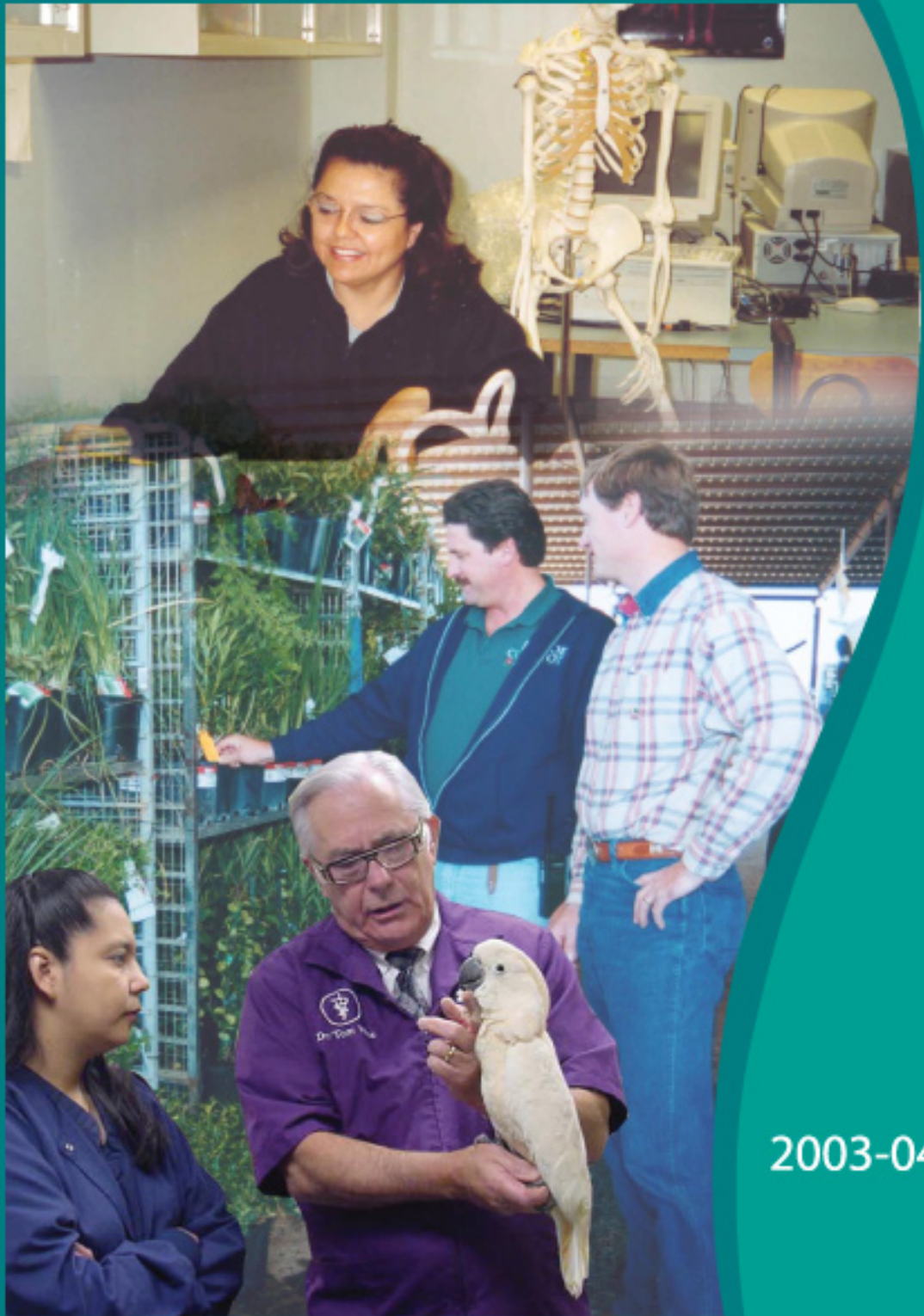


# PALO ALTO COLLEGE BULLETIN



2003-04



**2003-04**

## **PALO ALTO COLLEGE BULLETIN CATALOG OF COURSES**

Palo Alto College is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools (1866 Southern Lane, Decatur, Georgia 30033-4097; Telephone number 404/679-4501) to award associate degrees and by the Committee on Animal Technician Activities and Training of the American Veterinary Medical Association. Its programs are approved by the Texas Higher Education Coordinating Board, the Federal Aviation Administration, and the American Society of Transportation and Logistics.

Palo Alto College is a member of the American Association of Community Colleges, the Southern Association of Colleges and Schools, the Hispanic Association of Colleges and Schools, the Texas Community Colleges Teachers Association, and the National Council of Marketing and Public Relations.

This catalog contains policies, regulations, procedures, and course content effective at the beginning of the Fall Semester 2003. Palo Alto College reserves the right to make changes at any time to reflect current Board policies, administrative regulations and procedures, and applicable State and Federal regulations. The provisions of this bulletin are subject to change without notice and do not constitute a contract between any student and the college.

Palo Alto College is an Equal Opportunity/Affirmative Action Employer. The Alamo Community College District, including its affiliated colleges, does not discriminate on the basis of race, religion, color, national origin, sex, age, or disability with respect to access, employment programs, or services. Inquiries or complaints concerning these matters should be brought to the attention of: Director of Human Resources, Title IX Coordinator, 210/208-8051. Address: Human Resources Department, 201 W. Sheridan, Bldg. AA, San Antonio, Texas 78204. For special accommodations or an alternate format, contact Palo Alto disABILITY Services at 921-5287.

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**[www.accd.edu/pac](http://www.accd.edu/pac)**

## A Message from the President



As you decide to continue your education, we are excited that you are considering Palo Alto as your prospective college choice.

Spurred by a desire to provide higher education to Southside residents in San Antonio, community leaders decided to create a place where everyone would have access to creating their part of the American Dream.

You are a recipient of that legacy, and the faculty and staff at Palo Alto have dedicated themselves to your success.

You will find a Welcome Center to guide you through admissions, financial aid and registration processes at the College.

As you start your college career, you will find faculty who have rich expertise in their field and, more importantly, possess a strong love of learning and an unwavering commitment to students. We offer small class sizes where the faculty have the luxury and time to nurture you.

As Palo Alto enters its 19th year, this College is positioned to offer you a variety of programs, including technical programs you will not find anywhere else in the area. You will also have access to a world-class natatorium, a child care facility, and a state-of-the-art library.

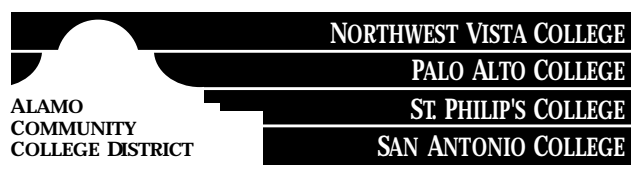
I invite you to read about Palo Alto College and what we offer you in this publication. Then please visit our beautiful, mission-style campus to find why we've been called "the heart of the community" and now are considered an "economic engine" for growth and vitality in the future.

Welcome!

Dr. Ana M. "Cha" Guzmán  
President

## Table of Contents

1.	Academic Calendar .....	4
2.	About Palo Alto .....	8
3.	General Information .....	14
4.	Admissions and Registration .....	20
5.	Financial Services and Assistance .....	28
6.	Student Support Services and Activities .....	39
7.	Academic Regulations and Policies .....	49
8.	Graduation .....	55
9.	Programs of Study .....	67
10.	Course Descriptions .....	140
11.	The People .....	221
12.	Index .....	248
13.	Campus Map .....	254
14.	Helpful Telephone Numbers .....	256



Palo Alto College is a college of the Alamo Community College District

# 1 Academic Calendar



## 2003-2004

**Consult class schedule for registration/advisement**

### **First Summer Session — Day 2003 (six weeks)**

June 2	Monday. Classes begin.
June 5	Thursday. Census date.
June 26	Thursday. Last day to withdraw.
July 3	Thursday. Last day of classes.
July 4	Friday. Independence Day Holiday. College closed.
July 7-8	Monday-Tuesday. FINAL EXAMINATIONS.
Nov. 5	Wednesday. Last day to complete First Summer Day incomplete (I) grades.

### **Second Summer Session — Day 2003 (six weeks)**

July 14	Monday. Classes begin.
July 16	Wednesday. Census date.
Aug. 6	Wednesday. Last day to withdraw.
Aug. 13	Wednesday. Last day of classes.
Aug. 13-14	Wednesday-Thursday. Final Examinations.
Dec. 15	Monday. Last day to complete Second Summer Day Session incomplete (I) grades.

### **Summer Session — Evening 2003 (eight weeks)**

June 2	Monday. Classes begin.
June 9	Monday. Census date.
July 4	Friday. Independence Day. College closed.
July 10	Thursday. Last day to withdraw.
July 22	Tuesday. Last evening of classes.
July 23	Wednesday. Final Examinations for Monday-Wednesday classes.
July 24	Thursday. Final Examinations for Tuesday-Thursday classes.
Nov. 21	Friday. Last day to complete Evening Session Summer incomplete (I) grades.

**Fall 2003 Regular Semester**

Aug. 18	Monday. Faculty Convocations.
Aug. 25	Monday. Classes begin.
Aug. 30-Sept. 1	Saturday-Monday. Labor Day Holiday. Weekend College closed.
Sept. 6	Saturday. Weekend classes begin.
Sept. 8	Monday. Census date.
Oct. 13	Monday. Employee Development Day. College closed Evening classes will meet after 5 p.m.
Nov. 14	Friday. Last day to withdraw.
Nov. 27-30	Thursday-Sunday. Thanksgiving Holiday. Weekend College closed.
Dec. 7	Sunday. Last day of classes
Dec. 8-14	Monday-Sunday. Final Examinations.
Dec. 14	Sunday. End of Fall Semester.
Dec. 20-Jan. 4	Saturday-Sunday. Christmas/New Year Holiday. College closed.
April 12, 2004	Monday. Last day to complete Fall 2003 incomplete (I) grades.

**Fall Flex Session I 2003 (first eight weeks)**

Aug. 25	Monday. Classes begin.
Aug. 30-Sept. 1	Saturday-Monday. Labor Day Holiday. College closed.
Sept. 2	Tuesday. Census date.
Sept. 6	Saturday. Weekend classes begin.
Oct. 3	Friday. Last day to withdraw.
Oct. 12	Sunday. Last day of classes.
Oct. 13	Monday. Employee Development Day. College closed. Evening classes will meet after 5 p.m.
Oct. 14-15	Tuesday- Wednesday. Final Examinations.
Oct. 15	Wednesday. End of Fall Flex Session I.
Feb. 12, 2004	Thursday. Last day to complete Fall Flex Session I incomplete (I) grades.

**Fall Flex Session II 2003 (second eight weeks)**

Oct. 20	Monday. Classes begin.
Oct. 25	Saturday. Census date.
Nov. 26	Wednesday. Last day to withdraw.
Nov. 27-30	Thursday-Sunday. Thanksgiving Holiday. Weekend College closed.
Dec. 7	Sunday. Last day of classes.
Dec. 8-14	Monday-Sunday. Final Examinations.
Dec. 14	Sunday. End of Fall Flex Session II.
Dec. 20-Jan. 4	Saturday-Sunday. Christmas/New Year Holiday. College closed.
April 12, 2004	Monday. Last day to complete Fall Flex II incomplete (I) grades.

**Spring 2004 Regular Semester**

Jan. 5	Monday. Semester begins.
Jan. 12	Monday. Classes begin.
Jan. 17	Saturday. Weekend Classes begin.
Jan. 19	Monday. Martin Luther King Holiday. College closed.
Jan. 24	Saturday. Census date.
March 15-21	Monday-Sunday. Spring Break. College closed. All administrative offices will be closed Thursday-Sunday.
April 8	Thursday. Last day withdraw.
April 9-11	Friday-Sunday. Easter Holiday. College closed.
April 23	Friday. Fiesta Holiday. College closed. Weekend classes will meet.
May 2	Sunday. Last day of classes.
May 3-9	Monday-Sunday. Final Examinations.
May 9	Sunday. End of semester.
May 31	Monday. Memorial Day Holiday. College closed.
Sept. 7	Monday. Last day to complete Spring 2004 incomplete (I) grades.

**Spring Flex Session I 2004 (first eight weeks)**

Jan. 12	Monday. Classes begin.
Jan. 17	Saturday. Census date.
Jan. 19	Monday. Martin Luther King Holiday. College closed.
Feb. 20	Friday. Last day to withdraw.
Feb. 29	Sunday. Last day of classes.
March 1-2	Monday-Tuesday. Final Examinations.
March 2	Tuesday. End of Spring Flex Session I.
June 30	Wednesday. Last day to complete Spring Flex I incomplete (I) grades.

**Spring Flex Session II 2004 (second eight weeks)**

March 8	Monday. Classes begin.
March 13	Saturday. Census date.
March 15-21	Monday-Sunday. Spring Break. College closed. All administrative offices will be closed Thursday-Sunday.
April 9-11	Friday-Sunday. Easter Holiday. College closed.
April 22	Thursday. Last day to withdraw.
April 23	Friday. Fiesta Holiday. College closed.
May 2	Sunday. Last day of classes.
May 3-9	Monday-Sunday. Final Examinations.
May 9	Sunday. End of Spring Flex Session II.
May 31	Monday. Memorial Day Holiday. College closed.
Sept. 7	Tuesday. Last day to complete Spring Flex II incomplete (I) grades.

**Maymester 2004**

May 10	Monday. Classes begin.
May 11	Tuesday. Census Date
May 20	Thursday. Last day to withdraw.
May 31	Monday. Memorial Day Holiday. College closed.
May 27	Thursday. Last day of classes

**First Summer Session — Day 2004 (six weeks)**

June 1	Tuesday. Classes begin.
June 7	Monday. Census date.
June 23	Wednesday. Last day to withdraw.
July 1	Thursday. Last day of classes.
July 5	Monday. Independence Day Holiday. College closed.
July 6-7	Tuesday-Wednesday. Final Examinations.
Nov. 4	Thursday. Last day to complete First Summer Day incomplete (I) grades.

**Second Summer Session — Day 2004 (six weeks)**

July 9	Friday. Semester begins.
July 12	Monday. Classes begin.
July 15	Thursday. Census date.
Aug. 4	Wednesday. Last day to withdraw.
Aug. 11	Wednesday. Last day of classes.
Aug. 12-13	Thursday-Friday. Final Examinations.
Dec. 10	Friday. Last day to complete Second Summer Day Session incomplete (I) grades.

**Summer Session — Evening 2004 (eight weeks)**

June 1	Tuesday. Classes begin.
June 8	Tuesday. Census date.
July 5	Monday. Independence Day Holiday. College closed.
July 7	Wednesday. Last day to withdraw.
July 27	Tuesday. Last evening of classes..
July 28	Wednesday. Final Examinations for Monday-Wednesday classes.
July 29	Thursday. Final Examinations for Tuesday-Thursday classes.
Nov. 19	Friday. Last day to complete Evening Session Summer incomplete (I) grades.

## 2 About Palo Alto



### Palo Alto College History

Palo Alto College was established by the Alamo Community College District Board of Trustees on February 21, 1983, and chartered by the Texas Legislature on March 19, 1983, as an open admission, public, two-year college.

Classes began in September 1985 with 231 students enrolled. The opening of the college turned a community vision of establishing an institution of higher learning in the under-served Southside of Bexar County into reality. Historically, Hispanics comprise more than half of Palo Alto's enrollment, and females generally outnumber males.

For two years, the college's administrative offices were located at Billy Mitchell Village near Kelly Air Force Base. Initial classes were held at various locations including the Southwest Center of the Alamo Community College District, local high schools, and military bases until the campus opened in January 1987.

The College serves students who come from the immediate service area in the southern sector of San Antonio, other parts of Bexar County, and the outlying rural counties south of Bexar County.

Palo Alto was designed to accommodate 2,050 students on 111 acres at I-410 South and Hwy 16 in southern Bexar County. However, consistent increases in enrollment have prompted much physical growth, specifically through the construction of new facilities for added classroom space as well as sports and recreation. The college was cited by the Texas Higher Education Coordinating Board as the fastest growing community college in the State of Texas in Fall 1991.

