credit-no credit basis. Four hours lecture, sixteen hours laboratory. **(UC)** Offered: Sum.

Theatre Arts 145AB—Touring Production (3)

Students will participate in elements of presenting a show at various locations. These elements will include: acting, set design, set construction, lighting, sound design, costuming, make up, and interaction with audiences through question and answer sessions. This course may require occasional overnight stays. Roles are assigned through audition. One hour lecture, seven hours studio. Offered: as needed.

Theatre Arts 165AD—Stagecraft Lab (1) (9 week course)

Introduction to stage craft activities including scenery construction, set painting, light rigging, stage props and theatre operations. One hour lecture, two hours non-lecture. **(UC)** Offered: as needed.

Theatre Arts 170AD—Stage Crew Activity (1)

The student will participate in productions presented to the community in one or more of the following areas of concentration: scenery building and painting, stage lighting, and stage property design and construction. Strongly recommended for theatre majors. Three hours studio. **(UC)** Offered: F,S.

Theatre Arts 171AD—Play Production (2) (9 week course)

Participation in productions presented to the community. The student will be involved in one or more of the following areas of concentration: scenery building and painting, stage lighting, make-up, costumes, publicity, house management and acting. Assignments will be given to the student upon enrollment in the course. All actors will pass auditions. Strongly recommended for theatre majors. May be taken for grades or on a credit-no credit basis. Two hours lecture, ten hours studio. **(UC)** Offered: F,S.

Theatre Arts 175—Stage Scenery (3)

The course includes an in-depth study of all the diverse theatre crafts such as scenery, construction, scene painting and properties, and a survey study of scenery design. Also, the historical development and major trends of stagecraft will be studied. The student will prepare a practical project consisting of a scene design or scale model. Required for students planning to transfer to CSU Long Beach and Fullerton. May be taken for grades or on a credit-no credit basis. Three hours lecture, one hour studio. **(UC)** Offered: as needed.

Theatre Arts 176—Stage Lighting (3)

An introductory course in stage lighting that includes basic electronics, color, projection, types, uses, and maintenance of lighting equipment, and lighting design. Students will participate in the lighting of college productions. Recommended for students who are interested in television and film/video. Required for the student planning to transfer to CSU Long Beach and UCI. Three hours lecture, one hour studio. **(UC)** Offered: as needed.

Theatre Arts 177AD—Make-up (3)

A practical introduction to the techniques of applying theatrical and film make-up. Recommended for students of drama interested in gaining a better understanding of the proper uses of theatrical make-up. Three hours lecture, one hour studio. **(UC)** Offered: F,S.

Theatre Arts 178—Costume Crafts (3)

An introduction to costuming for the theatre and the entertainment industry. Topics include: fabrics, basic sewing techniques, costume history and design, costume accessories, script analysis, costume craft tools, materials, and techniques. Three hours lecture, one hour studio. **(UC)** Offered: as needed.

Theatre Arts 188—Body Movement for the Actor (3)

Instruction in the use of the body as an expressive instrument in performance, the use of strength, flexibility, relaxation, control and the relationship of the body to the creative project are concepts which are discussed. May be taken for grades or on a credit-no credit basis. Three hours lecture, one hour studio. **(UC)** Offered: as needed.

Theatre Arts 189—Stage Combat (2)

Fundamentals of staged combat emphasizing such weapons as quarterstaff, foil, epee, sabre, broadsword, rapier and dagger. Such stunt techniques as fist fighting and falls are included. Strongly recommended for acting majors and theatre arts teachers. May be taken for grades or on a credit-no credit basis. Two hours lecture, two hours studio. **(UC)** Offered: as needed.

Theatre Arts 200—Voice and Articulation (3) (CAN DRAM 6)

Recommended preparation: Sophomore standing.

Major physiological bases of speech. Problems of speaking correctly. May be taken for grades or on a credit-no credit basis. Three hours. **(UC)** Offered: as needed.

Theatre Arts 206—Acting 3—Scene Study (3)

Advanced stage techniques based on the study of selected dramatic scenes. Areas of concentration include projection, voice and diction, rhythm and styles of acting. Three hours lecture, one hour studio. **(UC)** Offered: F,S.

Theatre Arts 207—Acting 4—Classical Styles (3)

Advanced acting techniques with particular emphasis on stage diction. Units of study include phonetics, voice, projection, vocal quality, dialects and the application of vocal techniques to dramatic literature. Required of theatre arts majors. Three hours lecture, one hour studio. **(UC)** Offered: F,S.

