

foodborne pathogens. Students will explore biological factors and controls relating to reproduction of microorganisms and the effects on public health. This course does not meet microbiology requirement for pre-health students.

FCS 136 Personal Finance (3)

3 hours lecture

Note: Cross listed as BUS 136

Transfer acceptability: CSU

A study of the effective management of personal and family resources. Budgeting, buying of goods and services, banking, credit, taxation, investing, insurance, home ownership, estate planning, and consumer protection.

FCS 150 Cultural Nutrition (3)

3 hours lecture

Transfer acceptability: CSU

Regional, ethnic, cultural, religious, historical, and social influences on food patterns. Influence of socio-economic class, gender, and age on diet, health, and disease.

FCS 165 Fundamentals of Nutrition (3)

3 hours lecture

Note: Cross listed as HE 165

Transfer acceptability: CSU; UC – FCS 165, FCS 185, BIOL 185, HE 165 combined: maximum credit, one course; CAN FCS 2

The study of how food nourishes the body. Investigation of diet fads and fallacies, eating for fitness, and planning meals for optimum health throughout the life cycle.

FCS 170 Nutrition: Eating Disorders and Obesity(3)

3 hours lecture

Transfer acceptability: CSU

Review of etiology, incidence, socio-economic influences, pathogenesis, and treatments. Techniques studied include modification of diet, activity, and behavior. Of interest to those needing vocational information for work with anorexics, bulimics, and the obese.

FCS 185 Science of Human Nutrition (3)

3 hours lecture

Note: Cross listed as BIOL 185

Transfer acceptability: CSU; UC – FCS 165, FCS 185, BIOL 185, HE 165 combined: maximum credit, one course

Science of food, nutrients, and other substances therein; processes by which the organism ingests, digests, absorbs, transports, utilizes, and excretes food substances. Emphasis on biological, chemical, and physiological implications to human nutrition.

FCS 197 Family and Consumer Sciences Workshop (5-3)

Units awarded in topics courses are dependent upon the number of hours required of the student. Any combination of lecture, laboratory, or lecture/laboratory may be scheduled by the department. Refer to Class Schedule.

Note: May be taken 3 times

Transfer acceptability: CSU

Materials relative to the field of Family and Consumer Sciences.

FCS 295 Directed Study in Family and Consumer Sciences (1,2,3)

3, 6, or 9 hours laboratory

Prerequisite: Approval of project or research by department chairperson/director

Note: May be taken 4 times

Transfer acceptability: CSU

Independent study for students who have demonstrated skills and/or proficiencies in Family and Consumer Sciences subjects and have the initiative to work independently on projects or research outside the context of regularly scheduled classes. Students will work under the personal supervision of an instructor.

Fashion (FASH)

Contact the Design and Consumer Education Department for further information, (760) 744-1150, ext. 2349. For transfer information, consult a Palomar College counselor.

Associate in Arts degree requirements, Certificate of Achievement requirements, and Certificate of Proficiency requirements are listed in Section 6 (green pages) of the catalog.

PROGRAMS OF STUDY

Fashion Design/Entry-Level

This certificate is intended to prepare students for entry-level positions in fashion design. It is intended to be completed in one year of full-time attendance at Palomar College. Employment might include seamstress, alterationist, assistant designer, and sample cutter.

Certificate of Achievement

Program Requirements		Units
FASH	100 Fashion Industry	3
FASH	105 Fashion Analysis and Clothing Selection	3
FASH	110 Textiles	3
FASH	135 Basic Sewing Construction	3
FASH	136 Advanced Sewing Construction	3
FASH	139 Pattern Making/Fashion Design	3
FASH/BUS	145 Fashion Illustration and Presentation	3
FASH	195 Field Studies in Fashion	2
CE	150 Internship	1-4
TOTAL UNITS		24 - 27

Recommended Electives: FASH 143, 146

Fashion Design/Technical

Courses required for employment in the fashion industry; specifically in pattern making, sample work, fashion design, and illustration.

Students should be aware that not all Fashion courses are offered every semester. See Class Schedule or Department Chairperson for additional information.

A.A. Degree Major

Program Requirements		Units
FASH	100 Fashion Industry	3
FASH	105 Fashion Analysis/Clothing Selection	3
FASH	110 Textiles	3
FASH	130 History of Fashion/Costume	3
FASH	135 Basic Sewing Construction	3
FASH	136 Advanced Sewing Construction	3
FASH	139 Pattern Making/Fashion Design	3
FASH	141 Adv Patternmaking/Fashion Design	3
FASH	145 Fashion Illustration/Presentation	3
FASH	146 Computer Aided Design (CAD) for Fashion	3
FASH	165 Fashion Laboratory	.5,1
FASH	195 Field Studies in Fashion	2
CE	150 Internship	2-3
TOTAL UNITS		31.5 – 33

Recommended Electives: FASH 125, 132, 147, 170

Fashion Merchandising/Entry-Level

This certificate is intended to prepare students for entry-level positions in fashion merchandising, such as sales associate, display stylist, and assistant manufacturer's representative. It is intended to be completed in one year of full-time attendance at Palomar College.

Certificate of Achievement

Program Requirements		Units
FASH	100 Fashion Industry	3
FASH	105 Fashion Analysis/Clothing Selection	3
FASH	110 Textiles	3
FASH	115 Visual Merchandising I	3
FASH/BUS	125 Retailing/Promotion	3
FASH	195 Field Studies in Fashion	2
CE	150 Internship	2-3
TOTAL UNITS		19 - 20

Recommended Electives: FASH 130, 155

Fashion Merchandising Sales Associate

This certificate is intended to prepare students for immediate employment in the fashion industry as a sales associate. It is intended to be completed in one semester.

Certificate of Proficiency

Program Requirements		Units
FASH 100	Fashion Industry	3
FASH 105	Fashion Analysis/Clothing Selection	3
FASH 115	Visual Merchandising I	3
TOTAL UNITS		9

Fashion Merchandising/Technical

The Fashion Merchandising A.A. degree program provides students with an option for a career or the requisite foundation for transfer to a four-year college or university. Careers might include assistant buyer, assistant department manager, small store owner, visual merchandiser, advertising consultant, fashion coordinator, promotion coordinator, sales associate, or manufacturer's sales representative. Students should be aware that not all Fashion courses are offered every semester. See Class Schedule or Department Chairperson for additional information.

A.A. Degree Major

Program Requirements		Units
FASH 100	Fashion Industry	3
FASH 105	Fashion Analysis/Clothing Selection	3
FASH 110	Textiles	3
FASH 115	Visual Merchandising I	3
FASH 120	Fashion Buying/Management	3
FASH 125	Retailing/Promotion	3
FASH 126	Fashion Show Promotion	1
FASH 130	History of Fashion/Costume	3
FASH/BUS 145	Fashion Illustration	3
FASH 195	Field Studies in Fashion	2
CE 150	Internship	2-3
TOTAL UNITS		29 - 30

Recommended Electives: FASH 116, 132, 155; BUS 155

COURSE OFFERINGS

Courses numbered under 100 are not intended for transfer credit.

FASH 80 Serger Sewing (.5)
1 hour lecture/laboratory

Recommended preparation: FASH 135

Note: May be taken 2 times

Basic serger (overlock) sewing machine operation for construction and embellishment.

FASH 81 Serger Sewing II (.5)
1 hour lecture/laboratory

Recommended preparation: FASH 135

Note: May be taken 2 times

Serger (overlock) sewing machine operation for construction and embellishment beyond the introductory level.

FASH 90 Design Collection (1)
2 hours lecture/laboratory

Recommended preparation: At least one of the following courses:

FASH 135, 136, 139, 140, 145

Note: May be taken 3 times

Lab course for fashion show line designers in any clothing category of women's, men's, teen's, and children's wear.

FASH 91 Pattern Grading (.5)
1 hour lecture/laboratory

Recommended preparation: FASH 135, 139

Note: May be taken 2 times

Pattern grading for industry professionals for the purpose of increasing or decreasing sample-size production patterns to make up a complete size range.

FASH 100 Fashion Industry (3)
3 hours lecture

Transfer acceptability: CSU

A study of the background and technology of the clothing industry. Includes contemporary problems of production and distribution; emphasis is on career options in the fashion industry.

FASH 105 Fashion Analysis and Clothing Selection (3)
3 hours lecture

Transfer acceptability: CSU; CAN FCS 20

Examines fashion as it relates to wardrobe planning, coordination, and standards of quality garment construction.

FASH 110 Textiles (3)
3 hours lecture-1 hour laboratory

Transfer acceptability: CSU; CAN FCS 6

Fibers, yarn, fabric construction, and finishes as related to selection, use, and care.

FASH 115 Visual Merchandising I (3)
3 hours lecture-1 hour laboratory

Transfer acceptability: CSU

Visual merchandise presentation including window and interior displays, elements of design, principles of design, fixtures, lighting, and other display materials.

FASH 116 Visual Merchandising II (3)
3 hours lecture-1 hour laboratory

Transfer acceptability: CSU

Advanced visual design and application. Hands-on experience in merchandise presentation and display; basic drafting techniques and drafting tools related to store planning and visual merchandising.

FASH 120 Fashion Buying/Management (3)
3 hours lecture

Transfer acceptability: CSU

Principles of fashion buying utilizing practical applications and case studies. Topics covered include merchandise planning and selection, resource relations, legal trade regulations, pricing, and merchandise management and control.

FASH 125 Retailing/Promotion (3)
3 hours lecture

Note: Cross listed as BUS 145

Transfer acceptability: CSU

Principles and techniques of retailing, promotion, and advertising pertinent to retail policies and procedures. Includes psychological aspect of retailing. Working foundation for those looking forward to employment in this area.

FASH 126 Fashion Show Presentation (1)
2 hours lecture/laboratory

Note: May be taken 2 times

Transfer acceptability: CSU

Applied study and practical application of fashion show and special event production and promotional skills. Strategies and techniques studied include organizing, advertising, staging, timing, and coordinating models and their clothing and accessories. Produce the Fashion Merchandising/Fashion Design program's annual fashion show.

FASH 130 History of Fashion/Costume (3)
3 hours lecture

Transfer acceptability: CSU

Styles of dress from the Paleolithic period to the present as depicted in art forms and other media. Focuses on Western European costume.

FASH 131 Elementary Stage Costume and Make-Up (3)
2 hours lecture-3 hours laboratory

Transfer acceptability: CSU

Basic theories, techniques, and procedures of costume production and make-up application for stage, film, and television. Practical training in college productions.

- FASH 132 Costume and Culture** (3)
3 hours lecture
Transfer acceptability: CSU; UC
Patterns of dress and human adornment of three cultures: African, Asian/Pacific Islanders and the Americas. Socio-cultural developments in dress. Clothing images and meaning in a contemporary multicultural American society
- FASH 135 Basic Sewing Construction** (3)
6 hours lecture/laboratory
Note: May be taken 2 times
Transfer acceptability: CSU
Traditional construction techniques. Quality garments will be produced utilizing new speed techniques as well as hand detailing.
- FASH 136 Advanced Sewing Construction** (3)
6 hours lecture/laboratory
Recommended preparation: FASH 135
Note: May be taken 2 times
Transfer acceptability: CSU
Sewing construction techniques beyond basic level, with increased difficulty in pattern assembly.
- FASH 137 Tailoring** (3)
6 hours lecture/laboratory
Recommended preparation: FASH 135
Note: May be taken 2 times
Transfer acceptability: CSU
Clothing principles emphasizing techniques in handling difficult fabrics. Principles of tailoring; planning and construction of suits and coats.
- FASH 139 Pattern Making/Fashion Design** (3)
6 hours lecture/laboratory
Recommended preparation: FASH 135
Note: May be taken 2 times
Transfer acceptability: CSU
Pattern making through the flat pattern design method. Attention is given to design analysis and interpretation of design; application of design method in the development, presentation, and construction of original garments.
- FASH 141 Advanced Pattern Making/Fashion Design** (3)
6 hours lecture/laboratory
Recommended preparation: FASH 135 and FASH 139
Note: May be taken 4 times
Transfer acceptability: CSU
Advanced design skills for the fashion industry. Examination of one method of pattern development: draping. Creation of patterns to drape and fit on a dressmaker's form.
- FASH 145 Fashion Illustration and Presentation** (3)
3 hours lecture-1 hour laboratory
Transfer acceptability: CSU
Fundamentals in drawing of fashion figures and in illustration of fashion garments. Development of individual skills and style in graphic presentation.
- FASH 146 Computer Aided Design (CAD) for Fashion** (3)
6 hours lecture/laboratory
Note: May be taken 2 times
Transfer acceptability: CSU
An introduction to computer aided pattern making for fashion using CAD technology. Hands-on experience with CAD technology to include the following operations: preparing and editing patterns using a digitizing tablet or mouse, storage and retrieval of patterns, and production of fashion industry quality patterns on a plotter.
- FASH 147 Advanced Computer Aided Design (CAD) for Fashion** (3)
6 hours lecture/laboratory
Prerequisite: FASH 146
Note: May be taken 2 times
Transfer acceptability: CSU
Advanced theory and hands-on operation of CAD systems for fashion pattern making including pattern making blocks, grading, and marker making. Emphasis is placed on productivity and manufacturability for the fashion design industry.
- FASH 155 World of Fashion** (2,3)
4 or 6 hours lecture/laboratory
Note: Fee charged; may be taken 4 times
Transfer acceptability: CSU
Extended field studies in textiles, design, manufacturing, forecasting, and retail practices as they apply to the national and international fashion industry. Emphasis upon field observation and examination of the fashion trends as they interrelate with the social, political, psychological, economic, and historical influences to create the fashion ambience. Geographical locations may vary.
- FASH 165 Fashion Laboratory** (.5-1)
1½ or 3 hours laboratory
Note: Credit/No Credit grading only; may be taken 4 times
Transfer acceptability: CSU
Enhancement of skills by supervised practice and active participatory experience in individual study. Content to be determined by the need of the student in agreement and under observation and direction of the instructor.
- FASH 170 Introduction to Fabric Design/Painting** (3)
6 hours lecture/laboratory
Transfer acceptability: CSU
Traditional and contemporary methods in the application of fabric dyes and paints using fundamental design principles for textiles and clothing.
- FASH 195 Field Studies in Fashion** (2)
4 hours lecture/laboratory
Note: May be taken 2 times
Transfer acceptability: CSU
Fashion industry on site: process of designing, manufacturing, marketing, and merchandising of fashion apparel and related accessories.
- FASH 196A Special Problems in Computer Aided Pattern Drafting** (1,2,3)
3, 6, 9 hours laboratory
Prerequisite: FASH 140
Note: May be taken 4 times
Transfer acceptability: CSU
Advanced research project using AutoCAD and BetaCAD software. Content to be determined by the need of the student under signed contract with the instructor.
- FASH 197A Fashion Merchandising Workshop** (.5-3)
Units awarded in topics courses are dependent upon the number of hours required of the student. Any combination of lecture, laboratory, or lecture/laboratory may be scheduled by the department. Refer to Class Schedule.
Note: May be taken 4 times
Transfer acceptability: CSU
Covers areas of the fashion merchandising industry which are rapidly changing or require current short-term specific training.
- FASH 197B Fashion Manufacturing Workshop** (.5-3)
Units awarded in topics courses are dependent upon the number of hours required of the student. Any combination of lecture, laboratory, or lecture/laboratory may be scheduled by the department. Refer to Class Schedule.
Note: May be taken 4 times
Transfer acceptability: CSU
Covers areas of the fashion manufacturing industry which are rapidly changing or require current short-term specific training.
- FASH 197C Fashion Design Workshop** (.5-3)
Units awarded in topics courses are dependent upon the number of hours required of the student. Any combination of lecture, laboratory, or lecture/laboratory may be scheduled by the department. Refer to Class Schedule.
Note: May be taken 4 times
Transfer acceptability: CSU
Covers areas of the fashion design industry which are rapidly changing or require current short-term specific training.