The first 11 buildings of 145,409 square feet were joined by a two-story General Education classroom building in 1991, a Natatorium/Gymnasium Complex in 1992, the George Ozuna Jr. Learning Resources & Academic Computing Center in 1997, and the Ray Ellison Family Center in 2001. The college now encompasses 274,491 square feet on 126 acres.

Originally expected to peak at 2,500 and then projected to reach 6,000 by 1996, enrollment reached a height of 7,607 in Fall 1996. The college drew many students from the northwest quadrant of the city, prompting the ACCD to establish Northwest Vista College in 1995. Palo Alto's Fall 2002 headcount was 7,061.

Founded on the belief that education is the central element to improving lives, Palo Alto College remains an institution of high academic standards. It serves a growing student body with an increasingly diverse curriculum that features two-year course plans in the arts and sciences as well as many technical-oriented programs. Through Palo Alto, students can earn certificates or complete the first two years of a four-year degree plan for transfer to a university.

Because of its high transfer rate and the success of its students who do transfer and achieve a baccalaureate degree, Palo Alto was among eight community colleges studied as part of the Ford Foundation's national "Cultures of Success" study. The college is continually receiving accolades from four-year universities commenting on the high caliber of preparation the students who transfer have attained.

In 1996, the Frank M. Tejeda/Palo Alto College Scholarship Fund was initiated in honor of the U.S. Congressman who died the next year from brain cancer. The fund provides prestigious scholarships to 10 students each year.

In response to an expressed need for a public, four-year university serving the southern sector of Bexar County, the Texas A&M University System opened a branch campus of Texas A&M University-Kingsville in Fall 2000, which offers junior- and senior-level classes on the community college campus. Using the "pathway model" endorsed by the Texas Higher Education Coordinating Board, the Texas A&M University-Kingsville System Cen-

ter-San Antonio can petition the Legislature to become a freestanding Texas A&M campus when it reaches a full-time enrollment equivalent of 2,500 students for one semester.

In Fall 2002, the College received the largest grant in its history – \$2.5 million – a Title V grant in cooperation with Texas A&M University-Kingsville System Center-San Antonio. The five-year grant will enhance academic support at the campus for both institutions and create an endowment for student scholarships and faculty instructional innovation at Palo Alto.

Palo Alto College is “the heart of community,” and continues to evolve to meet the needs of its students.

## **Mission of the Alamo Community College District**

The Alamo Community College District provides educational opportunities for the citizenry of Bexar and surrounding counties, thus contributing to the economic, academic, social and cultural development of the region. The colleges, catalysts for changing lives, serve as centers of academic excellence and technological advancement.

## **Palo Alto College Purpose Statement**

**Mission Statement:** As a public comprehensive community college, Palo Alto College provides exemplary, accessible education and training to a diverse and aspiring community. The College educates, nurtures, and inspires students through a dynamic and supportive learning environment, which promotes the intellectual, cultural, economic and social life of the community.

**Core Values:** Quality Instruction, Student Success, Commitment to Community, Appreciation of Diversity.

**Major Functions:** Palo Alto College fulfills its mission by offering the following:

- General, transfer, and technical education;
- Basic skills development and comprehensive literacy programs;
- Continuing education and community outreach;
- Student success and support programs;
- Instructional technologies and distance education;
- Library information resources; and
- Institutional research, planning, development and evaluation.

## **College Organization**

In support of the mission of the Alamo Community College District, Palo Alto College offers instructional services, student services, learning resources, technology resources, and extended services and community outreach.

## **Instruction**

Palo Alto College offers instructional programs in general education, occupational/technical education, developmental education, and continuing education. The general education program focuses on the development of competencies that are designed to assist individuals in leading productive and meaningful lives in a dynamic environment of social, technological, and cultural changes. Courses are designed to satisfy the requirements of the first two years of a bachelor's degree, as well as the general education core of an occupational/technical program.

Developmental education at Palo Alto College is designed to provide the opportunity for the academic success of every student by preparing the student for college level courses and for the successful completion of the Texas Academic Skills Program.

Occupational and technical programs provide a strong general education core with emphasis on entry level competencies for business and industry or for transfer to senior institutions. Advisory committees in each program area provide the expertise for the direction and development of topical course content. Through the advisory committees, linkage is provided to the secondary schools, business, and industry.

Continuing education offers adult literacy education, workforce development courses, personal development courses, and courses for community service. Students gain or improve skills for employment and enhance their personal and professional lives. Continuing education courses support the College's credit instructional programs to ensure quality and relevance of course content.

## Student Services

Student Services at Palo Alto College provides assistance toward accomplishing each student's unique academic career goals and ultimate leadership potential. Because the institution encompasses a student population of diverse ages, economic and cultural backgrounds, and abilities, Palo Alto College provides services through the following departments:

Admissions & Records  
 Assessment and TASP  
 Career Services  
 Child Care  
 Counseling and Student Success  
 Early Alert/Early Intervention Programs  
 International Student Services  
 Intramurals  
 Job Placement  
 PASSkey Program (TRIO grant)  
 Service-Learning  
 Special Populations (disABILITY Services)  
 Student Activities  
 Student Success  
 Student Financial Services  
 Transfer Services  
 Veterans Affairs  
 Welcome Center

These services are provided with respect and dignity while recognizing each student's unique strengths, abilities and individual potential. Continuous assessment by the college community ensures that programs and services meet student needs.

## Learning Resources Center and Instructional Resources

The Learning Resources Center (LRC) at Palo Alto College – housed in the George Ozuna Jr. Learning Resources and Academic Computing Center – is structured to provide on-site library materials, instructional technology, and audiovisual production necessary to support and supplement the teaching-learning programs at all levels. The library's collection includes print volumes, current magazines and journals, electronic indexes with full text databases, computer software, audio visual materials, and domestic and foreign newspapers. Through cooperative agreements and computer database searching, the Learning Resources Center has access to the holdings of local, state, and national libraries. Memberships in the Council of Research and Academic Libraries (CORAL), AMIGOS, and on-line

search capability through the Online Catalog and LRC Web pages also greatly enhance the faculty and students' ability to quickly access vast bibliographic resources at member institutions.

Within the LRC library, special purpose areas are designated for electronic research, bibliographic instruction, periodical reading, study areas, a children's library, and an integrated print and nonprint collection. Student seating and informal study areas are spread throughout the library. Microform reading/printing and copy machines are available. All stacks are open for students and other library users.

The library faculty are responsible for the bibliographic instruction program and subject/course integrated instruction, which are coordinated with faculty in the disciplines. Individual assistance in the use of resources and formal bibliographic instruction are offered by the library faculty and professional information staff. The Library Information and Instructional Services librarians also help develop database searches and verify requests for interlibrary loans.

The audiovisual services include graphics, computer graphics, photography, audio, and videotaping in direct support of academic instruction. The AV staff is led by a media professional with expertise in instructional design and development who can design, develop, and produce audiovisual materials tailored and individualized to course content. An audiovisual equipment depository provides equipment distribution to classrooms throughout the campus.

The Learning Resources Center of Palo Alto College reinforces the concept of life-long learning through electronic and conventional library services and through its Project COSMOS (Community Outreach Synergy: Marketing, Orienting, Serving) artistic, cultural and educational programs.

## **Academic Computing Center**

The Academic Computing Center, located on the east end of the first floor of the George Ozuna Jr. Learning Resources & Academic Computing Center, features a megalab with more than 100 PC work stations and five computing classrooms.

In the megalab, work stations are equipped with Internet access and software. Most computers include PC/CD-ROM capability. Other resources include digital color scanners and high-speed laser printers. Open seating is available for students in the Academic Computing Center. In addition to serving Computer Information Systems and Computer Science courses, the five computing classrooms also serve other disciplines with computer-based assignments.

The Academic Computing Center offers a wide assortment of computing resources for students to complete course assignments and projects with the highest efficiency and professionalism. The center is open seven days a week during hours similar to the Learning Resources Center.

## **Adult Education and Community Outreach**

The Adult Education and Community Outreach Office provides low-cost instruction in General Educational Development (GED) and non-credit English as Second Languages (ESL) classes on-campus and in the community. In addition, Adult Education provides General Equivalency Program (HEP) classes and support services to eligible individuals from migrant and seasonal farmworker households. This specific service is funded through a federal grant from the United States Department of Education. For more information on literacy services, call (210) 921-5410.

## Distance and Extended Education

The Office of Distance and Extended Education provides support services to students enrolled in courses offered during the evening and weekend, on-campus and at all off-campus locations, and in telecourses, Internet courses, and interactive videoconferencing courses. Students are provided assistance with testing, advising, registration, course changes, and information about the College.

Acting as a liaison, Distance and Extended Education personnel also respond to the post-secondary educational needs of the community, secondary schools, business/industry, and military bases to facilitate the establishment of college credit through both traditional and non-traditional delivery methods. Unique instructional programming such as a senior bridge program, dual-credit, off-campus, telecourse, Internet, and two-way interactive distance education courses are coordinated with the College's instructional units and the community.

In addition, the unit promotes and facilitates community outreach activities such as mentorships, volunteerism, and service-learning.



*USDA grant sends Palo Alto College courses into rural areas.*

## Texas A&M University-Kingsville System Center-San Antonio

Palo Alto College is the home of the Texas A&M University-Kingsville System Center-San Antonio, which allows students to obtain a four-year degree on the Southside of Bexar County.

Opened in Fall 2000 to address an educational need in South San Antonio, the Center currently offers upper-division college classes on the Palo Alto campus. Students with at least 45 semester hours of college with a 2.0 GPA or above may apply.

Students can seek degrees by taking junior- and senior-level courses in the following areas, and more are being added each semester:

Accounting  
Agribusiness  
Biology  
Child & Family Studies  
Computer Information Systems  
Criminology  
Interdisciplinary Studies (Elementary Education)  
English  
History  
Kinesiology  
Management  
Mathematics  
Psychology

Secondary teaching certification is available in most of these areas.

The System Center also offers a Bachelor of Applied Arts & Sciences (BAAS) degree, which gives college credit for technical and vocational courses.

Classes are offered throughout the day and evening.

Degrees will be awarded by Texas A&M University-Kingsville until the System Center becomes its own free-standing university within the Texas A&M University System.

Through joint admission agreements, first-time freshman who enter any of the four campuses within the Alamo Community College District and meet eligibility conditions will be automatically accepted for admission to the System Center when they complete their two-year degrees at either Northwest Vista College, Palo Alto College, San Antonio College or St. Philip's College.

To contact the System Center, located in Palo Alto's Student Center, call 210/921-5488 or visit the website at [www.tamuk.edu/sanantonio](http://www.tamuk.edu/sanantonio).



## 3 General Information



### Bookstore

The College bookstore operates as a service to students, faculty, and staff. Textbooks, school and office supplies, and course-related materials are provided along with gift items, greeting cards, paperbacks, and other items. Operating hours are posted each semester.

### Cafeteria

The cafeteria is located in the Student Center. Breakfast, lunch, and snacks are available to the campus community. Hours of operation are posted at the beginning of each semester. Special hours are followed during registration and holiday periods.

### Children on Campus Policy

Students are **urged not** to bring children to either a class or a lab. Minors under the age of 12 **must not** be left unattended on campus. Individual instructors may include additional restrictions or waivers for their particular classrooms or labs, which will be included in instructors' syllabi.

### Concealed Weapons

Penal Code 46.03 prohibits the carrying of firearms ". . . on the physical premises of a school or educational institution, any grounds or building on which an activity sponsored by a school or educational institution is being conducted or a passenger transportation vehicle of a school or educational institution, whether the school or educational institution is public or private, unless pursuant to written regulations or written authorization of the institution."

It is not a defense to prosecution under 46.03 that the actor possessed a handgun and was licensed to carry a concealed handgun under Article 4413 (29ee) revised statutes.

### Drug-Free Schools and Communities Act Amendments of 1989

In accordance with the Drug-Free Schools and Communities Act Amendments of 1989, the ACCD has adopted and implemented a program to prevent the unlawful possession, use, or distribution of illicit drugs or as part of any of its activities. The ACCD recognizes the importance of awareness about alcohol and other drug abuse. Therefore, for the benefit of each student and employee, the following are the standards of conduct and legal and disciplinary sanctions for unlawful possession or distribution of illicit drugs and alcohol abuse. Area resources for alcohol and other drug abuse counseling, rehabilitation and re-entry are available at the locations listed in this section.

### Legal Sanctions

Students or employees found violating any local, state, or federal law regarding the use, possession, or distribution of alcohol or other drugs (as defined by the Texas Health and Safety Code, Subtitle C. Substance Abuse Regulations and crimes) will receive the full legal penalty in addition to any appropriate ACCD disciplinary action. Information about the District disciplinary process is available in the ACCD Administrative Policy Manual. The most common legal violations and their consequences are as follows:

<u>Alcohol</u>		<u>Penalty</u>
Minor in Possession (Sec.106.05.)	Class C Misdemeanor	Up to \$200 fine
	Class B Misdemeanor	Up to \$1,000 fine and 6 months in jail
Contributing to the Delinquency of a Minor (Sec. 106.06.)	same as above	same as above
Public Intoxication (Sec. 42.08)	Class C Misdemeanor	Up to \$200 fine
<u>Other Drugs</u>		
Drug Possession	Varies according to placement of the drug on schedules and amount in possession	Up to \$50,000 fine and 5-99 years in jail

Penalties for drug possession are governed by the Texas Health and Safety Code, Subtitle C. Specific penalties may vary depending on the type of drug and amount.

### Disciplinary Sanctions

All students and employees are expected and required to obey the law, to comply with the institutional rules and with directives issued by an administrative official. Students are expected also to observe standards of conduct appropriate for an academic institution.

Any student who engages in conduct prohibited by the ACCD rules or by federal, state, or local law is subject to discipline whether such conduct takes place on or off campus or whether civil or criminal penalties are also imposed for such conduct.

After due process, any student or employee guilty of illegal use, possession and/or sale of a drug or narcotic on the campus of a component institution is subject to discipline, up to and including termination for employees. If, after due process, a student or employee is guilty of illegal use, possession, and/or sale of a drug or narcotic on campus, the minimum penalty shall be suspension from the institution for a specified period and/or suspension of rights and privileges.

A student is subject to discipline for prohibited conduct that occurs while participating in off-campus activities sponsored by a component institution including field trips, internships, rotations or clinical assignments.

A student who receives suspension as a disciplinary measure is subject to further disciplinary action for prohibited conduct that takes place on campus during the period of suspension.

### Health Risks

Drug and alcohol use, misuse, and abuse are complex behaviors with many determinants at both the cultural and the individual levels. Awareness of the deleterious effects of any drug/alcohol is imperative for an individual's well-being or survival.

NEGATIVE CONSEQUENCES may be exhibited through:

**Physical dependence** (the body's learned requirement of a drug for functioning.)

Abuse of alcohol or any other drug, whether licit or illicit, may result in marginal to marked and temporary to permanent physical and/or psychological damage, even death.

Since many illicit drugs are manufactured and sold illegally, their content varies and may contain especially harmful ingredients or amounts.

**Psychological dependence** (the experiencing of persistent craving for the drug and/or a feeling that alcohol or other drugs is a requirement for functioning).

Despite the type of drug or alcohol used, a perceived need for the continued use is likely to follow, resulting in dependence.

Dependence on alcohol and/or other drugs alters the user's psychological functioning. The acquisition of these substances becomes the primary focus of the drug dependent individual and often results in reduced job performance, and jeopardizes family and other interpersonal relationships. Criminal behavior is frequently the means for financing a drug habit. Behavior patterns often include violence and assault as the individual becomes increasingly drug/alcohol dependent. Social and psychological alienation and medical problems increase as the abuser becomes entrapped in drug/alcohol dependence.

Drug and alcohol abuse counseling and referral are available to employees, students and their families. Additional information both on the effects of specific drugs and alcohol and drug counseling resources in San Antonio and surrounding areas are available at the listed locations.

A biennial review of this program will be conducted by ACCD, and Student/Employee Assistance Program (SEAP) committee members to determine its effectiveness, to implement changes to the program if they are needed and to ensure that its disciplinary sanctions are consistently enforced.