Theatre Arts 210AB—Musical Theatre Workshop (1) (9 week course)

Prerequisite: Retention by audition.

For student dancers and choreographers to participate in musical theatre productions, such as musical comedy, musical drama, operetta and opera. Students will participate as members of the chorus or as lead dancers with some acting and singing possibilities when appropriate, also as assistant to the choreographer. May be taken for grades or on a credit-no credit basis. Six hours non-lecture. **(UC)** Offered: as needed.

Theatre Arts 215—Rehearsal and Performance (2)

A course designed to enrich and extend the basic technical theatre and acting background established in the beginning stagecraft and acting classes. Actual participation in college productions in all aspects. Area of participation is selected by the student to satisfy individual interests. One hour lecture, three hours studio. **(UC)** Offered: as needed.

Theatre Arts 271—Elements of Stage Design (3)

An intense study of stage design techniques going far beyond the introductory stage. The course is designed to provide both background and experience in set conceptualization, rendering, floor planning, model building, scenic art techniques, and materials selection. Two hours lecture, four hours studio. **(UC)** Offered: S.

Theatre Arts 275AD—Directing (3)

An examination of the bases, principles, procedures and problems in play direction. Each student will be required either to direct one of the productions in experimental theatre or to serve as an assistant for the main stage production. Three hours lecture, four hours studio. **(UC)** Offered: as needed.

Theatre Arts 276—Performing Arts Management (2) (8 week course)

Economic and administrative aspects of American theatre and performing arts applied to repertory, community, and educational organizations. Administrative assignments related to stage productions, as well as other performances. May be taken for grades or on a credit-no credit basis. Four hours. Offered: as needed.

TOOL DESIGN (See Machine Technology)

WELDING TECHNOLOGY

Welding Technology 100—Arc and Oxy-acetylene Welding (3)

Beginning course in arc and oxy-acetylene welding which covers safety practices, use of equipment, brazing and cutting operations and applications to various types of steels. Two hours lecture, four hours laboratory. Offered: F,S.

Welding Technology 101—Arc and Oxy-acetylene Welding (4)

Same as Welding Technology 100. Two hours lecture, six hours laboratory. Offered: F,S.

Welding Technology 102AD—Weld Testing GMAW (.5) (1-18 week course)

Weld testing for mastery of levels I, II, III, and/or IV in the Gas Metal Arch Welding process. May lead to a Certificate of Completion. A Certification Certificate will also be issued for the appropriate level. Offered on a credit-no credit basis only. One and one-half to twenty-seven hours laboratory. Offered: F,S.

Courses

Welding Technology 103—Weld Testing GMAW (.5) (1-18 week course)

Weld testing for mastery of level V in the Gas Metal Arc Welding process. When completed may lead to a Certificate of Completion. A Certification Certificate will also be issued for the appropriate level. Offered on a credit-no credit basis only. One and one-half hours to twenty-seven hours laboratory. Offered: F,S.

Welding Technology 104—Weld Testing GTAW (.5) (1-18 week course)

Weld testing for mastery of level I in the Gas Tungsten Arc Welding process. When completed may lead to a certificate of completion. Offered on a credit-no credit basis only. One and one-half to twenty-seven hours laboratory. Offered: F,S.

Welding Technology 105AD—Weld Testing

Basic (.5) (1-18 week course)

Weld testing for mastery of levels I, II, III, or IV in the Shielded Metal Arc Welding process. When completed may lead to a certificate of completion. A certification certificate will also be issued for the appropriate level. Offered on a credit-no credit basis only. One and one-half to twenty-seven hours laboratory. Offered: F,S.

Welding Technology 106AB—Weld Testing Intermediate (.5) (1-18 week course)

Weld testing for mastery of level V and/or VI in the Shielded Metal Arc Welding process. When completed may lead to a certificate of completion. A Certification Certificate will also be issued for the appropriate level upon successful completion. Offered on a credit-no credit basis only. One and one-half to twenty-seven hours laboratory. Offered: F,S.

Welding Technology 107AC—Weld Testing Advanced (.5) (1-18 week course)

Weld testing for mastery of levels VII, VIII and/or IX in Shielded Metal Arc Welding. Offered on a credit-no credit basis only. One and one-half to twenty-seven hours laboratory. Offered: F,S.

Welding Technology 108AD—Weld Testing Advanced (.5) (1-18 week course)

Weld testing for mastery of levels I, II, III, and/or IV in Flux Cored Arc Welding. Offered on a credit-no credit basis only. One and one-half hours to twenty-seven hours laboratory. Offered: F,S.

