

Individualized program for students who have specific learning disabilities. Intensive training in communication skills of reading, listening, and speaking.

### READ 10 Spelling (1)

1 hour lecture

**Note:** May be taken 2 times

Provides necessary skills to increase spelling ability through an introduction to phonetics and the rules of orthography.

### READ 11 Spelling II

1 hour lecture

**Note:** May be taken 2 times

An intensive study and application of techniques necessary to improve college-level spelling ability.

### READ 30 Fundamental Reading Skills (2)

4 hours lecture/laboratory

**Note:** Open Entry/Open Exit; Credit/No Credit grading only; may be taken 3 times

An individualized computer assisted instruction program based on in-depth testing, assessment, prescription and instruction for the improvement of students' reading comprehension. Emphasis is placed on reading skills and their application to college and life skills materials.

### READ 47 Reading 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

Topics in Reading. See class schedule for specific topic covered. Course title will designate subject covered.

### READ 50 Reading Improvement (4)

3 hours lecture-3 hours laboratory

**Note:** May be taken 3 times

A course designed to improve reading skills. Individual reading problems are diagnosed and improved through a variety of instructional materials and reading techniques. For students who need to remedy difficulties with reading comprehension, vocabulary, and fluency.

### READ 110 Power Reading (4)

3 hours lecture-3 hours laboratory

**Transfer acceptability:** CSU

Intended for students with reading competencies who wish to enhance their reading ability by increasing reading speed, comprehension, fluency, vocabulary, and critical analysis. For students who do not have reading comprehension and vocabulary difficulties.

### READ 115 Vocabulary Enhancement (2)

2 hours lecture

**Transfer acceptability:** CSU

Provides techniques to increase the precision and scope of language for everyday use. Emphasis is on the development of all aspects of college-level vocabulary.

### READ 120 Critical Reading (3)

3 hours lecture

**Recommended preparation:** READ 110

**Transfer acceptability:** CSU

Conceptual examination and application of critical reading, critical thinking, analysis and logical reasoning in multi-discipline and multi-cultural academic sources. Emphasis on advanced critical reading, logical reasoning/thinking, reflective judgment, and problem-solving skills that will lead to the ability to interpret, analyze, critically evaluate, and advocate ideas.

### READ 197 Reading 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

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

## Real Estate (RE)

Contact the Business Education Department for further information, (760) 744-1150, ext. 2488.

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

#### Escrow

Prepares students for employment as escrow officers.

#### A.A. Degree Major or Certificate of Achievement

Program Requirements	Units
RE 100 Real Estate Principles	3
RE 105 Real Estate Finance	3
RE 120 Legal Aspects of Real Estate	3
RE 155 Escrow and the Title Procedures	3
RE 156 Advanced Escrow Procedures	3
RE 157 Escrow Problems	3
<b>Electives (Select 2 courses, 5-7 units)</b>	
ACCT 103 and Financial Accounting	
ACCT 104 or Accounting Electronic Spreadsheet Lab	
BUS 105 Bookkeeping Fundamentals	3,5
BUS 110 Business Mathematics	3
BUS 115 or Business Law	
BUS 116 Business Law	3
BUS 205 Business Writing	3
OIS 102 Intermediate Keyboarding	3
BMGT 110 Human Resource Management	3
RE 110 Real Estate Appraisal	3
RE 115 Real Estate Practice	3
RE 130 Real Estate Economics	3
RE 135 Real Estate Investments	3
RE 145 Real Estate Exchanges	3
RE 150 Real Estate Income Taxation	2
RE 158 Current Trends in Escrow	3
CE 100* Cooperative Education	2,3,4
<b>TOTAL UNITS</b>	<b>23 - 25</b>

\* Applicable for C.E.A.'s Educational Achievement Award for full time students only. Completion of this certificate also qualifies students for the California Escrow Association's Educational Achievement Award.

#### Real Estate Appraisal License Preparation

A Real Estate Appraiser Trainee license is required of individuals who are to be employed as appraisers under the control and supervision of licensed or certified real estate appraisers. A license may be obtained by a person who does not immediately intend to be employed by an appraiser. However, no real estate appraisal activity may be performed unless the trainee is in the employ of a licensed or certified real estate appraiser.

Minimum Requirements to qualify to take the Real Estate Salesperson examination:

1. Age – 18 years of age or older.
2. Residence – Must be a legal resident of California.
3. Honesty – License applicants must be honest and truthful.
4. Education – Applicants for the Trainee or Residential license must provide evidence of successful completion of 90 hours of real estate appraisal education, including 15 hours of USPAP (Uniform Standards of Professional Appraisal Practice). Applicants for the Certified Residential license must provide proof of completion of

- 120 hours of real estate appraisal education (including 15 hours of USPAP). Applicants for the Certified General license must provide evidence of successful completion of 18 hours of real estate education (including 15 hours of USPAP).
- Experience – No experience is required before obtaining the Real Estate Appraiser Trainee license. 2,000 hours of appraisal experience is required before obtaining the residential license. 2,500 hours of experience is required before obtaining the Certified Residential license. 3,000 hours of experience is required before obtaining the Certified General license.

This program is designed to meet the educational requirements of all four licensing levels of the Office of Real Estate Appraisers. Note: Licensed real estate brokers may satisfy 1,000 hours of the experience requirement.

**Certificate of Proficiency**

Program Requirements	Units
RE 100 Real Estate Principles	3
RE 110 Real Estate Appraisal	3
RE 111 Advanced Real Estate Appraisal	3
RE 112 Business Appraisal	3
<b>TOTAL UNITS</b>	<b>12</b>

**Real Estate Broker License Preparation**

Preparation requirements for the Real Estate Broker Examination:

- One of the following:  
Minimum of two years full-time licensed real estate salesperson experience within the last five years or the equivalent is required (part-time – 4 years)  
OR  
Four year degree  
OR  
Member of the bar of any state in the United States (which will also exempt you from the course requirements)
- Complete the courses listed below:

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

Program Requirements	Units
RE 105 Real Estate Finance	3
RE 110 Real Estate Appraisal	3
RE 115 Real Estate Practice	3
RE 120 Legal Aspects of Real Estate	3
RE 130 or Real Estate Economics	3
ACCT 103 Financial Accounting	4
Corequisite: ACCT 104 Acct Elec Spreadsheet Lab	1

**Electives (Select \*6 or 9 units)**

**\*If ACCT 103, 104, and RE 130 are all three completed, only 6 units are required from the electives below:**

BUS 115 Business Law	3
BUS 116 Business Law	3
RE 100 Real Estate Principles	3
RE 111 Advanced Real Estate Appraisal	3
RE 140 Introduction to Property Management	3
RE 155 Escrow and the Title Procedures	3
RE 156 Advanced Escrow Procedures	3
<b>TOTAL UNITS</b>	<b>24 - 26</b>

**Real Estate Salesperson License Preparation**

A Real Estate Salesperson license is required of individuals who are to be employed as salespersons under the control and supervision of a licensed real estate broker. A license may be obtained by a person who does not immediately intend to be employed by a broker. However, no real estate

activity may be performed unless the licensee is in the employ of a licensed broker.

Minimum Requirements to qualify to take the Real Estate Salesperson examination:

- Age – 18 years of age or older.
- Residence – Must be a legal resident of California.
- Honesty – License applicants must be honest and truthful.
- Education – Applicants must provide evidence of successful completion of a three-unit course in Real Estate Principles. In addition, either with the examination or with the license application, or within 18 months after issuance of a license, the licensee must furnish official transcripts or certification with school seal confirming successful completion of a three-unit course in Real Estate Practice and one additional college level course listed below. Completion of the Real Estate Salesperson License Preparation Certificate satisfies the course requirements.

This program is designed to prepare the student for an entry-level position in the Real Estate sales field.

**Certificate of Proficiency**

Program Requirements	Units
RE 100 Real Estate Principles	3
RE 115 Real Estate Practice	3

**Electives (Select 3-5 units)**

ACCT 103 and Financial Accounting	
ACCT 104 Accounting Electronic Spreadsheet Lab	5
BUS 115 Business Law	3
RE 105 Real Estate Finance	3
RE 110 Real Estate Appraisal	3
RE 120 Legal Aspects of Real Estate	3
RE 130 Real Estate Economics	3
RE 140 Introduction to Property Management	3
RE 155 Escrow and the Title Procedures	3
RE 156 Advanced Escrow Procedures	3
<b>TOTAL UNITS</b>	<b>9-11</b>

**COURSE OFFERINGS**

Courses numbered under 50 are non-degree courses. Courses numbered under 100 are not intended for transfer credit.

**RE 49 California Real Estate License Exam Preparation (.5)**

½ hour lecture

**Prerequisite:** RE 100

**Note:** Credit/No credit grading; may be taken 2 times.

A specific review of materials included in the California Real Estate Licensing Exams (Salesperson and Broker). Testing techniques, stress management, and study skills will be covered.

**RE 100 Real Estate Principles (3)**

3 hours lecture

**Note:** Not open to students who have taken advanced real estate courses. This course may be offered on television.

**Transfer acceptability:** CSU

A real estate course covering the basic laws and principles of California real estate. Gives understanding, background, and terminology necessary for advanced study in specialized courses. Will be of assistance to those preparing for the real estate salesperson license examinations.

**RE 105 Real Estate Finance (3)**

3 hours lecture

**Recommended preparation:** A minimum grade of "C" in RE 100 or real estate license

**Transfer acceptability:** CSU

Analysis of real estate financing, including lending policies and problems in financing transactions in residential, apartment, commercial, special purpose properties, and land. Conventional and governmental programs emphasized.

**RE 110 Real Estate Appraisal (3)**  
3 hours lecture

**Recommended preparation:** RE 100 or real estate license

**Transfer acceptability:** CSU

An introductory course covering the purposes of appraisals, the appraisal process, and the different approaches, methods, and techniques used to determine the value of various types of property. Emphasis will be on residential and single-unit property.

**RE 111 Advanced Real Estate Appraisal (3)**  
3 hours lecture

**Recommended preparation:** RE 110 or 130

**Transfer acceptability:** CSU

Emphasis will be on the income approach to value. This course covers the appraisal of apartments, commercial/industrial properties, hotels, and business opportunities. Narrative report writing is required. All the continuing education requirements of the Office of Real Estate Appraisers will be covered, including 7 hours of the uniform standards of professional appraisal practice and state and federal laws and regulations.

**RE 112 Business Appraisal (3)**  
3 hours lecture

**Recommended preparation:** RE 100, 111, or BUS 100

This course provides specialized training for licensed real estate salespersons, brokers, and appraisers in the methods and techniques used to evaluate small businesses. This course also includes fifteen hours of the Uniform Standards of Professional Appraisal Practice, required of students applying for the real estate residential, certified residential, or certified general appraisal exam.

**RE 115 Real Estate Practice (3)**  
3 hours lecture

**Recommended preparation:** A minimum grade of "C" in RE 100 or real estate license

**Transfer acceptability:** CSU

Day-to-day operations in real estate roles and brokerage, including listing, prospecting, advertising, financing, sales techniques, escrow, and ethics. Applies toward State's educational requirements for the broker's examination.

**RE 120 Legal Aspects of Real Estate (3)**  
3 hours lecture

**Recommended preparation:** A minimum grade of "C" in RE 100 or real estate license

**Transfer acceptability:** CSU

A study of California real estate law, including rights incident to property ownerships and management, agency, contracts, and application to real estate transfer, conveyancing, probate proceedings, trust deeds and foreclosure, as well as recent legislation governing real estate transactions. Applies toward educational requirement of broker's examination.

**RE 130 Real Estate Economics (3)**  
3 hours lecture

**Recommended preparation:** A minimum grade of "C" in RE 100 or real estate license

**Transfer acceptability:** CSU

Deals with those trends and factors which affect the value of real estate; the nature and classification of land economics, the development of property, construction and sub-division, economic values and real estate evaluation; real estate cycles and business fluctuations, residential market trends, and real property trends.

**RE 135 Real Estate Investments (3)**  
3 hours lecture

**Transfer acceptability:** CSU

Real estate investing for the layperson; basic factors in the investment field; selection of real estate investments; methods of analyzing and appraising real property; expanding tax benefits and consequences; real estate investment; modern methods of group purchases through various types of syndications, including limited partnerships and real estate investment trust; and case studies of actual or hypothetical investments. The State Department of Real Estate has given special approval for this course to be used in the

elective group for the Real Estate Salesperson and Broker State License.

**RE 140 Introduction to Property Management (3)**  
3 hours lecture

**Recommended preparation:** A minimum grade of "C" in RE 100 or real estate license

**Transfer acceptability:** CSU

A practical approach to the principles and practices of managing income properties, including leasing, collections, and rent schedule; budget and purchasing, market economics; evictions; maintenance; taxation; and record keeping.

**RE 145 Real Estate Exchanges (3)**  
3 hours lecture

**Transfer acceptability:** CSU

A fundamental course for real estate licensees who have had broad experience in residential, commercial, and urban land transactions. Theory of exchanges, building of estates, income tax advantages, and trends of the market. By means of case studies actual exchanges are analyzed, planned, and executed.

**RE 150 Real Estate Income Taxation (2)**  
2 hours lecture

**Recommended preparation:** RE 100 or real estate license

**Transfer acceptability:** CSU

This course is designed to investigate real estate income taxation as it applies to the individual or business entity. It is intended that the student will derive a fuller understanding of both the use and the philosophy of tax law as it applies to real estate transactions. This course does not authorize students to advise clients regarding tax laws.

**RE 155 Escrow and the Title Procedures (3)**  
3 hours lecture

**Recommended preparation:** RE 100 or real estate license

**Transfer acceptability:** CSU

Escrow procedures including the processing and close of sale and loan escrows, the familiarizations and drawing of documents, prorations, title searches, title reports, and other details pertinent to efficient escrow proceedings.

**RE 156 Advanced Escrow Procedures (3)**  
3 hours lecture

**Recommended preparation:** RE 155

**Transfer acceptability:** CSU

Advanced course covering the more difficult and unusual types of escrow. Case problems on exchanges and condominiums.

**RE 157 Escrow Problems (3)**  
3 hours lecture

**Recommended preparation:** RE 156

**Transfer acceptability:** CSU

Further study of the more unusual and difficult types of escrows with particular attention to those wherein conflict or dispute arises. Actual case problems are presented for evaluation and discussion. Some cases include compliance with conditions, agency relationships, wrongful delivery, conditional deposits, liability assignments, delivery, and escrow instructions.

**RE 158 Current Trends in Escrow (3)**  
3 hours lecture

**Recommended preparation:** RE 157

**Transfer acceptability:** CSU

A refresher course for Escrow officers and supervisors covering current problems, legislation, and court cases. Open discussions and exchange of ideas will be expected of participants.

**RE 197 Real Estate 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

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

## Recreation (REC)

Contact the Physical Education Department for further information, (760) 744-1150, ext. 2462. 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

#### Outdoor Leadership

Provides the skills necessary for work as a leader in outdoor activities for federal, state, municipal, and private recreational agencies.

##### A.A. Degree Major or Certificate of Achievement

Program Requirements		Units
GC/RGC	170 Screen Printing	3
HE	100 Health Education and Fitness Dynamics	3
REC	110 Community Recreation	3
PE	104/	
EME	100 Advanced First Aid	3
AJ	100 Introduction to Criminal Justice	3
CE	100 Cooperative Education	3,4
<b>TOTAL UNITS</b>		<b>18 - 19</b>

Recommended Elective: PE 230

#### Recreation Agency Leader

Provides the skills necessary for work as a leader in a municipal or private recreation program.

##### A.A. Degree Major or Certificate of Achievement

Required Courses		Units
GC/RGC	170 Screen Printing	3
HE	100 Health Education and Fitness Dynamics	3
PE	104/	
EME	100 Advanced First Aid	3
REC	110 Community Recreation	3
REC	120 Recreational Team Sports	2
AJ	100 Introduction to Criminal Justice	3
CE	100 Cooperative Education	1,2,3,4
<b>TOTAL UNITS</b>		<b>18 - 21</b>

Recommended Electives: MUS 197; PE 230

### COURSE OFFERINGS

#### REC 110 Community Recreation (3)

3 hours lecture

**Transfer acceptability:** CSU

Scope of community recreation; basic philosophy of leisure time agencies and organizations for youth; program planning; playground practices; basic systems of organization; and policy formation.

#### REC 115 Recreational Leadership (3)

3 hours lecture

**Transfer acceptability:** CSU

Program planning and principles of group leadership; organized games and special events, playground management.

#### REC 120 Recreational Team Sports (2)

2 hours lecture

**Transfer acceptability:** CSU

The planning, organizing, of team sports designed to serve the interest of all people in a recreational setting. The course is designed to provide the methods and organization for group instruction in team sports including softball, soccer, touch football, volleyball, and basketball.

## Religious Studies (RS)

See also American Indian Studies, Anthropology, History, Judaic Studies, Philosophy

Contact the Behavioral Sciences Department for further information, (760) 744-1150, ext. 2330

### COURSE OFFERINGS

#### RS 101 World Religions (3)

3 hours lecture

**Transfer acceptability:** CSU; UC

A comparative study of the major figures from saviors to gurus, the practices and the teachings of the major religions of the world, Western and Eastern, ancient and modern.