### **Grievance Policy: Academic**

At academic institutions, conflicts may develop within the educational process. If this process is to function smoothly, a serious effort must be made to resolve such conflicts expeditiously. In the educational process, faculty members are responsible for classroom management, teaching strategies, testing, and evaluation of student performance. Students are encouraged to use the academic grievance procedure **only where there is clear and convincing evidence that a faculty member has treated the student unfairly, arbitrarily, or capriciously**. The student may ask his or her instructor to review the grievance, and may appeal the instructor's finding to the chairperson. If necessary, a final appeal may be made to the appropriate instructional Dean. A copy of this policy may be obtained from a Department Chairperson, a Dean, or Office of the Vice President of Academic Affairs.

### **Grievance Policy: Non-Academic**

Students at Palo Alto College have the right to grieve any form of abusive treatment by college personnel. If such conflicts arise between a student and a staff member, a serious effort must be made to resolve such issues. College officials will not condone or support any form of student abuse at Palo Alto College. Therefore, students are encouraged to use the non-academic grievance procedure only where there is clear and convincing evidence that an employee, outside the classroom, has treated the student unfairly through forms of discrimination, abuse and/or harassment. A copy of this policy is available at the Vice President of Student Affairs' Office and the Student Handbook.

### **Housing**

Palo Alto College is a commuter college, and no College dormitories are available. The College does not maintain lists of available housing. Housing is available within the area. Students assume sole responsibility for locating appropriate housing.

**Parking**

Parking is not guaranteed, however, parking is available. Students parking automobiles on campus will be required to purchase and display vehicle permits to park in student parking areas. Students are encouraged to observe safe driving habits. Permits are available at the Bursar's Office.

Continuing Education students enrolling in non-credit courses of less than 40 clock hours of instruction are allowed to park in designated "student parking" free-of charge, by properly displaying a temporary parking permit obtained from the ACCD Department of Public Safety located in the Student Center. The student must show receipt information indicating payment of tuition to the Department of Public Safety.

Continuing Education students enrolling in non-credit courses of more than 40 clock hours of instruction must purchase the ACCD parking permit from the Bursar's Office located in the Student Center, Room 130.

Citizens desiring to appeal a parking or traffic citation must contact the Department of Public Safety at the College and complete the Parking/Traffic Citation Appeals Form within 10 school or working days of the issue date. Further procedures are available in the Student Handbook.

**Smoking**

Smoking is prohibited in all classrooms, laboratories, offices, conference rooms, and all other rooms in all buildings of Palo Alto College. Smoking is permitted in designated areas at each College and ACCD buildings. All smoking areas are marked with appropriate signage.

**Student Center**

The Palo Alto College Student Center offers students opportunities for socializing and relaxation. A T.V. area is available for student viewing. The bookstore, cafeteria, health center, bursar's office, campus security, automatic teller machine, and vending machines are located in the Student Center and are accessible for student use.

**Student Code of Conduct**

A Student Code of Conduct, published in the Student Handbook, sets forth the rights of students with corresponding responsibilities. This document includes information regarding protection in academic pursuit, sets forth all the conditions for responsible behavior on the campus, lists the various appeal processes, and outlines the grievance procedures that exist for students. A copy of this code is available at the Vice President of Student Affairs, Counseling, or Student Activities Office.

**Student Government**

The student body is represented by the Executive Committee of the Student Senate. By enrolling in the College, all students automatically become members of the Student Senate. Student Senate representatives participate in committees which make recommendations for appropriate policies.

**Student Health Insurance**

The College sponsors a blanket insurance plan of benefits that insures all registered students. Students attending Palo Alto College are automatically insured for expenses incurred as a result of accidental injury. Coverage is provided 24 hours a day in that students are insured both on and off Palo Alto classroom sites.

Additional information may be obtained at the Health Center.

## Student Information Release Policy

Under provisions of state and federal laws, educational institutions receiving state and/or federal funds are obligated to release or restrict access to students' records in a manner established by those laws. Palo Alto College proposes to fulfill its responsibility regarding release of student information.

Students are protected by the Family Educational Rights and Privacy Act which permits students to withhold student directory information. To withhold information from being released, students must notify the Office of Admissions and Records in writing. Failure to make such a written request will indicate approval for disclosure by the College for any purpose at its discretion.

The kind of information which may be released includes the student's name, address, telephone number, major, attendance record, degrees received, semester credit hours, and student parking information.

The Family Educational Rights and Privacy Act (FERPA) affords students certain rights with respect to their education records. These rights include:

1. The right to inspect and review the student's education records within 45 days of the day the college receives a request for access.
2. The right to request the amendment of the student's education record that the student believes is inaccurate.
3. The right to consent to disclosures of personally identifiable information contained in the student's education records, except to the extent that FERPA authorizes disclosure without consent.
4. The right to file a complaint with the U.S. Department of Education concerning alleged failures by the college to comply with the requirements of FERPA. The name and address of the Office that administers FERPA are:

Family Policy Compliance Office  
U.S. Department of Education  
400 Maryland Avenue, SW  
Washington, DC 20202-4605

Contact the Office of Admissions and Records for more details.

## Student Obligations

As a community college, Palo Alto offers services which encourage and enable students to pursue new career goals, upgrade present skills and enrich their personal lives. The college, in turn, expects the students to recognize and accept their responsibilities as citizens and members of a scholarly community. Among these responsibilities are respect for the rights of others; academic and personal integrity; and adherence to federal, state, and local laws. Please refer to the Student Handbook for reference on the Student Code of Conduct.

**Student Right-to-Know and Campus Security Act**

The Student Right-to-Know and Campus Security Act, as amended, requires that an institution collect information regarding crime awareness and campus security. The Alamo Community College District's Department of Public Safety is responsible for campus security. Under the provisions of the federal law, colleges of the Alamo Community College District must publish statistics about criminal acts occurring on campus property.

Following are the number of occurrences by year for each of the reportable offenses, as supplied by the ACCD Office of Public Safety:

**PALO ALTO COLLEGE**

<b>OFFENSE</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>
Kidnapping	0	0	0
Murder	0	0	0
Sexual Assault	0	0	0
Hate Crime	0	0	0
Robbery	1	1	0
Burglary	0	3	2
Auto Theft	2	0	0
Theft	21	42	25
Weapon Possession	0	0	0
Drug Possession	0	0	0
Liquor Law Violation	0	0	0

## 4 Admissions & Registration



It is the policy of Palo Alto College to admit students without regard to race, color, age, gender, religion, national origin, or disability. Students are personally responsible for meeting all admission requirements.

**All students must provide the Office of Admissions and Records the transcripts from the previous schools of attendance before admission. If the transcripts are not received, registration will not be permitted. To ensure timely credential evaluation, correct placement, and admission into certain degree programs, the required transcripts should be submitted one month prior to registration.**

### Admission of First-Time-In-College Students

A. Graduates of accredited high schools must submit the following credentials to the Office of Admissions and Records:

1. Official high school transcripts with official seals and signatures affixed. (Transcripts received become the permanent property of the College and no reproduction of these credentials will be made.) Transcripts may be forwarded from the high school to Palo Alto College. **The College will accept official transcripts directly from the student.**

2. College Preparatory Program for High School Students

In preparation for a college education and career requirements of the 21st Century, the Texas Higher Education Coordinating Board recommends all high school graduates have the following core proficiencies:

English Language Arts (4)

Mathematics (2-4)

Sciences (2-3)

Social Studies (4)

Foreign Language (3)

Physical Education (1-1/2)

Health (1/2)

Computer Sciences (1)

Fine Arts or Speech (1/2-1)

Additional specialty or elective courses also will be required for college preparatory or tech-prep programs.

3. Official TASP or Alternative TASP Test scores.

Students who are not TASP-exempt or TASP-waived and who do not provide TASP or Alternative TASP Test scores must take the TASP or Alternative TASP prior to enrolling in college-level courses.

4. Official SAT/ACT/or TAAS scores if requesting a TASP exemption based on the following scores:

ACT: Composite score of 23 or higher with individual math and

English scores no less than 19. Scores can be no more than 5 years old.

SAT: Total score of 1070 with a minimum of 500 on both the verbal and math tests.

Scores can be no more than 5 years old.

TAAS: TAAS scores can be no more than 3 years old. For TAAS scores taken in Spring 1994 and thereafter, a Reading TLI of 89 and a Math TLI score of 86 and writing scaled score of 1770 will be required.

5. Placement test scores no more than 3 years old and/or a transcript showing previous college course work.

ASSET

ACCUPLACER

SAT-A verbal score below 450 or total score below 470 require an additional reading test.

ACT-composite score below 20 requires additional reading test.

TASP or alternative TASP-only passing scores may be used for placement; additional testing may be required for placement in college level courses.

B. Students can submit the General Educational Development (GED) transcripts (high school equivalency) in lieu of high school transcripts. A minimum score of 40 on each test, or an average of 45 if any single test score is below 40, is required. Students will be admitted on the same basis as graduates of accredited high schools.

C. Students graduating from unaccredited high schools or completing non-traditional high school programs may be considered for Special Conditional Admission. Approval authority is the Director of Enrollment Management for students 18 years old or older.

Students **MUST** take developmental courses in disciplines where performance scores indicate a deficiency. Failure to enroll in required remediation will result in withdrawal from all college-level courses. See Assessment and TASP Office for further information concerning TASP.

## **Admission of Transfer Students**

A. Transfer students must submit only official, complete transcripts to the Office of Admissions and Records from **all previous colleges or universities attended**. The transcripts must contain the official seals and the appropriate college officials' signatures. **The College does accept official copies of transcripts directly from students.** (Transcripts received become the permanent property of the College. No reproduction of these credentials will be made.) Palo Alto College will accept any passing grade from any accredited institution. Passing is a grade of "D" or better.

B. Transfer students must:

1. Meet the minimum scholastic standards of Palo Alto College as published in this catalog;

2. Continue on scholastic probation if that was the status at the last college or university attended;

3. Be subject to disciplinary action and dismissal if previous registration information is falsified or knowingly suppressed;

4. Provide official TASP or Alternative TASP scores if not TASP exempt; and

5. Provide placement test scores if passing TASP or Alternative TASP were not obtained and previous course work in the failed areas has not been attempted. Additional placement testing may also be required for placement into some college level courses.

C. Transfer students on Enforced Scholastic Withdrawal (or Academic Suspension) in the immediate past fall, spring, or summer semester will be denied admission. These students will be required to remain out of the College for the "specified suspension of time" (as defined by Palo Alto College academic standards) before being considered for admission.

Students having been placed on Enforced Scholastic Withdrawal for a third time or more will not be permitted to enroll in the College for one calendar year. After that year, the students may petition a review committee for readmittance. These petitions must be submitted to the Director of Enrollment Management at least three weeks prior to the start of the semester.

## Admission of International Students

All persons seeking admission holding non-permanent visas will be processed as International Students.

All students must demonstrate English proficiency before being allowed to enroll in university/college-level courses. If the student's first language is English, or the student completed studies from a school where English was the primary language, English proficiency testing will not be required.

Students entering Palo Alto College from countries where English is not the primary language will need to provide TOEFL test scores AND/OR be tested at Palo Alto College before enrolling in college level courses. For students who have taken the TOEFL Examination, a score of 450 or higher is considered English proficient. If either the TOEFL Examination or the Palo Alto College examination determines that the student does not possess the English skills necessary to successfully perform at the college level, the student will be required to enroll in English as a Second Language (ESL) courses.

In addition, all students who demonstrate English proficiency must take a placement examination for placement into skill-appropriate courses. Palo Alto College placement exams are administered on campus and must be taken upon arrival to the campus and before enrollment.

Since Fall 1989, students enrolling for the first time in a Texas public institution of higher education must take the Texas Academic Skills Program test (TASP). All International Students must follow the guidelines for TASP as determined by law and enforced by the College. For more information on TASP, please contact the Assessment Center.

A. To be considered for admission, the following requirements must be submitted prior to deadline dates: June 15 for Fall; October 15 for Spring; April 15 for Summer. International student applications can be obtained in the International Student Services Office. Requirements:

1. International Application for admission;
2. Letter of Academic Standing (transfer student only);
3. Financial Affidavit of Support (Form provided by the International Students Coordinator). This form must be signed by the student and by the student's sponsor who accepts responsibility for the student's financial needs. Financial statements must be received on bank letterhead and signed by a bank official;
4. Original copy English language translation and evaluation of secondary school or college/university transcript which includes official school seal, signature of school director and date. Students must pay all costs of translation and/or evaluation of credentials;
5. A \$15.00 (US dollars) processing fee (non-refundable) check to Palo Alto College;
6. Current photograph attached to application (Required).

B. After the above requirements are fulfilled, the applicant's file will be evaluated for official admission. If admission is granted, an I-20 AB Form will be issued to the student. The I-20AB Form will be issued through the INS mandatory Student and Exchange Visitor Information System (SEVIS). All international student records are maintained through the SEVIS system. In order to be a bonafide student, the applicant must complete the following upon arrival in the U.S.:

1. Participate in a college placement testing (ACT, SAT, or other official district assessments) as recommended by the Counselor or International Student Services Coordinator;
2. Enroll in a minimum of 12 semester hours;
3. Pay for hospital insurance each semester;
4. Submit to International Student Services Coordinator a copy of paid tuition receipt; and

5. At the end of each semester, submit to the International Student Services Coordinator a copy of grades earned.

C. Transfer Students: International students transferring to PAC must comply with the same policies and requirements as International Students who are applying from their home country. Transferring students are required to submit a letter of standing from their current Advisor and return it to PAC. When the student is determined to be in Status (or good standing), the applicant must complete and submit all documents as outlined in "A" above.

## **Evaluation of Foreign Credentials**

All foreign credentials submitted to the College must be the original of the certified English translation. An official evaluation of foreign credentials must be completed before transfer credits or TASP exemption can be granted. Students are responsible for arranging for credential evaluation. A list of acceptable professional evaluation services is available in the Office of Admissions and Records. Students must pay all costs of translations and/or evaluation of credentials.

## **Conditional Admission**

Students unable to obtain official copies of their college or high school transcripts or GED test scores may be admitted by the approval of the Director of Enrollment Management.

## **Admission to the Dual-Credit Program**

The Dual-Credit Program allows eligible high school students to earn college credit for certain high school courses in which the students are currently enrolled. Dual-credit courses are offered in participating high schools during the regular scheduling of classes. In order for students to participate in the program, the high schools must first be an approved site for the offering of dual-credit courses. In addition, the students must meet the following requirements:

1. Submit the Dual Credit Student Data Form and an official copy of the high school transcript to the Office of Admissions and Records.
2. Submit passing scores on the exit-level TAAS or tenth-grade end-of-year exams.
3. Submit official TASP/Alternative TASP scores showing passing levels in the content area required for the dual-credit course or be exempt from TASP based on ACT, SAT, or TAAS scores.
4. Tuition and fee charges are waived for eligible Dual Credit students for 6-8 credit hours per semester.

## **Early Admissions**

High School juniors and seniors may enroll in Palo Alto College courses for full college credit by fulfilling the following requirements:

1. Submit the Early Admissions Application Form, which includes recommendation forms to be completed by high school counselors, teachers, or principals, to the Office of Admissions and Records;
2. Demonstrate average or above-average proficiency on the college placement examination;
3. Pass the exit TAAS test or tenth-grade end-of-year exams. High school students enrolled in four consecutive high school courses may enroll in no more than two Palo Alto College courses. High school students enrolled in five consecutive high school courses may enroll in only one Palo Alto College course. Credit for college hours will not be granted

until all high school graduation requirements have been met and the students' official high school transcripts indicating graduation dates are received by the Office of Admissions and Records.

As mandated by the Texas Academic Skills Program (TASP), students in high school intending to enroll at Palo Alto College must take the TASP/Alternative TASP and must pass the areas in which college enrollment is sought.

### **Non-credit or Audit Admission**

A. Students registering for audit or non-credit status only are not required to provide admission credentials. A grade of "NC" (non-credit) is assigned to auditing students.

B. An audit fee of \$10 per course is charged in addition to the regular tuition and fees.

C. Students requesting a change to audit status must pay the \$10 audit fee by the census date of the semester or session.