Welding Technology 109AD—Weld Testing FCAW (.5) (1-18 week course)

Weld testing for mastery of levels V, VI, VII, and/or VIII in Flux Cored Arc Welding. May lead to a Certificate of Completion. A Certification Certificate will also be issued for the appropriate level upon successful completion. Offered on a credit-no credit basis only. One and one-half to twenty-seven hours laboratory. Offered: F,S.

Welding Technology 110—Weld Testing FCAW (.5) (1-18 week course)

Weld testing for mastery of level IX in Flux Cored Arc Welding. When completed may lead to a Certificate of Completion. A Certification Certificate will also be issued for the appropriate level upon successful completion. One and one-half to twenty-seven hours laboratory. Offered: F,S.

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Welding Technology 111AB—Weld Testing Pipe (.5) (1-18 week course)

Weld testing for mastery of levels I and/or II in Shielded Metal Arc Welding process or Gas Tungsten Arc and Shielded Metal Arc Welding processes. Offered on a credit-no credit basis only. One and one-half to twenty-seven hours laboratory. Offered: F,S.

Welding Technology 115AD—Arc and Oxy-acetylene Welding Practice (1-2)

Prerequisite: Welding Technology 100, or concurrent enrollment.

A laboratory class to develop skills in arc and oxy-acetylene welding. Three to fifty-four hours non-lecture. Offered: F,S.

Welding Technology 120—Mathematics and Science for Welding Technology (3)

Survey course covering the principles of mathematics, elementary chemistry and physics required for study of welding metallurgy. Three hours. Offered: as needed.

Welding Technology 122AD—Beginning Welding (1.5)

Arc and oxy-acetylene welding and cutting theory and laboratory practice. Three hours lecture/laboratory. Offered: F,S;Sum.

Welding Technology 123AD—Advanced Welding (1.5)

Prerequisite: Welding Technology 122AD, or previous welding experience.

Advanced welding theory and practice of ferrous and non-ferrous metals. Three hours lecture/laboratory. Offered: F,S;Sum.

Welding Technology 130AD—Gas Tungsten Arc Welding (1.5) (9 week course)

Prerequisite: Welding Technology 100.

GTAW (Gas Tungsten Arc Welding) theory and practice, covering aluminum and stainless steels and qualification requirements. May be taken for grades or on a credit-no credit basis. Two hours lecture, four hours laboratory. Offered: S.

Welding Technology 180—Blue Print Reading (2) (9 week course)

A basic course in the reading of blueprints associated with the welding fabrication industry. Four hours lecture, two hours laboratory. Offered: Sum.

Welding Technology 200—Advanced Welding (3)

Prerequisite: Welding Technology 100 or 101.

Advanced welding theory and practice, covering gas shielded arc processes, welding of non-ferrous metals, certification requirements and use of welding symbols. Two hours lecture four hours laboratory. Offered: F,S.

Welding Technology 201—Advanced Welding (4)

Prerequisite: Welding Technology 100 or 101.

Advanced welding theory and practice covering gas shielded arc processes, welding of non-ferrous metals, certification requirements and use of welding symbols. Two hours lecture, six hours laboratory. Offered: F,S.

Welding Technology 210—Welding Inspection and Testing (4)

Physical tests, metallographic analysis, visual inspection, nondestructive testing of welds and chemical analysis of metals and alloys. Three hours lecture, three hours laboratory. Offered: as needed.

Welding Technology 215AD—Advanced Arc and Oxy-acetylene (1-2)

Prerequisite: Welding Technology 200, 201, or concurrent enrollment.

A laboratory class to develop skills in arc, oxy-acetylene, TIG and MIG welding. Three to fifty-four hours non-lecture. Offered: F,S.

Welding Technology 220—Welding Specifications and Codes (2)

Codes and specifications used by governmental agencies and industry in control of products and production. Two hours. Offered: S.

Welding Technology 230—Welding Metallurgy (3)

Basic metallurgy as applied to welding, metal structures, strength of material. Weldability of metals, heat treatment, welding procedures, welding stresses and control. Three hours lecture, one hour laboratory. Offered: S.

Welding Technology 250AD—Pipe Welding and Advanced GTAW (3)

Prerequisite: Welding Technology 200 or 201.

Shielded metal-arc, gas shielded arc, certification requirements, layout and assembly pipe to pipe and pipe to fittings. Two hours lecture, four hours laboratory. Offered: as needed.