#### RS 105 Ways of Understanding Religion (3)

3 hours lecture

**Transfer acceptability:** CSU; UC

An exploration of religious phenomena and the various approaches by which Religious Studies has attempted to understand them. Such phenomena as mysticism, use of scripture, ritual, religious ethics, concepts of human destiny, and the meaning of religion in the modern secular world will be examined. Examples will be drawn from Eastern and Western cultures in ancient, medieval, and modern times.

#### RS 110 Religion in America (3)

3 hours lecture

**Transfer acceptability:** CSU; UC

An introduction to the rich diversity of religious experience in the United States exploring the impact religion has had on our nation's history and culture. Native American, Asian, African-American, Jewish, Roman Catholic, Protestant, and sectarian movements will be discussed.

#### RS 120 Ethics of World Religions (3)

3 hours lecture

**Transfer acceptability:** CSU; UC

A study of how world religions historically developed their ethical positions and how these are expressed today. Religious attitudes about women's rights, gay rights, the environment, business, death and dying, abortion, race relations, and sexuality will be discussed.

#### RS 197 Religious Studies 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 Religious Studies. See Class Schedule for specific topic offered. Course title will designate subject covered.

## Secretarial

See Office Information Systems

## Sign Language

See American Sign Language

## Sociology (SOC)

See also American Indian Studies, Africana Studies, Chicano Studies

Contact the Behavioral Sciences Department for further information, (760) 744-1150, ext. 2329

### COURSE OFFERINGS

- SOC 100 Introduction to Sociology (3)**  
*3 hours lecture*  
**Transfer acceptability:** CSU; UC; CAN SOC 2  
 A study of the principles and problems pertaining to group behavior, the relationships among human beings, the development and nature of institutions, and the structure of society.
- SOC 105 Marriage, Family, and Intimate Relationships (3)**  
*3 hours lecture*  
**Note:** Cross listed as PSYC 105  
**Transfer acceptability:** CSU, UC  
 A study of the psychology and sociology of the family and intimate relationships. Emphasizes factors that enhance interpersonal relationships. Topics include love, marital choice, communication, conflict, and changing models of the family. Examines cross-cultural and historical factors that impact the family as a social institution and the impact of gender, race and ethnicity, social class, age, and sexual orientation on family organization.
- SOC 110 Social Problems (3)**  
*3 hours lecture*  
**Transfer acceptability:** CSU; UC; CAN SOC 4  
 Identification and analysis of contemporary social problems in the United States, with emphasis on the sociological factors involved. Topics include poverty and economic inequality; gender inequality; racial and ethnic inequality; problems in the family, government, education, and the economy; crime; drug use; warfare and violence, among others. A critical evaluation of the causes and solutions.
- SOC 115 Introduction to Women's Studies (3)**  
*3 hours lecture*  
**Transfer acceptability:** CSU; UC  
 The study of the position of women in American society from a sociological and cultural perspective. Topics to be studied include the theoretical approaches to studying gender; the impact of race and ethnicity, class, nationality, and sexual orientation on women's lives; cross-cultural variations in gender roles; the socialization of women; women's role in the major social institutions – the family, education, the political system, religion, the economy, and the mass media; violence against women; and feminism as a social movement.
- SOC 120 Social Psychology (3)**  
*3 hours lecture*  
**Note:** Cross listed as PSYC 120  
**Transfer acceptability:** CSU; UC  
 Explores relationships between the behavior of individuals and the structure of society. Emphasizes the importance of language, roles, and the concept of the self in the socialization process.
- SOC 125 Human Sexuality (3)**  
*3 hours lecture*  
**Note:** Cross listed as PSYC 125  
**Transfer acceptability:** CSU; UC  
 Survey of topics pertinent to an understanding of the development of human sexuality. Emphasis on biological, psychological, and cultural determinants of sexual behavior. Current sex norms and various aspects of interpersonal and individual sexual adjustment.
- SOC 140 Introduction to Psychological and Social Services (3)**  
*3 hours lecture-3 hours laboratory*  
**Recommended preparation:** PSYC 100 or SOC 100  
**Note:** Cross listed as PSYC 140  
**Transfer acceptability:** CSU  
 Community resources and techniques in the helping professions. Students will gain familiarity with community agencies and their functions and learn specific techniques useful for working in such settings. Included will be techniques of interviewing, assessment, intervention, and referral. Volunteer work in agencies is required.
- SOC 145 Psychology and Sociology of Aging (3)**  
*3 hours lecture*  
**Note:** Cross listed as PSYC 145  
**Transfer acceptability:** CSU  
 A multi-disciplinary approach to the field of gerontology; historical, demographic, psychological, and sociological aspects of aging.
- SOC 150 Introduction to Chemical Dependency (3)**  
*3 hours lecture*  
**Recommended preparation:** PSYC 100, PSYC/SOC 140, and SOC 100 or 110  
**Note:** Cross listed as PSYC 150  
 This basic course will provide a historical perspective on alcohol and other psychoactive drug abuse and its impact on the community. An interdisciplinary approach will be used. Topics will include definitions, sociocultural factors related to use and/or abuse, identification of issues and models of dependency and recovery, and analysis of the effectiveness of policies and programs.
- SOC 155 The Physiology and Pharmacology of Psychoactive Drugs (3)**  
*3 hours lecture*  
**Recommended preparation:** PSYC 100  
**Note:** Cross listed as PSYC 155  
 This course will examine how psychoactive drugs affect the nervous system. Ways of classifying drugs will be identified including the processes of physical and psychological dependence, tolerance, withdrawal, and genetic predispositions. Temporary and permanent consequences of specific drugs will include: nutritional deficiencies, Korsakoff's syndrome, impact on sexual functioning, brain effects (including memory consequences), and behavioral consequences.
- SOC 160 Chemical Dependency Treatment (3)**  
*3 hours lecture*  
**Recommended preparation:** PSYC 100, PSYC/SOC 140, and SOC 100 or 110  
**Note:** Cross listed as PSYC 160  
 This course will examine legal and ethical aspects of psychoactive drug use including employment issues, patients' rights, and confidentiality. There will be an in-depth study and evaluation of different models for intervention, recovery, and prevention with an emphasis on gender, community, and cultural issues.
- SOC 197 Special Topics in Sociology (1,2,3)**  
*1, 2, or 3 hours lecture*  
**Note:** May be taken 4 times  
**Transfer acceptability:** CSU; UC – Credit determined by UC upon review of course syllabus.  
 Current topics in sociology will be discussed in lecture or seminar formats. Issues in such areas as deviance, stratification, demography, gender roles, death and dying, new immigrant groups, and others will be analyzed in cultural context from various theoretical perspectives. Content will vary from semester to semester.
- SOC 200 Race, Class, and Ethnic Groups in America (3)**  
*3 hours lecture*  
**Note:** Cross listed as AMS/MCS 200  
**Transfer acceptability:** CSU; UC  
 This course is designed to introduce the topics of intergroup relations in general to superordinate-subordinate relations in particular, as exemplified in various racial, ethnic, social class, and cultural groups. Emphasis is primarily on contemporary relations in the United States, although a comparative perspective is also offered.
- SOC 205 Statistics for the Behavioral Sciences (3)**  
*3 hours lecture*  
**Prerequisite:** A minimum grade of "C" in MATH 56 or 60 or eligibility determined through the math placement process  
**Note:** Cross listed as PSYC 205  
**Transfer acceptability:** CSU; UC – BIOL 215, MATH 120, and PSYC/SOC 205 combined: maximum credit, one course; CAN PSY 6  
 Quantitative methods as applied to behavioral science data. Frequency distributions, measures of central tendency, variability, theory of error, measures of significance, correlation, regression, and an introduction to analysis of variance. Also included is an introduction to the use of computers in statistics.

**SOC 205L Data Analysis in Psychology and Sociology (1)***3 hours laboratory***Corequisite:** PSYC/SOC 205**Note:** Cross listed as PSYC 205L**Transfer acceptability:** CSU; UC

Use of the computer as a tool for calculating statistics and exploring data in Psychology and Sociology.

**SOC 250 Group Leadership and Group Process (3)***hours lecture***Recommended preparation:** PSYC/SOC 150, PSYC/SOC 155, and PSYC/SOC 160**Note:** Cross listed as PSYC 250

An introduction to the dynamics of group interaction with emphasis upon the individual's firsthand experience as the group studies itself under supervision. The factors involved in problems of communication, effective emotional responses, and personal growth will be highlighted. The emphasis will be upon group process as a means of changing behavior.

**SOC 255 Chemical Dependency Case Management (3)***3 hours lecture***Recommended preparation:** PSYC/SOC 150, PSYC/SOC 155, and PSYC/SOC 160**Note:** Cross listed as PSYC 255

Techniques used for beginning and crisis counseling, intake interviewing, and referral will be studied and practiced. Attention will be given to the appropriate strategies of intervention, the admitting process, and the recording of information as it pertains to alcohol and drug abuse clients/residents. Though experiential in format, participants will learn and practice skills in attentive listening and recognizing and responding to different levels of client communication. Students will demonstrate a knowledge of community resources and how to make appropriate referrals.

**SOC 260 Chemical Dependency Family Counseling (3)***3 hours lecture***Recommended preparation:** PSYC/SOC150, PSYC/SOC 155, and PSYC/SOC 160**Note:** Cross listed as PSYC 260

This course is designed to explore methods of assisting significant others (family, employer, etc.) to understand and to cope in dealing with the alcohol and drug abuse of alcoholics and addicts. The approach will be to analyze and examine the ideas and dynamics of those relationships and to develop practice strategies for the worker who counsels these persons. The approach will be experiential in format and students will participate in exercises that lead to the development of these skills.

**SOC 296 Special Problems in Sociology (1,2,3)***1, 2, or 3 hours lecture***Note:** May be taken 4 times**Transfer acceptability:** CSU; UC – Credit determined by UC upon review of course syllabus.

An individualized or group project in sociology of any nature. Extensive use of slides and other illustrative materials.

**SOC 298 Directed Field Experience I (3)***3 hours lecture-5 hours laboratory***Prerequisite:** PSYC/SOC 140 and acceptance into the Psychological and Social Services Certificate Program**Note:** Cross listed as PSYC 298**Transfer acceptability:** CSU

Supervised field work in various community agencies in the psychological and social services areas. Agencies are selected with regard to student's area of specialization.

**SOC 299 Directed Field Experience II (3)***3 hours lecture-8 hours laboratory***Recommended preparation:** PSYC/SOC 250, PSYC/SOC 255, PSYC/SOC 260, and PSYC/SOC 298**Note:** Cross listed as PSYC 299

This course will include a lecture/seminar format and a supervised agency experience component which will prepare students to take certification examinations for alcohol/drug counselors.

**Spanish (SPAN)**

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.

Courses numbered under 100 are not intended for transfer credit.

An activity may be taken four times for credit. Activity is defined to include all ability levels. (e.g., A student may take a total of only four Conversation courses for credit.)

**SPAN 50 Beginning Conversation (3)***3 hours lecture***Note:** May be taken 2 times

This is the first course in the two-course series of Beginning Spanish conversation. Emphasis is on speaking and listening through the use of everyday vocabulary and communicative skills. Reading and writing skills will be developed from involvement with the spoken language. The course will also introduce students to the cultures of the Spanish-speaking world.

**SPAN 51 Intermediate Conversation (3)***3 hours lecture***Prerequisite:** SPAN 50**Note:** May be taken 2 times

This is the second course in the two-course series of Beginning Spanish conversation. Emphasis is on speaking and listening, using everyday vocabulary and communicative skills. Reading and writing skills will be developed from involvement with the spoken language. This course will also introduce students to the cultures of the Spanish-speaking world.

**SPAN 80 Spanish Through Song (1)***1 hour lecture*

A highly participatory course in which students of all levels develop and improve pronunciation skills, listening comprehension skills, vocabulary and certain basic grammar concepts by means of pedagogically chosen and enjoyable Spanish songs representing a variety of forms such as Salsa, Romantica, Cumbia, Mariachi, Popular Music and Latin Rock. Students become dynamically aware that songs are an essential expression of Hispanic culture.

**SPAN 101 Spanish I (5)***5 hours lecture-1 hour laboratory***Transfer acceptability:** CSU; UC; CAN SPAN 2; SPAN 101+ 102= CAN SPAN SEQ A

This course is the first semester of Spanish. This elementary level course is a study of the Spanish language and Spanish-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 Spanish.

**SPAN 101A Spanish IA (3)***3 hours lecture***Note:** Covers the first half of SPAN 101**Transfer acceptability:** CSU; UC – SPAN 101A and 101B combined: maximum credit, 5 units; UC – both courses must be taken for transfer credit to be given

Spanish 101A is equivalent to the first half of Spanish 101. This elementary level course is a study of the Spanish language and Spanish-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 Spanish

- SPAN 101B Spanish IB** (3)  
*3 hours lecture*  
*Prerequisite:* SPAN 101A or one year of high school Spanish  
*Note:* Covers the second half of SPAN 101  
*Transfer acceptability:* CSU; UC – SPAN 101A and 101B combined: maximum credit, 5 units; UC – both courses must be taken for transfer credit to be given  
 Spanish 101B is equivalent to the second half of Spanish 101, and is a continuation of Spanish 101A. This elementary level course is a study of the Spanish language and Spanish-speaking cultures, with emphasis on the development of communicative skills and basic structures.
- SPAN 102 Spanish II** (5)  
*5 hours lecture-1 hour laboratory*  
*Prerequisite:* SPAN 101 or 101B or two years of high school Spanish  
*Transfer acceptability:* CSU; UC; CAN SPAN 4; SPAN 101+ 102= CAN SEQ A  
 This course is the second semester of Spanish. This elementary level course is a study of the Spanish language and Spanish-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.
- SPAN 102A Spanish IIA** (3)  
*3 hours lecture*  
*Prerequisite:* SPAN 101 or 101B or two years of high school Spanish  
*Note:* Covers the first half of SPAN 110  
*Transfer acceptability:* CSU; UC – SPAN 102A and 102B combined: maximum credit, 5 units; UC – both courses must be taken for transfer credit to be given  
 Spanish 102A is equivalent to the first half of Spanish 102. This elementary level course is a study of the Spanish language and Spanish-speaking cultures, with continued emphasis on the development of communicative skills and basic structures.
- SPAN 102B Spanish IIB** (3)  
*3 hours lecture*  
*Prerequisite:* SPAN 102A or two years of high school Spanish  
*Note:* Covers the second half of SPAN 102  
*Transfer acceptability:* CSU; UC – SPAN 102A and 102B combined: maximum credit, 5 units; UC – both courses must be taken for transfer credit to be given  
 102B is equivalent to the second half of Spanish 102, and is a continuation of Spanish 102A. This elementary level course is a study of the Spanish language and Spanish-speaking cultures, with continued emphasis on the development of communicative skills and basic structures.
- SPAN 201 Spanish III** (5)  
*5 hours lecture-1 hour laboratory*  
*Prerequisite:* SPAN 102 or 102B or three years of high school Spanish  
*Transfer acceptability:* CSU; UC – SPAN 201 and 240 combined: maximum credit, one course; CAN SPAN 8; SPAN 201+ 202=CAN SPAN SEQ B  
 This course is the third semester of Spanish. This intermediate level course is a study of the Spanish language and Spanish-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 Spanish. Course combines in-class instruction with self-paced study in the Foreign Language Laboratory. Class is largely conducted in Spanish.
- SPAN 201A Spanish IIIA** (3)  
*3 hours lecture*  
*Prerequisite:* SPAN 102 or 102B or three years of high school Spanish  
*Note:* Covers the first half of SPAN 201; not open to students with credit for SPAN 201  
*Transfer acceptability:* CSU; UC – SPAN 201A and 201B combined: maximum credit, 5 units; UC – both courses must be taken for transfer credit to be given  
 First segment of first semester of intermediate Spanish (Spanish 201), stressing further grammatical development through oral and written communication and providing practice in readings of culturally relevant authentic materials. Emphasizes effective written and spoken communication at the beginning intermediate level. Conducted largely in Spanish.
- SPAN 201B Spanish IIIB** (3)  
*3 hours lecture*  
*Prerequisite:* SPAN 201A  
*Note:* Covers the second half of SPAN 201; not open to students with credit for SPAN 201  
*Transfer acceptability:* CSU; UC – SPAN 201A and 201B combined: maximum credit, 5 units; UC – both courses must be taken for transfer credit to be given  
 Spanish 201B is the second half of Spanish 201, and is a continuation of Spanish 201A. This intermediate level course is a study of the Spanish language and Spanish-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 Spanish. Class is largely conducted in Spanish.
- SPAN 202 Spanish IV** (5)  
*5 hours lecture*  
*Prerequisite:* SPAN 201 or four years of high school Spanish  
*Transfer acceptability:* CSU; UC – SPAN 202 and 241 combined: maximum credit, one course; CAN SPAN 10; SPAN 201+ 202=CAN SPAN SEQ B  
 This course is the fourth semester of Spanish. This intermediate level course is a study of the Spanish language and of special topics on the culture of the Spanish-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 Spanish. Class is largely conducted in Spanish.
- SPAN 215 Advanced Spanish** (3)  
*3 hours lecture*  
*Prerequisite:* SPAN 210  
*Transfer acceptability:* CSU; UC  
 Advanced grammar and composition.
- SPAN 216 Advanced Spanish Conversation** (3)  
*3 hours lecture*  
*Prerequisite:* SPAN 210  
*Transfer acceptability:* CSU; UC  
 Topics in Spanish language and culture with emphasis on improving fluency and building vocabulary.
- SPAN 235 Intermediate Conversation and Writing** (3)  
*3 hours lecture*  
*Prerequisite:* SPAN 201  
*Note:* May be taken 2 times  
*Transfer acceptability:* CSU; UC  
 Topical discussions, oral and written themes, and practical vocabulary.
- SPAN 240 Spanish for Native Speakers I** (3)  
*3 hours lecture*  
*Prerequisite:* Native speaker of Spanish  
*Transfer acceptability:* CSU; UC – SPAN 201 and 240 combined: maximum credit, one course  
 For the student who is a native speaker of Spanish and needs basic instruction in grammar, sentence structure, and paragraph development. No previous coursework in Spanish required. Provides the student with grammar and composition practice equivalent to that offered in SPAN 201.
- SPAN 241 Spanish for Native Speakers II** (3)  
*3 hours lecture*  
*Prerequisite:* Native speaker of Spanish or SPAN 240  
*Transfer acceptability:* CSU; UC – SPAN 210 and 241 combined: maximum credit, one course  
 Continuation of SPAN 240 with emphasis on composition, vocabulary building, precision in word choice, spelling, and punctuation. Provides the student with grammar and composition practice equivalent to that offered in SPAN 210.
- SPAN 295 Directed Study in Spanish** (1,2,3)  
*3, 6, or 9 hours laboratory*  
*Note:* May be taken 4 times for a maximum of six units

**Transfer acceptability:** CSU

Individual study in areas of Spanish language or culture. Designed for the student who has the initiative to work independently on a topic that is outside the scope of regularly scheduled classes.