### **Admission to Summer School**

Students attending other colleges or universities and enrolling only for the Palo Alto College summer sessions must provide all appropriate transcripts and documents.. The maximum student load is eight semester hours for one term or nine semester hours for concurrent day and evening students, and is not to exceed 14 semester hours for Summer Sessions I and II.

### **New and Transfer Student Orientation Policy**

All new students and students entering Palo Alto with less than 15 hours of academic credit are required to enroll in SDEV 0100 – Strategies for Succeeding in College. (Hours taken as Dual Credit or Early Admissions do not exempt a student from enrolling in SDEV 0100.) SDEV 0100 is designed to acquaint students with administrative policies and regulations, student activities, grading, financial aid, TASP regulations, academic programs, links to faculty advisors, use of campus resources, student services, study skills, advisement options, and career exploration. Courses are taught by faculty in the Counseling Department. Students will enroll in SDEV 0100 in their first semester at Palo Alto College.

Students enrolling during the summer can defer enrollment to the fall semester. Students who do not enroll in SDEV 0100 their first semester will have an administrative hold placed on their record until course requirements are met. Students who register for SDEV 0100 and do not complete the course will be required to re-enroll in the course the subsequent semester. Enrolling in HUMD 0300 Human Development can substitute for SDEV 0100. HUMD 0300 and SDEV 0100 cover many of the same topics; however, HUMD 0300 places emphasis on personal development and academic achievement. Descriptions for each of the courses can be found in the back of this publication.

In some circumstances, students enrolled in programs offered exclusively at off-campus sites can be waived from SDEV 0100. The decisions to waive SDEV 0100 will be made on a case-by-case basis by the Chair of Counseling or the next level administrator. Students requesting waivers need to provide evidence that taking a course on-campus or by WWW creates undue hardship. Students enrolled in the Virtual College of Texas are not required to enroll in SDEV 0100. Course waiver forms are available from the Counseling Office.

### **Texas Academic Skills Program (TASP)**

The Texas Academic Skills Program (TASP) is a state-mandated program of testing, advisement, and remediation approved by the Texas Legislature (House Bill 2182). Section 51.306 of the Texas Education Code requires all undergraduate students to comply with the

TASP regulations. The program is designed to ensure that students attending public institutions in Texas have the prerequisite skills of writing, reading, and mathematics to perform at the college level.

All students in Texas public colleges and universities must take the TASP or Alternative TASP exam prior to enrollment in college-level courses. With approval from an Assessment-TASP official, students who have not taken one of these exams may be permitted to enroll. Performance on the test will not be used as a condition of admission. All TASP-Failed students are required to meet with an advisor prior to enrollment.

Students are exempt from taking the TASP if they satisfy one of the following conditions:

- Earned 3 or more college level semester hours prior to the Fall 1989 Semester from an accredited institution.

- Possess a Bachelor's or higher degree from an accredited institution.

- Meet qualifying standards for an exemption based on ACT, SAT, or TAAS scores (scores must be attained in one "sitting"):

ACT: Composite score of 23 or higher with individual math and English scores of 19 or higher. Scores can be no more than five years old.

SAT: Total score of 1070 with a minimum of 500 on both the verbal and math tests. Scores can be no more than 5 years old.

TAAS: A Reading TLI score of 89 and a math TLI of 86 and a writing scaled score of 1770 is required. Scores can be no more than 3 years old.

- Meet the legal definition of "blind" and "deaf" and have obtained credit for 3 or more college-level semester hours from an accredited institution prior to September 1, 1995.

- Obtained credit through examination or military training equivalent to 3 college-level semester hours prior to the Fall 1989 semester. The credit must have been awarded by an accredited college or university or must apply to the Palo Alto College degree plan.

Students requiring exemption must provide as applicable official transcripts, official test scores, or official documentation of the "blind" or "deaf" disability.

Palo Alto College also offers several TASP-waived certificate programs. The TASP test is not required for those students enrolled in and taking only the courses within these programs.

Developmental studies courses and activities are required for students whose scores on any of the TASP or Alternative TASP subtests are below passing. The appropriate developmental program is determined by placement test scores and previous course work and must be in at least one of the areas in which the failure occurred. Developmental courses and non-course-based developmental programs are designed to strengthen academic skills and prepare students to pass the TASP Test. These courses do not apply toward degree requirements at any Texas public college. **TASP- failed students not complying with state remediation requirements may be withdrawn from all their college-level courses.**

Students who initially failed any portion of the TASP or Alternative TASP exam can meet TASP requirements by either retaking and passing the TASP exam or earning a grade of B or better in a course approved by the Coordinating Board (following successful completion of the prescribed developmental program and an unsuccessful retake of the TASP test - in that order) related to the skill area in which a deficit was assessed:

Writing: ENGL 1301 or 1302

Reading: HIST 1301, 1302

ENGL 2322, 2323, 2332, 2333, 2327, 2328

PSYC 2301

GOVT 2301, 2302, 2305, 2306

Math: MATH 1314 or higher, including MATH 1332

## Placement Policy

Palo Alto College requires each student to be assessed in writing, reading, and mathematics to determine the level of academic skills and the course placement. All students must be assessed or provide placement test scores. To fulfill this requirement, students may take the TASP or Alternative TASP Test and/or the placement test accepted at Palo Alto College. Official test scores from ACT, SAT, ASSET, Nelson-Denny, ACCUPLACER, San Antonio College, St. Philip's College, or Northwest Vista College also will be accepted. Placement scores must be less than three years old. Students scoring at the developmental level on entry tests must complete specified developmental courses before enrollment in college-level courses.

## Registration and the Enrollment Process

Palo Alto College is committed to providing its students an easy-access, flexible, and somewhat continuous registration/enrollment process. Students will be assessed, advised, and registered in a flexible, personalized process, provided students are in possession of all necessary admissions documents. For specific registration information, contact the Office of Admissions and Records.

## Course Delivery Options

Palo Alto College provides courses in a variety of different time lengths and delivery formats to meet the busy lifestyles which make scheduling traditional college courses difficult. Presently courses are offered in sixteen-week, twelve-week, eight-week, six-week, and three-week formats during the Fall, Spring, or Summer semesters.

In addition, the College provides intersession (between semester) courses such as the Maymester session. Courses are delivered face-to-face in a classroom situation on campus or off-campus at various businesses, high schools, or military installations in Bexar County and the Colleges' service area. Most of the core curriculum courses and some technical courses are also delivered via telecommunications such as Internet, telecourses, and interactive videoconferencing courses. Course content, college credit, and transferability of a distance education course is equivalent to the same course offered on campus. Students have the same rights, privileges and obligations as an on-campus student. However, distance education courses may not be appropriate for everyone. Maturity and self-discipline are necessary because students must maintain steady progress throughout the semester. For more specific information about distance education courses, refer to the web site: [www.accd.edu/pac](http://www.accd.edu/pac) and click on Distance Education.

The three telecommunication options are described below:

- 1) Internet courses require the student to access the course with a minimum 486 computer, and an Internet Service Provider (ISP) and other specific software. Basic requirements for taking an Internet course are found on the PAC website, [www.accd.edu/pac/distedu/Internet.htm](http://www.accd.edu/pac/distedu/Internet.htm).
- 2) Telecourses, which are prerecorded video programs broadcast on both cable television and on the local PBS network, allow students to independently complete all or most of the course away from the college.
- 3) Interactive videoconferencing courses utilize real time audio and video between instructor and students. These courses are offered either to or from a distant site or sites. Students may attend classes on-campus or at a pre-arranged distant site.

### **Academic Fresh Start**

Texas law entitles residents to seek admission to public institutions of higher education without consideration of courses taken 10 or more years prior to enrollment. This legislation has been called the "right to an academic fresh start," and it gives students the option of having course work taken 10 or more years prior to the starting date of the semester in which the applicant seeks to enroll either included or ignored for admission purposes. To apply for admission under this program, a student must notify the Office of Admissions and Records and complete the appropriate documents. A student admitted under this provision may not receive any course credit for courses undertaken 10 or more years prior to enrollment.

### **Student Class Load**

**Fall and Spring Semesters:** A Full-Time Student is enrolled in 12 or more semester hours. A Part-Time Student is enrolled in fewer than 12 semester hours. No student may enroll for more than 18 semester hours except by written authorization of the Vice President of Student Affairs or a designee.

**Summer Session:** A Full-Time Student is enrolled 6 or more credit hours. A Part-Time Student is enrolled in fewer than 6 semester credit hours. Hours in excess of full-time must be approved by the Vice President of Student Affairs.

### **Classification of Students**

**FRESHMAN:** Must have graduated from a high school with a minimum of 15 credits, or must have been admitted on the basis of acceptable GED scores, or must have earned fewer than 30 hours at Palo Alto College or another accredited college.

**SOPHOMORE:** Must have completed more than 30 semester hours in collegiate level subjects at Palo Alto College or some other accredited college, but not more than 66 credit hours.

### **Concurrent Enrollment at ACCD Institutions**

Students enrolling concurrently at Palo Alto College, St. Philip's College, San Antonio College, or Northwest Vista College do not pay duplicate fees and tuition.

## 5 Financial Services & Assistance



### Tuition and Fees

Palo Alto College reserves the right to change its tuition and fees in keeping with the decisions of the Board of Trustees of the Alamo Community College District, acts of the Texas Legislature, and official interpretations thereof.

All students are required to substantiate to the satisfaction of the College administration their entitlement to Texas residence classification in order for minimum tuition rates to apply (particularly Chapter 54, Texas Education Code). An Oath of Residency and acceptable documentation supporting the Texas residence declaration, such as Texas Driver's license and Texas Vehicle registration indicating at least one year's residence in Texas prior to registration, are required of all registrants. See semester class schedule for specifics or contact the Office of Admissions and Records.

Students qualifying as state residents for educational purposes pay the resident tuition rate. **All other students are classified as non-residents and pay the appropriate tuition rates. It is the obligation of students whose residence status changes while enrolled at Palo Alto College to notify the Office of Admissions and Records of such changes immediately. Students failing to report residence data changes may be subject to disciplinary action.**

Non-resident classifications remain in effect throughout the students' attendance at this college until written petitions for change have been approved. Written petitions or Palo Alto College Residence Questionnaires must be submitted to the Office of Admissions and Records ten calendar days prior to a semester's registration if residence classification changes are to be effected.

In-district students are those residing in Bexar County. All others are classified as out-of-district residents.

### Tuition Reimbursement

Under Section 54.0065 of the Texas Education Code, students graduating from a Texas public baccalaureate-granting university may be entitled to a partial tuition rebate if all of the following conditions are met:

- a. They must have enrolled for the first time in an institution of higher education in the Fall 1997 semester or later;
- b. They must have received a baccalaureate degree from a Texas public university;
- c. They must have been a resident of Texas and entitled to pay resident tuition at all times while pursuing the degree; and
- d. They must have attempted no more than three hours in excess of the minimum number of semester credit hours required to complete the degree under the catalog under which they were graduated. Hours attempted include transfer credits, course credit earned exclusively by examination, courses that are dropped after the official census date, and for-credit developmental courses.

Students desiring to qualify for tuition rebates are responsible for enrolling only in courses that will qualify them for the rebates. Contact the Director of Enrollment Management for additional information.

Semester hrs. taken	RESIDENT OF TEXAS				NON-TEXAS	
	In-District		Out-of-District		Residents & International Students	
	Tuition	General Fee	Tuition	General Fee	Tuition	General Fee
1	\$210.00	\$80	\$420.00	\$80	\$840.00	\$80
2	\$210.00	\$80	\$420.00	\$80	\$840.00	\$80
3	\$210.00	\$80	\$420.00	\$80	\$840.00	\$80
4	\$210.00	\$80	\$420.00	\$80	\$840.00	\$80
5	\$210.00	\$80	\$420.00	\$80	\$840.00	\$80
6	\$210.00	\$80	\$420.00	\$80	\$840.00	\$80
7	\$245.00	\$85	\$490.00	\$85	\$980.00	\$85
8	\$280.00	\$85	\$560.00	\$85	\$1,120.00	\$85
9	\$315.00	\$85	\$630.00	\$85	\$1,260.00	\$85
10	\$350.00	\$85	\$700.00	\$85	\$1,400.00	\$85
11	\$385.00	\$85	\$770.00	\$85	\$1,540.00	\$85
12	\$420.00	\$85	\$840.00	\$85	\$1,680.00	\$85
13	\$455.00	\$85	\$910.00	\$85	\$1,820.00	\$85
14	\$490.00	\$85	\$980.00	\$85	\$1,960.00	\$85
15	\$525.00	\$85	\$1,050.00	\$85	\$2,100.00	\$85
16	\$560.00	\$85	\$1,120.00	\$85	\$2,240.00	\$85
17	\$595.00	\$85	\$1,190.00	\$85	\$2,380.00	\$85
18	\$630.00	\$85	\$1,260.00	\$85	\$2,520.00	\$85
19	\$665.00	\$85	\$1,330.00	\$85	\$2,660.00	\$85
20	\$700.00	\$85	\$1,400.00	\$85	\$2,800.00	\$85
21	\$735.00	\$85	\$1,470.00	\$85	\$2,940.00	\$85

The General Fee will be \$80 for each summer term.

Minimum tuition for each summer term will be \$105.00 for In-District Texas residents, \$210.00 for Out-of-District Texas residents, and \$420.00 for Non-Texas residents and international students.

Any student currently enrolled as of the official census data who subsequently enrolls in a Flexible Entry class organized in the same semester will be assessed tuition and fees as though another class was being added to the student's current load.

The registration fee will be \$10 for fall and spring semesters and \$6 for each summer session. The library fee is \$10 for fall and spring semesters and each summer session. Students must pay a \$4 insurance fee at registration for fall and spring semesters and \$1 for summer session.

There is a separate lab fee schedule for laboratory courses.

Permanent resident aliens or aliens having filed a declaration of intention to become a citizen with the proper federal immigration authorities have the same privilege of qualifying for resident tuition and fee status as have citizens of the United States.

## Refund of Tuition

Students officially withdrawing from all credit courses at the institution will have their tuition and refundable fees returned according to the following schedule:

### Fall and Spring Semesters

Prior to the semester's First Class Day .....	100%
During Class Days 1 through 15 .....	70%
During Class Days 16 Through 20 .....	25%
After the 20th Class Day .....	None

### Six-Week Summer Sessions

Prior to the First Class Day .....	100%
During Class Days 1 through 5 .....	70%
During Class Days 6 through 7 .....	25%
After the 7th Class Day .....	None

### Eight-Week Summer Sessions and Flex Terms

Prior to the First Class Day .....	100%
During Class Days 1 through 8 .....	70%
During Class Days 9 through 10 .....	25%
After the 10th Class Day .....	None

Refunds for other non-standard-length courses shall be made based on the Refund of Tuition and Fees table provided by the Texas Higher Education Coordinating Board. Refunds are dependent on students having paid more than the minimum required tuition. All academic calendar days are considered for refund purposes, not only the days the student attends class.

**Refund checks will be prepared soon after the end of the refund period.**

## Non-credit Continuing Education Courses

All tuition refunds for non-credit continuing education classes that are cancelled due to low enrollment will be processed by the Continuing Education Department at 100%. For other drops, a full refund will be returned if a written or faxed request is received from the student prior to the first day of class. 80% of the tuition is refundable if a written request is received from the student prior to the second class period. After that time no exceptions will be made. Refund requests require approximately four to six weeks for processing.

## Refundable Fees

### Registration Fees

Fall and Spring Semester, per semester .....	\$10
Summer Sessions, per term .....	\$6

The Registration Fee is NOT refundable if ALL courses are dropped by the student prior to the official first class day of the semester or session.

**Library Upgrade Fee, per term .....** \$10

### Applied Music Fee:

Private lessons, one hour or two half-hour lessons per week, per semester .....	\$60
Private lessons, one hour or two half-hour lessons per week, per summer term .....	\$20
Class lessons, two lessons per week, per semester .....	\$20

**CHAPTER 5: Financial Services & Assistance** **31**

**Audit Fee** ..... \$10

**Computer Use Fee**

Laboratory Fee ..... \$2 to \$24

Special Fee ..... \$8 to \$65

**General Fee**

1-6 hours ..... \$80

7 or more hours ..... \$85

Summer or Flex term, per term ..... \$80

**Laboratory Fees** ..... \$2 to \$24

**Professional Liability Insurance Fee**

Veterinary Technology students are charged a fee to provide for the personal protection of each student involved in clinical practices and training.