Welding Technology 255AD—Orbital Welding (1.5) (9 week course)

Prerequisite: Welding Technology 100 or 101.

Advanced welding theory and practice covering the process of gas tungsten arc welding using an automatic orbital welding system. Instruction includes safety, equipment use, and certification requirements. Two hours lecture, four hours laboratory. Offered: F,S;Sum.

Notes

Faculty

Orange Coast College

- ACKLEY, DONALD A. (1971)**
Dean, Library and Media Services
Professor
B.A., California State University, Fullerton
M.S.L.S., University of Southern California
- ADAN, AMINA (1992)**
Assistant Professor of History
B.A., Arizona State University
M.A., University of California, Los Angeles
- ADELMANN, DANIEL (1980)**
Professor of Allied Health/Respiratory Care
A.A., Orange Coast College
B.S. California State University, San Diego
M.Ed., California State University, Long Beach
M.S., National University
- AKERS, THOMAS M. (1975)**
Professor of English
B.A., M.A., California State University, Fullerton
- ALTOBELLI, JOHN E. (1993)**
Assistant Professor Physical Education and Athletics
Head Baseball Coach
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M.A., Azusa Pacific
- AMARAL, CHRISTINA L. (1985)**
Associate Professor of Fashion
A.A., Orange Coast College
B.A., California Polytechnic State University, San Luis Obispo
M.A., California State University, Long Beach
- ANACKER, GAYNE J. (1986)**
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M.T.S., Gordon-Conwell Theological Seminary
M.A., Washington State University
Ph.D., University of California, Irvine
- ANTHONY, PATRICIA (1978)**
Professor of Airline Travel Careers
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- ARFSTEN, PATRICIA E. (1974)**
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- ARNOLD, HERRICK F. (1969)**
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- ATTORE, LOIS SHAFQAT (1979)**
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- BARVARZ, PARNIAN (1999)**
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- BENDER, EDWARD ERIK (1995)**
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- BENNETT, JANE (1974)**
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MORGAN, CARL (1991)

Librarian, Assistant Professor
B.A., California State University, Bernardino
M.L.S., San Jose State University

MORGAN, DENNIS L. (1999)

Instructor in Business Education
B.S., California State University, Dominguez Hills
M.B.A., California State University, Long Beach

MORIN, SYLVETTE (1989)

Professor of English as a Second Language
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B.A., University of California, Los Angeles
M.A., California State University, Long Beach

MORTILLARO, KAREN G. A. (1970)

Professor of Fine Arts
B.F.A., M.F.A., Otis Art Institute

MUCCIARO, THOMAS P. (1999)

Instructor in Chemistry
A.B., Occidental College
Ph.D., Stanford University

MUIR, ROBERT (1999)

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B.S., California State Polytechnic University, Pomona
M.S., University of California, Irvine

MYERS, KEVIN A. (1999)

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B.F.A., M.F.A., Otis College of Art and Design

NAUTA, DALE M. (1990)

Associate Professor of Mathematics
B.A., California State University, Long Beach
M.A., California State University, Fullerton

NETOLICZKA, ELISABETH (1991)

Assistant Professor of Spanish
A.A., Orange Coast College
B.A., M.A., University of California, Irvine

NGUYEN, SO VAN (1992)

Associate Professor of English as a Second
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B.A., Saigon University
M.A., University of California, Los Angeles

NORLING, MARCELLA L. (1982)

Associate Professor of Religious Studies
B.A., University of California, Santa Barbara
M.A., National University

NUDELMAN, JACK (1980)

Instructor in Electronics Technology / Avion-
ics
A.A., New York City Community College

O'KEEFFE, THOMAS (1979)

Instructor in English
B.A., Immaculate Heart College
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OBSTFELD, RAYMOND (1976)

Assistant Professor of English
B.A., Johnston College
M.A., University of California, Davis

OLDS, MICHAEL V. (1983)

Professor of Economics
B.A., Princeton University
M.A., M.A.L.D., Tufts University

OLSON, JUDITH O. (1974)

Professor of Airline Travel Careers
A.A., Coastline Community College
B.V.E., California State University, Long Beach
M.A., University of Redlands

ORTELL, MICHAEL N. (1970)

Professor of Mathematics
B.A., California State University, Los Angeles
M.A., University of New Mexico
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ORTIZ, KENNETH K. (1976)

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B.A., California State University, Northridge
M.A., California State University, Long Beach
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OWINGS, MARGARET INEZ (1986)

Professor of Art
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PADDEN, WILLIAM E. (1991)