FASH 295 Directed Study in Fashion (1,2,3)

3, 6, or 9 hours laboratory
Prerequisite: Approval of project or research by department chairperson/director

Note: May be taken 4 times

Transfer acceptability: CSU

Independent study for students who have demonstrated skills and/or proficiencies in Fashion subjects and have the initiative to work independently on projects or research outside the context of regularly scheduled classes. Students will work under the personal supervision of an instructor.

Filipino

See Tagalog

Fire Technology (FIRE)

Contact Public Safety Programs for further information, (760) 744-1150, ext. 1722

Associate in Arts degree requirements, Certificate of Achievement requirements, and Certificate of Proficiency requirements are listed in Section 6 (green pages) of the catalog.

PROGRAM OF STUDY

Fire Technology

Prepares students for a career in fire suppression, fire prevention and/or fire protection.

The following courses may be substituted: CHEM 100 will substitute for FIRE 115; PHYS 102 or 120 or PHSC 100 will substitute for FIRE 165.

A.A. Degree Major or Certificate of Achievement

Program Requirements		Units
FIRE 100	Fire Protection Organization	3
FIRE 118	Fire Prevention Technology	4
FIRE 120	Building Construction for Fire Protection	3
FIRE 130	Fire Protection Equipment and Systems	3
FIRE 165	Fundamentals of Fire Protection Chemistry	3
Elective Courses (Select 15 units)		
FIRE 51	Fire Academy Preparation	2
FIRE 71	Trench Rescue	.5
FIRE 72	Swiftwater Rescue	.5
FIRE 98	Fire Service Skills	.5-5
FIRE 105	Fire Hydraulics	3
FIRE 115	Hazardous Materials I	3
FIRE 125	Fire Apparatus and Equipment	3
FIRE 140	Fire Technology Records and Reports	3
FIRE 145	Fire Fighting Tactics and Strategy	3
FIRE 150	Fire Vehicle Maintenance	3
FIRE 151	Fire Fighter I Academy	18
FIRE 152	Driver Operator Academy	4.5
FIRE 160	Wildland Fire Control I	3
FIRE 168	Volunteer Fire Fighter Academy	4
FIRE 175	Fire Command 1A	2
FIRE 176	Fire Command 1B	2
FIRE 180	Fire Prevention 1A	2
FIRE 181	Fire Prevention 1B	2
FIRE 185	Fire Management I	2
FIRE 190	Fire Investigation 1A	2
FIRE 193	Fire Instructor 1A	2
FIRE 194	Fire Instructor 1B	2
FIRE 197A	Fire Technology General Topics	.5-5
FIRE 197B	Fire Technology Command Topics	.5-5
FIRE 197C	Fire Technology Field Topics	.5-5
EME 106	Emergency Medical Tech Basic	6
CE 100	Cooperative Education	1,2,3,4
TOTAL UNITS		31

COURSE OFFERINGS

Courses numbered under 100 are not intended for transfer credit.

FIRE 51 Fire Academy Preparation (2)

4 hours lecture/laboratory

Note: May be taken 4 times

This course prepares individuals for the demanding requirements of the Fire Academy. It will also prepare students for the Physical Ability test that is required to pass the North County Regional Fire Test. It breaks the test down into components, so that the student can more skillfully pass the exam. There will be time spent on application preparation and interview skills.

FIRE 71 Trench Rescue (.5)

1½ hours laboratory

Note: Credit/No Credit grading only; may be taken 4 times

Comprehensive instruction with extensive hands-on application of the techniques necessary to safely effect a rescue from an excavation or trenching cave-in. Topics include: critical considerations while responding to trenching emergencies; establishing and operating the Incident Command System; evaluation of cave-in scenes; specialized tool usage; shoring techniques; below grade safety procedures; patient packaging; and patient removal techniques. Upon successful completion of the course, students will receive a California State Fire Marshal certificate.

FIRE 72 Swiftwater Rescue (.5)

1½ hours laboratory

Note: Credit/No Credit grading only; may be taken 4 times

This course is intended for the training of fire service personnel in water rescue techniques. Topics include: Swiftwater rescue, submerged vehicles, drownings, use of engine/truck company equipment for water rescue, use of rafts and boats, and underwater search and recovery. Upon completion of the course, students will receive a California State Fire Marshal certificate.

FIRE 98 Fire Service Skills (.5-5)

1 to 10 hours lecture/laboratory

Note: Credit/No Credit grading only; may be taken 4 times

This course covers fire service basic topics in the classroom for review and manipulative training for skills maintenance. All subjects will have to do with the duties and responsibilities of the fire services, in order to maintain a state of readiness.

FIRE 100 Fire Protection Organization (3)

3 hours lecture

Transfer acceptability: CSU

Provides an introduction to fire protection; career opportunities in fire protection and related fields; philosophy and history of fire protection; fire loss analysis; organization and function of public and private fire protection services; fire departments as part of local government; laws and regulations affecting the fire service; fire service nomenclature; specific fire protection functions; basic fire chemistry and physics; introduction to fire protection systems; introduction to fire strategy and tactics.

FIRE 105 Fire Hydraulics (3)

3 hours lecture

Recommended preparation: FIRE 100 and MATH 60

Transfer acceptability: CSU

Review of basic mathematics; hydraulic laws and formulas as applied to the fire service; application of formulas and mental calculation to hydraulic problems; water supply problems; underwriter's requirements for pumps.

FIRE 115 Hazardous Materials I (3)

3 hours lecture

Transfer acceptability: CSU

A review of basic chemistry; storage, handling, laws, standards, and fire fighting practices pertaining to hazardous materials.

FIRE 118 Fire Prevention Technology (4)

4 hours lecture

Transfer acceptability: CSU

Provides fundamental information regarding the history and philosophy of fire prevention, organization and operation of a fire prevention bureau, use of fire codes, identification and correction of

fire hazards, and the relationships of fire prevention with built-in fire protection systems, fire investigation and fire safety education. Provides skills necessary for California Fire Service Training and Education system, Certified Firefighter I and Fire Inspector I. Meets requirements for CFSTES Fire Prevention IA and IB classes. Contains knowledge required for State Fire Training, Firefighter I Certification.

FIRE 120 Building Construction for Fire Protection (3)

3 hours lecture

Transfer Acceptability: CSU

The study of the components of building construction that relate to fire/life safety. The development and evolution of building and fire codes will be studied in relationship to past fires/collapses in residential, commercial, and industrial occupancies.

FIRE 125 Fire Apparatus and Equipment (3)

3 hours lecture

Transfer acceptability: CSU

Driving laws, driving technique, construction and operation of pumping engines, ladder trucks, aerial platforms, specialized equipment, and apparatus maintenance.

FIRE 130 Fire Protection Equipment and Systems(3)

3 hours lecture

Transfer acceptability: CSU

Provides information relating to the features of design and operation of fire detection and alarm systems, heat and smoke control systems, special protection and sprinkler systems, water supply for fire protection, and portable fire extinguishers.

FIRE 145 Fire Fighting Tactics and Strategy (3)

3 hours lecture

Transfer acceptability: CSU

Review of fire chemistry, equipment, and manpower; basic fire fighting tactics and strategy; methods of attack; preplanning fire problems.

FIRE 151 Fire Fighter I Academy (18)

36 hours lecture/laboratory

Prerequisite: EME 106 or certification as an EMT-1, and admission to the Fire Fighter I Academy program

Transfer acceptability: CSU

A 576-hour fire fighter academy course which will meet the requirements mandated by the California Office of State Fire Marshal for Certified Fire Fighter I training. Covers fire ground procedures, tactics, strategy, safety methods, fire dynamics, equipment usage and deployment, and subject material pertaining to the role of fire fighters within the fire service.

FIRE 152 Driver Operator Academy (4.5)

9 hours lecture/laboratory

Recommended preparation: FIRE 100 and 151

Transfer acceptability: CSU

Comprehensive instruction in all aspects of operating fire apparatus. This includes fire apparatus construction and maintenance; driving laws; safe driving practices; fire pump theory; fire pump service testing; hydraulic laws and formulas as applied to the fire service; developing effective fire streams; identification and use of the various hose, nozzles, and fittings used in the fire service; water supply; nationally recognized standards for fire apparatus and equipment.

FIRE 160 Wildland Fire Control I (3)

3 hours lecture

Transfer acceptability: CSU

Provides employed firefighters or fire service majors with a fundamental knowledge of the factors affecting wildland fire prevention, fire behavior, and control techniques.

FIRE 165 Fundamentals of Fire Protection Chemistry (3)

3 hours lecture

Recommended preparation: FIRE 100

Transfer acceptability: CSU

Provides the student with fundamental information and knowledge of the physical and chemical characteristics of matter, fire, hazardous materials, and basic extinguishment theory.

FIRE 168 Volunteer Fire Fighter Academy (4)

8½ hours lecture/laboratory

Transfer acceptability: CSU

Basic fire fighting skills needed to begin a career in the fire service. Meets State Fire Marshal requirements.

FIRE 175 Fire Command 1A (2)

2 hours lecture

Transfer acceptability: CSU

Course provides instruction and simulation time to the participants while engaged in the initial decision and action processes at a working fire. The course includes discussion regarding the fire officer, fire behavior, fireground resources, operations, and management.

FIRE 176 Fire Command 1B (2)

2 hours lecture

Transfer acceptability: CSU

A descriptive analysis in tactics and strategies and scene management principles for incidents involving hazardous materials. Emphasizes identification and hazard mitigation, decontamination, protective clothing, environmental concerns, and legal issues.

FIRE 180 Fire Prevention 1A (2)

2 hours lecture

Transfer acceptability: CSU

Includes general fire inspection practices and responsibilities of fire prevention personnel. Essential equipment of code enforcement and procedures for correcting fire hazards. Fire extinguishers, fixed systems, and determination of operational readiness of these systems.

FIRE 181 Fire Prevention 1B (2)

2 hours lecture

Transfer acceptability: CSU

Includes the relationship of life safety codes and requirements to building construction principles and building occupancy classifications. The engineering solutions to various hazards, enforcing the solution, and public relations as affected by fire prevention in handling complaints.

FIRE 185 Fire Management I (2)

2 hours lecture

Transfer acceptability: CSU

Supervision and management, leadership styles and techniques, development of policies and procedures, time management, stress management, and personnel appraisal and counseling guidelines.

FIRE 190 Fire Investigation 1A (2)

2 hours lecture

Transfer acceptability: CSU

Fire behavior and building construction, investigative techniques required for incendiary, accidental, fatal, vehicle, wildland, and juvenile fire investigations; procedures to collect and preserve physical evidence, and investigative report writing.

FIRE 193 Fire Instructor 1A (2)

2 hours lecture

Transfer acceptability: CSU

Standard State Board of Fire Services accredited course offered in community colleges. Basic information includes: occupational analysis, course outlines, concepts of learning, levels of instruction, behavioral objectives, using lesson plans, psychology of learning, and evaluation of effectiveness. Activities include student teaching demonstrations.

FIRE 194 Fire Instructor 1B (2)

2 hours lecture

Transfer acceptability: CSU

Standard State Board of Fire Services accredited course offered in community colleges. Advanced topics include: preparing course outlines, establishing levels of instruction, constructing behavioral objectives and lesson plans, instructional aid development, fundamentals of testing and measurements, tests planning, evaluation techniques and tools. Activities include student teaching demonstrations.