Per semester ..... \$10

Per summer session ..... \$4

**Radiology Badge Fee**

Veterinary Technology students are charged a film badge fee for radiation detection service when taking courses including clinical training in veterinary radiology and ultrasonography.

Per semester ..... \$6

Per summer session ..... \$3

**Special Fees**

Fees for defrayal of unusual supply or participation costs of certain courses (e.g., golf, photography, etc.) ..... Varies

**Student Insurance Fees**

Per Semester and Summer Term for credit courses ..... \$4

Per Summer Term and Continuing Education Class ..... \$1

(Continuing Education courses up to \$4.00 per semester).

**International Student Insurance Fees**

Per Semester ..... \$61

Summer and Mini-Term ..... \$20

Refund checks will be prepared as soon as possible after the end of the refund period.

**Special Fees**

Fees for the use of special supplies or for participation in certain courses vary. (e.g., piano, professional liability insurance, radiology badge, flying lab, etc.).

**Continuing Education Fees**

Community Service Courses ..... \$2.10 to \$3.50 per instructional hour

Apprenticeship Programs ..... \$2.00 per instructional hour

Adult Vocational ..... \$2.10 to \$3.50 per instructional hour

Contract Courses ..... Current Policy (Instructor cost plus all direct costs and indirect costs divided by minimum number of students needed.)

Instructional Technology Fee ..... \$5.00 to \$20.00 per instructional hour (\$10 maximum per course)

For all types of programs, other direct and/or indirect costs of a particular course may be prorated and added to the basic fee.

## Biology, Chemistry, and Veterinary Technology Breakage Fee

Biology, chemistry, and veterinary technology students will pay a \$2 breakage fee. The fee is not refundable. In the event breakage of equipment exceeds \$2, the student will be required to pay the additional amount prior to receiving credit in the course.

## Non-Refundable Fees

### Examination Fees (subject to change)

Advanced Standing Examination Fee .....	\$35 per credit hour with \$105 minimum
GED .....	\$61.50 (An additional \$16 will be charged for state and national processing fees)
Re-Exam Fee (if failed) .....	\$6
A.C.T. Residual .....	\$15
CLEP (per test) .....	\$58
Career Tests	
Interpretive or Kuder .....	\$5
Profile .....	\$3
Full Battery for Non-enrolled Person .....	\$50
Correspondence Exam .....	\$10
Texas Securities (Austin) .....	\$10
Women's Programs (including Women's Center participants) .....	\$5
Credit card Usage Fee .....	\$2 per transaction
Fines for Falsification of Information on Motor Vehicle Registration .....	\$10
Foreign Student Registration Processing Fee .....	\$15

### Installment Payment Plan

Administrative Fee, per semester .....	\$25
Late Fee, per each late payment .....	\$10
<b>Late Registration Fee:</b> .....	\$25

No tuition and fee reductions are made for any part of a term lost due to late registration. Students expecting to receive full credit for the semester's work must pay the full tuition charges from the beginning of the semester.

### Library Fines:

Each Book .....	\$0.10 per day
Each Reserved Item .....	\$0.50 per hour/day
Each Video .....	\$0.25 per day

### Parking Permits:

Full Year .....	\$15
After January 1 .....	\$10
Summer Term .....	\$7
Replacement .....	\$8

<b>Parking Fines</b> .....	\$10
Parking Fines if not paid within 10 days .....	\$16

<b>Registration Receipt Copy Fee</b> .....	\$2
<b>Returned Check Fee</b> .....	\$25
<b>Schedule Change Fee</b> .....	\$4

A schedule change fee will be charged for all class and course changes not initiated by the College.

**Transcript**

All transcripts will be issued without charge.

**Workshop Fees**

A fee is charged for workshops organized for special groups which may or may not carry semester credit hours. The amount of the fee, which is in addition to required tuition, is announced at the time of the workshop.

**Returned Checks**

Immediate restitution of funds must be made when a check is returned by a bank for insufficient funds. In addition, a \$25 fee will be charged by the Alamo Community College District. The District will not accept another check from a person from whom a bad check has been received previously. *NOTE: Stopping payment on tuition checks does not constitute an official withdrawal from the college. Official withdrawal must be processed at the Office of Admissions and Records.*

**Student Financial Services (Financial Aid)**

Scholarships, grants, loans, and federal work-study are available under certain conditions for students at Palo Alto College. It is the student's responsibility to inform the college that he/she needs financial assistance, to provide the necessary information, and to establish his/her qualifications for assistance.

Students applying for financial aid are requested to complete and mail a Free Application for Federal Student Aid (FAFSA) to the Processor. After receiving the Student Aid Report (SAR) from the Processor, the student must submit the documents to the Financial Services Office. Students selected for verification as indicated by the SAR must submit their most current Federal Income Tax Report (IRS) and that of their parents, if applicable. Aid is awarded when financial need has been established and upon evidence of satisfactory academic progress. The financial aid package is determined by standard formulas and determined need.

Transfer students applying for financial aid must inform the Student Financial Services Office if they have attended previous colleges within the academic year.

Current students may be considered for summer assistance provided that they submit a Student Aid Report and a Summer Application for Financial Aid to the Student Financial Services Office. Funding for summer is contingent on availability of funds.

**Student Financial Services  
for Continuing Education Courses**

Tuition assistance is available for eligible individuals who wish to enroll in Continuing Education courses. The Texas Public Education Grant (TPEG) may be used for course tuition only and there is no reimbursement for pre-paid tuition bills. Financial aid will be awarded for up to 75-100% of course tuition, but not to exceed a total amount of \$500. The standard Free Application for Federal Student Aid (FAFSA) must be completed eight (8) weeks prior to registering for the class. When the Student Aid Report (SAR) is received, you must complete an application for the TPEG upon registering for the class. Awards will be based on determined eligibility and available state funding. Forms are available in the Student Financial Services office in the Administration Building. Training programs that exceed a total of 260 clock hours will not be eligible.

## Grants

**Federal Pell Grant.** Students enrolling in three hours or more may apply. The Federal Pell Grant federal legislation requires the use of cost of attendance in determining a student's grant award. The following criteria are used to determine the amount of the grant: (1) student eligibility index, (2) actual cost of tuition, and (3) number of hours enrolled. This means that the actual tuition and fees charged by the institution are added to room and board. The federal government has established a standard figure for room and board which is not applicable to dormitories or campus living quarters for students at Palo Alto College.

**Federal Supplemental Education Opportunity Grant (FSEOG).** The purpose of the program is to provide Educational Opportunity Grants to students of exceptional financial need who would be unable to enter or remain in an institution of higher education. Students must apply through the Financial Aid Application process.

**Texas Public Educational Grant (TPEG).** Provides assistance to students who have documented financial need. The program is funded from tuition payments to the College. Apply through the Financial Aid Application process.

**State Student Incentive Grant (SSIG).** Provides assistance to students who have shown documented financial need. It is a grant jointly funded by the state and college. Apply through the Financial Aid Application process.

**Texas Grant Program.** Available to entering high school students who are Texas residents, completed an advanced high school curriculum defined by TEA, and will enroll at least on a 3/4 time basis in an undergraduate degree or certificate program. Students must apply through the Financial Aid Application, complete a Texas Grant Application, and submit a High School Transcript.

**PASSkey Program (TRIO grant).** Available to PASSkey Program participants who are in good program standing. Students must apply through the PASSkey Program and complete an application each semester. Awards range from \$400-\$1,500 each semester.

## Work-study Program

Federal work-study positions are posted and referred by the Career Resource Center. FWS allocations, student eligibility, and awarding is determined by the Student Financial Services department.

## Scholarships

Institutional and private scholarship information is available in the SFS office or through [www.accd.edu/pac](http://www.accd.edu/pac). Students can apply according to defined criteria and application deadlines. Applications for students not awarded are kept on file only for the current academic year.

**ACCD Endowed Scholarship (E):** ACCD Scholarship Application is required. **Major:** all majors. **Criteria & Description:** 3.0 GPA; enroll for 6 or more hours; official high school or college transcript(s); financial need or academic merit. **Deadline:** April 1 and November 1. **Amount:** \$300-\$1,000 per year.

**ACCD Foundation Scholarship (F):** ACCD Scholarship Application is required. **Major:** all majors. **Criteria & Description:** 3.0 GPA; enroll for 12 hours per term; official transcript(s); 2 letters of recommendation; financial need; applications available at the College Student Financial Services Office. **Deadline:** April 1. **Award:** \$750 per term, maximum \$1,500 per year for two years.

**Trustee Scholarship:** Trustee Scholarship Application is required. **Department:** Committee. **Major:** All majors. **Criteria & Description:** 3.0 GPA; at least 9 hours of enrollment. **Deadline:** July 15. **Amount:** \$1,000 per academic year.

**San Antonio Livestock Exposition:** SALE Application is required. Majors: Agriculture, Agribusiness, Veterinary Technology, Hospitality, Allied Health, Nursing, or Pre-Medicine. Criteria & Description: U.S. citizen or permanent resident of the United States; high school graduate from Bexar, Atascosa, Bandera, Comal, Gillespie, Guadalupe, Kendall, Medina, Wilson, Frio, Karnes or Kerr counties; 2.0 GPA; enroll for 12 or 6 credit hours; 3 letters of recommendation, official high school or college transcripts. Deadline: March 15. Award: \$1,000.

**Charlie Parker Jazz Scholarship:** Department: Fine and Performing Arts/Speech Communication. Major: Jazz Music. Criteria & Description: Full-time student, at least 12 hours that include Jazz Band, Theory, Piano I, Improvisation or Music America. Must demonstrate a commitment to the Jazz Art Form and display proficiency on his or her primary instrument. Must maintain a 2.5 GPA. Must complete two full terms. Deadline: Open. Amount: Varies.

**Frank M. Tejada Memorial Scholarship (E):** ACCD Scholarship Application is required. Department: Committee. Major: All majors. Criteria & Description: Academic merit. Deadline: July 1. Amount: \$600 to \$1,000 per academic year.

**Mariachi Scholarship:** Mariachi Music Scholarship Application is required. Major: Music. Criteria & Description: 2.5 GPA, Full -time enrollment must include Mariachi class (MUEN 1152). Audition and good academic standing required. Deadline: May 10. Award: Varies

**San Antonio Education Partnership (P):** SAEP Eligibility Form is required. Major: All majors. Criteria & Description: Eligibility is determined at the high school level, based on attendance and grade point average (GPA), and must enroll for 12 hours per term in the next year after graduation from high school. Deadline: During or terms only. Amount: \$175 per semester, up to four semesters.

## Loans

There are several long- and short-term loan programs available at Palo Alto College. The amount students can borrow depends on individual needs. Repayment of the long-term loans begins six months after graduation or from the date of withdrawal. Short-term loans are reserved for the time of registration and must be repaid within 30 days. In order to receive this loan the student must complete the necessary application before the deadline dates.

**The Federal Family Educational Student Loans,** Federal subsidized and unsubsidized Stafford Loans and Parent Loans are made by a lender such as a bank, credit union, savings and loan association, or the state of Texas through the Coordinating Board. Additional information regarding other federal loans is available in the Student Financial Services Office.

### STAFFORD LOAN DEADLINES

Fall 2003	November 7, 2003
Spring 2004	April 7, 2004
Summer 2004	May 14, 2004

## Financial Aid Eligibility

In general, a student is eligible for Federal, State, and Institutional aid if he or she meets the following requirements:

1. The student must have a high school diploma or a GED certificate. (Any exceptions must be approved by the Director of Student Financial Services)
2. The student is enrolled at least half-time as a regular student in an eligible program of study. (Less than half-time applies to Pell Grant only)
3. The student is a U.S. citizen or an eligible non-citizen.
4. Financial need is demonstrated by the supporting documents required, and Federally approved budgets.
5. A transfer student must submit a Financial Aid Transcript from previous coursework completed at another institution of higher learning.
6. The student must demonstrate satisfactory progress in the course of study.
7. The student must be working toward a degree or certificate.
8. The student is not in default on the Perkins Student Loan (formerly NDSL), Stafford Student Loan (formerly GSL), PLUS or SLS Loan at any institution the student has attended.
9. The student does not owe a refund on a Federal Pell Grant or a Federal Supplemental Educational Opportunity Grant at any school attended.
10. The student must sign a statement of registration status with the Selective Service.
11. The student must sign a statement of educational purpose indicating that he or she will use the money only for expenses related to attending that institution. For complete details on any item mentioned above, refer to the latest edition of "The Federal Student Financial Aid Handbook."

## Satisfactory Progress

A student must maintain a satisfactory academic record in the course of study he or she is pursuing in order to be eligible for financial assistance. A satisfactory academic record is measured in three ways: quality, progress, and quantity. Quality refers to maintaining a cumulative 2.0 grade point average for students on financial aid. Progress means completing at least sixty five percent (65%) of all attempted hours while enrolled at Palo Alto College. The quantity measurement allows a maximum number of semester hours within the Alamo Community College District for an associate degree.

## Deadlines for Filing Financial Aid Applications

TERM	PRIORITY DATE
Fall Term	May 1
Spring Term	November 1
Summer Term	March 1

Completed applications received **by priority date** will receive priority consideration of all available funds, subject to student's eligibility.

Completed applications received **after priority date** will be processed according to eligibility and remaining funds.

Applications received **after the final date** will be processed for future semesters only but not beyond that academic year. Separate summer application is required for consideration of summer awarding.

## **Financial Aid Policies**

Federal, State, and Institutional Financial Aid Programs must adhere to various regulations and guidelines. The ACCD Student Financial Aid Council has developed certain policies that must be enforced by the Financial Services offices within the ACCD. These policies may be found in the ACCD Student Financial Aid Policies and Procedures Manual.

## **Veterans Under Federal Programs**

A student planning to attend Palo Alto College under one of the public laws for veterans and their dependents must complete the required applications and documents and submit them to the Office of Veterans Affairs.

It is the student's responsibility to inform the VA office of any change in enrollment status.

A student enrolling under any of the various provisions for VA Educational Benefits should be prepared to pay the initial cost of tuition and fees. There is usually a period of four to six weeks before the student receives the first payment from the Department of Veterans Affairs.

To be considered a full-time student under one of these programs, a student must be enrolled for a minimum of 12 semester hours (for a degree program) during the fall or spring semester or the equivalent for a summer term. Consult a counselor for details as to what constitutes a full load for day and/or evening summer sessions.

A Palo Alto College student receiving VA educational benefits must maintain a 2.0 G.P.A. in all courses to satisfy VA Satisfactory Progress Standards.

The Office of Veterans Affairs can certify enrollment only if:

1. Transcripts from all colleges and universities are on file.
2. Courses fulfill degree requirements.
3. Courses were not previously completed.
4. Students are in good academic standing with a 2.0 minimum grade point average (G.P.A.).
5. Students are not on Enforced Scholastic Withdrawal status.
6. A degree plan is on file.
7. A Palo Alto College Course Selection Form signed by a counselor or a department advisor is on file at the Admissions Office for each enrollment period.

To confirm enrollment, students must provide Veterans Affairs with the green tuition receipt (marked Veterans Affairs) for each semester in order to request payment for that semester.

In order to ensure some timeliness in assistance, the above items (except for green receipt) should be submitted as early as possible. Please note that veterans are certified each semester. Therefore, participation in early registration is encouraged.

## **The Hazlewood Act**

The Hazlewood Act (Article 2654 B-1) aids ex-veterans who have exhausted all of their VA education benefits. A legal resident of Texas is exempt from payment of tuition and certain required fees when the applicant meets ALL of the following conditions:

1. The applicant must have served during a national emergency.
2. The applicant must have resided in Texas one year prior to entering the service, and must have entered the service from Texas. Upon discharge from the service, the applicant must continue to reside in Texas.
3. The applicant must have served on active military duty (other than for training) for more than 180 days.
4. The applicant must apply for federal educational benefits such as the Pell Grant and the SEOG.