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B.A., Principia College (Illinois)

PALADINO, ALAN M. (1976)

Professor of Electronics
B.S.E.E., University of Santa Clara

PARKER, JOHN R. (1974)

Professor of Ornamental Horticulture
B.S., California State Polytechnic University, Pomona

PARKER, P. KEVIN (1996)

Instructor in English
A.A., A.S., Saddleback Community College
B.A., University of California, Irvine
M.A., University of Missouri

PETERS, TIMOTHY (1999)

Instructor in Construction Technology
Vocational Equivalency

PHAM, HUE THI (1985)

Dean, Counseling and Matriculation, Profes-
sor, Counseling Services
B.S., Siena Heights College (Michigan)
M.S., Marywood College (Pennsylvania)
Ed.D., University of Houston

PHAN, DAT HUY (1985)

Professor, Counseling Services
B.A., B.Ed., University of Saigon
M.A., San Diego State University
J.D., Western State University

PHILLIPS, CLYDE H. (1993)

Instructor, Counseling Services
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PIERSTORFF, DON K. (1985)

Professor of English / Technical Writing
B.A., California State University, Long Beach
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Faculty

POSHEK, JOSEPH E. (1999)

Instructor in Music
B.A., Macalester College (Minnesota)
B.Mus., M.Mus., Manhattan School of Music

PROUT, CARL W. A. (1966)

Professor of History
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RAGENOVICH, CHRISTINE (1989)

Professor of Political Science
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RAYA, ROBERT A. (1976)

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REMINGTON, ALAN (1977)

Associate Professor of Music
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Doctorate, Florence University (Italy)

RIETSTRA, EDITH (1986)

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SALIBI, NUHA (1992)

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SAVAGE, SANDRA (1980)

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SCANLON, DANIEL E. (1973)

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SHAJIE, VIDA (1996)

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SIMON, RICHARD (1984)

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SJULE, GERALD D. (1962)

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VAIL, DOREEN W. (Ms.) (1965)

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VARGA, JOHN L. (1976)

Professor of Accounting
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VISCO, FRANK J. (1968)

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WICHERT, JACK (1975)

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WYNNE, ANN M. (1985)

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YATES, RONALD L. (1985)

Instructor in Computer Information Systems

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ZOOK, ROCHELLE (1991)

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Medical Advisors for the School of Allied Health Professions