**SPAN 296 Special Studies in Spanish (1-3)**

1 to 3 hours lecture

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

**Transfer acceptability:** CSU

Improve Spanish language competency and cultural awareness through individualized study, lectures, or class excursions. Undertaken during regular sessions, summer, or vacations.

## Speech (SPCH)

Contact the Speech Communication/Forensics/ASL Department for further information, (760) 744-1150, ext. 2405

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

#### Speech Communication

Prepares the student for employment in programs where advanced speaking skills are necessary. Transfer students should consult the four-year college or university catalog for specific requirements or see a Palomar College counselor.

#### A.A. Degree Major

Program Requirements	Units
SPCH 100 Oral Communication	3
SPCH 105 Beginning Argumentation and Debate	3
SPCH 115 Interpersonal Communication	3
SPCH 120 Human Communication	3
SPCH/TA 125 Beginning Oral Interpretation	3
SPCH 131 Intercultural Communication	3
<b>TOTAL UNITS</b>	<b>18</b>

### COURSE OFFERINGS

Courses numbered under 50 are non-degree courses.  
Courses numbered under 100 are not intended for transfer credit.

**SPCH 100 Oral Communication (3)**

3 hours lecture

**Transfer acceptability:** CSU; UC; CAN SPCH 4

An introduction to the fundamental principles and techniques of public address. Students will frequently prepare and present talks of informative or persuasive intent. Emphasis will be placed on the collection, analysis, and organization of material appropriate to the typical public address situations, as well as on the linguistic, vocal, and physical skills needed for effective delivery.

**SPCH 105 Beginning Argumentation and Debate (3)**

3 hours lecture

**Prerequisite:** A minimum grade of "C" in ENG 100

**Transfer acceptability:** CSU; UC; CAN SPCH 6

Argumentative theory and practice including burden of proof, logical analysis, research, types and uses of evidence, deductive and inductive reasoning, logical fallacies, written argumentative essay construction, refutation, rebuttal, and argument evaluation paradigms. Basic written communication skills are developed through composing, drafting, reviewing, and rewriting (1) analytical topic area essays, (2) affirmative and negative cases, and (3) written peer evaluation essays. Oral communication skills are developed through the agency of public debate. Critical perspectives on values and public policy, including examinations of diverse paradigms are emphasized.

**SPCH 115 Interpersonal Communication (3)**

3 hours lecture

**Transfer acceptability:** CSU

Introduction to the fundamental principles and terms of communication study in the interpersonal or face-to-face context. Analysis of communication patterns in developing, stable, and deteriorating relationships. Topics include communication rules and competence, perception and empathy, love, and family interaction.

**SPCH 120 Human Communication (3)**

3 hours lecture

**Transfer acceptability:** CSU; UC

A comprehensive introduction to the study of human communication processes including verbal and nonverbal modalities. Human abilities are compared to the communication systems of other species. Key definitions and concepts in communication theory are reviewed. Communication processes in personal, public, and mass-mediated contexts are analyzed.

**SPCH 125 Beginning Oral Interpretation (3)**

3 hours lecture

**Note:** Cross listed as TA 125

**Transfer acceptability:** CSU; UC

An introduction to the oral reading of prose, poetry, and drama in distinct and intertextual formats. Models of critical analysis will be applied to written literature and reading will be performed and evaluated by applying principles of effective delivery.

**SPCH 131 Intercultural Communication (3)**

3 hours lecture

**Transfer acceptability:** CSU

Introduction to the fundamental principles and terms of communication study in intercultural or cross-cultural contexts. Analysis of the opportunities and problems presented by national, ethnic, linguistic, and gender-based variation in verbal and nonverbal behaviors.

**SPCH 145 Management of Speech Activities (1)**

2 hours lecture/laboratory

**Note:** May be taken 4 times

**Transfer acceptability:** CSU

Planning, preparation, management, and supervision of speech tournaments and other interscholastic speech activities.

**SPCH 150 Debate Research (1)**

2 hours lecture/laboratory

**Note:** May be taken 4 times

**Transfer acceptability:** CSU

Advanced debate training including investigation and research of the national intercollegiate debate resolution.

**SPCH 160 Practical Public Speaking (1)**

2 hours lecture/laboratory

**Note:** May be taken 4 times

**Transfer acceptability:** CSU

Thorough individual preparation for effective oral communication in a variety of speech situations. This class will make up the college forensics team and the student speaker's bureau; students will be selected from classes in the speech curricula. Required of all students participating in intercollegiate competitive speech activities.

**SPCH 165 Leadership Communication (3)**

6 hours lecture/laboratory

Designed to increase participant's knowledge of the function of communication in leadership and group contexts. Students will explore the nature of human communication, one on one interpersonal interaction, small and large group communication, organizational communication, and public speaking. More specifically, discussion and activities will focus on the topics of perception, persuasion, listening, ethics, credibility, parliamentary procedure, and problem solving. *This course is designed primarily for participants in Associated Student Government and other student leadership positions at Palomar College. This is a TBA class and participants will be expected to attend local, state, and national conferences.*

**SPCH 197A Topics in Speech Communication (.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 Speech Communication. See Class Schedule for specific topic offered. Course title will designate subject covered.

**SPCH 290 Competitive Intercollegiate Forensics (1,2,3)**

2, 4, or 6 hours lecture/laboratory

**Note:** May be taken 4 times

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

Advanced projects including individual research. Tutoring and performance for college classes and community including reader's theatre; informative, persuasive, entertaining, extemporaneous, and impromptu speaking; communication analysis, prose, poetry, duo-interpretation, programmed reading, and debate.

**Surveying (SURV)**

Contact Occupational & Noncredit Programs for further information, (760) 744-1150, ext. 2284

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**

**Surveying**

Prepares students to be licensed surveyors in the field or in offices.

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

Program Requirements	Units
SURV 100 Plane Surveying	4
SURV 101 Advanced Plane Surveying	4
SURV 105 Survey Map Production	4
SURV 110 Control Surveying and Photogrammetry	4
SURV 115 Legal Principles	3
SURV 120 Boundary Control	3
SURV 125 Surveying Math and Drafting	3
SURV 130 Construction Surveying	4
MATH 115 Trigonometry	3
<b>TOTAL UNITS</b>	<b>32</b>

Recommended Elective: CE 100 (should be related to this major)

**COURSE OFFERINGS**

**SURV 100 Plane Surveying (4)**

3 hours lecture-3 hours laboratory

**Prerequisite:** MATH 115

**Transfer acceptability:** CSU; UC; SURV 100+101=CAN ENGR 10

Fundamentals of plane surveying, field practice, and calculations. Equipment and equipment use, horizontal, vertical, angular measurements; errors, traversing, leveling and stadia.

**SURV 101 Advanced Plane Surveying (4)**

3 hours lecture-3 hours laboratory

**Prerequisite:** SURV 100

**Transfer acceptability:** CSU; UC; SURV 100+101=CAN ENGR 10

Compute horizontal and vertical curves, tachometry, earthwork, error and adjustment of level nets, determine direction of lines and topographic surveys. The general procedure for United States Public Land Surveys and the State Plane Coordinates System.

**SURV 105 Survey Map Production (4)**

3 hours lecture-3 hours laboratory

**Prerequisite:** SURV 101 and DT 125

**Transfer acceptability:** CSU

Exposure to the special procedures and requirements unique to survey mapping. Fundamental survey drafting methods and types of maps will be stressed. Students will produce a variety of survey maps, both manually and by CAD systems.

**SURV 110 Control Surveying and Photogrammetry (4)**

3 hours lecture-3 hours laboratory

**Prerequisite:** SURV 101

**Transfer acceptability:** CSU

State plane coordinate systems, control surveying for municipal surveys, trilateration and adjustments, level nets and adjustments, and surveying for photogrammetry.

**SURV 115 Legal Principles (3)**

3 hours lecture

**Prerequisite:** SURV 101

**Transfer acceptability:** CSU

Topics involving the legal and professional aspects of surveying such as U.S. Public land surveys, property surveys, title search, and report laws affecting a surveyor. Topics in public relations, electronic computers, and calculators.

**SURV 120 Boundary Control (3)**

3 hours lecture

**Prerequisite:** SURV 101

**Transfer acceptability:** CSU

The resurveys or surveys based on the deed or record and the new divisions of land.

**SURV 125 Surveying Math and Drafting (3)**

3 hours lecture

**Prerequisite:** SURV 100

**Transfer acceptability:** CSU

Basic mathematics for surveyors as applied to bearing and azimuth, horizontal curves, vertical curves, traverse balancing and computations, areas, intersections, statistics and financial computations with emphasis on lettering techniques.

**SURV 130 Construction Surveying (4)**

3 hours lecture-3 hours laboratory

**Prerequisite:** SURV 101

**Transfer acceptability:** CSU

Construction surveys in the following areas: pipelines, tunnels, culverts, bridges, buildings, highways, and municipal surveys.

**SURV 197 Surveying 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

Concentrated courses in surveying. Course title will designate subject covered.

**Tagalog (TAG)**

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.

**TAG 101 Tagalog I (5)**

5 hours lecture-1 hour laboratory

**Transfer acceptability:** CSU; UC

This course is the first semester of Tagalog. This elementary course is a study of pronunciation, essentials of grammar, reading, speaking, and writing. Relationship between language and culture.

**TAG 102 Tagalog II (5)**

5 hours lecture-1 hour laboratory

**Prerequisite:** TAG 101, or two years of high school Tagalog

**Transfer acceptability:** CSU; UC

This course is the second semester of Tagalog. This elementary level course is a study of the Tagalog language

and Tagalog-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.

**TAG 201 Tagalog III (5)**  
5 hours lecture

**Prerequisite:** TAG 102 or three years of high school Tagalog

**Transfer acceptability:** CSU; UC

This course is the third semester of Tagalog. This intermediate level course is a study of grammar, review, composition, and continued oral practice. Appreciation of Tagalog culture through composition and oral practice assignments.

## Theatre Arts (TA)

Contact the Performing Arts Department for further information, (760) 744-1150, ext. 2316

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

#### Theatre Arts

Prepares the student for employment in programs where basic skills are necessary, especially children's theatre and community theatre. Transfer students should consult the four-year college or university catalog for specific requirements or see a Palomar College counselor.

##### A.A. Degree Major

Program Requirements	Units
TA 100 Introduction to the Theatre	3
TA/ENTT 105 Introduction to Technical Theatre	2.5
TA 109 Elementary Stage Make-Up	3
TA 111 Technical Theatre Production	.5
TA 115 Beginning Acting I: Fundamentals	3
TA 116 Beginning Acting II: Scene Study	3
TA 140 or History/Theatre thru 17th Century	
TA 141 History/Theatre/18th Century to the Present	3
TA 215 or Intermediate Acting I: Styles	
TA 216 or Intermediate Acting II: Character Development	
TA 217 Intensive Actor Training	3
<b>Plus one of the following courses</b>	
TA/ENTT 107 Special Effects of Light and Sound	3
TA/ENTT 108 Stagecraft/Scene Design	3
TA/SPCH 125 Beginning Oral Interpretation	3
TA 150 Dramatic Literature	3
<b>TOTAL UNITS</b>	<b>24</b>

Recommended Electives: TA 113, 184; DNCE/MUS/TA 173

#### Theatre Arts Emphasis In Acting

Provide actors with a foundation for lifelong development of acting experiences. Includes an introduction to the major 20<sup>th</sup> century approaches to actor training and basic concepts of character and script analysis.

##### A.A. Degree Major\*

Program Requirements	Units
TA 100 Introduction to the Theatre	3
ENTT/TA 105 Introduction to Technical Theatre	2.5
TA 109 Elementary Stage Make-up	3
TA 115 Beginning Acting I: Fundamentals	3
TA 116 Beginning Acting II: Scene Study	3
TA 197D Stage Crew Workshop	3
ENG 205 Introduction to Literature	3

#### **One course selected from the following classes:**

TA 140 History of the Theatre From Ancient Greece Through The 17th Century	3
TA 141 History of the Theatre From the 18th Century To the Present	3

#### **Two courses selected from the following classes of advanced acting:**

TA 215 Intermediate Acting I: Styles	3
TA 216 Intermediate Acting II: Character Development	3
TA 217 Intensive Actor Training	3

#### **One course selected from the following classes:**

DNCE 100 Survey of Dance	3
DNCE 101 Survey of World Dance	3
DNCE 110 Modern Dance I	1.5
DNCE 115 Fundamentals of Ballet	1.5
DNCE 120 Jazz Technique I	1.5
DNCE 125 Theatre Dance I	1.5
DNCE 130 Tap Dance I	1.5

#### **Once course selected from the following classes:**

ENTT/TA 107 Special Effects of Light and Sound	3
ENTT/TA 108 Stagecraft/Scene Design	3

**TOTAL UNITS 34-35.5**

\*Theatre Arts Emphasis in Acting A. A. Degree Major pending approval by Chancellor's Office at time of catalog publication.

#### Theatre - Technical

Provides training in basic technical theatre skills for career employment in technical production areas of drama, music, and telecommunications. Also provides training for employment in children's theatre, junior theatre, and community theatre.

##### Certificate of Achievement

Program Requirements	Units
TA 100 Introduction to the Theatre	3
TA/ENTT 105 Introduction to Technical Theatre	2.5
TA 106 Elementary Stage Costume	3
TA/ENTT 107 Special Effects of Light and Sound	3
TA/ENTT 108 Stagecraft/Scene Design	3
TA 109 Elementary Stage Make-Up	3
TA 111 Technical Theatre Production	.5
TA 115 or Beginning Acting I: Fundamentals	
TA 116 Beginning Acting II: Scene Study	3
TA 197D* Stage Crew Workshop	2-6
TA 197E Management of Theatre Activities	.5-3
<b>Plus one of the following courses</b>	
TA 140 History/Theatre thru 17th Century	3
TA 141 History/Theatre/18th Century to the Present	3
TA 170 Computer Aided Drafting for Theatre	3
TA 297 Experimental Topics in Theatre	1-3
<b>TOTAL UNITS</b>	<b>24.5 - 33</b>

Recommended Electives: DT 105; CFT 100; TA 197C

\* TA 197D must be taken two times for a minimum of 2 units.

### COURSE OFFERINGS

Courses numbered under 50 are non-degree courses. Courses numbered under 100 are not intended for transfer credit.

**TA 100 Introduction to the Theatre (3)**  
3 hours lecture

**Transfer acceptability:** CSU; UC

A survey of theory and practice in the contemporary theatre including its literary, critical and technical aspects, and their relationships to historical backgrounds.

**TA 105 Introduction to Technical Theatre (2.5)**  
5 hours lecture/laboratory

**Note:** Cross listed as ENT 105

**Transfer acceptability:** CSU; UC

A general survey of technical theatre including stagecraft, lighting, sound design, costuming, make-up, production organization, business management, and promotion. Course will include practical skills in all areas.

**TA 106 Elementary Stage Costume (3)**

2 hours lecture-4 hours laboratory

**Prerequisite:** ENTT/TA 105

**Transfer acceptability:** CSU; UC

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

**TA 107 Special Effects of Light and Sound (3)**

2 hours lecture-4 hours laboratory

**Prerequisite:** ENTT/TA 105

**Note:** Cross listed as ENTT 107

**Transfer acceptability:** CSU; UC

Techniques, theories, and procedures necessary to develop sound, music, and lighting effects integrated into film, television, and theatre production. Practical experience in college productions.