If the conditions listed above are met, the applicant must submit the following to the Veterans Affairs Office:

- a. A letter from the Department of Veterans Affairs that the applicant has no further educational entitlement under the G.I. Bill.
- b. A copy of the applicant's DD214.
- c. A Student Aid Report for the academic year.
- d. A certified copy of the Texas residency statement.

The applicant may enroll in non-credit courses if these conditions are met.

### **Senior Citizens Tuition Waiver**

Colleges of the Alamo Community College District are authorized to allow persons 65 years of age or older to enroll for credit or to audit up to six hours of credit courses or various continuing education courses each semester or summer term without payment of tuition if space is available. In credit courses eligible persons will be admitted under this program after regular registration has closed on a space-available basis. In continuing education courses, space available is determined as of 12:00 noon the day the class is scheduled to begin. They will be required to pay all applicable fees other than tuition.



*Students win competitions to be named All-State Musicians.*

## 6 Student Support Services & Activities



### The Welcome Center – 'We Get You Where You Need to Be'

The Welcome Center is the first stop in your journey to success. The Welcome Center Staff is specifically trained to negotiate the maze of admissions, financial aid, assessment, and counseling for everyone, especially new and transfer students.

- Guide students through Advisement process
- Supply general information regarding majors and academic degree plans
- Assist with on-line Fall/Spring/Summer registration
- Help complete FAFSA forms on-line
- Computer Lab to view or printout grades, unofficial transcripts, class schedules and tuition bills
- Provide resources to make your PAC experience a success

### Assessment and TASP Center

The Palo Alto Assessment and TASP Center offers a variety of testing programs to assist students with academic placement and career exploration. Students are encouraged to take advantage of the resources and services provided by the Center.

Testing programs available to students and the community include:

1. Placement Testing
 

All Palo Alto students except those enrolling in Continuing Education or pursuing a technical certificate are required to have placement test scores for academic advisement. Scores must be less than three years old. Tests accepted at Palo Alto include:

  - ACCUPLACER
  - ASSET
  - SAT – Recentered verbal score below 450 requires additional reading test or original verbal score below 370.
  - ACT – Composite score below 20 requires additional reading test
  - TASP/Alternative TASP – only passing scores may be used for placement; additional placement testing may be required for placement into some college-level courses
  - SLEP - Secondary Level Proficiency Exam - English Proficiency Exam.
2. College-Level Examination Program (CLEP)
 

Only CLEP Subject Examinations are administered and accepted.
3. Departmental Exams
 

With faculty approval, students may challenge some courses by taking an examination.
4. Texas Academic Skills Program (TASP)
 

The TASP or Alternative TASP is offered on the Palo Alto campus several times per year. Consult the TASP Registration Bulletin available at the Assessment & TASP Center for dates and procedures. **NOTE: Due to pending legislation, TASP policies may be subject to change.**
5. Correspondence Course and Contracted Test Administration
 

The Assessment & TASP Center will administer correspondence, certification, and various other examinations only by appointment. Test administration and building usage fees may be charged.

Standardized tests are administered on scheduled dates and require advance registration and payment if applicable. The placement tests or Alternative TASP are offered on a scheduled basis and during registration periods. Contact the Assessment and TASP Center for more information.

## Counseling and Support Services

Counseling services are considered an integral and important component of the College support services program. Students are encouraged to speak with a counselor to address issues related to the pursuit of their educational goals. The Counseling area provides comprehensive services designed to assist students with:

1. Academic Counseling
2. Personal Issues
3. Career Development
4. Goal Setting
5. Referral to Community Services

When enrolling in College for the first time, the student meets with a counselor for academic advisement and registration. Thereafter, counseling services are available to assist students in various phases of academic and personal development.

Professional counseling is available for day and evening students. All counseling is confidential. Individual counseling, small group discussions, seminars, and workshops provide students with information and strategies in the following areas:

Academic	—	transferring Palo Alto credits to other schools; joint admissions; overcoming academic difficulties such as poor study skills; scholastic probation and ESW.
Career	—	selecting a major or long-term career goal, exploring personal attributes for careers.
Personal	—	adjusting to college; time management; stress management; decision-making; effective communication; crisis intervention; individual counseling; life needs assistance – food, utility bills, medical, etc.

Referrals can be made to campus or community agencies to provide in-depth assistance for long-term counseling, legal concerns, financial aid, tutoring, job placement, assessment, career exploration, medical services, and short-term personal counseling. Personal/problem counseling sessions are limited to five (5) one (1) hour sessions. Should the student need additional counseling, referrals will be made to the appropriate community agencies.

One of the chief goals of Palo Alto College is helping students successfully complete their college goals. The Counselors in the **Counseling Center** assist students in staying in school and successfully completing their educational goals through individual and group counseling, advisement, skills training, referrals, and other appropriate types of support. Counselors teach Student Success (SDEV) 0100 and Human Development (HUMD) 0300 courses, classes which help students gain the knowledge, skills and attitudes necessary for success in college. All students entering Palo Alto with less than 15 semester credit hours are required to enroll in either SDEV 0100 or HUMD 0300. Counselors also teach SDEV 0101: Career and Life Planning and SDEV 0102: Enhancing Academic Success.

In addition, students wanting to be proactive (to plan ahead) are encouraged to come in early in the semester and see a counselor to create a personalized **Academic Success Plan**, a plan for success based on the individual's needs, schedule and life situation.

Counselors can also help students who find themselves in danger of failing or dropping out of school for academic or personal reasons. Through discussion, the counselor will

help the student consider all important factors and decide how best to deal with the situation. Students who do this are often able to identify ways to solve the problem and successfully complete the class or semester.

All counseling, which is confidential and free, is provided by professional counselors. For assistance come by the Counseling Center or call 921-5280 and ask for a counselor.

### **Student Success Center**

The Student Success Center has been designed to provide students with the information and assistance needed to be successful in college. Housed within the Center are:

- ✓ Career Services
- ✓ Early Alert/Early Intervention Program
- ✓ International Student Services
- ✓ Job Placement Services
- ✓ PASSkey Program
- ✓ Transfer Services

The Student Success Center contains a small computer lab providing students with access to information regarding scholarship opportunities, college/university transfer plans, career exploration and job placement.

Weekly success seminars and workshops are offered covering topics such as:

- ✓ Stress management
- ✓ Test-taking strategies
- ✓ Money management and budgeting
- ✓ Healthy families
- ✓ Budgeting your time
- ✓ Career exploration
- ✓ Resume writing
- ✓ Dealing with depression
- ✓ Getting organized

### **Academic Advisement**

Initial academic advisement is provided by the Counseling Center for first-time Palo Alto College students, both new and transfer students. At the conclusion of their first semester, students will see faculty advisors for subsequent advisement.

Academic advising is available to all currently enrolled and former Palo Alto students by assigned faculty advisors according to the students' declared majors. Students must check with the appropriate department office to obtain a schedule of advisement periods.

Currently enrolled and former students not having declared majors can be advised by counselors. These students are encouraged to participate in scheduled courses and career exploration seminars, and may take vocational interest inventories offered through Career Services located in the Student Success Center (Palomino Center Room 126). The expectation is that advising will be completed during regularly scheduled office hours and during selected hours in the evenings.

It is important that students schedule advisement appointments early so that they receive information about college services, discuss their educational goals and timelines, and develop degree plans. Students have the ultimate responsibility to select and register for courses meeting graduation requirements.

Transient students from other colleges who have no intention of completing a degree at Palo Alto will be advised by the Counseling Center.

Note: Once students accumulate fifteen hours, the transient status will no longer apply.

Students are encouraged to see faculty advisors any time they encounter academic problems or contemplate a change in educational goals. They are especially encouraged to

consult with their advisors early in the year in which they expect to graduate in order to determine their graduation eligibility.

Note: Each student is responsible for verifying the transferability of credit with the receiving institution.

## disABILITY Services (Special Populations)

Federal law defines a disability as "any mental or physical condition that substantially limits an individual's ability to perform one or more major life activities" including:

- physical disabilities
- visual or hearing impairments
- neurological impairments
- psychological disabilities
- learning disabilities
- chronic or temporary health problems
- communication disorders

Federal law guarantees a learning environment that provides reasonable accommodations to students with disabilities. At Palo Alto College students must disclose their disabilities and complete the required process through disABILITY Services. Section 504 of the Rehabilitation Act of 1973 states:

No otherwise qualified individual . . . shall solely by reason of . . . handicap, be excluded from participation in, be denied benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance.

Section 504, as well as the Americans with Disabilities Act (ADA) of 1990, prohibits discrimination in the recruitment, admission or treatment of students. Students with documented disabilities may request accommodations that will enable them to benefit from all educational programs and activities. The ADA requires each academic accommodation to be made on an individual or case-by-case basis. Under ADA, Palo Alto College must ensure that its programs and facilities are accessible to students with disabilities including assistance during the admissions and enrollment process.

disABILITY Services coordinates accommodation services for Palo Alto students with some temporary or permanent disabilities, as defined by ADA.

### disABILITY Services strives to:

- Coordinate services and reasonable accommodations that enable individuals with disabilities to participate in and benefit from all Palo Alto College programs and activities.
- Promote a barrier free environment at Palo Alto College: Free from both physical barriers and barriers of attitude.
- Encourage students to become as independent and self-reliant as possible.
- Provide information and consultation about specific disabilities and accommodations to the entire Palo Alto community.

### Process To Establish Services:

To qualify for assistance from disABILITY Services, a student must:

- Provide up-to-date documentation of a temporary or permanent disability, and
- Schedule an intake with disABILITY Services to discuss needs and to request support services.
- Attend an orientation session offered through disABILITY Services outlining the policies and procedures concerning accommodations and support services.
- Pick up and deliver confidential letter of accommodation to each instructor.

### Description of Services:

Students must register for accommodations with the disABILITY Services Office EV-

ERY SEMESTER so that services can be coordinated. Accommodations are provided on an individual basis. Students are encouraged to register with the disABILITY Services Office several weeks prior to each semester so that support services are available at the start of the semester. Accommodations to students may include:

- Confidential Letter to Instructors
- Note-taking Services
- Special Testing Accommodations
- Readers, Scribes
- Sign Language Interpreter Services
- Classroom Furniture
- Adaptive Technological Equipment
- Tape Recorders for classroom use
- Referrals to Resources for Books on Tape, Disk or CD
- Referral to PASSKey for Tutoring or other services

**Disabled Parking**

Students of the Alamo Community College District are required to display their County Tax Assessor Collector issued disabled parking placard behind the ACCD vehicle registration or have disabled parking license plates in order to park in spaces designated for persons with disabilities.

**VIA Trans**

Palo Alto College provides several convenient VIA Trans drop off and pick up locations. For a map or information, contact disABILITY Services at 921-5287, TTY 921-5227 or stop by the office at Palomino Center Room 119.

**PASSkey Program**

PASSkey, located in the Student Success Center (Palomino Center Room 126), is a federally funded TRIO/Student Support Services program designed to:

- increase college retention and graduation rates of eligible students.
- increase the transfer rates of eligible students from two-year to four-year institutions.
- foster a supportive climate of success for low-income and first-generation college students and individuals with disabilities.

PASSkey participants must meet the established federal criteria of academic underpreparation, first-generation college, low-income and/or a disability as defined by the ADA. Students enrolled in the Student Support Services program have particular academic, personal, and social needs that can become a deterrent to their academic success. One of the key components is the Individual Plan for Success (IPS) designed to develop a holistic personalized plan of action that will assist each student with transition to college and to the university and/or work. PASSkey's retention initiatives incorporate a broad, flexible system of supportive services including:

- Academic, career, and personal counseling.
- Financial aid preparation and securing of educational funds.
- Academic advisement and registration assistance.
- Seminars and workshops on topics such as study skills, test anxiety, stress management, time management, self-esteem, and budget management.
- Referral and assistance with campus services and resources.
- Assistance in securing community resources to resolve issues relating to health, relationships, and financial needs.
- Participation in social and cultural activities.
- Linkages with colleges and universities, professionals, and other students nationwide in order to facilitate career decisions, goal setting, and transition to other schools or to the workforce.

- Computer and Internet access.
- One-on-One Math Tutoring.
- Learning community for MATH 0303 and 1314.
- Tutorial textbook library.

## Child Care

The Ray Ellison Family Center provides high quality child care and early childhood education for the children of the Palo Alto College community while supporting family development and parents' pursuit of a college education.

The Ellison Center is comprised of four classrooms serving children ages 18-months through 5 years old. The program features low child-teacher ratios, innovative programming, family activities, and a highly qualified staff. Full-time and part-time care is available.

It is located conveniently between the Ozuna Learning Resources and Academic Computing Center and the Student Center. To obtain more information, please call the Center at 921-5490.

## Student Success and Human Development Programs (SDEV 0100: Strategies for Succeeding in College & HUMD 0300: Human Development)

All new students and transfer students entering Palo Alto with less than 15 credit hours are required to register for SDEV 0100 (Strategies for Succeeding in College) or HUMD 0300 (Human Development). These classes are designed to acquaint students with the campus and the many resources that can enhance both their academic success and personal development. Both classes focus on several important areas such as curriculum, academic advising, and campus facilities.

## Career and Job Placement Services

Career Services, located in the Student Success Center (Palomino Center Room 126), provides a spectrum of services to assist PAC students in the areas of career exploration and planning. All services are FREE of charge.

1. **One-on-One Career Services**, including assessment, is available to assist students in selecting an academic major or career field.
2. **Career Resources**, including books, magazines, videos, and internet access, are available for students to research occupations, salaries, labor market data, employer information, job search processes, and transfer college information.
3. **Current Job Vacancies** for work-study positions and full-time & part-time jobs are advertised in the Student Success Center.
4. **Internship & Co-Op Education Positions**, as well as volunteer positions, are advertised in the Student Success Center. Positions include local and national opportunities.
5. **On-Campus Recruiting** provides students an opportunity to speak with local employers who hire PAC students.
6. **Career and Job Fairs**, both on and off-campus, are coordinated annually to allow students the opportunity to gain first-hand knowledge on careers and interview for jobs.
7. **Discover**, a computerized career assessment tool which explores:
  - Careers
  - World of Work
  - Learning About Yourself
  - Identifying Occupations of Interest
  - Learning About Occupations
  - Educational Choices

- Job-Seeking Skills
- Developing a Plan

## **Transfer Services**

Transfer Services, located in the Student Success Center (Palomino Center Room 126), provides students with transfer admissions and scholarship information to assist them in their transition to a four-year university. Mutual agreements between Palo Alto College and four-year institutions have been established to allow students access to upper-division educational programs. Joint Admissions Agreements (JAA) and 2+2 Degree Plans allow students to follow established course outlines whereby a student can monitor, semester-by-semester, what transfer courses can be taken at PAC and the courses required for a degree by the selected university. Transfer Articulation Agreements or University Course Equivalency guides are designed to match courses at PAC with equivalent university courses. Various university admissions applications and college catalogs, as well as scholarship information are available in the Student Success Center.

Other services provided through Transfer Services include:

1. A Transfer Fair held every Fall Semester with 50+ universities and colleges from throughout Texas and the United States, which provides students an opportunity to visit with representatives and recruiters;
2. Education Express Tours, which provide students the opportunity to visit several in-state universities and occasionally an out-of-state school to see first hand the potential transfer institution;
3. Visits to the college by local college/university/military recruiters who share information on their institution's academic programs, transfer admissions requirements, transfer scholarship opportunities, housing options, college costs, and on a specific campus basis offer pre-admissions coursework evaluation;
4. Worldwide university homepage searches, and scholarship access;
5. A full-time UTSA Admissions Advisor is housed in the center to facilitate the transfer and admissions process and;
6. Sponsored workshops held throughout the academic year which highlight the transfer and admissions process and educational funding resources available for PAC students.

Transfer Services is located in the Student Success Center, Room 126 of the Palomino Center.