BARKE, JEFFREY, M.D.
Medical Assisting

CONTINO, MICHAEL, M.D.
Emergency Medical Technology

ROBIN SHAUGHNESSY, M.D.
Cardiovascular Technology

MCINTYRE, HUGH, M.D.
Neurodiagnostic Technology

REINKE, ROBERT, M.D.
Diagnostic Medical Sonography

SELECKY, PAUL, M.D.
Polysomnography
Respiratory Care

TURNER, ROBERT, M.D.
Radiologic Technology

Major Clinical Affiliates for the School of Allied Health Professions

American Medical Response, Torrance
 Anaheim Memorial Medical Center, Anaheim
 Cedars-Sinai Medical Center, Los Angeles
 Chapman Medical Center, Orange
 Children's Hospital of Orange County (CHOC), Orange
 Children's Hospital and Health Center-San Diego, San Diego
 Coastal Aire Care, Brea
 Coastal Communities Hospital, Santa Ana
 County of Riverside Health Services Agency, Riverside
 Daniel Freeman Memorial Hospital, Inglewood
 UC EFNEP, Orange County Office, Costa Mesa
 Foothill Presbyterian Hospital, Glendora
 Fountain Valley Regional Hospital and Medical Center,
 Fountain Valley
 Garden Grove Medical Center, Garden Grove
 Good Samaritan Hospital, Los Angeles
 Hoag Memorial Hospital Presbyterian, Newport Beach
 Huntington Beach Hospital, Huntington Beach
 Huntington Memorial Sleep Disorder Center, Pasadena
 Jordan Neuroscience- a Medical Corporation, San Bernadino
 Kaiser Foundation Hospitals, Southern California Region
 Lakewood Regional Medical Center, Lakewood
 La Palma Intercommunity Hospital, La Palma
 Loma Linda University Medical Center, Loma Linda
 Long Beach Community Hospital, Long Beach
 Long Beach Memorial Medical Center, Long Beach
 Los Alamitos Medical Center, Los Alamitos
 Los Angeles County/USC Medical Center, Los Angeles
 Los Angeles Harbor/UCLA Medical Center, Torrance
 Methodist Hospital of Southern California, Arcadia
 Mission Hospital Regional Medical Center, Mission Viejo
 Northridge Hospital Medical Center, Northridge
 Olive View/UCLA Medical Center, Sylmar
 Orange Coast Memorial Medical Center, Fountain Valley
 Orange County Department of Health and Human
 Services, WIC Program, Santa Ana
 Pomona Valley Hospital Medical Center, Pomona
 Pomona Valley Sleep Disorders Center, Pomona
 Presbyterian Intercommunity Hospital, Whittier
 Rancho Los Amigos Hospital, Downey
 Redlands Community Hospital, Redlands
 Riverside General Hospital, Moreno Valley
 Saddleback Memorial Medical Center, Laguna Hills
 St. Francis Medical Center, Lynwood
 St. Joseph Hospital, Orange
 St. Jude Hospital and Rehabilitation Center, Fullerton
 St. Mary Medical Center, Long Beach
 St. Vincent Medical Center, Los Angeles
 Samaritan Medical Center, San Clemente
 San Bernardino County Medical Center, San Bernardino
 San Gabriel Valley Medical Center, San Gabriel
 San Pedro Peninsula Hospital, San Pedro
 South Coast Medical Cneter, Laguna Beach
 Stanford University Hospital, Stanford
 Suburban Medical Center, Paramount
 Torrance Memorial Medical Center, Torrance
 Tri-City Stanford Healthcare, Oceanside
 UCI Medical Center, Orange
 UCLA Neuropsychiatric Institute, Los Angeles
 UCLA Sleep Disorders Center, Los Angeles
 UCSF Stanford Healthcare, San Franscico
 Veterans Administration Medical Center, Long Beach
 Veterans Administration Medical Center, San Francisco
 West Anaheim Medical Center, Anaheim
 Western Medical Center, Santa Ana
 Western Medical Center – Anaheim, Anaheim
 Whittier Hospital Medical Center, Whittier
 Numerous Skilled Nursing Facilities, Convalescent Hospi-
 tals, Clinics, Physicians' and Dental Offices