FIRE 197A Fire Technology General Topics (.5-5)

1 to 10 hours lecture/laboratory

Units awarded in topics courses are dependent upon the number of hours required of the student. Any combination of lecture, laboratory,

or lecture/laboratory may be scheduled by the department. Refer to Class Schedule.

Note: May be taken 4 times

Transfer acceptability: CSU

Topics in Fire technology General. See Class Schedule for specific topic offered. Course title will designate subject covered.

FIRE 197B Fire Technology Command Topics (.5-5)

1 to 10 hours lecture/laboratory

Units awarded in topics courses are dependent upon the number of hours required of the student. Any combination of lecture, laboratory, or lecture/laboratory may be scheduled by the department. Refer to Class Schedule.

Note: May be taken 4 times

Transfer acceptability: CSU

Topics in Fire Technology Command. See Class Schedule for specific topic offered. Course title will designate subject covered.

FIRE 197C Fire Technology Field Topics (.5-5)

1 to 10 hours lecture/laboratory

Units awarded in topics courses are dependent upon the number of hours required of the student. Any combination of lecture, laboratory, or lecture/laboratory may be scheduled by the department. Refer to Class Schedule.

Note: May be taken 4 times

Transfer acceptability: CSU

Topics in Fire Technology Field. See Class Schedule for specific topic offered. Course title will designate subject covered.

Foreign Languages (FL)

See Arabic, Chinese, French, German, Italian, Japanese, Spanish, and Tagalog.

Contact the Foreign Languages Department for further information, (760) 744-1150, ext. 2390

COURSE OFFERINGS

FL 194A Foreign Languages Experimental Topics (3)

3 hours lecture

Note: May be taken 4 times

Transfer acceptability: CSU

Foreign Languages not covered by regular foreign language offerings. Course content to be determined in relation to community/student need (s). Course title will designate language and level covered. See Class Schedule for specific language and level being offered.

FL 194B Foreign Languages Experimental Topics (3)

3 hours lecture

Note: May be taken 4 times

Transfer acceptability: CSU

Foreign Languages not covered by regular foreign language offerings. Course content to be determined in relation to community/student need(s). Course title will designate language and level covered. See Class Schedule for specific language and level being offered.

FL 194C Foreign Languages Experimental Topics (3)

3 hours lecture

Note: May be taken 4 times

Transfer acceptability: CSU

Foreign Languages not covered by regular foreign language offerings. Course content to be determined in relation to community/student need (s). Course title will designate language and level covered. See Class Schedule for specific language and level being offered.

FL 197 Foreign Languages Topics (.5-5)

Units awarded in topics courses are dependent upon the number of hours required of the student. Any combination of lecture, laboratory, or lecture/laboratory may be scheduled by the department. Refer to Class Schedule.

Note: May be taken 4 times

Transfer acceptability: CSU

Topics in Foreign Languages. See Class Schedule for specific topic offered. Course title will designate subject covered.

French (FREN)

Contact the Foreign Languages Department for further information, (760) 744-1150, ext. 2390

COURSE OFFERINGS

For students who have completed foreign language course work at the high school level, and need clarification regarding placement in college level course work, contact the Counseling Center. Universities have varying policies regarding the granting of transfer credit when there is a combination of high school and college level course work.

FREN 101 French I (5)

5 hours lecture/1 hour laboratory

Transfer acceptability: CSU; UC; CAN FREN 2; FREN 101+102 = CAN FREN SEQ A

This course is the first semester of French. This elementary level course is a study of the French language and French-speaking cultures, with emphasis on the development of communicative skills and basic structures. Course combines in-class instruction and practice with self-paced study in the Foreign Language Laboratory. This beginning-level course is for students with no previous coursework in French.

FREN 101A French IA (3)

3 hours lecture

Transfer acceptability: CSU; UC – FREN 101A and 101B combined: maximum credit, 5 units; UC – both courses must be taken for transfer credit to be given

French 101A is equivalent to the first half of French 101. This elementary level course is a study of the French language and French-speaking cultures, with emphasis on the development of communicative skills and basic structures. This beginning-level course is for students with no previous coursework in French.

FREN 101B French IB (3)

3 hours lecture

Prerequisite: FREN 101A or one year of high school French

Transfer acceptability: CSU; UC – FREN 101A and 101B combined: maximum credit, 5 units; UC – both courses must be taken for transfer credit to be given

French 101B is equivalent to the second half of French 101, and is a continuation of French 101A. This elementary level course is a study of the French language and French-speaking cultures, with emphasis on the development of communicative skills and basic structures.

FREN 102 French II (5)

5 hours lecture-1 hour laboratory

Prerequisite: FREN 101 or 101B or two years of high school French

Transfer acceptability: CSU; UC; CAN FREN 4; FREN 101+102 = CAN FREN SEQ A

This course is the second semester of French. This elementary level course is a study of the French language and French-speaking cultures, with continued emphasis on the development of communicative skills and basic structures. Course combines in-class instruction with self-paced study in the Foreign Language Laboratory.

9/15/05 AND 2-2-05

FREN 102A French IIA (3)

3 hours lecture

Prerequisite: FREN 101 or 101B or two years of high school French

Transfer acceptability: CSU; UC – FREN 102A and 102B combined: maximum credit, 5 units; UC – both courses must be taken for transfer credit to be given

French 102A is equivalent to the first half of French 102. This elementary level course is a study of the French language and French-speaking cultures, with continued emphasis on the development of communicative skills and basic structures.

FREN 102B French IIB (3)

3 hours lecture

Prerequisite: FREN 101 OR 101B or two years of high school French

Transfer acceptability: CSU; UC – FREN 102A and 102B combined: maximum credit, 5 units; UC – both courses must be taken for transfer credit to be given

French 102B is equivalent to the second half of French 102, and is a continuation of French 102A. This elementary level course is a study of the French language and French-speaking cultures, with continued emphasis on the development of communicative skills and basic structures.

FREN 131 French Civilization (3)
3 hours lecture

Transfer acceptability: CSU; UC

A multi-media presentation of the humanistic achievements of the civilization of France from the Renaissance to the Fifth Republic.

FREN 140 Basic French Pronunciation (1)
1 hour lecture

Transfer acceptability: CSU

Practice in the basics of French pronunciation. Emphasis on the correct use of intonation, stress, and rhythm.

FREN 197 French Topics (5-4)

Units awarded in topics courses are dependent upon the number of hours required of the student. Any combination of lecture, laboratory, or lecture/laboratory may be scheduled by the department. Refer to Class Schedule.

Note: May be taken 4 times

Transfer acceptability: CSU; UC – Credit determined by UC upon review of course syllabus.

Topics in French. See Class Schedule for specific topic offered. Course title will designate subject covered.

FREN 201 French III (5)
5 hours lecture

Prerequisite: FREN 102 or 102B three years of high school French

Transfer acceptability: CSU; UC; CAN FREN 8, FREN 201+202= CAN FREN SEQ B

This course is the third semester of French. This intermediate level course is a study of the French language and French-speaking cultures, focusing on intermediate level structures and readings of culturally relevant authentic materials. Emphasis is on developing oral, listening, reading and writing skills in order to acquire proficiency in French. Class is largely conducted in French.

FREN 202 French IV (5)
5 hours lecture

Prerequisite: FREN 201 or four years of high school French

Transfer acceptability: CSU; UC; CAN FREN 10, FREN 201+202= CAN FREN SEQ B

This course is the fourth semester of French. This intermediate level course is a study of the French language and of special topics on the culture of the French-speaking world. Emphasis is on further development of oral, listening, reading and writing skills in order to improve communicative competence in French. Class is largely conducted in French.

FREN 215 Advanced French (3)
3 hours lecture

Prerequisite: FREN 202

Transfer acceptability: CSU; UC

Continuation of the French sequence. Intensive practice in spoken French; review of essentials of French grammar and composition.

FREN 296 Special Studies in French (1,2,3)
1, 2 or 3 hours lecture

Note: May be taken 4 times for a maximum of 6 units

Transfer acceptability: CSU

Improve French language competency and cultural awareness through individualized study, lectures or cultural activities.

General Studies

Contact the Counseling Center for further information, (760) 744-1150, ext. 2179

Associate in Arts degree requirements, Certificate of Achievement requirements, and Certificate of Proficiency requirements are listed in Section 6 (green pages) of the catalog.

PROGRAMS OF STUDY

General Studies

This program is designed for students who may not be planning to transfer to a four-year college and who need to explore possibilities before committing themselves to a major program. The program may serve the purposes of students who have been out of school and who need to review and assess their academic skills and interests before deciding on a definite major program. Students planning to transfer to a four-year institution are cautioned that this curriculum may not provide for completion of the lower-division requirements for transfer to a four-year institution.

Only one course may double-count between the A.A. general education requirements and the selected emphasis. Students may receive only one General Studies major.

A.A. Degree Major

Select One Emphasis:

Emphasis in Arts and Humanities

(Select 18 units minimum)

AIS 100, 105, 135, 141, 142, 143, 144, 145, 150, 151, 152, 153, 154
AMS 100
ANTH 135, 155
ART 100, 102, 104, 105, 165, 166, 167, 168,
AS 100, 115, 116
ASL 100, 101, 110, 205, 206
CHIN 101, 101A, 101B, 102, 102A, 102B, 130, 201, 201A, 201B
CINE 100, 102, 103, 110, 120
CS 100, 105, 110, 115, 155
DNCE 100, 101, 105
DT 120
ENG 202, 203, 205, 210, 211, 215, 220, 221, 225, 226, 230, 240, 245, 250, 255, 260, 265, 270, 280, 290
ESL 101, 102, 103
FASH 130, 132
FREN 101, 101A, 101B, 102, 102A, 102B, 131, 140, 201, 202
GERM 101, 101A, 101B, 102, 102A, 102B, 201, 202
HIST 105, 106
HUM 100, 101, 150
ID 115
ITAL 101, 102, 201, 201A, 201B
JAPN 101, 101A, 101B, 102, 201, 202
JOUR 101
JS 100
LT 154
MUS 100, 101, 102, 103, 166, 167, 170, 171
PHIL 100, 101, 102, 105, 110, 115, 120, 255
PHOT 100, 125
READ 110, 120
RS 101, 105, 110, 120
RTV 100
SPAN 101, 101A, 101B, 102, 102A, 102B, 201, 201A, 201B, 202, 240, 241
SPCH 100, 105, 115, 125
TA 100, 125, 140, 141
TAG 101, 102, 201,

Emphasis in Science and Mathematics

(Select 18 units minimum*)

ANTH 100
ASTR 100, 120
BIOL 100, 101, 102, 105, 106, 107, 110, 114, 118, 130, 131, 185, 200, 201
BOT 100, 101, 110, 115
BUS 110
CHEM 100, 102, 110, 115, 210
ENGR 210
ES 100
FCS 185
GEOG 100, 110, 115, 125

GEOL 100, 110, 120, 125, 150
 MATH 56, 60, 100, 105, 110, 115, 120, 130, 135, 140, 200
 MICR 200
 OCN 100, 101, 115
 PHSC 100, 101
 PHYS 101, 102, 120, 200, 201, 230
 PSYC 205, 210
 SOC 205
 ZOO 100, 101, 115, 116, 120, 145, 200, 203, 205

*Although not listed, related lab courses may be included as part of the 18 unit minimum.

Emphasis in Social and Behavioral Sciences

(Select 18 units minimum)

AIS 101, 102, 120, 125, 130, 140, 165
 AJ 100
 ANTH 105, 110, 115, 125, 126, 130, 140, 145, 150
 AMS 110, 200
 AS 101, 102, 110, 120, 125, 126
 CHDV 100, 110, 115
 COMM 100, 105
 COUN 100, 120
 CS 101, 102, 120, 125
 ECON 100, 101, 102, 110, 115
 ENG 150
 FCS 101, 105
 GEOG 103, 105
 GERO 120
 HIST 101, 102, 107, 108, 110, 114, 130, 140, 141, 150, 151, 152
 JS 105
 LS 121, 240
 MCS 100, 110, 165, 200
 PLS 121, 240
 POSC 100, 101, 102, 110, 115
 PSYC 100, 105, 110, 115, 120, 125 130, 145
 SOC 100, 105, 110, 115, 120, 125, 145, 200
 SPCH 120, 131

Geography (GEOG)

Contact the Earth Sciences Department for further information, (760) 744-1150, ext. 2512

Associate in Arts degree requirements, Certificate of Achievement requirements, and Certificate of Proficiency requirements are listed in Section 6 (green pages) of the catalog.

PROGRAM OF STUDY

Geographic Information Systems

The Geographic Information Systems Certificate program is designed to provide entry-level training for students seeking employment in this fast-growing profession, or to upgrade the skills for those already working in the field of Geographic Information Systems. The program may be completed in one year including summer session

Associate in Arts degree requirements are listed in Section 6 of the catalog. Certificates of Achievement or Proficiency require a minimum grade of "C" in each of the required courses.

Certificate of Proficiency

Program Requirements	Units
GEOG 120 Intro to Geographic Information Sys/GIS Software	4
GEOG 132 Database Management and Data Acquisition	4
GEOG 134 GIS Applications	2
GEOG 136 Intermediate ArcGIS: GIS Analysis	2
GEOG 138 GIS Internship	2
TOTAL UNITS	14

COURSE OFFERINGS

GEOG 100 Physical Geography (3)

3 hours lecture
Transfer acceptability: CSU; UC; CAN GEOG 2
 A study of earth's physical environment with emphasis on weather, climate, landform, soils, and natural vegetation and the interrelationship between these elements within unique physical landscapes.

GEOG 100L Physical Geography Laboratory (1)

3 hours laboratory
Prerequisite: Completion of, or concurrent enrollment in, GEOG 100
Transfer acceptability: CSU; UC
 Laboratory and field investigations in weather elements, climate regions, soils, world ecosystems, and Earth's landform features. Satisfies laboratory requirement in physical sciences.