## **Tutoring Services**

### **English Learning Center (ELC)**

The English Learning Center (ELC), located in Social Science Building (SS), Room 105, provides all students enrolled at Palo Alto College with tutoring at no charge. In addition to composition, subjects tutored may include: foreign languages, the arts and humanities, interdisciplinary studies, the social sciences, and basic literacy. Peer tutors are available by appointment or on a walk-in basis, and appointments may be arranged with the English Instructional Skills Specialist as well. In addition to face-to-face tutoring, the ELC offers tutoring to distance learners via email, fax, and Internet chat. The Online Writing Lab (OWL) is a resource for writers at PAC and in the community at large. <<http://www.accd.edu/pac/slac/engl/owl.htm>>

Other learning assistance, such as computer-aided instructional software is available in the Developmental Writing Lab, AS 110. Writing videotapes may be viewed in the ELC or checked out from the Learning Resources Center. TASP preparation materials are also available in the ELC.

**Math Learning Center (MLC)**

The Math Learning Center (MLC) provides all students enrolled at Palo Alto College with tutoring at no charge in all levels of Mathematics. Math Skills Specialists and peer tutors are available on a "drop in" basis in the large tutoring facility, Educational Laboratories Building (EL) Room 115.

Other learning assistance, such as computer-aided instructional software and advanced mathematics software (DERIVE), is available in the Math Computer Lab, EL 105. Math videotapes may be viewed in the Math Computer Lab, EL 105, or checked out from the Ozuna Library.

**Reading Learning Center (RLC)**

The Reading Learning Center (RLC), provides all students enrolled at Palo Alto College with tutoring at no charge in all levels of reading courses (0300, 0301, 0302, 0303). Tutors are available on a "drop in" basis in the tutoring facility, Applied Science Building (AS) Room 103. Other learning assistance (such as Plato, EDL, Weaver, PassKey, EDL, and other computer-aided instructional software) is available in the Reading Computer Lab, AS 105.

**Health Center**

The College maintains a Student Health Center that provides limited health related services. Services such as first aid, referrals to community health agencies, over the counter medications and health counseling are provided by the college nurse.

The staff is concerned with the total health needs of the college community.

They work to promote wellness and prevention through a variety of health awareness activities.

Illnesses or accidents incurred, whether on campus or while in route to school, should be immediately reported to the Health Center staff. Students with chronic health problems of a serious nature should contact the Health Center early in the semester and provide the staff with a brief medical history so that the best possible help can be rendered.

The Health Center can provide information on the following: immunizations, medical and dental treatment referrals, and student insurance. The Health Center also maintains resource materials such as brochures, pamphlets, and other health information that are available to the campus community at no cost.

It is the policy of the Health Center to keep information confidential.

**Student Activities**

Palo Alto College offers a variety of social, intellectual, and cultural opportunities. A combination of both extracurricular and co-curricular activities includes lectures, films, forums, and numerous social activities. In addition, campus departments and community groups present musical productions, theatrical productions and art exhibits.

Programs and services include:

- Bus Cards
- Campus Posting
- Programming
- Leadership Programs
- Student Clubs and Organizations
- Issues Lockers

In addition, Recreational Activities and Sports are coordinated through the Student Activities Office. These recreational events are open to all current students, faculty, and staff. Additionally, the program maintains open hours in the Gymnasium for recreational activities.

Recreational Activities and Sports programs include:

**Extramural Activities**

- Men's and Women's Basketball
- Women's Volleyball

**Intramural Activities**

- Tennis Tournaments
- Basketball
- Volleyball
- Basketball Shooting Contest

**Recreational Activities**

- Arts & Crafts
- Sports & Outdoor Activities
- Food Classes
- Games & Hobbies
- Travel & Trips

**Service-Learning**

The Service-Learning Program serves several purposes:

1. To increase the abilities of students to articulate issues within the context of their course materials and community service experiences;
2. To promote critical awareness of community concerns such as : environment, education, public safety, and unmet human needs;
3. To promote student leadership, civic responsibility, and student success.

**Student Clubs and Organizations**

Palo Alto College students have the opportunity for membership in social, service, religious, special interest, political, professional, and honorary organizations. Guidance and direction are provided to these organizations by faculty and staff advisors. An official list of registered organizations is available in the Student Activities Office. Recruitment activities are held at the beginning of each term to help new students get acquainted with the organizations.

For more information about joining a club or organization please contact the Office of Student Activities at 921-5290 or stop the office in the Student Center. Below is a sample list of current clubs and organizations:

Baptist Student Ministry (BSM)  
Catholic Campus Ministry  
Collegiate 4-H Club  
Education Club  
Horticulture Club  
Phi Beta Lambda (PBL)  
Science Club  
Student Government Association  
Student Leadership Institute  
The Mariachi And Friends Association  
Tri-Beta Biological Honor Society (Kappa Zeta Chapter)

## **ACCD Student Leadership Institute "Empowering Today's Students to be Tomorrow's Leaders"**

The ACCD Student Leadership Institute (SLI) is a district-wide program that provides free, intensive instruction and overviews of issues that are important to effective leadership in any environment. Beginning each fall, SLI scholars selected via an application process from all ACCD campuses will be given the opportunity to reach levels of personal and public accomplishments and leadership within a climate that recognizes and respects diversity. This yearlong commitment provides training in skills that enables the ACCD representatives to lead a group or work in collaboration with other leaders to accomplish organizational objectives. The students will be able to meet various successful community leaders, use lab models, case studies, and participate in field studies, while drawing upon the expertise of those who have held leadership roles in all sectors of the economy. Students selected to participate in the ACCD SLI will become SLI Scholars, receive a scholarship and have opportunities to travel to Washington DC, thus utilizing the skills and knowledge acquired throughout the year in meetings and presentations with officials from private, non-profit, and government sector headquarters. For applications or further information, please contact your Student Activities Office or call the SLI office directly at (210) 220-1656.

## **Natatorium**

The Palo Alto Natatorium was designed as a world-class aquatic facility. The connected swimming, warm-up, and diving pools, the competition-height spring boards, and the diving platforms meet national championship qualifications. But you don't have to be a world-class competitive swimmer to enjoy the Natatorium's water facilities. It is open to the community for open swimming sessions several times a week and is used for college credit and continuing education classes as well as special lessons for children and adults. Activities such as water basketball, adult lap swimming and a water slide are available. The Natatorium is fully accessible for physically challenged persons. Contact the Natatorium for details and a current schedule.

## **Intercollegiate Athletics**

The Palo Alto College Intercollegiate athletic program began in 1995. The college joined the National Junior College Athletic Association and participates in Women's and Men's Cross Country and in Women's and Men's Swimming and Diving.

The intercollegiate athletics program at Palo Alto College is a non-scholarship program.

In order to compete, students must have a current physical examination and be a full time student (minimum of 12 semester hours). Students must also maintain a 2.0 or better grade point average and pass at least 12 credit hours per semester. Please contact the Athletic Office for any additional information.

Since beginning its intercollegiate athletic program, Palo Alto College has consistently been a top ten team in the nation in both cross country and swimming.

The college hosted the national swimming championships in the Spring of 2000 and 2001, and the national cross country championships in the Fall of 2001.

## 7 Academic Regulations & Policies



### Grading System and Reports

Permanent grades are recorded at the end of the semester/session. Students may obtain grades through the College's automated voice response system at (210) 301-2520 or through the Internet at [www.accd.edu](http://www.accd.edu). Grades are not mailed. The grades regularly used are: "A" (excellent/exceptional performance beyond mastery), "B" (above average/beyond basic mastery), "C" (average/mastery), "D" (below average), "F" (failure), "I" (incomplete), "W" (withdrew), "IP" (in progress), "NC" (non-credit), and "CR" (non-traditional credit only). A grade of "P" (Pass) may be assigned by the instructors for students in the English, reading, and mathematics developmental laboratories.

The conditional grade of "I" may be issued to a student having a passing average on all completed work, but for a justified reason (such as illness or death in the family), has failed to take the final examination or to complete other required work. The "I" becomes an "F" in 120 calendar days unless the student either completes the work with a grade of "D" or higher or re-registers for the course within those 120 calendar days after the end of the term.

In certain courses, the grade of "D" will not be assigned. In these courses, it is deemed essential to have completed the course with at least a basic mastery. To have learned less indicates an unpreparedness on the part of the student to progress to the next level. Course syllabi will indicate the courses in which this policy is to be adhered to.

A grade of "W" will be assigned students being withdrawn for excessive absences.

The "IP" grade may be assigned to a student not adequately mastering the course content during a given semester or term. In the instructor's judgment, however, the student has the potential to successfully complete the course. A student receiving an "IP" must re-register for the course and earn a passing grade to receive credit for the course. "IP" grades are assigned only in developmental and certain skills-building courses.

**A student has a maximum of two years from the end of the semester to request a review of the grade or petition for a change of grade.**

### Grade Point Average

Grade point averages are computed by assigning values to each grade as follows:

A .....	4 points per semester hour
B .....	3 points per semester hour
C .....	2 points per semester hour
D .....	1 point per semester hour
F .....	0 points
I .....	0 points
IP, NC, P, W, CR .....	Not used in grade point average calculation.

The average is found by dividing the total number of points by the total number of semester hours for which grades have been received. The average is based on all semester and term coursework.

#### Calculating the G.P.A.:

1. Multiply the number of semester hours each course is worth by the quality points earned.
2. Add these values.
3. Divide this sum by the number of semester hours attempted.

Course	Semester	Quality	Grade
	Hours	Points	Points
BIOL 1401	4	x 3(B)	= 12
ENGL 1301	3	x 2(C)	= 6
CHEM 1401	4	x 4(A)	= 16
SS 1101	1	x 4(A)	= 4
PSYC 1301	3	x 2(C)	= 6
<b>Total =</b>	<b>15</b>		<b>44</b>

G.P.A. = 44 (grade points) divided by 15 (semester hours) = 2.93

## Grade Changes

The responsibility for determining all grades and for judging the quality of academic performance in a course rests with the instructor assigned to the course.

A student who believes that the grade received is incorrect should schedule a conference with the instructor to resolve the problem. Grade appeals can be made up to a maximum of two years from the semester when the final grade was issued. When the instructor cannot be located in a timely manner by the student and chairperson, the student grade appeal can be initiated with the chairperson.

If the instructor concurs that an error in calculating the final grade occurred, the error is corrected by completing a "Change of Grade" form.

If the instructor is not willing to change the grade, then the student must initiate an Academic Grievance within five (5) days of the instructor's decision. Copies of the Academic Grievance are to be provided by the appropriate dean to the student and instructor.

## Minimum Academic Standards

A student is expected to maintain a level of scholastic achievement which will allow him/her to meet the minimum graduation grade point requirements. A student must have earned a 2.0 ("C") cumulative grade point average to remain in good academic standing.

A student's record will be evaluated for academic standing only after enrollment in, or accumulation of, **twelve** or more semester hours.

## Scholastic Dishonesty

For various reasons, the number of incidents of scholastic dishonesty in the classroom has increased throughout the nation in recent years. It is in the best interest of our students and of Palo Alto College that such scholastic dishonesty not be tolerated and that college policies and procedures be followed so as to provide consistent college-wide enforcement. Scholastic Dishonesty includes, but is not limited to, cheating on a test, plagiarism and collusion.

**Cheating on a test** includes, but is not limited to:

1. Copying from another student's test paper;
2. Using materials during a test which are not authorized by the person giving the test;
3. Collaborating with another student during a test without authority;
4. Knowingly using, buying, selling, stealing, transporting or soliciting, in whole or in part, the contents of a test, without the consent of the instructor;
5. Substituting for another student, or permitting another student to substitute for one's self, to take a test;
6. Bribing or otherwise influencing another person to obtain a test not authorized for distribution by the instructor;
7. Reporting fraudulent research results.

**Plagiarism** means the appropriation of another's work and the unacknowledged incorporation of that work in one's own coursework/assignment.

**Collusion** means the unauthorized collaboration with another person in preparing any coursework/assignment.

Please refer to the current Student Handbook for the procedures if a student is accused of scholastic dishonesty.

### **Scholastic Probation**

Scholastic Probation indicates the student's grade point average has fallen below a 2.0 and that the quality of the student's overall academic work is unacceptable. A student beginning any semester or term in good academic standing but failing to maintain the College's minimum academic standards will be placed on Scholastic Probation. Scholastic Probation status is removed by attaining minimum academic standards the next semester or session. (See Minimum Academic Standards.)

### **Continued Scholastic Probation**

After the first semester following a probation status, a student may re-enroll at Palo Alto College on a Continued Scholastic Probation status provided a 2.0 or higher semester grade point average is earned each semester or summer session. The student's status is evaluated after each 12 semester hour segment of work attempted or accumulated. The Scholastic Probation status is removed when a student has earned a 2.0 grade point average.

### **Enforced Scholastic Withdrawal**

If a student on Scholastic Probation fails to earn a 2.0 grade point average in any semester or summer session when twelve semester hours credit is attempted or accumulated, the student will be placed on Enforced Scholastic Withdrawal, and will not be allowed to enroll in any classes during the next semester or session.

A student on Enforced Scholastic Withdrawal for the first or second time and wanting to continue in the next semester/session may:

1. Enroll in the next summer session and attempt at least six semester hours. If the student earns a 2.5 grade point average, he or she will be allowed to register in the next fall semester.
2. Petition **at least two weeks prior to the start of the semester** to the Director of Enrollment Management for special permission to register. The petitioning process begins in the Counseling and Support Services Center. A student allowed to re-enter the College by petitioning must agree to follow the recommended academic prescription for achieving academic success as specified by a counselor.

A student having been placed on Enforced Scholastic Withdrawal for a third time or more will not be permitted to enroll in the College for one calendar year. After that year, the student may petition a review committee for readmittance. The petition must be submitted to the Director of Enrollment Management at least three weeks prior to the beginning of a semester.

### **Attendance**

Regular and punctual attendance in classes and laboratories is required. A student absent for any reason may be allowed to make up work at the discretion of the instructor. In all cases, the student will be held responsible for completion of requirements. Excused absences are given only to students representing the school in an official capacity. The appropriate instructional division chair and dean must approve such absences.

While many Continuing Education courses have special attendance requirements, 80 percent attendance is the general requirement for Continuing Education if the individual is to receive a Certificate of Completion from the College. Students should take note of attendance requirements upon beginning a course of instruction since requirements are announced at the beginning of every course.

### **Excessive Absence Policy**

Student absences are recorded from the official date of enrollment. A student absent the equivalent of two weeks of instruction may be dropped by the instructor. Instructors are encouraged to drop students who are excessively absent, are not doing well in class, and do not attempt to contact the instructor about the absences and/or academic problems. Absences do not have to be consecutive. A student dropped from a class for excessive absences may be given a grade of "W". See the section on Adding and Dropping Courses below for the proper procedure for dropping a course. A student required to be in a remedial class due to TASP will be subject to being withdrawn from all college-level courses if the student is dropped from the required remedial class.

### **Readmission to Class**

A student dropped for excessive absences may be readmitted to class only if circumstances justify reinstatement. The decision to reinstate the student is left to the discretion of the instructor.

### **Examinations**

A final examination is administered at the end of each semester or term for each course. Make-up examinations are administered at the discretion of the instructor.

### **Adding and Dropping Courses**

If for whatever reason a student decides to drop a course, it is the student's responsibility to inform the TASP Center and the Office of Admissions and Records of that decision in a timely manner. The student must either complete the proper forms in person at the above offices or submit the request in writing. To simply stop attending a class may result in the student being assigned the grade "F."

### **Withdrawals**

A student wishing to withdraw from the College must follow the procedure listed below:

1. Resolve all financial obligations.
2. Obtain an official "Notice of Change" form from the Office of Admissions and Records for each class.
3. Complete and leave the form and student I.D. Card with the Office of Admissions and Records.

A student may also withdraw from the College by writing to the Office of Admissions and Records. However, no drops or withdrawals will be accepted by phone.

### **Withdrawal for Military Service**

If a student withdraws because he or she is called to active military service, the College, at the student's option, shall:

1. Grant a student who is eligible under the District's guidelines an incomplete grade in all courses by designating "withdrawn-military" on the student's transcript, or

2. As determined by the instructor, assign an appropriate final grade or credit to a student who has satisfactorily completed a substantial amount of coursework and demonstrated sufficient mastery of the course material.