**TA 108 Stagecraft/Scene Design (3)**

2 hours lecture-4 hours laboratory

**Prerequisite:** ENTT/TA 105

**Note:** Cross listed as ENTT 108

**Transfer acceptability:** CSU; UC

Technical practices and organization of production for theatre, film, and television. Practice in drafting, designing, and construction of scenery for college productions.

**TA 109 Elementary Stage Make-Up (3)**

2 hours lecture-4 hours laboratory

**Prerequisite:** ENTT/TA 105

**Transfer acceptability:** CSU; UC

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

**TA 111 Technical Theatre Production (.5)**

1½ hours lecture/laboratory

**Prerequisite:** ENTT/TA 105

**Corequisite:** TA 106, ENTT/TA107, ENTT/TA 108, or TA 109

**Note:** May be taken 4 times

**Transfer acceptability:** CSU; UC

Techniques and procedures for all phases of technical theatre production with an emphasis on production organization. Practical training through college production.

**TA 113 Theatre and Comedy Improvisation (3)**

3 hours lecture

**Note:** May be taken 3 times

**Transfer acceptability:** CSU

Practice and analysis of improvisational theatre and expansion of student's confidence and creative abilities. Development of a foundation for further work in the theatre.

**TA 115 Beginning Acting I: Fundamentals (3)**

3 hours lecture

**Transfer acceptability:** CSU; UC

In a workshop environment, the student will learn the basic tools and terminology of acting. The student will apply this knowledge and experience to the performance of short scenes.

**TA 116 Beginning Acting II: Scene Study (3)**

Three hours lecture (3)

**Prerequisite:** TA 115

**Transfer acceptability:** CSU; UC

Designed to improve the actor's skills for performing scenes and monologues with truth and power. Actors will improve their ability to pursue the character's needs and objectives, to be vulnerable to their partners' words and actions and to create with a range of emotion. Actors in this class will continue to develop their vocal and physical technique.

**TA 122 World View of the Short Play (3)**

3 hours lecture

**Prerequisite:** TA 100 or 115

**Transfer acceptability:** CSU; UC

An exploration of cultural and social diversity through intensive investigation of the short play. Students will study the works of

several artists with varied views and backgrounds, including segments on African, African-American, Asian, Hispanic, and gay and lesbian theatre. Each student will also participate in the acting, directing and/or technical aspects of several short works, culminating in the performance of the "Short Play Festival."

**TA 123 Arts Across the Curriculum (3)**

3 hours lecture

**Note:** Cross listed as: ART/DNCE/MUS 123

**Transfer acceptability:** CSU

This course is an introduction to the artistic creative process through a comparative study of dance, music, theatre, and visual arts, within a social and cultural context. The principles of artistic perception, creative expression, cultural and historical context, and aesthetic valuing will be discussed.

**TA 125 Beginning Oral Interpretation (3)**

3 hours lecture

**Note:** Cross listed as SPCH 125

**Transfer acceptability:** CSU; UC

An introduction to the oral reading of prose, poetry and drama in distinct and intertextual formats. Models of critical analysis will be applied to written literature and reading will be performed and evaluated by applying principles of effective delivery.

**TA 140 History of the Theatre From Ancient Greece Through the 17th Century (3)**

3 hours lecture

**Transfer acceptability:** CSU; UC

A survey of the influence of different cultures, traditions, and technologies on the development of the theatre as a social institution from Ancient Greece through the 17th Century.

**TA 141 History of the Theatre From the 18th Century to the Present (3)**

3 hours lecture

**Transfer acceptability:** CSU; UC

A survey of the influence of different cultures, traditions, and technologies on the development of the theatre as a social institution from the 18th Century to the present.

**TA 155 Beginning Playwriting (3)**

3 hours lecture

**Transfer acceptability:** CSU

Study and analysis of form, style, and structure in dramatic literature. Students will write at least two one-act plays for critical analysis. Selected student work will be given studio production.

**TA 160 Beginning Stage Direction (3)**

3 hours lecture

**Transfer acceptability:** CSU; UC

Training in the principles, procedures, and methods of stage direction. Students will serve as assistant directors on college productions and will also direct scenes for acting classes and studio productions.

**TA 170 Computer Aided Drafting for Theatre (3)**

6 hours lecture/laboratory

**Prerequisite:** TA/ENTT 108

**Note:** May be taken 2 times

**Transfer acceptability:** CSU

Basic introduction to computer aided drafting using AutoCAD software and IBM compatible or Macintosh computers. Hands-on experience with AutoCAD to include basic mechanical drafting terminology and techniques. An introduction to user specific third party software as related to drafting and designing of scenery for college productions.

**TA 173 Musical Theatre Scenes (1)**

3 hours laboratory

**Note:** Cross listed as DNCE/MUS 173

**Transfer acceptability:** CSU

Rehearsal and performance of solo and group scenes from Broadway musicals dating from the 1930's to the present.

**TA 182 Introduction to Arts Management (3)**

9 hours laboratory

**Note:** Cross listed as AMS/ART/DNCE/MUS 182

**Transfer acceptability:** CSU

An introduction to the principles and practices of arts management

through an interdisciplinary study of management topics in the visual and performing arts.

**TA 183 Internship in Arts Management (3)**

9 hours laboratory  
**Prerequisite:** AMS/ART/DANCE or MUS 182  
**Note:** Cross listed as AMS/ART/DNCE/MUS 183  
**Transfer acceptability:** CSU  
 Practical experience in arts management in the visual and performing arts.

**TA 184 Creative Theatre Ensemble (3)**

3 hours lecture  
**Note:** May be taken 4 times  
**Transfer acceptability:** CSU; UC  
 Students (actors, designers, directors, musicians, visual artists, etc.) will work together as an ensemble to create theater performances that rely on discipline, skill, imagination, and artistic courage.

**TA 197A Summer Theatre Workshop (3)**

6 hours lecture/laboratory  
**Note:** May be taken 4 times  
**Transfer acceptability:** CSU; UC  
 A lecture/laboratory course designed to give students guidance and direction in a variety of practical experiences in the theatre (including acting, lighting, scenery, costumes, and stage management) through productions of major works for public audiences.

**TA 197C Rehearsal and Performance (.5-3)**

1½ to 9 hours laboratory  
**Note:** May be taken 4 times  
**Transfer acceptability:** CSU; UC  
 Participation in college dramatic and musical productions as a member of the stage crew or house staff. At least one unit of this course is required of all theatre arts majors.

**TA 197D Stage Crew Workshop (.5-3)**

1½ to 9 hours laboratory  
**Prerequisite:** Completion of, or concurrent enrollment in, TA 105 or 111  
**Note:** At least one unit of this course is required of all theatre arts majors; may be taken 4 times  
**Transfer acceptability:** CSU; UC  
 Participation in college dramatic and musical productions as a member of the stage crew or house staff.

**TA 197E Management of Theatre Activities (.5-3)**

1½ to 9 hours laboratory  
**Note:** May be taken 4 times  
**Transfer acceptability:** CSU  
 The principles of organization, operation, and planning for theatre management including programming, ticket sales, box office records, and promotional news release writing. Practical use applied to theatre productions.

**TA 197F Theatre 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 theatre. See Class Schedule for specific topic offered. Course title will designate subject covered.

**TA 215 Intermediate Acting I: Styles (3)**

3 hours lecture  
**Prerequisite:** TA 116  
**Note:** May be taken 2 times  
**Transfer acceptability:** CSU; UC  
 This course emphasizes the application of fundamental acting skills to specific styles. The actors will learn how to accomplish the demands of different styles from Shakespeare to Theatre of the Absurd.

**TA 216 Intermediate Acting II: Character Development (3)**

3 hours lecture  
**Prerequisite:** TA 116  
**Note:** May be taken 2 times

**Transfer acceptability:** CSU; UC

Several approaches to the task of creating a character will be offered. Physical, vocal, psychological, and emotional aspects of character will be developed in depth.

**TA 217 Intensive Actor Training (3)**

3 hours lecture  
**Prerequisite:** TA 116 and audition  
**Transfer acceptability:** CSU  
 The application of rigorous actor training techniques to develop the actor's ability to create compelling performances. The coursework will integrate physical, vocal and imagination training with psychological work, text analysis and ensemble training.

**TA 297 Experimental Topics in Theatre (1,2,3)**

3, 6, or 9 hours laboratory  
**Prerequisite:** Previous theatre experience  
**Note:** May be taken 4 times  
**Transfer acceptability:** CSU; UC – Credit determined by UC upon review of course syllabus.  
 Designed for students with particular interest in advanced projects, including individual research. Tutoring and performance for college classes and community.

## Wastewater Technology Education (WWT)

Contact Occupational & Noncredit Programs for further information, (760) 744-1150, ext. 2284

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

#### Wastewater Technology Education

Specifically designed for individuals employed by or seeking employment in water districts in San Diego County.

#### A.A. Degree Major or Certificate of Achievement

Program Requirements		Units
WWT 100	Treatment Plant Operations	3
WWT/WTE 110	Waterworks Mathematics	3
WWT/WTE 120	Instrumentation and Controls	3
WWT/WTE/		
PWM 125	Supervision	3
WWT 150	Collection Systems Operator	3
WWT 155	Treatment Process Control	3
WWT/WTE 215	Motors/Pumps/Oper/Maintenance	3
WWT 220	Discharge Water Monitoring	3
<b>Electives (Select 6-7 units)</b>		
WWT/WTE 135	Backflow Prevention	3
WWT/WTE 138	Cross Connection Specialist	3
WWT 197	Wastewater Tech Education Topics	.5-4
CE 100*	Cooperative Education	3,4
<b>TOTAL UNITS</b>		<b>30 – 31</b>

\*Cooperative Education must be related to this major.

### COURSE OFFERINGS

Courses numbered under 50 are non-degree courses. Courses numbered under 100 are not intended for transfer credit.

**WWT 45 Vocational Math Skills for WWT/WTE (3)**

3 hours lecture  
**Note:** Cross listed as WTE 45  
 Introduction to the basic mathematic skills used in water and wastewater calculations. Particular interest is given to industry-relevant problems and examples.

**WWT 100 Treatment Plant Operations (3)**

3 hours lecture

**Recommended preparation:** WWT/WTE 45

**Note:** May be taken 2 times

**Transfer acceptability:** CSU

An introductory wastewater treatment plant operations course. Topics covered include: the various origins and characteristics of wastewater; an overview of wastewater collections systems; preliminary treatment; primary treatment; fixed film secondary biological treatment processes; treatment ponds and disinfection. Emphasis is given to the role of the operator and preparation for solving practical problems and problems typical of those found in Operator Certification examinations.

**WWT 110 Waterworks Mathematics (3)**

3 hours lecture

**Recommended preparation:** WWT/WTE 45

**Note:** Cross listed as WTE 110

Provides instruction in entry level to intermediate level mathematical calculations used in the operation and evaluation of conventional water and wastewater treatment processes. The course content has been developed to meet training requirements for entry to intermediate level certification (Grade I - III) for water treatment plant operators. Also, it will cover wastewater collection, treatment and disposal. Material will parallel some of the problems found on State Certification examination.

**WWT 120 Instrumentation and Controls (3)**

3 hours lecture

**Prerequisite:** WTE/WWT 110

**Note:** Cross listed as WTE 120

**Transfer acceptability:** CSU

Introduction to basic electrical theory. Applications and uses of water and wastewater control systems including switches, relays, alarms, motors, instrumentation and telemetering.

**WWT 125 Supervision (3)**

3 hours lecture

**Note:** Cross listed as WTE/PWM 125

**Transfer acceptability:** CSU

Managerial aspects of public utilities including organization, decision making, coordination, communication, and public relations. Personnel management including recruiting, training, evaluation, discipline, promotion, morale, and grievances. Safety programs and encouraging safe conditions, actions and attitudes.

**WWT 135 Backflow Prevention (3)**

2½ hours lecture-1½ hours laboratory

**Note:** Cross listed as WTE 135; may be taken 4 times

**Transfer acceptability:** CSU

Concentrated training in recognition and abatement of cross-connections in water supply and plumbing systems. Hands-on backflow prevention device testing procedures for certification.

**WWT 138 Cross Connection Specialist (3)**

3 hours lecture

**Recommended preparation:** WTE/WWT 135

**Note:** Cross listed as WTE 138

The study of the various levels of administrative and technical procedures necessary to operate a cross connection control program. Students will obtain the knowledge to become certified as a "Cross Connection Control Specialist" under the provisions set forth by American Water Works Association.

**WWT 150 Collection Systems Operator (3)**

3 hours lecture

**Transfer acceptability:** CSU

Wastewater collection systems and collection system equipment, pipeline cleaning and maintenance, system design, safety procedures, inspecting and testing procedures used in collections systems.

**WWT 155 Treatment Process Control (3)**

3 hours lecture

**Recommended preparation:** WWT 110

**Transfer acceptability:** CSU

A wastewater treatment and disposal course with an emphasis on control of these processes. Topics covered include: the activated sludge secondary treatment process and its variations; sludge digestion, treatment and disposal; safety and housekeeping;

maintenance and an overview of effluent disposal, tertiary treatment and reclamation. Emphasis is also given to the role of the operator and provides preparation for solving process control calculations and problems typical of those found in Operator Certification examinations.

**WWT 197 Wastewater Technology Education 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

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

**WWT 215 Motors and Pumps, Operation and Maintenance (3)**

3 hours lecture

**Recommended preparation:** WTE/WWT 110

**Note:** Cross listed as WTE 215

**Transfer acceptability:** CSU

Identification of problems encountered, causes of problems, corrective solutions, and repairs in the operation of pumps and motors. Implementation of maintenance programs including scheduling and recordkeeping.

**WWT 220 Discharge Water Monitoring (3)**

2½ hours lecture, 1½ hours laboratory

**Recommended preparation:** WTE/WWT 110

Study of basic laboratory methods, sampling and analysis procedures, chemistry concepts, and regulatory requirements in order to monitor wastewater for compliance and treatment plant process control.

**Water Technology Education (WTE)**

Contact Occupational & Noncredit Programs for further information, (760) 744-1150, ext. 2284

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**

**Water Technology Education**

Specifically designed for individuals employed by or seeking employment in water districts in San Diego County.

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

Program Requirements		Units
WTE 100	Waterworks Distribution	3
WTE 105	Water Treatment Plant Operation I	3
WTE/ WWT 110	Waterworks Mathematics	3
WTE/ WWT 120	Instrumentation and Controls	3
WTE/WWT/ PWM 125	Supervision	3
WTE 150	Water Quality Monitoring	3
WTE/ WWT 215	Motors/Pumps/Oper/Maintenance	3
<b>Electives (Select 9-10 units)</b>		
WTE/ WWT 135	Backflow Prevention	3
WTE/ WWT 138	Cross Connection Specialist	3
WTE 197	Water Technology Education Topics	.5-4

WTE 205	Waterworks Distribution II	3
WTE 210	Water Treatment Plant Operation II	3
CE 100*	Cooperative Education	3.4
<b>TOTAL UNITS</b>		<b>30-31</b>

\* Cooperative Education must be related to this major.

## COURSE OFFERINGS

Courses numbered under 50 are non-degree courses.

Courses numbered under 100 are not intended for transfer credit.

### WTE 45 Vocational Math Skills for WWT/WTE (3)

3 hours lecture

**Note:** Cross listed as WWT 45

Introduction to the basic mathematic skills used in water and wastewater calculations. Particular interest is given to industry-relevant problems and examples.

### WTE 100 Waterworks Distribution (3)

3 hours lecture

**Recommended preparation:** WTE/WWT 45

**Transfer acceptability:** CSU

Water utility system operations and maintenance. An introduction to the principles of pressure pipe systems and the hydraulics involved in their operation. Design, installation, operation, and maintenance of basic elements of water systems including pipes, pumps, valves, meters, and related hydraulic units. Operations and maintenance safety considerations emphasized. This course prepares students for the "American Water Works Association" Grade I and Grade II exams.

### WTE 105 Water Treatment Plant Operation I (3)

3 hours lecture

**Recommended preparation:** WTE/WWT 45

**Note:** May be taken 2 times

**Transfer acceptability:** CSU

Practical water quality control and treatment with emphasis given to sources of and quality characteristics of natural water, chemistry, public health protection, sanitary practices, and hydraulic principles. Particular attention will be given to basic water treatment plant process and operation. Will be helpful to those preparing for the Grade I and Grade II examination.

### WTE 110 Waterworks Mathematics (3)

3 hours lecture

**Recommended preparation:** WTE/WWT 45

**Note:** Cross listed as WWT 110

Provides instruction in entry level to intermediate level mathematical calculations used in the operation and evaluation of conventional water and wastewater treatment processes. The course content has been developed to meet training requirements for entry to intermediate level certification (Grade I - III) for water treatment plant operators. Also, it will cover wastewater collection, treatment and disposal. Material will parallel some of the problems found on State Certification examination.