GEOG 103 World Regional Geography (3)

3 hours lecture
Transfer acceptability: CSU; UC
 Critical survey of the major world regions with specific focus on physical and cultural components, such as development, economics, population and migration, political structure, and natural resources and the physical environment.

GEOG 105 Introduction to Human Geography (3)

3 hours lecture
Transfer acceptability: CSU; UC; CAN GEOG 4
 Human elements of geography, including population distribution, general land-use patterns, religion, trade and economy, and their correlation with the physical elements. Emphasis on world cultural regions with attention paid to interdependence and globalization.

GEOG 110 Meteorology: Weather and Climate (3)

3 hours lecture
Transfer acceptability: CSU; UC
 Elements of weather including temperature, moisture, air pressure, and circulation of the atmosphere; air masses, storms, and their geographical distribution. Practical applications in the use of weather instruments, and the reading and interpretation of weather maps and climatological data.

GEOG 115 Natural Disasters and Environmental Hazards (3)

3 hours lecture
Transfer acceptability: CSU; UC
 Examination and analysis of natural disasters and environmental hazards including earthquakes, volcanic activity, landslides, atmospheric pollution, water pollution, flooding, waste disposal, global climate change, and medical geology and geography.

GEOG 120 Introduction to Geographic Information Systems and GIS Software (4)

3 hours lecture/3 hours laboratory
Recommended preparation: GEOG 100 and CSIS 105
Transfer acceptability: CSU; UC
 This course is an introduction to the mapping sciences with a primary focus on Geographic Information Systems (GIS). Course will cover the trends, history, structure, application, hardware and software, and basic operations of GIS in order to provide a foundation for the use of GIS software. Related geographic technologies to be examined include mapping, aerial and satellite imagery, and Global Positioning Systems (GPS). The lab portion of the course will provide introductory training in the use of ArcGIS software including identifying, evaluating, and inputting spatial data, developing and using raster and vector data sets, converting data from one form to another, and applying programming with GIS software.

GEOG 125 California Geology and Geography (3)

3 hours lecture
Note: Cross listed as GEOL 125
Transfer acceptability: CSU; UC
 Emphasizes the physical geographic and geologic factors that have combined to form the varied landscapes of California. Climate and vegetation patterns, as well as the various geomorphic processes will be studied.

GEOG 132 Database Management and Data Acquisition (4)

4 hours lecture

Prerequisite: Completion of, or concurrent enrollment in, GEOG 120**Transfer acceptability:** CSU

Course provides students with knowledge and practical experience in the fundamentals of database management, and the acquisition, conversion, and creation of spatial data within Geographic Information Systems (GIS). Topics to include strategic design, querying, modeling techniques, data appropriateness and accuracy, hardware and software requirements, conversion of digital data, creating digital data using digitizers, scanners and Global Positioning Systems (GPS), and utilization of remote sensing, photogrammetry, and web-based data. This course provides hands-on experience with database management and data acquisition using ArcGIS software.

GEOG 134 GIS Applications (2)

4 hours lecture/laboratory

Prerequisite: GEOG 120**Transfer acceptability:** CSU

This course provides students with knowledge and practical experience in Geographic Information Systems (GIS) applications. Students will learn the fundamentals of GIS programming, converting data for web publications, and developing GIS applications. The lab portion of this course provides hands-on experience with GIS programming using Visual Basic for Applications (VBA), data conversion using Arc Tools, and applications development using MapObjects software.

GEOG 136 Intermediate ArcGIS: GIS Analysis (2)

4 hours lecture/laboratory

Prerequisite: GEOG 120**Transfer acceptability:** CSU

This course will focus on more complex operations in using ArcGIS software. Students will gain hands-on experience in advanced querying operations, the use of ArcGIS extensions such as Spatial Analyst and 3D Analyst, transforming coordinates using Coordinate Geometry, using a GPS unit to generate and input spatial data, and the application of ArcGIS as an analytical tool in a variety of disciplines.

GEOG 138 GIS Internship (2)

6 hours laboratory

Prerequisite: GEOG 120**Transfer acceptability:** CSU

The Geographic Information Systems (GIS) internship is a directed program allowing students to apply classroom instruction to real-world GIS problem solving by working with a government or private agency. Students will be under the supervision of an instructor from the college and an advisor from the agency while working in one or more aspects of GIS operations.

GEOG 195 Regional Field Studies in Geography (1,2,3)

2, 4, or 6 hours lecture/laboratory

Note: May be taken 4 times with different content for a maximum of six units**Transfer acceptability:** CSU; UC – Credit determined by UC upon review of course syllabus.

Extended field studies of the geography of selected regions. Emphasis upon field observation and interpretation of climate, meteorology, vegetation, soils, and landforms.

GEOG 295 Directed Study in Geography (1,2,3)

3, 6, or 9 hours laboratory

Prerequisite: Approval of project or research by instructor**Note:** May be taken 4 times for a maximum of six units**Transfer acceptability:** CSU; UC – Credit determined by UC upon review of course syllabus.

Independent study for students who have demonstrated skills and/or proficiencies in geography subjects and have the initiative to work independently on projects or research outside the context of regularly scheduled classes. Students will work under the personal supervision of an instructor.

Geology (GEOL)

Contact the Earth Sciences Department for further information, (760) 744-1150, ext. 2512

Associate in Arts degree requirements, Certificate of Achievement requirements, and Certificate of Proficiency requirements are listed in Section 6 (green pages) of the catalog.

PROGRAM OF STUDY**Geology**

Provides the student with sufficient background to begin upper division coursework and will prepare the student for entry-level jobs that require geologic knowledge. The student is advised to check with the school to which he/she may wish to transfer for additional courses which may be required.

A.A. Degree Major**Program Requirements** **Units****Group One**

GEOL 100	Basic Geology	3
GEOL 100L	Basic Geology Laboratory	1
GEOL 150	Dinosaurs and Earth History	3
GEOL 150L	Dinosaurs and Earth History Laboratory	1
GEOL 195	Regional Field Studies in Geology	2

Group Two (Select at least two sets of courses listed below)**Set 1**

MATH 140 and Calculus/Analytic Geometry, First Course	5	
MATH 141	Calculus/Analytic Geometry, Second Course	4

Set 2

PHYS 120 and 121 General Physics	8
or	
PHYS 230 and 231 Principles of Physics	10

Set 3

CHEM 110	General Chemistry	3
CHEM 115	General Chemistry	3
CHEM 110L	General Chemistry Laboratory	2
CHEM 115L	General Chemistry Laboratory	2

Group Three (Select at least 8 units)

Any other courses in Group Two not taken above	8-10	
GEOL 110	General Geology: National Parks	3
GEOL/		
GEOG 125	California Geology and Geography	3
GEOG 197	Geology Topics	1-3
GEOL 195	Regional Field Studies in Geology	1,2,3
GEOL 295	Directed Study in Geology	1,2,3
ASTR 100	Principles of Astronomy	3
BIOL 100	General Biology	4
OCN 100	Oceanography	3
OCN 100L	Oceanography Laboratory	1
OCN 115	Coastal Oceanography	3
MATH 205	Calculus/Analytic Geometry, Third Course	4
MATH 206	Calculus/Differential Equations	4
PHYS 232	Principles of Physics	4
TOTAL UNITS		35-38

COURSE OFFERINGS**GEOL 100 Basic Geology** (3)

3 hours lecture

Note: Together with GEOL 150, a prerequisite to upper division courses in Geology.**Transfer acceptability:** CSU; UC; CAN GEOL 6

Principles of physical geology. Plate tectonics, rocks and minerals, weathering, mass-wasting, surface and ground water, wind, waves and currents, glaciation, mountain building, volcanoes and other igneous activity, deformation and resulting structures, earthquakes, Earth's interior, geologic time, and earth resources.

GEOL 100L Basic Geology Laboratory (1)

3 hours laboratory

Prerequisite: Completion of, or concurrent enrollment in, GEOL 100
Note: May be offered as a field laboratory; satisfies lab requirement in Physical Science

Transfer acceptability: CSU; UC

Laboratory and field identification of rocks and rock forming minerals. Study of geologic processes by means of geologic and topographic maps.

GEOL 110 General Geology: National Parks and Monuments (3)

3 hours lecture

Transfer acceptability: CSU

Geologic history and processes of formation of our natural landscape. Principles of physical and historical geology as revealed in the structure, stratigraphy, and rock types of the parks and monuments.

GEOL 120 Planets, Moons, and Comets (4)

3 hours lecture

Note: Cross listed as ASTR 120

Transfer acceptability: CSU; UC – ASTR/GEOL 120 and ASTR 205 combined: maximum credit, one course

The astronomy and geology of the solar system, observations, dynamics, relativistic ideas, including theories of formation and evolution. Comparative survey of the atmospheres, surface features, and interiors of planets and satellites. Minor objects, such as comets and asteroids, will be included.

GEOL 125 California Geology and Geography (3)

3 hours lecture

Note: Cross listed as GEOG 125

Transfer acceptability: CSU; UC

Emphasizes the physical geographic and geologic factors that have combined to form the varied landscapes of California. Climate and vegetation patterns, as well as the various geomorphic processes will be studied.

GEOL 150 Dinosaurs and Earth History (3)

3 hours lecture

Prerequisite: GEOL 100, 110 or 125

Transfer acceptability: CSU; UC

Principles of historical geology. The origin and evolution of Earth and its biosphere, incorporating plate tectonics, stratigraphy, paleontology, and geologic dating. Together with GEOL 100, a prerequisite to upper division courses in geology.

GEOL 150L Dinosaurs and Earth History Laboratory(1)

3 hours laboratory

Prerequisite: Completion of, or concurrent enrollment in, GEOL 150

Transfer acceptability: CSU; UC

Laboratory and field identification of rocks and fossils. Elements of stratigraphic methods and of vertebrate and invertebrate paleontology. Study of geologic and topographic maps in relation to earth history.

GEOL 195 Regional Field Studies in Geology (1,2,3)

2, 4, or 6 hours lecture/laboratory

Prerequisite: GEOL 100 or GEOL 110 or GEOL 125 or GEOG 100

Note: May be taken 4 times with different content for a maximum of 6 units

Transfer acceptability: CSU; UC – Credit determined by UC upon review of course syllabus.

Extended field studies of the geology of western North America over weekends and during vacation and summer sessions. Emphasis upon field observation and interpretation of rock types, landforms, and structure. Localities visited may vary from year to year.

GEOL 197 Geology Topics (1-3)

Units awarded in topics courses are dependent upon the number of hours required of the student. Any combination of lecture, laboratory, or lecture/laboratory may be scheduled by the department. Refer to Class Schedule.

Note: May be taken 3 times for a maximum of 6 units

Transfer acceptability: CSU

Topics in Geology. See Class Schedule for specific topic offered. Course title will designate subject covered

GEOL 295 Directed Study in Geology (1,2,3)

Arrange 3, 6, or 9 hours laboratory with department chairperson

Prerequisite: GEOL 150

Note: May be taken 4 times for a maximum of 6 units

Transfer acceptability: CSU – UC Credit determined by UC upon review of course syllabus.

Individual study in field, library, or laboratory for interested students.

German (GERM)

Contact the Foreign Languages Department for further information, (760) 744-1150, ext. 2390

COURSE OFFERINGS

For students who have completed foreign language course work at the high school level, and need clarification regarding placement in college level course work, contact the Counseling Center. Universities have varying policies regarding the granting of transfer credit when there is a combination of high school and college level course work.

GERM 101 German I (5)

5 hours lecture-1 hour laboratory

Transfer acceptability: CSU; UC; CAN GERM 2; GERM 101+102 =CAN GERM SEQ A

This course is the first semester of German. This elementary level course is a study of the German language and German-speaking cultures, with emphasis on the development of communicative skills and basic structures. Course combines in-class instruction and practice with self-paced study in the Foreign Language Laboratory. This beginning-level course is for students with no previous coursework in German.

GERM 101A German IA (3)

3 hours lecture

Transfer acceptability: CSU; UC – GERM 101A and 101B combined: maximum credit, 5 units; UC – both courses must be taken for transfer credit to be given

German 101A is equivalent to the first half of German 101. This elementary level course is a study of the German language and German-speaking cultures, with emphasis on the development of communicative skills and basic structures. This beginning-level course is for students with no previous coursework in German.

GERM 101B German IB (3)

3 hours lecture

Prerequisite: GERM 101A or one year of high school German

Transfer acceptability: CSU; UC – GERM 101A and 101B combined: maximum credit, 5 units; UC – both courses must be taken for transfer credit to be given

German 101B is equivalent to the second half of German 101, and is a continuation of German 101A. This elementary level course is a study of the German language and German-speaking cultures, with emphasis on the development of communicative skills and basic structures.

GERM 102 German II (5)

5 hours lecture-1 hour laboratory

Prerequisite: GERM 101 or 101B or two years of high school German

Transfer acceptability: CSU; UC; CAN GERM 4; GERM 101 + 102=CAN GERM SEQ A

This course is the second semester of German. This elementary level course is a study of the German language and German-speaking cultures, with continued emphasis on the development of communicative skills and basic structures. Course combines in-class instruction with self-paced study in the Foreign Language Laboratory.