Notes

Emeritus

- ACKERMAN, WILLIAM**
Professor, Machine Technology
1954-83
- ALBRECHT, DOROTHY DALLAS**
Professor, Business Education
1948-79
- ALLINGHAM-DALE, MURIEL**
Professor, English
1971-95
- ALLEN, JAMES M.**
Professor, History
1968-83
- ASHBAUGH, STANLEY**
Professor of Chemistry
1974-98
- BAKER, EDWARD R.**
Dean, Fine Arts
1968-98
- BARRETT, RICHARD**
Professor, Animal Science
1949-77
- BENNETT, LAWRENCE T.**
Professor, French/English
1961-84
- BERGER, IRINA V.**
Associate Professor, Russian/History
1963-84
- BINGO, GEORGE**
Professor, Aviation Technology
1968-88
- BLAKELY, THOMAS**
Director, Evening College
1953-76
- BLESH, CHARLES "CHUCK"**
Professor of Welding Technology
1976-93
- BONIN, ADELYN I.**
Professor, German
1959-83
- BOWEN, SHIRLEY A.**
Professor, Coordinator of Tutorial
Center
1986-98
- BRADLEY, I. LEE**
Counselor/Professor, Psychology
& Jazz
1959-95
- BRADY, JOHN P. Jr.**
Professor, Electronics
1977-98
- BRAND, JON S.**
Professor, Geography
1965-98
- BRIGHTMAN, RICHARD W.**
Professor, Business/Computer Infor-
mation Systems
1963-95
- BROOKS, JOHNNIE L.**
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tion
1966-88
- BROWN, SUSAN**
Administrative Dean,
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1964-95
- BRUCE, SILAS**
Professor, Wastewater Technology
1970-88
- BULLER, JOHN L.**
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mation Services
1958-84
- BURCHETT, DEAN**
Professor, Psychology/Counselor
1956-84
- BUTCHER, NORMA**
Professor, Music
1973-83
- CALLAHAN, FLORENCE**
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1965-75
- CALLANAN, MARGARET G.**
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1969-93
- CESAREO, MILJENKO**
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1964-89
- CHARD, RICHARD**
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Education
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- CHILDS, THOMAS H.**
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- CIARLO, GEORGE V.**
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- CLARK, FRANK L.**
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1960-92
- CLARKE, JAMES E.**
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- CLIFTON, ROBERT B.**
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- CONRY, EDWIN C.**
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1962-79
- COWPERTHWAIT, SARAH M.**
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Second Language
1976-93
- CRON, JAMES R.**
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- CRUMLEY, LAVERNE**
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- CURTIS, ADRIENNE R.**
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- DENISON, FRANK E.**
Professor, Construction Technology
1966-88
- DOSS, RICHARD**
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- DOWLEN, LOUISE**
Div. Chair/Professor, English
Charter Faculty
1948-78
- DUDDRIDGE, DOROTHY**
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- EATON, MILES**
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- ELDON, FRED A. S.**
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- ELLIS, GERALD**
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1954-82
- EVERHART, HOWARD**
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- FAIR, JACK**
Professor, Physical Education;
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- FEISTHAMMEL, AUDREY M.**
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- FOLEY, WILLIAM, H.**
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ogy
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- FULLERTON, JACK**
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- GAVIN, JOHN**
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- GLECKLER, WALTER E.**
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- GOLODNER, PAMELA**
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- GRANT, DAVID A.**
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- GRAZAITIS, MARIANA**
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- GRIGGS, PATRICIA A.**
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- GUNDRY, MAXINE CHERRY**
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- HARPER, HUESTON**
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- KAGLEY, DORIS**
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1954-79
- KOSTKA, CONNIE MACK (Mr.)**
Associate Professor,
Dental Technology
1972-91
- KRIEGER, ROBERT F.**
Professor, Art
1956-86
- KUBIS, PATRICIA**
Professor, English
1965-85
- LINDER, RICHARD C.**
Assistant Professor, English
1966-95
- LISTER, RICHARD S.**
Professor, Psychology
1968-98
- LIVSEY, HERB F.**
Professor, English/Physical Education
and Athletics
1969-96
- LOSMANN, JOHN**
Professor, Metal Trades
1965-76
- LOUIE, DENNIS H.**
Professor, Office Information Systems
1978-95
- LOW, DON R.**
Dean, Counseling Services
1971-98
- LUMIAN, NORMAN C.**
Professor, History/American Studies
1959-85
- MacMILLIN, PAUL G.**
Assistant Professor, Business Education
1966-98
- MARTIN, LAURI R.**
Professor, Photography
1968-96
- MATTIAS, GEORGE R.**
Professor, Physical Education and