### WTE 120 Instrumentation and Controls (3)

3 hours lecture

**Prerequisite:** WTE/WWT 110

**Note:** Cross listed as WWT 120

**Transfer acceptability:** CSU

Introduction to basic electrical theory. Applications and uses of water and wastewater control systems including switches, relays, alarms, motors, instrumentation and telemetering.

### WTE 125 Supervision (3)

3 hours lecture

**Note:** Cross listed as WWT/PWM 125

**Transfer acceptability:** CSU

Managerial aspects of public utilities including organization, decision-making, coordination, communication, and public relations. Personnel management including recruiting, training, evaluation, discipline, promotion, morale, and grievances. Safety programs and encouraging safe conditions, actions and attitudes.

### WTE 135 Backflow Prevention (3)

2½ hours lecture-1½ hours laboratory

**Note:** Cross listed as WWT 135; may be taken 4 times

**Transfer acceptability:** CSU

Concentrated training in recognition and abatement of cross-connections in water supply and plumbing systems. Hands-on backflow prevention device testing procedures for certification.

### WTE 138 Cross Connection Specialist (3)

3 hours lecture

**Recommended preparation:** WTE/WWT 135

**Note:** Cross listed as WWT 138

The study of the various levels of administrative and technical procedures necessary to operate a cross connection control program. Students will obtain the knowledge to become certified as a "Cross Connection Control Specialist" under the provisions set forth by American Water Works Association.

### WTE 150 Water Quality Monitoring (3)

2 ½ hours lecture-1 ½ hours laboratory

**Recommended preparation:** WWT/WTE 110

Regulatory requirements, proper sampling procedures, basic laboratory methods in order to monitor water quality for regulatory compliance or treatment plant operations.

### WTE 197 Water Technology Education 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

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

### WTE 205 Waterworks Distribution II (3)

3 hours lecture

**Recommended preparation:** WTE 100 and 110

**Transfer acceptability:** CSU

Intermediate and advanced instruction in the field of water production, types of reservoirs, water lines, pumps, valves, and related appurtenances. Studies design, proper operation, and facilities repair of a public water system. Provides instruction in methods of record keeping and administrative responsibilities related to water systems. This course prepares students for the California Department of Health Services, Water Distribution Operator certification exams at levels D-3, D-4, and D-5 and the "American Water Works Association" certification exams for Grades II, III, and IV.

### WTE 210 Water Treatment Plant Operation II (3)

3 hours lecture

**Prerequisite:** WTE 105 and 110

**Transfer acceptability:** CSU

Advanced water quality control and treatment with emphasis given to state regulations, EPA regulations, advanced mathematics and chemistry. Particular attention will be given to in-depth examination of treatment plant processes and the enforcement of the Surface Water Treatment Rule, Total Coliform Rule, Interim Enhanced Surface Water Treatment Rule, Long Term 1 Enhanced Surface Water Treatment Rule, Long Term 2 Enhanced Surface Water Treatment Rule, and Disinfection/Disinfection by Product Rule. This course will be helpful to those preparing for Grade III and IV examinations.

### WTE 215 Motors and Pumps, Operation and Maintenance (3)

3 hours lecture

**Recommended preparation:** WTE/WWT 110

**Note:** Cross listed as WWT 215

**Transfer acceptability:** CSU

Identification of problems encountered, causes of problems, corrective solutions, and repairs in the operation of pumps and motors. Implementation of maintenance programs including scheduling and recordkeeping.

## Welding (WELD)

Contact the Trade and Industry Department for further information, (760) 744-1150, ext. 2545

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

#### Entry-Level Gas Metal Arc/Flux Cored Arc Welding

Provides the skills necessary for entry-level employment as a gas metal arc welder/flux cored arc welder.

##### Certificate of Proficiency

Program Requirements		Units
IT 100	Technical Mathematics	3
WELD 100	Welding I	3
WELD 120	Gas Metal Arc and Flux Cored Arc Welding	3
WELD 135	Print Reading for Welders	3
WELD 160	Metal Layout for Fabrication	3
<b>TOTAL UNITS</b>		<b>15</b>

#### Entry-Level Gas Tungsten Arc Welding

Provides the skills necessary for entry-level employment as a gas tungsten arc welder.

##### Certificate of Proficiency

Program Requirements		Units
IT 100	Technical Mathematics	3
WELD 100	Welding I	3
WELD 115	Gas Tungsten Arc Welding	3
WELD 135	Print Reading for Welders	3
WELD 160	Metal Layout for Fabrication	3
<b>TOTAL UNITS</b>		<b>15</b>

#### Entry-Level Shielded Metal Arc Welding

Provides the skills necessary for entry-level employment as a shielded metal arc welder.

##### Certificate of Proficiency

Program Requirements		Units
IT 100	Technical Mathematics	3
WELD 100	Welding I	3
WELD 135	Print Reading for Welders	3
WELD 160	Metal Layout for Fabrication	3
<b>TOTAL UNITS</b>		<b>12</b>

#### Welding Technology

Provides training for a career in the field of welding. Following the study of basic welding processes, the student may elect to concentrate in one or more of the basic welding processes and to prepare for the industrial certification test.

##### A.A. Degree Major or Certificate of Achievement

Program Requirements		Units
WELD 100	Welding I	3
WELD 110	Shielded Metal Arc Welding	3
WELD 115	Gas Tungsten Arc Welding	3
WELD 120	Gas Metal Arc and Flux Cored Arc Welding	3
WELD 160	Metal Layout for Fabrication	3
WELD 196	Special Problems in Welding	1,2,3
WELD 135	Print Reading for Welders	3
CE 100	Cooperative Education	1,2,3,4
IT 100	Technical Mathematics	3
<b>TOTAL UNITS</b>		<b>23 - 28</b>

### COURSE OFFERINGS

Courses numbered under 50 are non-degree courses.

Courses numbered under 100 are not intended for transfer credit.

#### **WELD 10L Shielded Metal Arc Welding Laboratory(3)**

6 hours lecture/laboratory

**Note:** May be taken 4 times

Operation of arc welding machines with various electrodes in all positions of welding.

#### **WELD 15L Gas Tungsten Arc Welding Laboratory (3)**

6 hours lecture/laboratory

**Note:** May be taken 4 times

Operation of Gas Tungsten Arc Welding machines on carbon steel, stainless steel, and aluminum.

#### **WELD 20L Semiautomatic Arc Welding Laboratory(3)**

6 hours lecture/laboratory

**Note:** May be taken 4 times

Operation of Gas Metal Arc and Flux Cored Arc Welding machines on carbon steel.

#### **WELD 100 Welding I (3)**

2 hours lecture-4 hours laboratory

**Note:** May be taken 2 times

**Transfer acceptability:** CSU

Introduction to safe practices, setup, and operation of oxyfuel cutting and brazing, shielded metal arc welding, gas tungsten arc welding, flux core arc welding, and gas metal arc welding.

#### **WELD 110 Shielded Metal Arc Welding (3)**

2 hours lecture-4 hours laboratory

**Note:** May be taken 4 times

**Transfer acceptability:** CSU

Welding steel sheet metal, plate, tubing, and pipe. Carbon arc gouging on construction type steels.

#### **WELD 115 Gas Tungsten Arc Welding (3)**

6 hours lecture/laboratory

**Note:** May be taken 4 times

**Transfer acceptability:** CSU

Safe setup, operation, and maintenance of GTAW welding equipment. Welding stainless steel, carbon steel, and aluminum in the flat and horizontal position.

#### **WELD 116 Advanced Gas Tungsten Arc Welding (3)**

6 hours lecture/laboratory

**Note:** May be taken 4 times

**Transfer acceptability:** CSU

Safe setup, operation and maintenance of GTAW welding equipment. Welding stainless steel, carbon steel, aluminum, and other exotic metals in all positions according to building codes, military specifications, and aerospace standards.

#### **WELD 120 Gas Metal Arc and Flux Cored Arc Welding (3)**

2 hours lecture-4 hours laboratory

**Note:** May be taken 4 times

**Transfer acceptability:** CSU

Gas metal arc welding steel and aluminum sheet metal, plate and pipe with short arc and spray arc technique. Flux cored arc welding steel plate in flat, horizontal, and vertical positions.

#### **WELD 135 Print Reading for Welders (3)**

3 hours lecture

Line interpretation, sketching, bill of materials, structural shapes, welding symbols, joint types, weld types, and metric conversions.

2 hours lecture-4 hours laboratory

**Prerequisite:** WELD 101

**Note:** May be taken 4 times

This course is designed to train the students to be familiar with the provisions of the various welding standards and codes. Supervised training is provided so that students will be able to qualify for certification on any code or standard.

**WELD 160 Metal Layout for Fabrication (3)**

6 hours lecture/laboratory

*Note: May be taken 4 times*

This course provides students with knowledge of basic layout, fitup, fabrication, safe operation of shop equipment. Parallel line, radial line, and triangulation layout will be taught. Students will work from drawings or sketches to prepare, form, or cut multiple parts for assembly.

**WELD 196 Special Problems in Welding (1,2,3)**

3, 6 or 9 hours laboratory

**Prerequisite:** Completion of, or concurrent enrollment in, WELD 100*Note: May be taken 4 times*

This course is designed to aid the student in the enrichment of the area of concentration in welding and is of a research nature. Content to be determined by the need of the student under signed contract with the instructor.

Structural and functional adaptations of major groups of the animal kingdom from protozoans through mammals. ZOO 101L laboratory optional.

**ZOO 101L Animal Kingdom Laboratory (1)**

3 hours laboratory

**Prerequisite:** Completion of, or concurrent enrollment in, ZOO 101*Note: Not open to students with prior credit in ZOO 100***Transfer acceptability:** CSU; UC – No credit for ZOO 101/101L if taken after 100

Investigations upon living and preserved specimens representative of the major groups of the animal kingdom. *This is a general education course intended for non-science majors.*

**ZOO 115 Natural History of Animal Life (4)**

3 hours lecture-3 hours laboratory

*Note: Not open to students with prior credit in ZOO 116 or 116L***Transfer acceptability:** CSU; UC – ZOO 115, 116/116L combined: maximum credit, 4 units

Consideration of the natural history, adaptations, ecology, behavior, and distribution of animals with reference to major groups of both vertebrates and invertebrates. Weekend field trips are required.

**ZOO 116 Natural History of Animal Life (Lecture) (3)**

3 hours lecture

*Note: Not open to students with prior credit in ZOO 115***Transfer acceptability:** CSU; UC – ZOO 115, 116/116L combined: maximum credit, 4 units

Consideration of the natural history, adaptations, ecology, behavior, and distribution of animals with reference to major groups of both invertebrates and vertebrates

**ZOO 116L Natural History of Animal Life (Laboratory) (1)**

3 hours laboratory

**Prerequisite:** Completion of, or concurrent enrollment in, ZOO 116*Note: Not open to students with prior credit in ZOO 115***Transfer acceptability:** CSU; UC – ZOO 115, 116/116L combined: maximum credit, 4 units

The radiative adaptation of representative animals to various habitats and modes of life; field observation of major fauna of littoral, chaparral, desert, and mountain environments. Weekend field trips are required.

**ZOO 120 Animal Behavior (3)**

3 hours lecture

**Transfer acceptability:** CSU; UC

Biological basis of behavior including behavior genetics, operation of evolutionary processes on species-typical behaviors, behavioral ontogeny, functional organization of nervous systems, animal senses, motivation including hormonal effects on drive, and biorhythms; behavioral ecology including social behavior and social living, reproductive behaviors, homing and migration, antipredatory defenses, feeding strategies, and communication.

**ZOO 135 Marine Mammals: Biology and Ecology (3)**

3 hours lecture

*Note: Cross listed as BIOL 135***Transfer acceptability:** CSU; UC

Basic biology and ecology of marine mammals. Special emphasis on behavior, adaptations, and conservation.

**ZOO 145 Introduction to Anatomy and Physiology (3)**

3 hours lecture

*Note: Not open to students with prior credit in ZOO 200, 203 and 205***Transfer acceptability:** CSU; UC – ZOO 145/145L and BIOL 106/106L or BIOL 105 combined: maximum credit, 4 units; UC – No credit for ZOO 145/145L if taken after ZOO 203, 205/205L, or 200

Introduction to the structure and function of human body systems in health and disease. Not recommended for those intending to take BIOL 105, 106, ZOO 200, 203, or 205.

**ZOO 145L Introduction to Anatomy and Physiology Laboratory (1)**

3 hours laboratory

**Prerequisite:** Completion of, or concurrent enrollment in, ZOO 145**Transfer acceptability:** CSU; UC – ZOO 145/145L and BIOL 106/106L or BIOL 105 combined: maximum credit, 4 units; UC – No credit for ZOO 145/145L if taken after ZOO 203, 205/205L, or 200

## Women's Studies

Contact the Behavioral Sciences Department for further information, (760) 744-1150, ext. 2330

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

#### Women's Studies

This major offers the student an opportunity to study women and their contributions from a female perspective. It also provides intensive, interdisciplinary lower-division preparation necessary for pursuing advanced coursework in Women's Studies. Transfer students should consult the four-year college or university catalog for specific requirements.

#### A.A. Degree Major

Program Requirements	Units
SOC 115 Introduction to Women's Studies	3
<b>Electives (Select a minimum of 15 units)</b>	
AIS 165 Native Women in the Americas	3
COMM 105 Human Values in the Mass Media	3
ENG 280 Women and Literature	3
PSYC/SOC 145 Psychology and Sociology of Aging	3
HIST 130 Women in United States History	3
PSYC 130 Psychology of Women	3
PSYC/SOC 125 Human Sexuality	3
<b>TOTAL UNITS</b>	<b>18</b>

Recommended Electives: ENG 100 and 202 with emphasis in Women's Studies issues.

## Zoology (ZOO)

Contact the Life Sciences Department for further information, (760) 744-1150, ext. 2275

### COURSE OFFERINGS

**ZOO 100 General Zoology (4)**

3 hours lecture-3 hours laboratory

*Note: Not open to students with prior credit in ZOO 101 or 101L***Transfer acceptability:** CSU; UC – No credit if taken after ZOO 101/101L; CAN BIOL 4

Principles of animal life and body organization. Structural and functional adaptations of major groups of the animal kingdom from protozoans through mammals. *This is a general education course intended for non-science majors.*

**ZOO 101 Animal Kingdom (3)**

3 hours lecture

*Note: Not open to students with prior credit in ZOO 100***Transfer acceptability:** CSU; UC – No credit if taken after ZOO 100



Introduction to the structure and function of human body systems. Includes study of cells, tissues, and human organ systems. Not recommended for those intending to take BIOL 105, 105L, 106, ZOO 200, 203, 205, or 205L.

### ZOO 195A Field Study of Marine Invertebrates(1,2,3)

2, 4, or 6 hours lecture/laboratory

**Note:** Fee charged; may be taken 4 times

**Transfer acceptability:** CSU; UC – ZOO 195A-F combined: maximum credit, 2 courses

Extended field study of the fauna of marine intertidal and subtidal habitats of selected geographic regions, with emphasis upon field identification, observation and interpretation of behavioral and ecological interrelationships of animals to their environment and to one another. See Class Schedule for locality to be visited.

### ZOO 195B Field Study of Marine Vertebrates (1,2,3)

2, 4, or 6 hours lecture/laboratory

**Note:** Fee charged; may be taken 4 times

**Transfer acceptability:** CSU; UC – ZOO 195A-F combined: maximum credit, 2 courses

Extended field study fishes and marine reptiles and mammals, with emphasis upon identification, behavior, and adaptations. See Class Schedule for locality to be visited.

### ZOO 195C Field Study of Terrestrial Vertebrates (1,2,3)

2, 4, or 6 hours lecture/laboratory

**Note:** Fee charged; may be taken 4 times

**Transfer acceptability:** CSU; UC – ZOO 195A-F combined: maximum credit, 2 courses

Extended field study of terrestrial mammals, reptiles, and amphibians, emphasizing identification, behavior, adaptations, and ecology. See Class Schedule for locality to be visited.

### ZOO 195D Field Study of Birds (1,2,3)

2, 4, or 6 hours lecture/laboratory

**Note:** Fee charged; may be taken 4 times

**Transfer acceptability:** CSU; UC – ZOO 195A-F combined: maximum credit, 2 courses

Extended field study of terrestrial and aquatic avifauna of selected habitats, emphasizing identification and observation of native and migratory birds, their behavior, and adaptations. See Class Schedule for locality to be visited.

### ZOO 195E Field Study of Terrestrial and Aquatic Invertebrates (1,2,3)

2, 4, or 6 hours lecture/laboratory

**Note:** Fee charged; may be taken 4 times

**Transfer acceptability:** CSU; UC – ZOO 195A-F combined: maximum credit, 2 courses

Extended field study of the land and freshwater invertebrate life of selected areas, emphasizing taxonomic identification, behavior, and ecological relationships. See Class Schedule for locality to be visited.

### ZOO 195F Field Studies in Animal Ecology (1,2,3)

2, 4, or 6 hours lecture/laboratory

**Note:** Fee charged; may be taken 4 times

**Transfer acceptability:** CSU; UC – ZOO 195A-F combined: maximum credit, 2 courses

Extended field studies of the fauna of selected ecosystems, emphasizing identification of animal species and observations upon their interspecific and conspecific interactions and ecological relationships with flora. See Class Schedule for locality to be visited.