GERM 102A German IIA (3)

3 hours lecture

Prerequisite: GERM 101 or 101B or two years of high school German

Transfer acceptability: CSU; UC – GERM 102A and 102B combined: maximum credit, 5 units; UC – both courses must be taken for transfer credit to be given

German 102A is equivalent to the first half of German 102. This elementary level course is a study of the German language and German-speaking cultures, with continued

emphasis on the development of communicative skills and basic structures

GERM 102B German IIB (3)

3 hours lecture

Prerequisite: *GERM 102A or two years of high school German*

Transfer acceptability: *CSU; UC – GERM 102A and 102B combined: maximum credit, 5 units; UC – both courses must be taken for transfer credit to be given*

German 102B is equivalent to the second half of German 102, and is a continuation of German 102A. This elementary level course is a study of the German language and German-speaking cultures, with continued emphasis on the development of communicative skills and basic structures.

GERM 201 German III (5)

5 hours lecture

Prerequisite: *GERM 102 or three years of high school German*

Transfer acceptability: *CSU; UC; CAN GERM 8; GERM 201 + 202= CAN GERM SEQ B*

This course is the third semester of German. This intermediate level course is a study of the German language and German-speaking cultures, focusing on intermediate level structures and readings of culturally relevant authentic materials. Emphasis is on developing oral, listening, reading and writing skills in order to acquire proficiency in German. Class is largely conducted in German.

GERM 202 German IV (5)

5 hours lecture

Prerequisite: *German 201 or four years of high school German*

Transfer acceptability: *CSU; UC; CAN GERM 10; GERM 8; GERM 201+ 202= CAN GERM SEQ B*

This course is the fourth semester of German. This intermediate level course is a study of the German language and of special topics on the culture of the German-speaking world. Emphasis is on further development of cross-cultural awareness, as well as, the development of oral, listening, reading and writing skills in order to improve communicative competence in German. Class is largely conducted in German.

Graphic Communications (GC)

Contact the Graphic Communications Department for further information, (760) 744-1150, ext. 2452. For transfer information, consult a Palomar College counselor.

Associate in Arts degree requirements, Certificate of Achievement requirements, and Certificate of Proficiency requirements are listed in Section 6 (green pages) of the catalog.

PROGRAMS OF STUDY

Digital Animation, Compositing, and Music

This program is directed at the digital design and implementation of 3D animations, graphic compositing and music.

Certificate of Proficiency

Program Requirements	Units
(5 courses minimum required, 15 units total)	
ARTI 246 Digital 3D Design and Modeling	3
ARTI 247 Digital 3D Design and Animation	3
GC 204 Motion Graphics for Multimedia-A	3
GC 213 Motion Graphics Production and Compositing	3
MUS 180 Computer Music I	3
MUS 184 Electronic Ensemble	3
TOTAL UNITS	15

This program is also offered in Art and Music.

Digital Arts

Specific skills for the Digital Arts certificate include graphic design methodologies, including the design process, output production and presentation. The certificate prepares students to gain competence with the industry standard for digital imaging: Adobe Photoshop. Color, resolution, input and output, production process, photography and creativity are core competencies. Upon completion of the certificate, the student may find a job as a production artist, illustrator, graphic artist, or in digital imaging.

Certificate of Proficiency

Program Requirements	Units
ARTD 150 Digital Concepts/Techniques in Art	3
GC/RGC 140 Digital Imaging/Photoshop I	3
GC 141 Digital Imaging/Photoshop II	3
GC 142 Digital Imaging/Photoshop III	3
PHOT 230 Digital Darkroom	3.5
TOTAL UNITS	15.5

Digital Imaging

Prepares students for entry-level position as creator and processor of digital imagery. Layout and creative position in multimedia, internet publishing, digital video, publishing, photography, and motion graphics.

Digital imaging is one of the basic requirements for all electronic communication delivery systems.

A.A. Degree Major or Certificate of Achievement

Program Requirements	Units
GC/RGC 140 Digital Imaging/Photoshop I	3
GC 141 or Digital Imaging/Photoshop II	3
GG 147 and Intermediate Photoshop – Part I	1.5
GC 148 Intermediate Photoshop – Part II	1.5
GC 142 Digital Imaging/Photoshop III	3
GC 204 Motion Graphics for Multimedia-A	3
GC 206 Web Multimedia	3
GC 207 Motion Graphics for Multimedia-B	3
GC 220 Introduction to Painter	3

PHOT 100 Elementary Photography	3.5
PHOT 230 Digital Darkroom	3.5
TOTAL UNITS	28

The Digital Imaging program is also offered in Photography.

Digital Media

Digital Media encompasses digital video editing in both analog and digital media. The certificate prepares students for employment in the film, video, Internet, and television industries. Major growth in this industry is anticipated as Internet and television merge into one medium.

Certificate of Proficiency

Program Requirements	Units
CINE/	
RTV 125 or Beg Film/Video Field Production	
GC/RGC 140 Digital Imaging/Photoshop I	3
RTV 270 Computer Video Editing	3
GC 204 Motion Graphics for Multimedia-A	3
GC 207 Motion Graphics for Multimedia-B	3
RTV 275 Avid Editing for Television & Film	3
TOTAL UNITS	15

The Digital Media program is also offered in Radio and Television.

Digital Prepress Operator

Prepares students to pursue entry-level employment in the printing industry in prepress, press, and finishing processes.

Certificate of Proficiency

Program Requirements	Units
GC 180 Digital Prepress and Press I	3
GC 182 Digital Prepress and Press II	3
GC 185 Advanced Offset Press	3
TOTAL UNITS	9

Digital Publishing

Designed to meet the increasing needs of organizations and businesses that distribute publications in both electronic and print media. Specific skills for the Digital Publishing certificate include typography, visual acuity, graphic design and layout. The certificate prepares students to gain competence with the basic applications used in industry for digital graphics and electronic publishing. Teamwork, problem solving, workflow and production process, communication and creativity are core competencies. Upon completion of the certificate, the student may find a job as a production artist, illustrator, graphic artist, graphic designer, or in digital imaging.

Certificate of Proficiency

Program Requirements	Units
GC/RGC 140 Digital Imaging/Photoshop I	3
GC 141 Digital Imaging/Photoshop II	3
GC/RGC 149 Page Layout and Design I	3
GC/RGC 152 Desktop Publishing with Illustrator	3
GC/RGC 203 Interactive Publishing with PDF's	3
TOTAL UNITS	15

Digital Video

Digital Video encompasses editing and design in using both digital and analog media. This degree prepares students for employment in the film, video, Internet, and television industries.

A.A. Degree Major or Certificate of Achievement

Program Requirements	Units
GC/RGC 140 Digital Imaging/PhotoShop I	3
GC 165 Digital Video Design	3
GC 204 Motion Graphics for Multimedia-A	3

GC 207	Motion Graphics for Multimedia-B	3
RTV 125	Beg Film/Video Field Production	3
RTV 230	Digital Audio with Pro Tools	3
RTV 270	Digital Video Editing	3
RTV 275	Avid Editing for Television and Film	3

Electives (2 courses minimum required, 6 units total)		Units
ARTI 246	Digital 3D Design and Modeling	3
ARTI 247	Digital 3D Design and Animation	3
GC 142	Digital Imaging/PhotoShop III	3
GC/RGC 152	Desktop Publishing with Illustrator	3
GC/RGC 200	Introduction to Multimedia	3
GC 201	Intermediate Multimedia	3
GC 206	Web Multimedia	3
GC 208	Web Motion Graphics I	3
GC 209	Web Motion Graphics II	3
RTV 50	Basic Television Acting	1
RTV 110	Broadcast Writing and Producing	3
ENTT/RTV 120	Basic Television Production	3
RTV 150	Performance and Acting for Broadcast and Film	3
RTV 170	Introduction to Video Editing	3
RTV 225	Intermediate Film and Video Field Production	3
DT 180	3D Studio Max-Intro to 3D Modeling/Animation	3
TOTAL UNITS		30

The Digital Video program is also offered in Radio and Television.

E- Commerce Design

Provides students with a basis for understanding and participating in the design and production of e-business and e-commerce. Specific skills for the E-Commerce Design certificate include Web production, site accessibility, shopping carts, site and data management, security, privacy, and commercial site promotion. Teamwork, problem solving, production process, communication and creativity are core competencies. Upon completion of the certificate, the student may find a job as a graphic designer, Web author, or graphical user interface designer.

Certificate of Proficiency

Program Requirements		Units
BUS 157	E-Commerce	3
GC 212	Web Page Layout II	3
GC 215 or	Designing for Web Standards I	
GC 216	Web Data Base Design I	3
GC 217	Online Store Design I	3
GC 218	Online Store Design II	3
GC 232	Web Accessibility Design	1
GC 290 or	Copyright for Graphic Design and Web Developers	
GC 291	Contracts for Graphic Design and Web Developers	1
TOTAL UNITS		17

Electronic Publisher

Electronic publishing encompasses computer-based document layout, composition, typography, illustration, scanning, image modification, as well as reproduction and distribution. It has revolutionized print communications. There will be a major growth in this field in the future.

Employment opportunities will be with commercial printers, corporate electronic publishers, small print shops, service bureaus, direct mail companies, magazine publishers, advertising, typographers and compositors, freelance publications, newspaper publishers, marketing and ad agencies, and in-plant printers.

Certificate of Proficiency

Required Courses		Units
GC 105	Layout for Offset Lithography	3
GC/RGC 140	Digital Imaging/Photoshop I	3
GC/RGC 149	Page Layout and Design I	3
TOTAL UNITS		9

Electronic Publishing

Electronic publishing—which encompasses computer-based document layout, composition, typesetting, illustration, scanning, image modification, reproduction, and distribution—has revolutionized print communications. There will be major growth in this field in the future. Employment opportunities will be with commercial printers, corporate electronic publishers, small printers, service bureaus, quick printers, direct mail companies, magazine publishers, advertising, typographers and compositors, freelance publications, newspaper publishers, inplant printers, and other still growing applications.

A.A. Degree Major or Certificate of Achievement

Program Requirements		Units
GC 100	Graphic Communications	3
GC 105	Layout for Offset Lithography	3
GC/RGC 140	Digital Imaging/Photoshop I	3
GC/RGC 149	Page Layout and Design I	3
GC/RGC 152	Desktop Publishing with Illustrator	3
GC 180	Digital Prepress and Press I	3
GC/RGC 260	Portfolio Development and Presentation	3
ARTD 100	Graphic Design I	3
ARTD 210	Typography Design	3

Electives (Select one course)

CE 100*	Cooperative Education	1,2,3,4
CSIS 105	Computer Concepts/Microcomputer	3
DT/RDT 125	AutoCAD Introduction to Computer Aided Drafting	3
ENG 100	English Composition	4
GC 142	Digital Imaging/Photoshop III	3
GC 157	Advanced Illustrator	3
GC 182	Digital Prepress and Press II	3
GC 185	Advanced Offset Press	3
GC/RGC 202	Web Page Layout I	3
GC/RGC 203	Interactive Publishing with PDF's	3
GC 205	Graphics Estimating and Pricing	3
GC/RGC 249	Page Layout and Design II	3
JOUR 105	Newspaper Production	3
PHOT 100	Elementary Photography	3,5
TOTAL UNITS		28-31

*Cooperative Education must be related to this major.

Graphic Communications Management

Prepares students to pursue employment in the printing industry as supervisors, foremen, production managers, estimators, salespersons, and plant operators.

A.A. Degree Major or Certificate of Achievement

Program Requirements		Units
GC 105	Layout for Offset Lithography	3
GC/RGC 140	Digital Imaging/Photoshop I	3
GC/RGC 149	Page Layout and Design I	3
GC/RGC 152	Desktop Publishing with Illustrator	3
GC 180	Digital Prepress and Press I	3
GC 182	Digital Prepress and Press II	3
GC 205	Graphics Estimating and Pricing	3
CSIS 105	Computer Concepts/Microcomputer	3

Electives (Select two courses)

BMGT 115	Organizational Theory and Design	3
GC 100	Graphic Communications	3
GC 142	Digital Imaging/Photoshop III	3
GC 185	Advanced Offset Press	3
GC/RGC 249	Page Layout and Design II	3
BUS 105	Bookkeeping Fundamentals	3
BUS 115	Business Law	3
BUS 125	Business English	3
ENG 100	English Composition	4
BUS 140	Selling for Business	3
BUS 155	Marketing	3
BMGT 105	Small Business Management	3
CE 100*	Cooperative Education	1,2,3,4
TOTAL UNITS		28 - 32

* Cooperative Education must be related to this major.

Graphic Communications Production

Prepares students to pursue employment in the printing industry in prepress, press, and finishing processes.

A.A. Degree Major or Certificate of Achievement**Requirements**

	Units
GC 100 Graphic Communications	3
GC 105 Layout for Offset Lithography	3
GC/RGC 140 Digital Imaging/Photoshop I	3
GC/RGC 149 Page Layout and Design I	3
GC 180 Digital Prepress and Press I	3
GC 182 Digital Prepress and Press II	3
GC 185 Advanced Offset Press	3
GC 205 Graphics Estimating and Pricing	3

Electives (Select two courses)

ART 104 Design and Composition	3
ARTD 100 Graphic Design I	3
BUS 125 Business English	3
CE 100* Cooperative Education	1,2,3,4
CHEM 100 Fundamentals of Chemistry	4
CSIS 105 Computer Concepts/ Microcomputer	3
ENG 100 English Composition	4
GC 142 Digital Imaging/Photoshop III	3
JOUR 105 Newspaper Production	3
JOUR 205 Advanced Newspaper Production	3
PHOT 100 Elementary Photography	3.5
TOTAL UNITS	28 – 32

* Cooperative Education must be related to this major.

Interactive Media Design

Prepares students with specific skills necessary for employment in the field of multimedia design and production. Students may choose an emphasis in either 3D modeling and animation, which emphasizes production skills and authoring systems, or multimedia design, which emphasizes content development and visual design of multimedia productions. Both areas of emphasis collaborate on an actual multimedia production.