Athletics, Assistant Football Coach
1963-93
- McAFERTY, HELEN K.**
Associate Professor, Chemistry
1963-88
- McCHESNEY, MARY**
Professor, Spanish
1950-83
- McCLURG, DICK**
Professor, Air Transportation
1968-76
- McCULLOCH, SARA ELLEN**
Professor, English
1964-85
- McDONOUGH, CATHERINE**
Director, Student Health Service/As-
sociate Professor
1971-95
- McGILL, JOHN R.**
Executive Dean, Instruction, Dean,
Admissions, Records & Information
Services
1966-88
- McNAMEE, MICHAEL W.**
Instructor/Coordinator,
Business Information Systems
1978-85
- McTIERNAN, EDITH**
Associate Professor, Allied Health &
EEG Program Director
1973-85
- MECKE, CHARLOTTE P.**
Professor, English and Education
1964-91
- MERRY, DWAYNE L.**
Professor, Anthropology
1965-88
- MILLAR, RUSSELL W.**
Professor, Political Science/History
1962-95
- MISENER, MARY JEAN**
Professor/Director, Dental Assisting
1961-74
- MITCHEL, ROBERT**
Dean, Business Division
Associate Professor, Business Educa-
tion
1960-88
- MOGAN, PATRICIA J.**
Associate Professor, Home Economics
1959-95
- MOORE, ROBERT B.**
College President 1964-82
Dean of Instruction 1960-64
- NASBY, DAVID P.**
Professor, Mathematics
1963-98
- NEDOFF, CHARLES**
Professor, Sociology
1956-88
- OBERHAUS, MARY ANN**
Professor, Marketing/Management
1967-98
- OSBORNE, TOM**
Professor, Business Education
1954-83
- OVERHOLT, GENE**
Professor, Business Education
1959-83
- PAINTER, ALFRED**
Professor, Philosophy
1967-83
- PANIAN, HENRY, S.**
Professor, History
1956-90
- PAYNE, BILL**
Professor, Art
1949-74
- PEARCE, FRANCES M.**
Professor, Business Education
1955-75
- PEARLMAN, JOSEPH**
Professor, Music
1965-83
- PHILLIPS, ROBERT MALCOLM**
Assistant Professor, Counseling
Services
1957-93
- PINER, CHARLES BRUCE**
Professor, Art
1958-90
- PITTON, JAMES A.**
Associate Professor, Chemistry &
Physical Science
1954-91
- PONDER, JOHNNY**
Instructor, Computer Information
Systems
1971-92
- PONTNEY, JOAN**
Professor, Microbiology
1968-81
- POPE, ROBERT L.**
Professor, Ecology and Biology
1977-98
- POST, MARTIN**
Professor, Business Education
1965-83
- POWELL, MILDRED S.**
Associate Professor, Home Economics
1975-85
- PRICE, DAVID G.**
Professor, Electro/Mechanical Drafting
1974-98
- PRIDDY, BARBARA J.**
Professor, Business Education
1973-98
- RAUB, RICHARD**
Professor, Music
1970-93
- RECCOW, LOUIS**
Professor, History
1968-88
- REES, HENRY M.**
Professor, Construction Technology
1975-98
- REESE, JAMES I.**
Professor, Geology
1972-88
- RENFRO, MARVIN W.**
Professor, Architectural Technology
1974-93
- REYNOLDS, RICHARD**
Professor, Business Education
1964-84
- RICHARDS, JERREL T.**
Dean, Counseling, Psychology &
Special Services
1958-84
- RIDDICK, GLENDA**
Associate Professor, Human Develop-
ment
1971-94
- ROJAS, EUSTACE**
Professor, Spanish
Charter Faculty
1949-83
- ROSSO, RAYMOND**
Professor, Physical Education
Intra-Mural Director/Charter Faculty
1948-83
- RUBINSTEIN, NANCY LEE**
Professor, Business Education
1965-88
- RUTHERFORD, CHARLES**
Professor, Instrumental Music
1967-98
- SANFORD, JOHN R.**
Associate Professor, Photography
1969-98
- SAWYER, ALAN L.**
Professor, Mathematics
1957-97
- SCHADE, MAXINE**
Professor, Restaurant, Hotel
Management
1965-92
- SCHMITZ, JOSEPH**
Associate Professor, Art
1972-84
- SCHRYER, RONALD R.**
Professor, Mathematics
1965-84
- SCRIPPSMA, KENNETH E.**
Associate Professor, Hotel
Management
1971-92
- SHARKEY, DONNA L.**
Professor, Art
1962-86
- SIMONDS, ROBERT**
Professor, Construction Technology
1963-81
- SLAUGHTER, ROBERT L.**
Professor, Business Education
1968-91
- SMITH, DOUGLAS C.**
Professor, English
1966-98
- SMITH, EDITH G.**
Professor, Music
1971-98
- SMITH, GLENN**
Professor, Speech
1971-81
- SMITH, LLOYD**
Professor, Biological Sciences
1956-80
- SNOW, ROSLYN**
Professor, English
1962-98
- STEPHENS, ROY L.**
Professor, Aviation and Space
1976-94
- TARZIAN, RALPH**
Professor, Art
1965-84
- TAYLOR, OSCAR**
Professor, Architecture
1949-83
- THOMPSON, JEAN**
Associate Dean, Community Services
1957-81
- TOMCHAK, JOSEPH**
Professor, Anthropology
1958-86
- TUCKER, HAL RICHARD**
Professor, Physical Education &
Athletics
1962-95
- UPTON, JOHN**
Professor, Photography
1965-98
- WALKER, JOAN**
Professor, Radiologic Technology
1969-86

Emeritus

WALLACE, WESLEY V.
Professor/Director, Dental Technology
1966-83

WASSERMAN, LARRY
Professor, Art
1975-98

WATSON, NORMAN E.
Chancellor, CCCD
1952-84

WESTFALL, WENDELL
Librarian, Professor
1971-91

WETZEL, ROBERT C.
Professor, Physical Education &
Athletics
1964-95

WHITESELL, JACK K.
Professor, Counseling Services
1965-98

WILSON, ROBERT L.
Dean, Business Education/Professor,
Business Education
1969-95

WIN, U KYAW
Professor, Counseling Services
1968-98

WONACOTT, DALE
Professor, Physical Education
Assistant Football Coach
1962-86

WOOD, LARRY B.
Professor, Architectural Technology
1965-1999

WOODWARD, NELL M.
Associate Dean, Academic
Administration/Vocational Ed
1964-85

WYLIE, JAMES
Professor, Chemistry
1953-85

YAMAZAKI, R. ALAN
Instructor, English
1969-94

YOST, BETTY
Professor, Biology
1976-90

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