### ZOO 197 Zoology 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 Zoology. See Class Schedule for specific topic offered. Course title will designate subject covered.

### ZOO 200 Anatomy (5)

3 hours lecture-6 hours laboratory

**Prerequisite:** BIOL 102; or BIOL 200; or BIOL 100; or BIOL 101 and 101L; or BIOL 105; or BIOL 106 and BIOL 106L

**Transfer acceptability:** CSU; UC – ZOO 200, 203, 205/205L

combined: maximum credit, 10 units; CAN BIOL 10; ZOO 200+203 =CAN BIOL SEQ B

Designed to provide a basic understanding of the structure of the human body. Laboratory study includes a study of anatomy through cat and organ dissection, skeletal study, use of human models and other visual aids.

### ZOO 203 Physiology (5)

3 hours lecture-6 hours laboratory

**Prerequisite:** BIOL 102; or BIOL 200 and CHEM 100; or BIOL 100 and CHEM 100; or BIOL 105 and CHEM 100

**Note:** Not open to students with prior credit in ZOO 205 and/or 205L

**Transfer acceptability:** CSU; UC – ZOO 200, 203, 205/205L combined: maximum credit, 10 units; UC – ZOO 203 and 205/205L combined: maximum credit, 5 units; CAN BIOL 12; ZOO 200+203=CAN SEQ B

Principles of human physiology including laboratory exercises. Deals with physiology of muscle, nerve, circulation, respiration, excretion, digestion, the endocrines and exercise.

### ZOO 205 Physiology Lecture (3)

3 hours lecture

**Prerequisite:** BIOL 102; or BIOL 200 and CHEM 100; or BIOL 100 and CHEM 100; or BIOL 105 and CHEM 100

**Note:** Not open to students with prior credit in ZOO 203

**Transfer acceptability:** CSU; UC – ZOO 200, 203, 205/205L combined: maximum credit, 10 units; UC – ZOO 203 and 205/205L combined: maximum credit, 5 units

Principles of human physiology. Deals with physiology of muscle, nerve, circulation, respiration, excretion, digestion, the endocrines and exercise.

### ZOO 205L Physiology Laboratory (2)

6 hours laboratory

**Prerequisite:** Completion of, or concurrent enrollment in, ZOO 205

**Note:** Not open to students with prior credit in ZOO 203

**Transfer acceptability:** CSU; UC – ZOO 200, 203, 205/205L combined: maximum credit, 10 units; UC – ZOO 203 and 205/205L combined: maximum credit, 5 units

Laboratory exercises in principles of human physiology. Deals with physiology of muscle, nerve, circulation, respiration, excretion, digestion, the endocrines and exercise.

### ZOO 295 Directed Study in Zoology (1,2,3)

3, 6, or 9 hours laboratory

**Prerequisite:** Approval of project or research by department chairperson

**Note:** May be taken 4 times

**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 Zoology 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.

## Regional Occupational Program (ROP)

Palomar College, under contract with the San Diego County Office of Education, offers vocational and technical training through the Regional Occupational Program.

Courses provided through ROP are available to college and high school students, out-of-school youths, and adults residing in San Diego County. Courses can be used for basic job skills, upgrading of existing skills, or changing occupations. Units earned may be used for high school or college credit. ROP courses taken for college credit may be applied toward Palomar College Certificates/Degrees. For more information, contact the ROP Office in AA-136 or call (760) 744-1150, ext. 2293.

## Air Conditioning, Heating and Refrigeration (R ACR)

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

#### Air Conditioning, Heating and Refrigeration

Prepares students for entry-level positions as air conditioning, heating, and refrigeration technicians. Also provides retraining and upgrading of skills for maintenance technicians, including EPA certification.

In order to earn a certificate, students must achieve a minimum grade of "C" in each of the certificate program courses.

#### Certificate of Proficiency

Program Requirements	Units
R ACR 50 AC, Heating, and Refrigeration: Electrical	4
R ACR 55 AC, Heating, and Refrigeration: Mechanical	4
R ACR 56 Adv AC/Heating/Refrigeration	4
R ACR 58 Refrigerant Recovery	1
<b>TOTAL UNITS</b>	<b>13</b>

### COURSE OFFERINGS

Courses taken for college credit may be applied toward a certificate or an Associate in Arts degree.

Courses numbered under 100 are not intended for transfer credit.

#### **R ACR 50 Air Conditioning, Heating and Refrigeration: Electrical (4)**

8 hours lecture/laboratory

**Note:** Graded only; may be taken 4 times

Introduction to the fundamentals and application of electrical theory as related to air conditioning, heating and refrigeration. Study of basic electrical theory, alternating current, electrical controls, motors, schematics, and electrical meters.

#### **R ACR 55 Air Conditioning, Heating and Refrigeration: Mechanical (4)**

8 hours lecture/laboratory

**Note:** Graded only; may be taken 4 times

Introduction to basic mechanical theory of air conditioning, heating and refrigeration. Application of principles and techniques to include system components and their interrelated functions, safety procedures, tools, and equipment.

#### **R ACR 56 Advanced Air Conditioning, Heating and Refrigeration (4)**

8 hours lecture/laboratory

**Prerequisite:** R ACR 50 and 55

**Note:** Graded only; may be taken 2 times

Advanced principles and techniques of air conditioning, heating and refrigeration. EPA regulations and safety requirements; complex control systems; gas furnace combustion and air requirements; and the installation, troubleshooting, repair, and maintenance of residential and small commercial units.

#### **R ACR 58 Refrigerant Recovery (1)**

2 hours lecture/laboratory

**Note:** Graded only; may be taken 2 times

Basic understanding of the United States Environmental Protection Agency regulations as set forth under Section 608 of the Clean Air Act of 1990, which described requirements for recycling ozone-depleting refrigerants. Preparation to take the EPA certification exam, which is administered at the conclusion of the course.

#### **R ACR 97 Air Conditioning, Heating, and Refrigeration 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:** Graded only; may be taken 4 times

Topics in Air Conditioning, Heating, and Refrigeration. See Class Schedule for specific topic offered. Course title will designate subject covered.

## Automotive Technology (R AT)

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

#### Auto Body Work

In order to earn a certificate, students must achieve a minimum grade of "C" in each of the certificate program courses.

#### A.A. Degree Major or Certificate of Achievement

Program Requirements	Units
R AT 50 Auto Body Repair I	4
R AT 51 Auto Body Repair II	4
R AT 55 Auto Refinishing I	4
R AT 56 Auto Refinishing II	4

#### Elective Courses (Select 6 Units)

AT 100 Auto Maintenance and Minor Repair	3
AT 105 Automotive Electricity	2
CE 100 Cooperative Education	1,2,3,4
IT 100 Technical Mathematics	3
WELD 100 Welding I	3
<b>TOTAL UNITS</b>	<b>22</b>

The Auto Body Work program is also listed under Auto Technology.

### COURSE OFFERINGS

Courses taken for college credit may be applied toward a certificate or an Associate in Arts degree.

Courses numbered under 100 are not intended for transfer credit.

#### **R AT 50 Auto Body Repair I (4)**

8 hours lecture/laboratory

**Note:** Graded only; may be taken 3 times

Automotive body work with emphasis on repair. Includes welding; working with small damage points; restoring contour of body panels and sections; and realigning bumpers, fenders, doors, and hoods.

**R AT 51 Auto Body Repair II (4)**  
*8 hours lecture/laboratory*  
**Recommended preparation:** R AT 50  
**Note:** Graded only; may be taken 3 times  
 Automotive body work with emphasis on increasing diagnostic, estimating and repair skills and updating techniques and related technologies. Introduction to collision industry standards including I-CAR and ASE.

**R AT 55 Auto Refinishing I (4)**  
*8 hours lecture/laboratory*  
**Note:** Graded only; may be taken 3 times  
 Introduction to auto refinishing. Preparation of auto surfaces for refinishing: taping, cleaning, and sanding. Refinishing auto surfaces: sanding, application of primers and paint.

**R AT 56 Auto Refinishing II (4)**  
*8 hours lecture/laboratory*  
**Recommended preparation:** R AT 55  
**Note:** Graded only; may be taken 3 times  
 Skills development in automotive refinishing techniques including base-coat clear-coat application. Color matching concepts. Identification, prevention and correction of painting problems. Update on new products, techniques, and trends.

**R AT 90 Automotive Upholstery (4)**  
*8 hours lecture/laboratory*  
**Note:** Cross listed as R UP 90; graded only; may be taken 2 times  
 Skills and techniques required to replace, repair or customize automotive and related upholstery. Fabrication of interiors and accessories for automobile interiors, watercraft and other recreational vehicles. Techniques and considerations related to auto alarm or sound system installation. Students will complete individual or group projects.

**R AT 97 Auto Body Repair/Auto Refinishing 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:** Graded only; may be taken 4 times  
 Topics in auto body repair and auto refinishing. See Class Schedule for specific topic offered. Course title will designate subject covered.

## Computer Science and Information Systems (R CSIS)

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

#### Applications Support Specialist

This program prepares students for employment as technicians supporting software applications such as Microsoft Office Suite in a help desk environment. Building on applications proficiency, it includes supporting coursework in computer hardware, operating systems, web site development and customer support fundamentals.

In order to earn a certificate, students must achieve a minimum grade of "C" in each of the certificate program courses.

#### Certificate of Proficiency

Program Requirements	Units
R CSIS/CSIS 170 Windows	1
R CSIS/CSIS 120 Microcomputer Applications	3
R CSIS/CSIS 137 Web Site Development with HTML	2
R CSIS 172 Windows for Technicians	2
R CSIS 157 or Windows XP: Professional/Server	
R CSIS 158 Windows 2000	3
R CSIS 65 Help Desk Fundamentals	2
<b>TOTAL UNITS</b>	<b>13</b>

#### Computer Technology

This program prepares students for employment in various areas of business and industry requiring technical support for stand-alone and networked computer systems. It is designed to provide the basics of computer hardware and software theory and application, familiarity with a variety of operating systems and the fundamentals of networking. Hands-on labs with an emphasis on problem-solving and troubleshooting provide opportunities for the application of theoretical knowledge to real and simulated system malfunctions.

#### A.A. Degree Major or Certificate of Achievement

Program Requirements	Units
R CSIS 140 Command Line Operations	3
R CSIS/CSIS 145 Introduction to Linux	3
R CSIS 155 Computer Technology – Hardware	3
R CSIS 156 or Computer Technology – Software	
CSIS 108 Hardware and O.S. Fundamentals	3
R CSIS 172 Windows for Technicians	2
R CSIS/CSIS 120 Microcomputer Applications	3
R CSIS 157 Windows XP: Professional/Server	3
R CSIS 158 or Windows 2000	
CSIS 162 and Windows Client	3
CSIS 163 Windows Server	3
R CSIS 160 or Introduction to Local Area Networking	3
CSIS 111 Networking Fundamentals	4

#### Electives (Select a minimum of 6 units)

R CSIS 159 Industry Certification: Review and Prep	1
CSIS 160 Survey of Computer Science	4
R CSIS 161 PC/Network Security	3
R CSIS 169 Overview of Computer Forensics	3
R CSIS 65 Help Desk Fundamentals	2
R CSIS/CSIS 137 Web Site Development with HTML	2
ECHT 100 Electronic Components and Circuits	4.5
ECHT 203 Digital/Computer Electronics	4.5
<b>TOTAL UNITS</b>	<b>32-36</b>

#### Microcomputer Operating Systems

Prepares students for employment in various areas of microcomputer support, specifically operating systems and software installation and support. Focus on client and server applications of Microsoft Windows user and server operating systems. Includes evolution of operating systems, upgrade and transition to emerging industry standards.

In order to earn a certificate, students must achieve a minimum grade of "C" in each of the certificate program courses.

#### Certificate of Proficiency

Program Requirements	Units
R CSIS 140 Command Line Operations	3
R CSIS/CSIS 170 Windows	1
R CSIS 172 Windows for Technicians	2
R CSIS 158 Windows 2000	3
R CSIS 157 Windows XP: Professional and Server	3
<b>TOTAL UNITS</b>	<b>12</b>

#### Microcomputer Technology

Prepares students for entry-level positions supporting, maintaining and repairing stand-alone and networked microcomputer systems.

In order to earn a certificate, students must achieve a minimum grade of "C" in each of the certificate program courses.

#### Certificate of Proficiency

Program Requirements	Units
R CSIS 140 Command Line Operations	3
R CSIS 155 Computer Technology - Hardware	3
R CSIS 156 Computer Technology - Software	3
R CSIS 160 Introduction to Local Area Networking	3
<b>TOTAL UNITS</b>	<b>12</b>

**PC Repair Technician**

Prepares students for mid-level positions as PC Repair Technician. Focus on microcomputer structure and Windows operating system. Students will develop skills in component identification, preparation and setup; memory system and repair; power supplies; multiple hard disk preparation, testing and installation; current technology trends and troubleshooting and customer relations.

In order to earn a certificate, students must achieve a minimum grade of "C" in each of the certificate program courses.

**Certificate of Proficiency**

Program Requirements		Units
R CSIS 156	Computer Technology - Software	3
R CSIS 159	Industry Certification: Review & Preparation	1
R CSIS 172	Windows for Technicians	2
<b>TOTAL UNITS</b>		<b>6</b>

**PC Support Technician**

Prepares students for entry-level positions as PC Support Technician. Instructional focus on installation, upgrade, maintenance, and repair of microcomputers to the modular level.

In order to earn a certificate, students must achieve a minimum grade of "C" in each of the certificate program courses.

**Certificate of Proficiency**

Program Requirements		Units
R CSIS 140	Command Line Operations	3
R CSIS 155	Computer Technology - Hardware	3
<b>TOTAL UNITS</b>		<b>6</b>

**Software Applications Specialist**

Prepares students for employment in positions that require competence in software applications common to business and industry.

In order to earn a certificate, students must achieve a minimum grade of "C" in each of the certificate program courses.

**Certificate of Proficiency**

Program Requirement		Units
R CSIS/CSIS 120	Microcomputer Applications	3
R CSIS 121	Microcomputer Applications – Advanced	3
R CSIS/CSIS 137 or	Web Site Development with HTML	2
R CSIS 138	Website Design with FrontPage	2
R CSIS/CSIS 170	Windows	1
R CSIS 186	Contemporary Job Search	1
<b>TOTAL UNITS</b>		<b>10</b>

**COURSE OFFERINGS**

Courses taken for college credit may be applied toward a certificate or an Associate in Arts degree.

Courses numbered under 100 are not intended for transfer credit.

**R CSIS 65 Help Desk Fundamentals (2)**

*4 hours lecture/laboratory*  
**Recommended preparation:** R CSIS 121 and 172 or 157 or 158  
**Note:** Graded only

A comprehensive overview of the Help Desk environment. Builds on basic software and hardware knowledge to provide entry-level training in computer user support. Includes critical skills in professionalism; communication; call management, customer service and related job stress. Hands-on simulations enable students to identify and troubleshoot a variety of commonly occurring problems.

**R CSIS 97 Computer Science and Information Systems 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:** Graded only; may be taken 4 times  
 Topics in Computer Science and Information Systems. See Class Schedule for specific topic offered. Course title will designate subject covered.

**R CSIS 116 Introduction to Computers (2)**

*1 hour lecture-2 hours lecture/laboratory*  
**Note:** Graded only  
**Transfer acceptability:** CSU

Introduction to basic computer operations and the Windows operating system for students with little or no background in computer science. Includes terminology and techniques as well as keyboarding and mouse functions. Also includes: window management; creating and managing files and folders; performing basic system maintenance using Windows accessory programs; word processing; and accessing the Internet.

**R CSIS 120 Microcomputer Applications (3)**

*1 hour lecture-4 hours lecture/laboratory*  
**Note:** Cross listed as CSIS 120; graded only; may be taken 4 times; maximum of 4 completions in any combination of CSIS/R CSIS 120, CSIS 121  
**Transfer acceptability:** CSU

Hands-on experience with microcomputers and microcomputer applications featuring the use of Windows, word processing, spreadsheet, database, and presentation graphics software.

**R CSIS 121 Microcomputer Applications - Advanced(3)**

*1 hour lecture, 4 hours lecture/laboratory*  
**Prerequisite:** R CSIS/CSIS 120  
**Note:** Graded only; may be taken 2 times  
**Transfer acceptability:** CSU

This course builds upon fundamental knowledge of Windows operating system and Microsoft Office Suite (Word, Excel, Access and PowerPoint) to progress into advanced functions of each element as well as integration of various elements.

**R CSIS 125 Presenting with PowerPoint (1)**

*1 hour lecture/laboratory*  
**Recommended preparation:** R CSIS/CSIS 170  
**Note:** Graded only  
**Transfer acceptability:** CSU

Comprehensive study and application of PowerPoint multimedia capabilities to create effective audience-focused presentations, live and web-based. Preparation of documents in various formats to include: animated slideshows, speaker notes, audience handouts, outlines and web sites.