A.A. Degree Major or Certificate of Achievement***Emphasis in 3D Modeling and Animation*****Program Requirements**

	Units
ARTI 100 Introduction to Illustration	3
ARTI 246 Digital 3D Design and Modeling	3
ARTI 247 Digital 3D Design and Animation	3
DT 180 3D Studio Max-Intro to 3D Modeling/Animation	3
DT 182 3D Studio Max-Adv 3D Modeling/Animation	3
GC/RGC 140 Digital Imaging/Photoshop I	3
GC 204 Motion Graphics for Multimedia-A	3

Electives (Select two courses)

ART 241 Computer Graphics	3
ART 248 Character Animation	1.5
ARTD 150 Digital Concepts/Techniques in Art	3
ARTD 220 Motion Design	3
DT/RDT 128 SolidWorks Intro 3D Design and Presentation	3
DT 184 Real Time 3D Technical/Game Animation	2
GC 142 Digital Imaging/Photoshop III	3
GC 201 Intermediate Multimedia	3
ENTT/RTV 120 Basic Television Production	3
RTV 124 Staging and Lighting for Television	3
TOTAL UNITS	24.5 – 27

Emphasis in Multimedia Design**Program Requirements**

	Units
ARTD 100 Graphic Design I	3
ARTD 220 Motion Design	3
ARTI 247 Digital 3D Design and Animation	3
GC 142 Digital Imaging/Photoshop III	3
GC/RGC 200 Introduction to Multimedia	3
GC 201 Intermediate Multimedia	3
GC 204 Motion Graphics/Multimedia-A	3

Electives (Select two courses)

ARTD 150 Digital Concepts and Techniques in Art	3
ARTI 246 Digital 3D Design/Modeling	3
DT 180 3D Studio Max-Intro to 3D Modeling/Animation	3
DT 182 3D Studio Max-Adv 3D Modeling/Animation	3
GC 100 Graphic Communications	3
GC/RGC 140 Digital Imaging/Photoshop I	3
GC/RGC 152 Desktop Publishing with Illustrator	3
GC/ART 197 Multimedia Project	3
GC/RGC 202 Web Page Layout I	3
GC 206 Web Multimedia	3
MUS 180 Computer Music I	3
RTV 170 Introduction to Video Editing	3
TOTAL UNITS	27

The Interactive Media Design program is also offered in Art and Drafting Technology.

Interactive Web Multimedia and Audio

This program is directed at interactive methods of Web production that include creation of audio for the internet. Students will learn techniques and software to create animated and interactive Web sites and audio production for the Internet.

A.A. Degree Major or Certificate of Achievement***Required Courses**

	Units
GC 144 Web Graphics	3
GC 200 Introduction to Multimedia	3
GC/RGC 202 Web Page Layout I	3
GC 206 Web Multimedia	3
GC 208 Web Motion Graphics I	3
GC 209 Web Motion Graphics II	3
GC 223 Audio for the Internet	3
GC 229 Interactive Streaming Media	3

Electives (select 2 courses)

GC/RGC 140 Digital Imaging / PhotoShop I	3
GC 141 Digital Imaging / PhotoShop II	3
GC 142 Digital Imaging / PhotoShop III	3
GC 165 Digital Video Design	3
GC 204 Motion Graphics for Multimedia-A	3
GC 207 Motion Graphics for Multimedia-B	3
GC 211 Web Motion Graphics III	3
GC 212 Web Page Layout II	3
GC 215 Designing for Web Standards I	3
GC 219 Designing for Web Standards II	3
GC 236 Flash Game Design	3
MUS180 Computer Music I	3
RTV230 Digital Audio with Pro Tools	3
TOTAL UNITS	30

*Interactive Web Multimedia and Audio A.A. Degree Major/Certificate of Achievement pending approval by Chancellor's Office at time of catalog publication.

Internet

As the vast web of global and local information networks grow, several skills and forms of literacy are becoming essential for anyone who wants to obtain the full benefits of the Communications Age.

An individual's ability to capitalize on the opportunities offered by interactive communications requires mastery of these information and communication proveniences:

- **Navigational skills** - The ability to move smoothly among arrays of autonomous and globally interconnected information, contacts, forums, and discussion groups in order to locate and connect to information and expertise from relevant sources.
- **Information literacy** - An understanding of which information is most useful, relevant, and reliable, as well as the ability to analyze, distill, integrate, compose, and classify information to create knowledge.

- **Distribution skills** - Frameworks for rethinking methods of packaging, presenting, providing access, and disseminating information and knowledge in this new medium.
- **Communications literacy** - Integrating new forms of information, knowledge, and message development into evolving patterns of organizational and interpersonal communication.

This certificate offers preparation skills for the above areas of emphasis involving the Internet.

A.A. Degree Major or Certificate of Achievement

Program Requirements		Units
BUS 157	E-Commerce	3
CSIS/ RCSIS 137	Web Site Development/HTML	2
GC/ RGC 202 or	Web Page Layout I	3
GC 230 and	Web Page Layout I – Part I	1.5
GC 231	Web Page Layout I – Part II	1.5
LT 154	Information for Life Long Learning	3
	Emphasis Requirements	14-18
TOTAL UNITS		25-29

Emphasis in Business Education

Emphasis Requirements		Units
BMGT 105	Small Business Management	3
BUS 140	Selling for Business	3
BUS 150	Advertising	3
BUS 155	Marketing	3
BUS 170	Word Processing for Business – Basic	1
BUS 171	Word Processing for Business - Advanced	1

Emphasis in Graphic Communication

Emphasis Requirements		Units
GC 144	Web Graphics	3
GC/RGC 203	Interactive Publishing with PDF's	3
GC 206	Web Multimedia	3
GC 212	Web Page Layout II	3
GC 215	Designing for Web Standards I	3
GC 217 or	Online Store Design I	3
GC 229	Interactive Streaming Media	3

The Internet program is also offered in Business Education.

Internet Publisher

Prepares students with specific skills necessary for entry-level employment in the field of multimedia design and production. Topics in multimedia authoring which includes production skills and authoring systems, multimedia design, content development and visual design of multimedia productions.

Certificate of Proficiency

Program Requirements		Units
GC 144	Web Graphics	3
GC/RGC 202	Web Page Layout I	3
GC 206	Web Multimedia	3
GC 215	Designing for Web Standards I	3
TOTAL UNITS		12

New Media Compositing, Authoring and Distribution

This program is directed at alternative methods of digital video compilation and release. Students will learn techniques and software to compile and composite digital video for release on CD ROM, DVD, and the Internet.

A.A. Degree Major or Certificate of Achievement

Program Requirements		Units
GC 142	Digital Imaging/PhotoShop III	3
GC 165	Digital Video Design	3
GC/RGC 200	Introduction to Multimedia	3
GC 201	Intermediate Multimedia	3
GC 204	Motion Graphics for Multimedia - A	3
GC 207	Motion Graphics for Multimedia - B	3
GC 213	Motion Graphics Production and Compositing	3
GC 229	Interactive Streaming Media	3

Electives (2 course minimum required, 6 units total)

ARTD 220	Motion Design	3
ARTI 246	Digital 3-D Design and Modeling	3
ARTI 247	Digital 3D Design and Animation	3
GC 101	History of Graphic Communications	3
GC/RGC 140	Digital Imaging/PhotoShop I	3
GC 141	Digital Imaging/PhotoShop II	3
GC/RGC 152	Desktop Publishing with Illustrator	3
GC/RGC 202	Web Page Layout I	3
GC 212	Web page Layout II	3
GC 206	Web Multimedia	3
GC 208	Web Motion Graphics I	3
GC 209	Web Motion Graphics II	3
GC 211	Web Motion Graphics III	3
GC 215	Designing for Web Standards I	3
GC 219	Designing for Web Standards II	3
GC 223	Audio for the Internet	3
GC 236	Flash Game Design	3
GC 295	Directed Studies in Graphic Communications	3
GC 296	Special Projects	3
RTV 170	Introduction to Video Editing	3
RTV 270	Digital Video Editing	3
RTV 230	Digital Audio with Pro Tools	3
RTV 275	Avid Editing for Television and Film	3
TOTAL UNITS		30

Screen Printer

Recent advances in technology have allowed screen printing to compete on a large scale with other printing processes. Productive, challenging careers are growing in the screen printing field at a steady rate. Palomar's screen printing process classes prepare students for duties in project planning, copy preparation, camera operation, screen preparation, electronic prepress, stencil making, screen printing, and sales.

Certificate of Proficiency

Program Requirements		Units
GC/RGC 170	Screen Printing	3
GC/RGC 172	Textile Screen Printing	3
GC 174	Commercial Screen Printing	3
TOTAL UNITS		9

Screen Printing

Prepares students for entry-level positions in project planning, copy preparation, camera operation, screen preparation, stencil making, printing, and sales.

Due to recent advances in screen printing technology, screen printing is becoming very commercialized. These breakthroughs have allowed screen printing to compete on a large scale with other processes. Productive, challenging careers are growing in the screen printing field at a steady rate.

A.A. Degree Major or Certificate of Achievement

Program Requirements		Units
GC/RGC 140	Digital Imaging/Photoshop I	3
GC/RGC 152	Desktop Publishing with Illustrator	3
GC/RGC 170	Screen Printing	3
GC/RGC 172	Textile Screen Printing	3
GC 174	Commercial Screen Printing	3

GC 180	Digital Prepress and Press I	3
GC 205	Graphics Estimating and Pricing	3
BMGT 105	Small Business Management	3

Electives (Select one course)

CE 100	Cooperative Education	1,2,3,4
GC 142	Digital Imaging/Photoshop III	3
GC 157	Advanced Illustrator	3
GC 182	Digital Prepress and Press II	3

TOTAL UNITS 25 - 28

Video Game Artist

This certificate program introduces students to the video game industry, game design, and the creation of both 2D and 3D artwork for video games.

Certificate of Proficiency

Program Requirements	Units
CSIS 241 Overview of the Video Game Industry	4
CSIS 242 Game Design	4
ART 241 or Computer Graphics	
GC/RGC 140 or Digital Imaging/Photoshop I	
GC 141 or Digital Imaging/Photoshop II	
GC 142 Digital Imaging/Photoshop III	3
ARTI 246 or Digital 3D Design and Modeling	
DT 180 or 3D Studio Max-Intro to 3D Modeling/Animation	
DT 182 3D Studio Max-Adv 3D Modeling/Animation	3
ARTD 220 or Motion Design	
ARTI 247 or Digital 3D Design and Animation	
DT 184 or Real Time 3D Technical/Game Animation	
GC 204 Motion Graphics for Multimedia-A	2,3
TOTAL UNITS	16-17

The Video Game Artist program is also offered in Computer Science and Information Systems.

Web Data Base Design

The Web site developer must present the complexity and volume of information so that the site's visitor may make decisions quickly and accurately. Data-driven dynamic pages are also interactive, allowing the visitor to choose the information that they would like to see. The increasingly sophisticated site development for online stores and multimedia, for example, requires a range of diverse and multifaceted skills from database design, computer graphics, Web design, site design and architecture, graphical user interface design, to cross-platform competence. The World Wide Web, as a graphical user interface, offers new career opportunities to graphic designers who have the skills to maintain sites that contain large amounts of data that changes frequently. The ability to package, share, and manage data to consumers across the Internet is in high demand. The Web Data Base Design certificate prepares for employment in dynamic business environments that need large-scale as well as smaller sites.

Certificate of Proficiency

Program Requirements	Units
GC 212 Web Page Layout II	3
GC 215 Designing for Web Standards I	3
GC 216 Web Data Base Design I	3
GC 217 or Online Store Design I	
GC 218 Online Store Design II	3
GC 226 Web Data Base Design II	3

Elective Courses (Select one course)

BUS 180	Access for Business	1
CSIS 173	Designing Microsoft SQL Server Database	2
CSIS 268	Active Server Pages	3
GC 154	Preparing Web Graphics	1
GC 164	Interactive Web Graphics	1
GC 290	Copyright for Graphic Designers/Web Developers	1
GC 291	Contracts for Graphic Designers/Web Developers	1
GC 292	Legal Issues Graphic Designers/Web Developers	3
TOTAL UNITS		16-18

Web Graphics

Designed to meet the increasing needs of organizations and businesses that publish on the World Wide Web. Specific skills for the Web Graphics certificate include typography, visual acuity, graphic design, Web color, and file formats. The certificate prepares students to gain competence with the basic applications used in industry for digital graphics and Web publishing. Teamwork, problem solving, workflow and production process, communication and creativity are core competencies. Upon completion of the certificate, the student may find a job as a Web production artist, graphic production assistant, or graphic designer.

Certificate of Proficiency

Program Requirements	Units
GC 144 Web Graphics	3
GC 154 or Preparing Web Graphics	
GC 164 Interactive Web Graphics	1
GC/RGC 202 Web Page Layout I	3
GC 206 Web Multimedia	3
GC 208 Web Motion Graphics I	3
GC 212 Web Page Layout II	3
GC 232 Web Accessibility Design	1
TOTAL UNITS	17

Web Motion Graphics

Prepares students with specific skills necessary for employment in the field of Interactive Web multimedia design and production. A high level of skill and time are needed to create professional motion graphics. Specific skills include an attention to detail, knowledge of various illustration and animation software, technical and analytical problem solving, and visual acuity. Teamwork, creativity, communication, understanding of the production process and interactivity are core competencies. Typical job opportunities are in entertainment, business, corporate, and educational industries.