**R CSIS 127 Word Processing Software – Basic (1)**

*2 hours lecture/laboratory*  
**Recommended preparation:** A keyboarding speed of 20 net words a minute  
**Note:** Graded only; may be taken 4 times  
**Transfer acceptability:** CSU

Study of word processing skills using Microsoft Office. Course includes file creation, modification, and formatting, saving and printing files, graphics, report generation elements, and integration of Word documents within the Office suite. Hands-on labs using state of the art software are an integral part of this course, as well as guided instruction.

**R CSIS 130 Microsoft Publisher (1)**

*2 hours lecture/laboratory*  
**Recommended preparation:** R CSIS 170 and R CSIS 127 or BUS 170 or OIS 136.1  
**Note:** Cross listed as BUS 186; graded only, may be taken 4 times.

Hands-on applications of Microsoft Publisher, a comprehensive software package that combines text, graphics, illustrations, and photographs to produce typeset quality documents for local printer output or commercial printing. Includes: newsletters; brochures; flyers; web pages; business cards; letterheads and envelopes; advertising and marketing materials; greeting cards; PDF and web file formats; and printing options.

**R CSIS 137 Web Site Development with HTML (2)**

*4 hours lecture/laboratory*  
**Note:** Cross listed as CSIS 137; graded only  
**Transfer acceptability:** CSU

This course provides a foundation to Internet/Intranet technologies. This course primarily teaches the skills required to develop and publish Web sites utilizing HTML, including using HTML tables, Frames, Web Page Forms, and basic CSS (Cascading Style Sheets).

- R CSIS 138 Website Design with FrontPage** (2)  
*4 hours lecture/laboratory*  
**Recommended preparation:** R CSIS/CSIS 137  
**Note:** Graded only  
 Comprehensive study of web site development and maintenance using Microsoft FrontPage. Includes creation of web pages, application of design elements; comparison of search engines, familiarity with source code, and use of interactive forms to create client databases. Also includes uploading, testing and modification of web site.
- R CSIS 140 Command Line Operations** (3)  
*6 hours lecture/laboratory*  
**Note:** Graded only  
 Introduction to the basic principles of computer operating systems and command line operations, using DOS (Disk Operating System) as a foundation. Includes: introduction to computer hardware; comparative overview of operating systems, managing files, disks and directories; batch files; controlling peripherals; disk maintenance, optimization and data recovery; and configuring system environment.
- R CSIS 145 Introduction to Linux** (3)  
*6 hours lecture/laboratory*  
**Note:** Cross listed as CSIS 145; graded only  
**Transfer acceptability:** CSU  
 An overview of the Linux operating system, utilities, and associated applications for workstations. Includes installation, configuration and troubleshooting of Linux Systems within the command-line environment and the graphical X-Windows environment.
- R CSIS 150 Computer Spreadsheets** (3)  
*6 hours lecture/laboratory*  
**Note:** Graded only  
**Transfer acceptability:** CSU  
 In-depth study of the varied applications of spreadsheets using Microsoft Excel. Create, modify, format and maintain multiple page worksheets; enter numeric and text data for manipulation; and create and copy formulas. Includes integration of Excel spreadsheets within Microsoft Office Suite. Hands-on experience in networked lab.
- R CSIS 155 Computer Technology – Hardware** (3)  
*6 hours lecture/laboratory*  
**Note:** Graded only; may be taken 2 times  
 Introduction to the basic principles of computer hardware architecture and design. Hands-on course includes microcomputer design, assembly and troubleshooting. Course content aligns with objectives of the A+ certification core exam.
- R CSIS 156 Computer Technology – Software** (3)  
*6 hours lecture/laboratory*  
**Note:** Graded only; may be taken 2 times  
**Prerequisite:** R CSIS 140  
 Fundamentals of computer operating systems and Local Area Network (LAN). Hands-on approach to installing, troubleshooting, and supporting operating systems, networking fundamentals, and preparation for the A+ OS certification exam.
- R CSIS 157 Windows XP: Professional and Server** (3)  
*6 hours lecture/laboratory*  
**Recommended preparation:** R CSIS/CSIS 170  
**Note:** Graded only; may be taken 2 times  
**Transfer acceptability:** CSU  
 A focused study of Microsoft Windows XP Professional and Server operating systems. Includes hands-on experience installing, configuring, optimizing, maintaining and troubleshooting Windows XP Professional on stand-alone and client computers in workgroup or domain environment. Study of Windows.NET Server includes setup and configuration of Active Directory Service.
- R CSIS 158 Windows 2000** (3)  
*6 hours lecture/laboratory*  
**Recommended preparation:** R CSIS/CSIS 170  
**Note:** Graded only; may be taken 2 times  
 Core knowledge and skills for supporting Microsoft Windows 2000 operating system. Includes installing, configuring, customizing, optimizing, networking, integrating, and troubleshooting.
- R CSIS 159 Industry Certification: Review and Preparation** (1)  
*2 hours lecture/laboratory*  
**Note:** Graded only; may be taken 2 times  
 A focused study of industry and professional certifications available for PC technicians. Review of Microsoft, Novell, and CTIA certification
- programs. Content review and preparation for A+ Certification Examination.
- R CSIS 160 Introduction to Local Area Networking** (3)  
*6 hours lecture/laboratory*  
**Prerequisite:** R CSIS 155 and 156  
**Note:** Graded only; may be taken 2 times  
 Introduction to the basic principles of Local Area Networking (LAN) structure and function. Hands-on experience in design, construction, installation, maintenance and repair to the modular level using operating systems and diagnostic hardware and software.
- R CSIS 161 PC/Network Security** (3)  
*6 hours lecture/laboratory*  
**Note:** Graded only  
**Transfer acceptability:** UC  
 Comprehensive overview of computer security, including stand-alone and networked systems. Includes: fundamentals of network security principles and implementation; e-mail, web and data transmission security; infrastructure security; cryptography; and operational/organizational security, including disaster recovery.
- R CSIS 169 Overview of Computer Forensics** (3)  
*6 hours lecture/laboratory*  
**Prerequisite:** R CSIS 161  
**Note:** Graded only  
 Introduction to computer forensics and investigation including digital information recovery and analysis. Includes hands-on exercises, case studies and discussion of computer forensic ethics. Course content aligns with the objectives of the International Association of Computer Investigative Specialists (IACIS) certification.
- R CSIS 170 Windows** (1)  
*2 hours lecture/laboratory*  
**Note:** Cross listed as CSIS 170; graded only  
**Transfer acceptability:** CSU  
 Fundamentals of Windows Graphical User Interface. Students will develop proficiency in: changing desktop settings; file/folder management at both desktop and Explorer levels; and basic system maintenance.
- R CSIS 172 Windows for Technicians** (2)  
*4 hours lecture/laboratory*  
**Recommended preparation:** R CSIS/CSIS 170  
**Note:** May be taken 2 times; graded only  
 A technical study of the Windows operating system; hands-on experience installing, configuring, optimizing, maintaining, and troubleshooting.
- R CSIS 175 Excel** (1)  
*2 hours lecture/laboratory*  
**Note:** Graded only; may be taken 2 times; graded only  
**Transfer acceptability:** CSU  
 Study of spreadsheets using Microsoft Excel. Course includes creating spreadsheets, formatting data, manipulating data, creation and application of formulas, charting data, and printing considerations. Preparation for the Excel MOS certification exam.
- R CSIS180 Access** (1)  
*2 hours lecture/laboratory*  
**Note:** Graded only; may be taken 2 times  
**Transfer acceptability:** CSU  
 Study of Access database program within the Microsoft Office Suite. This class introduces and reinforces the creation, modification and maintenance of Access databases. Students will create the database structure, enter data in tables, execute queries, generate reports and forms, modify properties and layout at the design level and maintain the database. Preparation for the Access MOUS certification exam.
- R CSIS 186 Contemporary Job Search Techniques** (1)  
*2 hours lecture/laboratory*  
**Note:** Graded only  
 Use the Internet, current software and research tools to organize and implement a job search. Includes: on-line resources; preparation and posting of application materials, including resume and cover letters; interview strategies and mock interviews; industry speakers, and hard copy and online portfolios.

# Culinary Arts (R CUL)

See also Culinary Arts

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

### Culinary Arts

Prepares students for employment and career opportunities in various areas of the foodservice industry. The focus is on food preparation and production skills, with supporting coursework in nutrition, food sanitation and safety, menu planning, purchasing and inventory control, kitchen management and employee supervision. Practical hands-on lab activities in a commercial kitchen environment and directed workplace learning opportunities prepare students for foodservice positions in resorts, casinos, and fine dining establishments.

Students will need to possess a current San Diego County Food Handler Card to participate in kitchen/lab activities.

In order to earn a certificate or degree, students must achieve a minimum grade of "C" in each of the certificate program courses.

### A.A. Degree Major or Certificate of Achievement

Program Requirements	Units
FCS/	
MICR 110 Microbiology and Foods	3
FCS/HE 165 Fundamentals of Nutrition	3
R CUL/	
CUL 110 Culinary Essentials I	3
R CUL/	
CUL 111 Culinary Essentials II	3
R CUL/	
CUL 120 Patisserie and Baking I	3
R CUL/	
CUL 121 Patisserie and Baking II	3
R CUL/	
CUL 130 Pantry/Garde Manger	3
R CSIS/	
CSIS 120 Microcomputer Applications	3
R CUL/	
CUL 200 Menu Planning and Purchasing	2
R CUL/	
CUL 210 Foodservice Management	3
R CUL/	
CUL 220 Catering and Event Planning	3
R CUL/	
CUL 298 Culinary Directed Practice I	3
R CUL/	
CUL 299 Culinary Directed Practice II	3
<b>Electives (Select a minimum of 3 units)</b>	
R CUL/	
CUL 115 Dining Room Service	2
R CUL/	
CUL 150 International Cuisine	3
R CUL/	
CUL 230 Adv Garde Manger/Competition	3
R CUL/	
CUL 240 Wines and Affinities	1
<b>TOTAL UNITS</b>	<b>41</b>

### Culinary Skills

With a focus on basic food preparation and production skills, nutrition, and food safety and sanitation, the program prepares students for various entry-level positions in the foodservice industry. Practical hands-on lab activities in a modern commercial kitchen environment provide opportunities for students to master the skills required for employment.

Students will need to possess a current San Diego County Food Handler Card to participate in required kitchen/lab activities.

In order to earn a certificate, students must achieve a minimum grade of "C" in each of the certificate program courses.

### Certificate of Proficiency

Program Requirements	Units
FCS/	
MICR 110 Microbiology and Foods	3
FCS/HE 165 Fundamentals of Nutrition	3
R CUL/	
CUL 110 Culinary Essentials I	3
R CUL/	
CUL 111 Culinary Essentials II	3
R CUL/	
CUL 130 Pantry/Garde Manger	3
R CUL/	
CUL 115 Dining Room Service	2
<b>TOTAL UNITS</b>	<b>17</b>

### Patisserie and Baking

With a focus on commercial baking and pastry making, the program prepares students for entry-level positions in bakeries, restaurants, resorts and casino operations. Practical hands-on lab activities in a modern commercial kitchen environment provide opportunities for students to master the skills required for employment.

Students will need to possess a current San Diego County Food Handler Card to participate in required kitchen/lab activities.

In order to earn a certificate, students must achieve a minimum grade of "C" in each of the certificate program courses.

### Certificate of Proficiency

Program Requirements	Units
FCS/	
MICR 110 Microbiology and Foods	3
FCS/HE 165 Fundamentals of Nutrition	3
R CUL/	
CUL 120 Patisserie and Baking I	3
R CUL/	
CUL 121 Patisserie and Baking II	3
<b>TOTAL UNITS</b>	<b>12</b>

## COURSE OFFERINGS

### R CUL 110 Culinary Essentials I (3)

1 hour lecture - 4 hours laboratory

**Prerequisite:** Current San Diego County Food Handler Card

**Recommended preparation:** FCS/MICR 110

**Note:** Cross listed as CUL 110; graded only

Introduction to culinary arts and the foodservice industry. Fundamentals of food preparation and production, emphasizing industry standards. Lab work will focus on knife skills, standard cuts, and preparation of vegetables and starches. Students will be expected to meet high standards of professionalism, sanitation and work habits.

### R CUL 111 Culinary Essentials II (3)

1 hour lecture - 4 hours lecture/laboratory

**Prerequisite:** R CUL/CUL 110

**Note:** Cross listed as CUL 111; graded only

Advanced food production, including meat and protein fabrication. Lab work will include: stocks, sauces and soups; meat and game; poultry; fish and seafood; breakfast foods and classical cuisine. Students will be expected to meet high standards of professionalism, sanitation and work habits.

### R CUL 115 Dining Room Service (2)

4 hours lecture/laboratory

**Prerequisite:** Current San Diego County Food Handler Card

**Note:** Cross listed as CUL 115; graded only

Orientation to dining room operations with an emphasis on dining room service, techniques of table waiting, and dining room skills. Students will be expected to meet high standards of professionalism, sanitation and work habits.

**R CUL 120 Patisserie and Baking I (3)**  
 1 hour lecture - 4 hours lecture/laboratory  
*Prerequisite:* Current San Diego County Food Handler Card  
*Recommended Preparation:* FCS/MICR 110  
*Note:* Cross listed as CUL 120; graded only  
 Fundamentals of baking, including ingredient properties and function, and preparation and evaluation of a variety of yeast products, quick breads, cookies, cakes, pies and pastries. Students will be expected to meet high standards of professionalism, sanitation and work habits.

**R CUL 121 Patisserie and Baking II (3)**  
 1 hour lecture - 4 hours lecture/laboratory  
*Prerequisite:* R CUL/CUL 120  
*Note:* Cross listed as CUL 121; graded only  
 Advanced skills in the art of patisserie. Includes: classic pastries, pâte à choux and meringues; plated desserts; cake decorating; chocolate and sugar techniques. Students will be expected to meet high standards of professionalism, sanitation and work habits.

**R CUL 130 Pantry/Garde Manger (3)**  
 1 hour lecture - 4 hours lecture/laboratory  
*Prerequisite:* Current San Diego County Food Handler Card  
*Recommended Preparation:* R CUL/CUL 110  
*Note:* Cross listed as CUL 130; graded only  
 Introduction to cold food preparation and display. Includes salads, dressings, sandwiches and canapés. Students will be expected to meet high standards of professionalism, sanitation and work habits.

**R CUL 150 International Cuisine (3)**  
 1 hour lecture - 4 hours lecture/laboratory  
*Prerequisite:* Current San Diego County Food Handler Card  
*Note:* Cross listed as CUL 150; graded only  
 A hands-on cooking, tasting and evaluating exploration of the major cuisines of the world. Includes Asian, Latin, European and American cuisines with a focus on the cultures that influenced their development. Students will be expected to meet high standards of professionalism, sanitation and work habits.

**R CUL 200 Menu Planning and Purchasing (2)**  
 2 hours lecture  
*Prerequisite:* R CUL/CUL 111 and FCS 165/HE 165 and R CSIS/CSIS 120  
*Note:* Cross listed as CUL 200; graded only  
 Basic principles of menu planning and purchasing with emphasis on: menu design; specifications and pricing; purchasing, inventory control and storeroom operations; and food and beverage cost control. Includes spreadsheet and database applications. Students will be expected to meet high standards of professionalism and work habits.

**R CUL 210 Foodservice Management (3)**  
 3 hours lecture  
*Prerequisite:* R CUL/CUL 111  
*Note:* Cross listed as CUL 210; graded only  
 Introduction to foodservice management with emphasis on human relations and employee development. Includes operational planning and coordination, problem-solving and decision-making, and personnel management. Students will be expected to meet high standards of professionalism and work habits.

**R CUL 220 Catering and Event Planning (3)**  
 1 hour lecture - 4 hours lecture/laboratory  
*Prerequisite:* R CUL/CUL 111 and R CUL/CUL 130  
*Note:* Cross listed as CUL 220; graded only  
 Fundamentals of catering, including event planning, menu development and banquet preparation. Includes opportunities to apply culinary theory and skills in actual practice. Students will be expected to meet high standards of professionalism, sanitation and work habits.

**R CUL 230 Adv Garde Manger/Competition (3)**  
 1 hour lecture - 4 hours lecture/laboratory  
*Prerequisite:* R CUL/CUL 111 and R CUL/CUL 130  
*Note:* Cross listed as CUL 230; graded only  
 Application of advanced garde manger techniques in practical situations and culinary competition. Includes classical buffet presentation, decorative displays and artistic centerpieces. Students will be expected to meet high standards of professionalism, sanitation and work habits.

**R CUL 240 Wines and Affinities (1)**  
 1 hour lecture  
*Prerequisite:* R CUL/CUL 111  
*Note:* Cross listed as CUL 240; graded only  
 Classification and identification of wines, with emphasis on properties and affinities with food. Includes wines from various regions of the world. Students will be expected to meet high standards of professionalism and work habits.

**R CUL 298 Culinary Directed Practice I (3)**  
 3 hours lecture – 10 hours lab  
*Prerequisite:* R CUL/CUL 111 and R CUL/CUL 130 or R CUL/CUL 121  
*Note:* Cross listed as CUL 298; graded only  
 Directed learning opportunity for culinary arts students to increase their knowledge and skill in the areas of hot and cold food production through supervised on-the-job training. Students will be expected to follow Culinary Arts standards of professionalism. Current San Diego County Food Handler Card and TB clearance required.