Certificate of Proficiency

Program Requirements	Units
GC 164 Interactive Web Graphics	1
GC/RGC 202 Web Page Layout I	3
GC 206 Web Multimedia	3
GC 208 Web Motion Graphics I	3
GC 209 Web Motion Graphics II	3
GC 229 Interactive Streaming Media	3
TOTAL UNITS	16

COURSE OFFERINGS**GC 100 Graphic Communications (3)**

3 hours lecture

Transfer acceptability: CSU

Explores the history and theory of effective mass communication from prehistoric cave art, to invention of the printing press, and modern graphic communication techniques using computers and the Internet. The class examines communication models revolving around imagery, type, delivery systems, and technology. The students will be able to understand and establish the effects of a clear visual message. Learning modules include slideshow, field trips, guest speakers, discussion, lectures and hands-on application with computers and the Internet to promote an understanding of graphic communications and visual messages and their impact on society.

GC 101 History of Graphic Communications (3)

Three hours lecture

Transfer Acceptability: CSU

This course focuses on the history and evolution of graphic communications from prehistoric pictographs to present day graphic design. Topics include the invention of writing and the creation of alphabets. Other topics include world influences on print and aesthetic design, and an understanding of the stylistic, social, political, economic, and historical events as related to communication and graphic design. The emphasis is on art movements, schools of thought, influential individuals, and technology as they interrelate with the history of graphic arts. Historical topics are applied to photography, print media graphics and motion graphics. Field trips to

museums and guest speakers will be integrated into the topics as appropriate.

GC 105 Layout for Offset Lithography (3)

6 hours lecture/laboratory
Note: May be taken 4 times

Transfer acceptability: CSU

Planning and layout of visual communication for offset lithography. Basic computer applications for layout of business communication set or eight page booklet using type, color, images, paper, and the lithographical production processes to complete the package. Emphasis is on practical application.

GC 132 Desktop Publishing with Illustrator – Part I (1.5)

3 hours lecture/laboratory
Note: May be taken 4 times

Introduction to electronic layout on the microcomputer. Illustrator will help the student generate new images or convert bitmapped images in PostScript. Quality levels needed for electronic output will be evaluated.

GC 133 Desktop Publishing with Illustrator – Part II (1.5)

3 hours lecture/laboratory
Recommended preparation: GC 132
Note: May be taken 4 times

Introduction to electronic layout on the microcomputer. Illustrator will help the student generate new images or convert bitmapped images in PostScript. Quality levels needed for electronic output will be evaluated. Topics included: printing, separations, working with graphics from multiple applications with Illustrator, and production of Web graphics.

GC 140 Digital Imaging/Photoshop I (3)

6 hours lecture/laboratory
Note: Cross listed as R GC 140; may be taken 4 times
Transfer acceptability: CSU

The study of digital imaging and editing with Adobe Photoshop for visual, pictorial and graphic use in all media. Emphasis on creating and enhancing imagery for effective use in mass communication mediums.

GC 141 Digital Imaging/Photoshop II (3)

6 hours lecture/laboratory
Transfer acceptability: CSU

The concepts of intermediate digital imaging with Adobe Photoshop for visual, pictorial and graphic use in all media. Effective image creation for motion graphics, publications and internet for effective visual communications.

GC 142 Digital Imaging/Photoshop III (3)

6 hours lecture/laboratory
Recommended preparation: GC/R GC 140
Transfer acceptability: CSU

The concepts of advanced digital imaging with Adobe Photoshop for creating and preparing images for electronic distribution. Advanced methods of editing in all venues of digital media for visual communications.

GC 144 Web Graphics (3)

6 hours lecture/laboratory
Recommended preparation: GC/R GC 140 and GC/R GC 202
Note: May be taken 4 times
Transfer acceptability: CSU

Design and production of Web page graphics using current graphics editing applications, for inclusion in Web pages and other display media. Mechanics for image production as well as methodologies for image size reduction, scanning of existing images, GIF animation and JavaScript rollovers. GIF and JPEG file formats, image resolution, color depth. Elements of a Graphical User Interface.

GC 145 Photoshop Digital Imaging – Part I (1.5)

3 hours lecture/laboratory
Note: May be taken 4 times

Introduction to digital imaging systems with Photoshop for Graphic Communications and Multimedia. Emphasis on basic and intermediate features and functions of Photoshop with a primary focus on preparing and using optimized images for the web. Special projects facilitate the needs of more advanced students.

GC 146 Photoshop Digital Imaging – Part II (1.5)

3 hours lecture/laboratory
Recommended preparation: GC 145
Note: For intermediate levels; may be taken 4 times.

A hands-on introduction to digital imaging systems with Photoshop for Graphic Communications and Multimedia. Emphasis on basic and intermediate features and functions of Photoshop with a primary focus on preparing and using optimized images for the web. Special projects facilitate the needs of more advanced students.

GC 147 Intermediate Photoshop – Part I (1.5)

3 hours lecture/laboratory
Recommended preparation: GC/R GC 140, or GC 145 or 146
Note: May be taken 4 times

This Intermediate Photoshop class is being created to allow the existing class to be taught on Camp Pendleton. This is an intermediate level of Photoshop focusing on digital art and graphics with an emphasis on website development. A working knowledge of Photoshop is suggested as well as a basic knowledge of using computers (Mac, PC). Students will produce digitally manipulated art and website design to be used print and/or digital portfolio presentations.

GC 148 Intermediate Photoshop – Part II (1.5)

3 hours lecture/laboratory
Prerequisite: GC 147
Recommended preparation: GC/R GC 140, or GC 145 or 146
Note: May be taken 4 times

This is an intermediate level of Photoshop focusing on digital art and graphics with an emphasis on website development. A working knowledge of Photoshop is suggested as well as a basic knowledge of using computers (Mac, PC). Students will produce digitally manipulated art and website design to be used print and/or digital portfolio presentations.

GC 149 Page Layout and Design I (3)

6 hours lecture/laboratory
Note: Cross listed as R GC 149; may be taken 4 times

Introduction to electronic document design and page layout, electronic composition, text and graphics entry with computers. Students will create a variety of projects including but not limited to: brochures, flyers, and newsletters.

GC 152 Desktop Publishing with Illustrator (3)

6 hours lecture/laboratory
Note: Cross listed as RGC 152; may be taken 4 times
Transfer acceptability: CSU

Introduction to electronic layout on the microcomputer. Illustrator will help the student generate new images or convert bitmapped images into PostScript. Quality levels needed for electronic output will be evaluated.

GC 154 Preparing Web Graphics (1)

2 hours lecture/laboratory
Recommended Preparation: GC/R GC 140 and/or GC/R GC 152 and/or GC/R GC 202
Note: May be taken 4 times
Transfer acceptability: CSU

Hands-on course to produce optimized graphics for the Web with applications such as Adobe's ImageReady or Macromedia's Fireworks, cross-platform production environments: edit bitmap and vector graphics; format text; select Web-safe color; simple animation; generate HTML and JavaScript automatically; integrate with other Web production applications.

GC 157 Advanced Illustrator (3)

6 hours lecture/laboratory
Prerequisite: GC/RGC 152
Note: May be taken 4 times
Transfer acceptability: CSU

Advanced concepts and methods of Illustrator and its use in graphic illustrations and problem solving. Software capabilities for use in preparing computer files for publishing to digital and electronic delivery systems.

GC 164 Interactive Web Graphics (1)

2 hours lecture/laboratory
Recommended preparation: GC/R GC 140 and/or GC/R GC 152 and/or GC 154 and/or GC/R GC 202
Note: May be taken 4 times
Transfer acceptability: CSU

Hands-on course to produce optimized graphics for the Web with applications such as Adobe's ImageReady or Macromedia's Fireworks, cross-platform production environments: design complex buttons and navigation bars, image maps, slicing complex graphics, animation, batch processing, and scripting; generate HTML and JavaScript automatically; integrate with other Web Production applications.

GC 165 Digital Video Design (3)

6 hours lecture/laboratory

Recommended preparation: GC/R GC 140

Note: May be taken 3 times

Explores project planning, setup, editing and output of Digital Video. Incorporates sound, graphics, 2D animation and text for full-screen, web, CD-ROM, or DVD playback. Projects and assignments utilize transitions, superimposing, transparency and keying along with video, audio and other special effects.

GC 170 Screen Printing (3)

6 hours lecture/laboratory

Note: Cross listed as RGC 170; may be taken 4 times

Transfer acceptability: CSU

Screen printing theory and application of layout and image preparation, computer applications, stencil methods, process camera and basic screen printing techniques. Practical application is stressed.

GC 172 Textile Screen Printing (3)

6 hours lecture/laboratory

Note: Cross listed as R GC 172; may be taken 3 times

Transfer acceptability: CSU

Theory and applications of screen printing for textile use. Copy preparation for multicolor reproduction, color matching, ink selection, and mesh and stencils for material compatibility.

GC 174 Commercial Screen Printing (3)

6 hours lecture/laboratory

Note: May be taken 4 times

Transfer acceptability: CSU

Commercial screen printing applications. Preparation of mechanicals using close registration and printing on standard and unusual surfaces. Color, mechanical process, and quality control standards in screen printing.

GC 180 Digital Prepress and Press I (3)

6 hours lecture/laboratory

Note: May be taken 4 times

Transfer acceptability: CSU

Practical applications of electronic prepress and introduction to offset press operation. The theory and practical applications of conventional and digital prepress including job layout, page impositions, templates and press signatures, plus small format press operation to include control and setup of feeder and delivery units, press controls, direct to plate technology, ink and chemistry as related to the offset press.

GC 182 Digital Prepress and Press II (3)

6 hours lecture/laboratory

Note: May be taken 4 times

Transfer acceptability: CSU

Set up and control of printing on small offset presses. Examines offset chemistry, kinds of offset plates, inks, and offset press problems. Theory and practical applications of conventional and digital prepress.

GC 185 Advanced Offset Press (3)

6 hours lecture/laboratory

Recommended preparation: GC 182

Note: May be taken 4 times

Transfer acceptability: CSU

Advanced work on larger format offset equipment focusing on sheet control, register, ink and water control, and digital imposition.

GC 197A Topics in Graphic Communications (.5-4)

Units awarded in topics courses are dependent upon the number of hours required of the student. Any combination of lecture, laboratory, or lecture/laboratory may be scheduled by the department. Refer to Class Schedule.

Note: Cross listed as R GC 197A; may be taken 3 times

Transfer acceptability: CSU

Short term or special topic course, lecture or laboratory courses in various topics in Graphic Communications.

GC 197B Graphic Communications Topics in Digital Imaging (.5-5)

Units awarded in topics courses are dependent upon the number of hours required of the student. Any combination of lecture, laboratory, or lecture/laboratory may be scheduled by the department. Refer to Class Schedule.

Note: May be taken 4 times

Transfer acceptability: CSU

Graphic Communications topics in digital imaging. See Class Schedule for specific topic offered. Course title will designate subject covered.

GC 197C Graphic Communications Topics in Electronic Publishing (.5-5)

Units awarded in topics courses are dependent upon the number of hours required of the student. Any combination of lecture, laboratory, or lecture/laboratory may be scheduled by the department. Refer to Class Schedule.

Note: May be taken 4 times

Transfer acceptability: CSU

Graphic Communications topics in electronic publishing. See Class Schedule for specific topic offered. Course title will designate subject covered.

GC 197D Graphic Communications Topics in Internet (.5-5)

Units awarded in topics courses are dependent upon the number of hours required of the student. Any combination of lecture, laboratory, or lecture/laboratory may be scheduled by the department. Refer to Class Schedule.

Note: May be taken 4 times

Transfer acceptability: CSU

Graphic Communications topics in Internet. See Class Schedule for specific topic offered. Course title will designate subject covered.

GC 197E Graphic Communications Topics in Multimedia (.5-5)

Units awarded in topics courses are dependent upon the number of hours required of the student. Any combination of lecture, laboratory, or lecture/laboratory may be scheduled by the department. Refer to Class Schedule.

Note: May be taken 4 times

Transfer acceptability: CSU

Graphic Communications topics in multimedia. See Class Schedule for specific topic offered. Course title will designate subject covered.

GC 197F Graphic Communications Topics in Graphic Processes (.5-5)

Units awarded in topics courses are dependent upon the number of hours required of the student. Any combination of lecture, laboratory, or lecture/laboratory may be scheduled by the department. Refer to Class Schedule.

Note: May be taken 4 times

Transfer acceptability: CSU

Graphic Communications topics in graphic processes. See Class Schedule for specific topic offered. Course title will designate subject covered.

GC 200 Introduction to Multimedia (3)

6 hours lecture/laboratory

Note: Cross listed as R GC 200; may be taken 4 times

Transfer acceptability: CSU

Introduction to multimedia authoring software combining text, graphics, sound, animation, video clips and user interface to produce effective visual presentations.

GC 201 Intermediate Multimedia (3)

6 hours lecture/laboratory

Prerequisite: GC 200

Recommended preparation: GC/R GC 140 and GC141

Note: May be taken 4 times

Transfer acceptability: CSU

Strategies and techniques for designing successful user multimedia interface. There will be emphasis on usability and design issues, incorporation of underlying metaphors, screen design, and navigational styles. Authoring systems, video compositing, digital imaging and audio editing applications will be explored.