**R CUL 299 Culinary Directed Practice II (3)**  
 3 hours lecture-10 hours lab  
*Prerequisite:* RCUL/CUL 298, R CUL/CUL 200, FCS 110/MICR 110 and FCS 165  
*Note:* Cross listed as CUL 299; graded only  
 Directed entry-level professional work experience in the foodservice industry that provides exposure to the foodservice industry and an opportunity for culinary arts students to practice and demonstrate their employability skills and reflect on their future roles in the industry. Students will be expected to follow Culinary Arts standards of professionalism. Current San Diego County Food Handler Card and TB clearance required.

## Diesel Mechanics Technology (R DMT)

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

#### Diesel Technology

In order to earn a certificate, students must achieve a minimum grade of "C" in each of the certificate program courses.

#### A.A. Degree Major or Certificate of Proficiency

Program Requirements	Units
AT 105 Automotive Electricity	2
AT 197 Associated Studies in Automotives	3
RDMT/DMT 50 Introduction to Diesel Mechanics	3
RDMT/DMT 55 Heavy-Duty Diesel Tune-up/ Engine Analysis	3
RDMT/DMT 61 Diesel Engine Rebuilding I	3
RDMT/DMT 62 Diesel Engine Rebuilding II	3
RDMT/DMT 65 Air Brake Systems	3
RDMT/DMT 66 Truck Transmission and Drive Lines	3
IT 100 Technical Mathematics	3
<b>Electives (Select 6 units)</b>	
AT 125 Automotive Machining	3
CE 100 Cooperative Education	1,2,3,4
DMT 54 Heavy-Duty Electricity	3
DMT 56 Alternative Fuels	3
RDMT/DMT 70 Medium-Duty Diesel Engine Tune-up	3
DMT 81 Basic Hydraulics	3
DMT 96 Special Problems in Diesel Technology	.5-3
RDMT/DMT 97 Diesel Mechanics Technology Workshop	.5-3
WELD 100 Welding I	3
<b>TOTAL UNITS</b>	<b>32</b>

The Diesel Technology program is also offered in Diesel Mechanics Technology.

## COURSE OFFERINGS

Courses taken for college credit may be applied toward a certificate or an Associate in Arts degree.

Courses numbered under 100 are not intended for transfer credit.

**R DMT 50 Introduction to Diesel Mechanics (3)**

6 hours lecture/laboratory

**Note:** Cross listed as DMT 50; graded only

Theory and practice of fundamental skills for the maintenance and operation of basic diesel engines. Topics for study include: basic theory of operation; engine applications; engine lubricating and cooling; intake, exhaust and fuel systems; and electronic control.

**R DMT 55 Heavy-Duty Diesel Tune-Up and Engine Analysis (3)**

2 hours lecture-4 hours laboratory

**Prerequisite:** DMT 50

**Note:** Cross listed as DMT 55; graded only; may be taken 2 times

The use of software and diagnostic equipment in performing diesel tune-up. Topics include: theory of operation, tune-up procedures, fuel system function and repair, diagnostic equipment usage, electronic engine controls, mechanical and electronic engine system troubleshooting.

**R DMT 61 Diesel Engine Rebuilding I (3)**

6 hours lecture/laboratory

**Recommended preparation:** R DMT/DMT 50

**Note:** Cross listed as DMT 61; graded only; may be taken 2 times

Theory and practice in rebuilding diesel engines. Topics for study include disassembly, cleaning, inspection, and analysis of engine parts. Also included are cylinder head service, sleeve and piston service, advanced machining and measuring techniques.

**R DMT 62 Diesel Engine Rebuilding II (3)**

6 hours lecture/laboratory

**Prerequisite:** R DMT/DMT 61

**Note:** Cross listed as DMT 62; graded only

Theory and practice in rebuilding diesel engines. Topics for study include final cleaning, inspection and reassembly of engine parts. Also included are assembly measuring, torque procedures and torque-turn methods used on engine assembly, and engine testing upon completion of assembly.

**R DMT 65 Air Brake Systems (3)**

2 hours lecture-3 hours laboratory

**Note:** Cross listed as DMT 65; graded only

The service and repair of heavy-duty hydraulic and air brake systems and their components. Topics of study include brake troubleshooting, complete system repair, anti-skid brake system, and related axle services.

**R DMT 66 Truck Transmission and Drive Line (3)**

2 hours lecture-3 hours laboratory

**Note:** Cross listed as DMT 66; graded only

Service and repair of heavy-duty truck drive lines. Topics for study include the disassembly, inspection, and reassembly of single and multiple disc clutches, four to fifteen speed transmissions, universal joints, and differentials.

**R DMT 70 Medium-Duty Diesel Engine Tune-Up (3)**

2 hours lecture-4 hours laboratory

**Note:** Cross listed as DMT 70; graded only; may be taken 2 times

The use of diesel tune-up and diagnostic equipment. Topics include: fuel systems; compression testing; fuel pump and injection timing; troubleshooting procedures; alternators, regulators, and starting systems.

**R DMT 97 Diesel Mechanics Technology 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:** Cross listed as DMT 97; graded only; may be taken 4 times

A special selection of topics specific in nature. The contents will vary depending on specific needs of the students and community.

**Drafting Technology (R DT)**

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

## COURSE OFFERINGS

Courses taken for college credit may be applied toward a certificate or an Associate in Arts degree.

Courses numbered under 100 are not intended for transfer credit.

**R DT 125 AutoCAD Introduction to Computer Aided Drafting (3)**

6 hours lecture/laboratory

**Note:** Cross listed as DT 125; may be taken 2 times; maximum of 4 completions in any combination of DT/R DT 125, DT/R DT 126, DT/R DT 127

**Transfer acceptability:** CSU; UC – R DT 125 and 126 combined; maximum credit, one course

An introduction to computer aided drafting using AutoCAD software and IBM compatible computers. Hands-on experience with AutoCAD to include the following operations: preparing and editing drawings, storage and retrieval of drawings, and production of commercial quality drawings on a plotter. Introductory computer terminology and techniques in Windows.

**R DT 126 AutoCAD Intermediate Computer Aided Drafting (3)**

6 hours lecture/laboratory

**Prerequisite:** DT/R DT 125

**Note:** Cross listed as DT 126; may be taken 2 times; maximum of 4 completions in any combination of DT/R DT 125, DT/R DT 126, DT/R DT 127

**Transfer acceptability:** CSU; UC – R DT 125 and 126 combined; maximum credit, one course

Advanced theory and hands-on operation of a CAD system. Emphasis is placed on large scale drawings, three-dimensional software techniques, orthographic projections, and complex computer aided manufacturing applications.

**R DT 127 AutoCAD Customization (3)**

6 hours lecture/laboratory

**Prerequisite:** R DT/DT 126

**Note:** Cross listed as DT 127; may be taken 2 times; maximum of 4 completions in any combination of DT/R DT 125, DT/R DT 126, DT/R DT 127

**Transfer acceptability:** CSU

Advanced theory and hands-on operation of a CAD system. Emphasis is placed on increased productivity, using customization and portfolio presentation for successful career opportunities.

**R DT 128 SolidWorks Introduction to 3D Design and Presentation (3)**

6 hours lecture/laboratory

**Prerequisite:** DT 110

**Note:** Cross listed as DT 128; may be taken 2 times

**Transfer acceptability:** CSU

Advanced theory and hands-on operation of three-dimensional software techniques. Emphasis is placed on wireframe, surface, solid, and parametric three-dimensional modeling.

**R DT 130 CAD/CAM Machining (3)**

6 hours lecture/laboratory

**Prerequisite:** DT 110 and DT/R DT 128

**Note:** Cross listed as DT 130; graded only; may be taken 2 times

Hands-on operation of importing three-dimensional solid and parametric three-dimensional models into CAD/CAM operations.

**R DT 131 SolidWorks Advanced 3D Design and Presentation (3)**

6 hours lecture/laboratory

**Prerequisite:** DT/R DT 128

**Note:** Cross listed as DT 131; may be taken 2 times

**Transfer acceptability:** CSU

Advanced theory and hands-on operation of solid and parametric three-



dimensional models. Emphasis is placed on creating molds, advanced sheet metal design and developing dynamic assemblies.

**R DT 200 Advanced Computer Aided Architectural Drafting (4)**

8 hours lecture/laboratory

**Prerequisite:** DT/R DT 125 and completion of, or concurrent enrollment in, DT 105

**Note:** Cross listed as DT 200; graded only; may be taken 2 times

**Transfer acceptability:** CSU

Advanced techniques in the operation of AutoCAD software for architectural applications on IBM-compatible computers. Preparation of various architectural working drawings from a preliminary residential design.

**R DT 202 Advanced Computer Aided Architectural Drafting II (4)**

8 hours lecture/laboratory

**Recommended preparation:** DT/R DT 200

**Note:** Cross listed as DT 202; graded only; may be taken 2 times

**Transfer acceptability:** CSU

Third-party architectural software for use in conjunction with AutoCAD software. Preparation of 3D architectural models and their manipulation for preparation of individual architectural working drawings including: dimensioned floor plans, building sections, elevations, etc.

## Graphic Communications (R GC)

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

### COURSE OFFERINGS

Courses taken for college credit may be applied toward a certificate or an Associate in Arts degree.

**R GC 140 Digital Imaging/Photoshop I (3)**

6 hours lecture/laboratory

**Note:** Cross listed as GC 140; graded only; 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.

**R GC 149 Page Layout and Design I (3)**

6 hours lecture/laboratory

**Note:** Cross listed as 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.

**R GC 152 Desktop Publishing with Illustrator (3)**

6 hours lecture/laboratory

**Note:** Cross listed as GC 152; graded only; 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.

**R GC 170 Screen Printing (3)**

6 hours lecture/laboratory

**Note:** Cross listed as GC 170; graded only; 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.

**R GC 172 Textile Screen Printing (3)**

6 hours lecture/laboratory

**Note:** Cross listed as GC 172; graded only; may be taken 3 times

**Transfer acceptability:** CSU

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

**R 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 GC 197A; graded only; may be taken 3 times

**Transfer acceptability:** CSU

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

**R GC 200 Introduction to Multimedia (3)**

6 hours lecture/laboratory

**Note:** Cross listed as GC 200; graded only; 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.

**R GC 202 Web Page Layout I (3)**

6 hours lecture/laboratory

**Note:** Cross listed as GC 202; graded only; 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.

**R GC 203 Interactive Publishing with PDF's (3)**

6 hours lecture/laboratory

**Note:** Cross listed as GC 203; graded only; 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.

**R GC 249 Page Layout and Design II (3)**

6 hours lecture/laboratory

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

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

**R GC 260 Portfolio Development and Presentation (3)**

6 hours lecture/laboratory

**Prerequisite:** R GC/GC 140 and R GC/GC 152

**Note:** Cross listed as GC 260; graded only; 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.

## Optical Technology (R OT)

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

#### Optical Technology

Prepares students for entry-level positions as optical dispensing technicians, optical lab technicians, optometric assistants, ophthalmic assistants, and other occupations in the vision care field.

In order to earn a certificate, students must achieve a minimum grade of "C" in each of the certificate program courses.

#### Certificate of Proficiency

Required Courses	Units
R OT 50 Optical Technology I	8
R OT 55 Optical Technology II	8
<b>TOTAL UNITS</b>	<b>16</b>

Recommended Electives: R OT 60, 97

**COURSE OFFERINGS**

Courses taken for college credit may be applied toward a certificate or an Associate in Arts degree.

Courses numbered under 100 are not intended for transfer credit.

**R OT 50 Optical Technology I (8)**

6 hours lecture-6 hours laboratory

**Note:** Graded only

Basic theory of light and optics; anatomy and function of the eye; spectacle frame and lens design and fabrication; tools of the trade; and dispensing skills for optical technicians.

**R OT 55 Optical Technology II (8)**

6 hours lecture-6 hours laboratory

**Prerequisite:** R OT 50

**Note:** Graded only

In-depth study of anatomy and function of the eye. Advanced theories of light, lenses, mirrors, and optics. Specialized dispensing skills. Topic preparation for the American Board of Opticianry (ABO) certification exams.

**R OT 60 Specialized Ophthalmic Procedures (3)**

6 hours lecture/laboratory

**Prerequisite:** R OT 55

**Note:** Graded only

Specialized procedures in the ophthalmic industry including keratometry and biomicroscopy; ocular metabolism and related conditions; ocular solutions and pharmaceuticals; and contact lens fitting, ordering, and dispensing.

**R OT 70 Ophthalmic Medical Assisting I (2)**

4 hours lecture/laboratory

**Prerequisite:** R OT 50

**Note:** Graded only

Introduction to assisting in the ophthalmic medical environment. Topics include ophthalmic exam, ophthalmic drugs, structure, function and common diseases of the eye and related tissues, optics and refraction, ocular motility and visual fields. Course content aligns with national certification standards for Certified Ophthalmic Assistant (COA) as set forth by the Joint Commission on Allied Health Personnel in Ophthalmology (JCAHPO).

**R OT 75 Ophthalmic Medical Assisting II (2)**

4 hours lecture/laboratory

**Prerequisite:** R OT 70

**Note:** Graded only

Intermediate-level training in the ophthalmic health field. Includes keratometry, topography, refractometry, retinoscopy, slit lamp examination, tonometry, visual field testing, ultra-sound A-Scan measurements, intraocular implant calculations and ultra-sound B-Scan examination. Course content aligns with national certification standards for Certified Ophthalmic Technician (COT) as set forth by the Joint Commission on Allied Health Personnel in Ophthalmology (JCAHPO)

**R OT 97 Optical Technology 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:** Graded only; may be taken 4 times

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

**Upholstery (R UP)**

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****Automotive Upholstery**

Prepares students for employment in a variety of specialized areas of upholstery including automobiles, trucks, recreational vehicles and watercraft. Students will master skills and

techniques specific to each area of interest.

In order to earn a certificate, students must achieve a minimum grade of "C" in each of the certificate program courses.

**Certificate of Proficiency**

Program Requirements	Units
R UP 85 Basic Upholstery	4
R UP/R AT 90 Automotive Upholstery	4
<b>TOTAL UNITS</b>	<b>8</b>

**Upholstery**

Prepares students for variety of positions in upholstery and related industries. Students will master skills and techniques required for furniture upholstery and accessories, antique restoration, custom draperies and window treatments.

In order to earn a certificate, students must achieve a minimum grade of "C" in each of the certificate program courses.

**Certificate of Proficiency**

Program Requirements	Units
R UP 85 Basic Upholstery	4
R UP 86 Advanced Upholstery	4
R UP 95 Window Treatments	1.5
R UP 96 Decorator Accessories	1.5
<b>TOTAL UNITS</b>	<b>11</b>

**COURSE OFFERINGS**

Courses taken for college credit may be applied toward a certificate or an Associate in Arts degree.

Courses numbered under 100 are not intended for transfer credit.

**R UP 75 Introduction to Upholstery (2)**

4 hours lecture/laboratory

Introduction to upholstery skills and techniques. Includes fabric selection, measurement, layout and other considerations. Students will complete an individual project (chair) using commercial sewing machines, cushion stuffer, pneumatic and hand tools. Cost estimating and other functions essential to a successful business venture will be discussed.

**R UP 85 Basic Upholstery (4)**

8 hours lecture/laboratory

**Note:** Graded only; may be taken 2 times

Upholstering or replacing existing upholstery for various types of furniture. Commercial sewing machines, cushion stuffer, pneumatic tools, and hand tools will be used to complete individual projects.

**R UP 86 Advanced Upholstery (4)**

8 hours lecture/laboratory

**Recommended preparation:** R UP 85

**Note:** Graded only; may be taken 2 times

Advanced upholstery principles and techniques. Power sewing equipment, pneumatic tools, and specialized hand tools will be used to complete complex upholstery projects. Includes estimating, customer relations, tax laws, and other fundamentals of upholstery business operation.

**R UP 90 Automotive Upholstery (4)**

8 hours lecture/laboratory

**Note:** Cross listed as R AT 90; graded only; may be taken 2 times

Skills and techniques required to replace, repair or customize automotive and related upholstery. Fabrication of interiors and accessories for automobile interiors, watercraft and other recreational vehicles. Techniques and considerations related to auto alarm or sound system installation. Students will complete individual or group projects.

**R UP 95 Window Treatments (1.5)**

*3 hours lecture/laboratory*

**Note:** Graded only

Design and fabrication of various window treatments. Includes industry standards, design and fabric options, measuring and estimating, and related business concepts. Students will complete sample projects.

**R UP 96 Decorator Accessories (1.5)**

*3 hours lecture/laboratory*

**Note:** Graded only

Skills and techniques necessary for creation of a variety of decorator accessories: upholstered headboards; designer cushions; custom pillows; lampshades; duvet covers, bedspreads and dust ruffles; table runners and covers; and simple slipcovers. Includes design and fabric/materials selection, industry standards, cost estimating/pricing and other business considerations. Students will complete individual projects.

**R UP 97 Upholstery 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:** Graded only; may be taken 4 times

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