- GC 202 Web Page Layout I (3)**
6 hours lecture/laboratory
Note: Cross listed as R GC 202; may be taken 4 times
Transfer acceptability: CSU
 A hands-on introduction to page layout for the Internet. Typographic considerations, screen layout, graphical interfaces, and structured page design for effective Internet communications.
- GC 203 Interactive Publishing with PDF's (3)**
6 hours lecture/laboratory
Note: Cross listed as R GC 203; may be taken 4 times
Transfer acceptability: CSU
 Hands-on instruction in creating electronic documents that can be viewed, searched, and printed from virtually any computer or printer.
- GC 204 Motion Graphics for Multimedia-A (3)**
6 hours lecture/laboratory
Recommended preparation: GC/R GC 140
Note: May be taken 4 times
Transfer acceptability: CSU
 Explores project planning, setup, execution, and output of motion-based graphics. Incorporates exploration and integration of sound, graphics, digital video, 2-D animation, and text for multimedia.
- GC 205 Graphics Estimating and Pricing (3)**
3 hours lecture
Recommended preparation: GC 105
Transfer acceptability: CSU
 Business plans, cost centers, estimating, pricing, marketing and professional issues for Graphic Communication.
- GC 206 Web Multimedia (3)**
6 hours lecture/laboratory
Prerequisite: GC/RGC 202
Recommended preparation: GC/R GC 140 and GC 200
Note: May be taken 4 times
Transfer acceptability: CSU
 Open discussion of current technologies, social issues, and design theory directly related to multimedia for the Internet and the World Wide Web. Experimental and practical application of multimedia in graphical user interface and user navigation design via assigned class projects.
- GC 207 Motion Graphics for Multimedia-B (3)**
6 hours lecture/laboratory
Prerequisite: GC/RGC 140
Note: May be taken 4 times
Transfer acceptability: CSU
 Exploration of concepts, design and development of digital video production and editing skills as they relate to CD Rom/DVD, Internet, and Digital Video Tape.
- GC 208 Web Motion Graphics I (3)**
6 hours lecture/laboratory
Prerequisite: GC/RGC 202
Recommended preparation: GC 206
Note: May be taken 4 times
Transfer acceptability: CSU
 Introduction of core concepts: vectors, the Stage, Scenes, Timelines, Layers, Keyframes, Shapes, Symbols (Graphic, Button, Movie Clip), Tweening, native drawing tools and external editors, frame-by-frame animation, Actions and Actionscript. Development of basic skills in web motion graphics. Exporting and embedding SWF files in Web pages. Macromedia's Flash will be used to create dynamic visual presentations with auditory components to communicate more effectively on the Web.
- GC 209 Web Motion Graphics II (3)**
6 hours lecture/laboratory
Prerequisite: GC 208
Recommended preparation: GC/R GC 202
Note: May be taken 4 times
Transfer acceptability: CSU
 Development of intermediate skills in web motion graphics: introduction of object-oriented design as applied to dynamic animation presentations; communication between graphical elements and instances; use of scripting and variables; creation of sound objects; use of components to improve efficiency; using Dynamic Text and ActionScript. Integrating digital audio and video with Flash presentations. Macromedia's Flash will be used to create dynamic visual presentations with audio and video assets to communicate more effectively on the Web.
- GC 211 Web Motion Graphics III (3)**
6 hours lecture/laboratory
Prerequisite: GC 209
Recommended preparation: GC/R GC 202 and GC 216
Note: May be taken 4 times
Transfer acceptability: CSU
 Dynamic Web content - explore the creation of dynamic Flash presentations. Skinnable components and presentations. Incorporating server-side technologies: Flash as a front-end to a database; using Flash Communications Server and ColdFusion MX to enable rich internet application capabilities. Production of audio and digital video for Flash; integration of non-embedded media.
- GC 212 Web Page Layout II (3)**
6 hours lecture/laboratory
Prerequisite: GC/R GC 202 or GC 215
Note: May be taken 4 times
Transfer acceptability: CSU
 Multimedia web site design and production using advanced WYSIWYG editor that permits editing hypertext markup language (HTML) and generation of JavaScript and animation within the application. Includes mechanics for site production as well as methodologies for project planning and management.
- GC 213 Motion Graphics Production and Compositing (3)**
6 hours lecture/laboratory
Prerequisite: GC 204 or 207
Recommended preparation: GC/R GC 140 or GC 165
Note: May be taken 4 times
 This course will be a "cap course" in which the student combines skills learned in multiple disciplines. For example the student will combine video skills learned in Graphic Communications and RTV with skills learned in ART or CAD by compositing a video that incorporates 3D rendered characters with live video footage. The student will complete the work by preparing it for publication using VHS, DVD, and on-line Streaming technologies.
- GC 214 Designing Data Bases Visually (3)**
6 hours lecture/laboratory
Note: May be taken 4 times
Transfer acceptability: CSU
 Organize and track people, projects, images and information in visually designed cross-platform relational data bases using graphic tools via wizards, templates and custom capabilities. Lay out powerful forms for the end user implementing graphical user interface standards. Publish for print and Web and intranet. Share and integrate secure data with workgroups across networks or other applications. Course is hands-on and will feature such applications as FileMaker Pro.
- GC 215 Designing for Web Standards I (3)**
6 hours lecture/laboratory
Recommended preparation: GC/R GC 202
Note: May be taken 4 times
Transfer acceptability: CSU
 Web site design and production using the current standards of the hypertext markup language (HTML) and other advanced tools (multimedia applications and Java Script, Java, etc.). Use of HTML editors for site authoring and mechanics as well as methodologies for project planning and management.
- GC 216 Web Data Base Design I (3)**
6 hours lecture/laboratory
Recommended preparation: GC/R GC 202 with Dreamweaver or equivalent knowledge
Note: May be taken 4 times
Transfer acceptability: CSU
 Hands-on course for creating Web pages that draw dynamic content from databases. Design and create a simple database for use on the Web. Create Web forms that add, modify or delete records from a database. Plan and implement a Web application using modern Web design tools such as Dreamweaver.
- GC 217 Online Store Design I (3)**
6 hours lecture/laboratory
Prerequisite: GC/R GC 202 or GC 215
Note: May be taken 4 times

Transfer acceptability: CSU

Design of interactive commercial web sites with emphasis on online shopping cart and database creation and management. Hands-on production of an online store. Perspective through web store case studies and models. Evaluation of various e-commerce solutions, security/privacy and payment options, site promotion/advertising, analysis tools and trends in appropriate web graphics, multimedia and software. Project management methods for e-commerce site life cycle.

GC 218 Online Store Design II (3)

6 hours lecture/laboratory

Prerequisite: GC 217

Note: May be taken 4 times

Transfer acceptability: CSU

Hands-on design and production of interactive commercial Web sites with emphasis on complex data-driven online shopping carts. Perspective through Web store case studies and models. Emphasis on forms production to send and dynamically display data for catalog, inventory, customers, etc. Produce components such as guest books, counters, e-mail, etc. to enhance an e-commerce site. Project Management methods for e-commerce site life cycle.

GC 219 Designing for Web Standards II (3)

6 hours lecture/laboratory

Prerequisite: GC 215

Note: May be taken 4 times

Current standards of Web design set forth by the W3C mandate changes in the way Web designers create their Web pages. This course teaches the use of XHTML and CSS to implement Web typography and advanced Web page layouts that comply with current Web standards. Use of modern Web page layout and design tools such as Dreamweaver to aid your work flow will also be taught.

GC 220 Introduction to Painter (3)

6 hours lecture/laboratory

Transfer acceptability: CSU

Provides the student with the knowledge to electronically simulate natural media tool and textures. The class covers the use of Painter as an image-editing tool. Students will produce electronic images simulating the use of painting and drawing tools.

GC 222 Advanced Painter (3)

6 hours lecture/laboratory

Prerequisite: GC 220

Transfer acceptability: CSU

Advanced concept and method of Painter and its use in image making, image editing, and problem solving. Painter applications for developing special effects, shape descriptions, Internet, and multimedia interface design for communication solutions.

GC 223 Audio for the Internet (3)

6 hours lecture/laboratory

Recommended preparation: GC 208

Note: May be taken 4 times

Transfer acceptability: CSU

Introduction to sound and audio on the World Wide Web. Topics covered include digitizing audio for the internet, audio formats, optimization techniques and bandwidth considerations. This is a hands-on class using audio editing, html, and graphics editing software. Upon completion of course, student will create and publish a website incorporating audio on the internet.

GC 226 Web Data Base Design II (3)

6 hours lecture/laboratory

Prerequisite: GC 216

Note: May be taken 4 times

Transfer acceptability: CSU

Advanced topics in the use of databases on the Web. Plan and implement an advanced Web application using robust Web database servers. Build your application using advanced Web design tools such as Dreamweaver.

GC 229 Interactive Streaming Media (3)

6 hours lecture/laboratory

Recommended preparation: GC 204 or 207

Note: May be taken 3 times

This course explores the various aspects of interactive streaming for the web. It combines lecture, hands on lessons, exercises, projects, and group work to build skills in the interactive streaming process. Students evaluate and select streaming methods, develop and author

various media, and deliver the content in appropriate formats. Particular attention is given to design, usability, and applicable uses of interactive streaming media on the web.

GC 230 Web Page Layout I – Part I (1.5)

3 hours lecture/laboratory

Note: May be taken 4 times

A hands-on introduction to page layout for the Internet. Typographic considerations, screen layout, graphical interfaces, graphics preparation and structured page design for effective Internet communications. The course is designed to introduce students to Web production and site maintenance; special projects facilitate the needs of more advanced students. (For beginning and intermediate levels).

GC 231 Web Page Layout I – Part II (1.5)

3 hours lecture/laboratory

Note: May be taken 4 times

A hands-on introduction to page layout for the Internet. Typographic considerations, screen layout, graphical interfaces, graphics preparation and structured page design for effective Internet communications. The course is designed to introduce students to Web production and site maintenance; special projects facilitate the needs of more advanced students. (For beginning and intermediate levels).

GC 232 Web Accessibility Design (1)

2 hours lecture/laboratory

Note: May be taken 4 times

Evaluate screen and Web design techniques to maximize accessibility by people with physical disabilities. Implement tools to convert documents to accessible formats. Produce sites that are accessible. Use various resources from the World Wide Web Consortium and publishers such as checklists, examples of code, conversion tools, test tools, etc. Review legal requirements (Americans with Disabilities Act and the Web Accessibility Initiative) for various sectors to provide fully accessible Web sites.

GC 234 Web Page Layout & Animation with Flash – Part I (1.5)

3 hours lecture/laboratory

Note: May be taken 4 times

A hands-on introduction to page layout for the Internet. Typographic considerations, screen layout, graphical interfaces, graphics preparation and structured page design for effective Internet communications. The course is designed to introduce students to Web production and site maintenance; special projects facilitate the needs of more advanced students. (For beginning and intermediate levels).

GC 235 Web Page Layout & Animation with Flash – Part II (1.5)

3 hours lecture/laboratory

Recommended preparation: GC 234

Note: May be taken 4 times

A hands-on introduction to page layout for the Internet. Typographic considerations, screen layout, graphical interfaces, graphics preparation and structured page design for effective Internet communications. The course is designed to introduce students to Web production and site maintenance; special projects facilitate the needs of more advanced students. (For beginning and intermediate levels).

GC 236 Flash Game Design (3)

6 hours lecture/laboratory

Prerequisite: GC 208

Note: May be taken 4 times

A hands-on introduction to game design using Flash 5. ActionScript for game development, screen layout, game interfaces, and structured game layout for effective game design. The course is designed to introduce students to Flash game design and concepts. Projects apply ActionScript and game layout principles. (For beginning and intermediate levels).

GC 249 Page Layout and Design II (3)

6 hours lecture/laboratory

Recommended preparation: GC/R GC 149

Note: Cross listed as RGC 249; may be taken 4 times

Intermediate concepts of electronic document layout, typography, and graphics. Software capabilities in creating sophisticated graphic and type treatments.

GC 260 Portfolio Development and Presentation (3)

6 hours lecture/laboratory

Prerequisite: GC/RGC 140 and GC/RGC 152

Note: Cross listed as RGC 260; may be taken 2 times

Students will develop a personal portfolio to showcase their graphic skills and techniques. Various resources, including the Internet, will be used to conduct a job search, develop a resume and learn interviewing techniques. Guest speakers will share industry tips. Students will practice presentation and interviewing skills, with feedback from professionals working in graphics and related industries.

GC 290 Copyright for Graphic Designers & Web Developers (1)

1 hour lecture

Note: May be taken 4 times

Copyright is an old and well codified area of law. The statutes and cases, however, have created complexities that are sometimes difficult to understand. This course covers the basics of copyright law, copyright registration, methods of informing viewers of copyright protections and liability, and the ways in which a graphic designer may enforce copyright. The damages and remedies of injunction and compensation are included.

GC 291 Contracts for Graphic Designers & Web Developers (1)

1 hour lecture

Note: May be taken 4 times

Graphic designers, whether employed by business or freelance, need to understand contract terms, negotiation, conditions, and the statutory and case law uniquely applicable to graphic design. Understanding the terms of a contract is essential to protecting the rights to use of work product and obtaining compensation. Failing to do so usually results in abuse of rights and non-compensation.

GC 292 Legal Issues for Graphics Designers and Web Developers (3)

3 hours lecture

This course will cover most legal issues that confront graphic designers and web developers in the day-to-day operation of the businesses. Specific legal issues will include business formation, contracts, copyright, licensing, deep linking, click wrap agreements, and the risks and benefits of self employment versus employment by a business.

GC 295 Directed Study in Graphic Communications (1,2,3)

3, 6, or 9 hours laboratory

Prerequisite: Approval of project or research by department chairperson/director

Note: May be taken 4 times

Transfer acceptability: CSU

Independent study for students who have demonstrated skills and/or proficiencies in Graphic Communications subjects and have the initiative to work independently on projects or research outside the context of regularly scheduled classes. Students will work under the personal supervision of an instructor.

GC 296 Special Projects (1,2,3)

2, 4, or 6 hours lecture/laboratory

Note: May be taken 4 times

Transfer acceptability: CSU

Independent work on a specified sustained project which does not fit into the context of regularly scheduled classes. Students work from a contract agreed upon by the student and the instructor.