## Withdrawal Grades

A student dropping classes or withdrawing from the College prior to the census date will not have grades recorded for those classes. Following the census date, grades will be recorded for any classes dropped or for withdrawal from the College. The grade that will be assigned is a "W." If a "W" grade is assigned to a TASP-required course, the student may be dropped from college-level courses for non-compliance to TASP regulations.

During the fall and spring semesters "W's" are assigned within a period following the census date that extends from the 13th day of the semester to the end of the 14th week of classes. An instructor may also assign a "W" during this period if the student is dropped for excessive absences. Following the 14th week, performance grades ("A," "B," "C," "D," "F," "I," "IP," or "P") are assigned by the instructors.

Summer terms and Flex Sessions of eight weeks have differing census dates. The census dates and last days during which a student may drop or withdraw and receive a "W" are listed in the academic calendars appearing in the College catalog or in the academic schedule of classes.

## Official Census Date

The Official Census Date of each semester or session is the date as of which all student enrollment is certified or considered "official." It corresponds to the actual twelfth (12) class day for long (Fall or Spring) semesters, the sixth (6) class day for Flex or Mid semesters, and the fourth (4) class day for summer sessions. For all Continuing Education courses the official census date is the third class day. No grade is recorded or maintained for courses dropped or withdrawn prior to the Official Census Date.

## Repetition of Courses

If a student repeats a course, only the higher grade earned is considered in assigning grade points. CAUTION: Other colleges and universities may not follow this practice. A student planning to transfer to other institutions should check with the Registrar or Office of Admissions at those institutions.

## Student's Permanent Record

The Student's Permanent Record contains personal data, test scores, transfer and admissions information, Palo Alto courses attempted, grades and academic status. This information becomes part of the College's permanent files.

The name appearing on the official record is the name under which the student initially registered, unless a "Change of Name" form has been processed through the Office of Admissions and Records. Except upon marriage, name changes are made only when appropriate legal documentation accompanies the request. Public or Directory Information inquiries should be addressed to the Office of Admissions and Records.

## Honors Lists

Outstanding academic achievement is recognized as follows:

**President's Honors List:** Must be enrolled in 12 or more semester hours and earn a 4.0 grade point average.

**President's Part-Time Honors List:** Must be enrolled in 6-11 semester hours and earn a 4.0 grade point average.

**Dean's Honors List:** Must be enrolled in 12 or more semester hours and earn a 3.5 or higher grade point average.

**Dean's Part-Time Honors List:** Must be enrolled in 6-11 semester hours and earn a 3.5 or higher grade point average.

The appropriate notation appears on the mailed grade report and permanent record.

An Honors Convocation is held each Fall to recognize achievements from the previous Fall and Spring semesters. Letters are sent to students to notify them of the ceremony with instructions on how to receive a certificate.

## Prerequisites

A number of courses have prerequisites. The prerequisite may be a score on a placement test or successfully completing a lower-level course. Before registering for courses with prerequisites, the student must show proof that he or she has fulfilled the requirement or is in the process of fulfilling the required course. Prerequisites may be waived upon the approval of the appropriate academic departments.

## Corequisites

When a course for which a student registers indicates a corequisite course is needed, all courses listed must be attempted simultaneously.

## Developmental Courses

Palo Alto College offers underprepared students the opportunity to develop college-level skills in reading, mathematics, writing, speech, and personal development. Based upon the results of college entry tests and/or previous academic record, students are placed in appropriate developmental courses if required. Students not passing the state-required Texas Academic Skills Program (TASP)/Alternative TASP test **MUST** enroll in the developmental courses where deficiencies have been identified until they pass the TASP test or complete TASP requirements. **Failure to remain in a developmental course may result in the students' compulsory withdrawal from all college-level courses.** Passing the TASP enables the students to bypass further remediation in reading and writing, but NOT in mathematics.

Palo Alto College offers developmental lab classes which help enable students to succeed in the college's developmental reading, English, and math programs. Lab classes are taken on a pass/fail basis and meet for one or two hours a week. Lab services include computer programs, video tapes, various written materials, and a college instructor who is available to provide tutoring.

## Credit by Non-traditional Methods

Palo Alto College recognizes that students may have achieved the objectives of certain courses through means other than traditional classroom methods. Palo Alto may award college credit for military training, standardized examinations, and departmental exams. Credit by non-traditional methods must be applicable to a Palo Alto degree program.

Students may satisfy a maximum of 32 semester hours of an associate degree through the following programs:

United States Armed Forces Institute: the American Council on Education (ACE) Guide is used to evaluate course equivalency for military training.

College-Level Examination Program (CLEP): Up to 32 hours credit may be awarded for specific subject exams. Course equivalency is determined by the respective departments.

Departmental Challenge Exams: 16 semester hours may be earned through departmental exams.

The College's Assessment & TASP Center schedules and administers the CLEP Subject Examinations. The Assessment & TASP Center can provide a list of the CLEP Subject Examinations which the College accepts in fulfillment of curricular requirements. Test Fee information also can be obtained at the Assessment & TASP Center. Students should contact the academic departments for challenge exam information. Credit by examination cannot be earned for any course already completed by a student.

Students requesting credit by examination must have official score reports sent directly to the Assessment Center. Credits earned through these non-traditional methods are not posted on the Palo Alto transcripts until the students have satisfied a six semester hour residency requirement. Transfer students with college credit through non-traditional methods must submit official transcripts to the Office of Admissions and Records for evaluation.

### **Telecommunications Courses**

Palo Alto College is pleased to offer distance education courses which help meet the unique needs of students whose busy lifestyles make scheduling college courses difficult. Instead of attending regular classes, students use a variety of instructional modes to take college courses. These instructional delivery systems include Internet courses, telecourses, and interactive video conference courses.

The course content, college credit, and transferability of the distance education courses are equivalent to the same courses offered on campus. Students have the same rights, privileges, and obligations as an on-campus student. Telecommunications courses may not be appropriate for everyone. Maturity and self-discipline are required because students must maintain steady progress throughout the semester. Students who are able may also be allowed to finish early. Veterans must contact the VA office before enrolling in any of these courses.

Registration for telecommunications courses is the same as for all college credit courses. Like all Palo Alto College courses, class enrollments are limited.



*An Honors Convocation is held each Fall.*

## 8 Graduation



### Application for Graduation

A student must apply for graduation to be awarded a degree or certificate. An application for graduation must be submitted to the Office of Admissions and Records by October 31 for fall candidates, February 28 for spring candidates, and July 1 for summer candidates.

A student may make application for graduation under provisions of the current catalog or meet graduation requirements of the catalog under which he/she was admitted to Palo Alto College. The catalog selected must not be dated more than five (5) years prior to the expected graduation date. **Prior to a graduation review, all applicants must provide transcripts reflecting their complete college record.** Candidates need not be enrolled during the semester that application for graduation is made.

All candidates for degrees and certificates are encouraged to be present at the May commencement exercises. No formal commencements are held in December and August.

There is no graduation fee. The diploma, cap, and gown are provided by the College.

### Graduation Requirements

Palo Alto College provides five forms of recognition for satisfactory completion of work:

- Associate of Arts Degree
- Associate of Science Degree
- Associate of Arts or Science College/University Transfer Degree
- Associate of Applied Science Degree
- Certificate of Completion

To qualify for a degree, a student must have a cumulative grade point average of 2.0 ("C") in all courses taken from other colleges, universities, and Palo Alto College. In addition, a student must satisfy the minimum requirements of the College and the degree program. Two associate degrees may be earned concurrently with the stipulation that the requirements for each degree be met.

Non-TASP exempt students must pass all sections of the TASP Test prior to graduation or complete TASP requirements by obtaining a B or better in a course approved by the Coordinating Board (see Texas Academic Skills Program in the Admissions and Registration section of this publication).

Other than applied science majors, persons having been awarded baccalaureate level or higher degrees are not usually accepted as associate degree candidates.

It is the student's responsibility to ensure that all substitutions, by-pass exams, waivers, and/or a list of any electives which have been approved by the academic deans are on file in the Office of Admissions and Records no later than:

- |                  |            |
|------------------|------------|
| Fall graduates   | November 1 |
| Spring graduates | April 1    |
| Summer graduates | July 1     |

Students not having satisfied all requirements by deadline dates will not be eligible for that semester's graduation. Students must reapply for graduation to be eligible for the next graduation date.

Participation in the graduation ceremony does not ensure automatic fulfillment of requirements and that a degree will be awarded. Diplomas will be mailed approximately 8-10 weeks after the graduation date.

Graduation evaluation questions or concerns should be directed to the Office of Admissions and Records before the deadline date.

## Honor Graduates

A candidate maintaining an overall grade point average from 3.5 to 3.799 will graduate cum laude; from 3.8 to 3.999 will graduate magna cum laude; and a 4.0 will graduate summa cum laude. Students with these overall grade point averages for all courses attempted at Palo Alto College and other transfer institutions are considered honor graduates.

## Graduate Guarantee Policy

### Guarantee for Job Competency for Occupational-Technical Students.

Palo Alto College makes certain guarantees to its Associate of Applied Science graduates or Certificate completers, whose course work began in the Fall 1993 semester or after. If the graduate or completer is judged by an employer to be lacking in technical job skills identified as exit competencies for their specific degree or certificate program, the graduate/completer will receive up to nine (9) tuition-free hours of additional skill training by the college.

The guarantee does not imply that the graduate or completer will pass any licensing or qualifying examination for a particular career.

Conditions which apply to the guarantee are as follows:

1. The graduate/completer must have earned the A.A.S. degree or certificate in a technical program published in the college's catalog (or its addenda); and
2. The graduate/completer must have completed the A.A.S. degree or certificate with a majority (75%) of the credits being earned at Palo Alto College within a four-year time span from initial enrollment. The last fifteen (15) semester hours of credit **must** be completed at Palo Alto College; and
3. Graduates must be employed full-time in an area directly related to the area of program concentration as certified by the President of the college or designee; and
4. The graduate/completer must begin employment within six (6) months of graduation/completion; and
5. The employer must certify in writing that the employee is lacking entry-level skills which were identified by Palo Alto College as the program exit competencies as approved by the program advisory committee. The employer must specify the areas of deficiency within ninety (90) days of the graduate/completer's initial employment.

### RETRAINING PROCEDURES

6. The employer, graduate/completer, and representatives of the college will develop a written educational plan for retraining.
7. Retraining will be limited to nine (9) credit hours related to the identified skill indicated by the retraining plan.
8. All retraining must be completed within a calendar year from the time agreed upon for the educational plan.
9. The graduate/completer and/or employer is responsible for the cost of books, insurance, uniforms, fees, and/or other course-related expenses.
10. The student's sole remedy against the college and its employees for skill deficiencies shall be limited to nine credit hours of tuition-free education under conditions described above.
11. The program can be initiated through a written contract with the Office of the College President.

### **Palo Alto's pledge for students in Arts and Sciences who plan to transfer to a four-year college or university:**

Palo Alto College pledges to its Associate of Arts and Associate of Science graduates and other students who have met the requirements of a 60-credit-hour transfer plan the

transferability of course credits to those programs or majors at other four-year institutions which have articulation agreements or joint admission agreements with Palo Alto College.

This pledge is designed specifically for those Palo Alto College students whose course work began in the Fall of 1993 or after and who have made firm decisions about their major and the institution to which they plan to transfer.

Conditions which apply to the pledge are as follows:

1. Transferability is the acceptance of credits toward a specific major and degree. Courses must be identified by the receiving university as transferable and applicable according to the articulation or joint admission agreement;
2. Limitations of total number of credits accepted in transfer, grades required, relevant grade point average and duration of transferability apply as determined and stated by the receiving institution; and
3. The student must take the responsibility to meet with a Palo Alto College counselor and a receiving institution counselor to ascertain the requirements of the specific articulation or joint admission agreement and follow the agreement course plan while attending Palo Alto College.

Then, you have our pledge that courses will transfer to the cooperating four-year institution. If they do not, you may take the additional required courses at Palo Alto College — up to nine (9) hours — tuition-free.

## Core Curriculum

### Associate of Arts Degree

### Associate of Science Degree

The Core Curriculum for the Associate of Arts and the Associate of Science degrees at Palo Alto College reflects a common experience in academic foundations and provides a basis for transferability not only with the Alamo Community College District, but also among other Texas colleges and universities. The competency-based core aids in the development of academically capable and knowledgeable students whose basic intellectual skills include reading, writing, speaking, listening, critical thinking, and computer literacy.

The 48-hour options of core courses for the Associate of Arts and Associate of Science degrees represent the eight core elements recommended by the Texas Higher Education Coordinating Board.

## Palo Alto College Core Curriculum

### Generic Degree Plan

<b>1. Communication</b>		<b>9</b>
Composition	ENGL 1301	3
	ENGL 1302	3
Speech	SPCH 1311, 1318, 1321 or 2341	3
<b>2. Mathematics</b>		<b>3</b>
	MATH 1314 or Higher	3
<b>3. Natural Sciences</b>		<b>7-8</b>
	Natural Lab Science	4
	Second Natural Science	3
	BIOL, CHEM, ENVR, GEOL or PHYS	

**CHAPTER 8: Graduation****59**

<b>4. Humanities &amp; Visual and Performing Arts</b>		<b>9</b>
Humanities	ENGL, HUMA, IDST, PHIL or SPAN	6
Visual and Performing Arts	ARTS, DRAM or MUSI	3
<b>5. Social and Behavioral Sciences</b>		<b>15</b>
History	HIST 1301	3
	HIST 1302	3
Government	GOVT 2305	3
	GOVT 2306	3
Social/Behavioral Sciences	ANTH, COMM, CRIJ, ECON, GEOG, HIST, IDST, PSYC or SOCI	3
<b>6. Computer Literacy</b>		<b>3</b>
	COSC 1300, COSC 1301	3
<b>7. Physical Education</b>		<b>1-2</b>
	PHED or KINE	1-2
	<b>TOTAL</b>	<b>48</b>

**Core Curriculum Course Selection List****Speech Core (3 hours)**

SPCH 1311, 1318, 1321, or 2341

**Mathematics Core (3 hours)**MATH 1314, 1316, 1324, 1325, 1332\*, 1348, 1442, 2318, 2320, 2412, 2413, 2414, 2415  
(\*A.S. students may not select)**Natural Sciences Core (7-8 hours)**

BIOL 1322, 1406, 1407, 1408, 1409, 1411, 1413, 2306/2106, 2401, 2402

CHEM 1311/1111, 1312/1112, 1406, 1407

ENVR 1401

GEOL 1401, 1402, 1403, 1404

PHYS 1305/1171, 1307, 1401, 1402

**Humanities Core (6 hours)**

ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2373

HUMA 1301, 1302

IDST 2377

PHIL 1301, 1304, 2303, 2306, 2371

SPAN 2311, 2312

**Visual and Performing Arts Core (3 hours)**

ARTS 1301, 1303, 1304

DRAM 1310

MUSI 1306

**Social and Behavioral Sciences Core (3 hours)**

ANTH 2346

COMM 1307

CRIJ 1301, 1307

ECON 2301, 2302

GEOG 1301, 1303

HIST 2301, 2311, 2312, 2313, 2314, 2321, 2322, 2323, 2380, 2381

IDST 2370, 2371, 2372, 2373

PSYC 2301, 2303, 2306, 2308, 2314, 2316, 2317, 2370

SOC 1301, 1306, 2301

**Associate of Arts Degree****Associate of Science Degree****Associate of Arts or Science College/University Transfer Degree**

To be awarded the Associate of Arts or Associate of Science Degree, the student must satisfy the following requirements:

1. Complete at least 60 semester hours with a cumulative grade point average of 2.0 ("C") in all courses. Developmental courses are excluded.
2. Complete at least 15 semester hours of work at Palo Alto College.
3. Fulfill the curricular requirements.

*Special Note for Associate of Science Degrees – Students must take a total of 8 hours of sequential sciences courses.*

If you also complete the requirements in a **Field of Study**, Texas law requires that all other Texas public colleges and universities accept these courses in transfer. These institutions must also apply the Field of Study courses to your degree requirements.

You can earn an Associate of Arts or Science Degree by completing the Core Curriculum and either a Field of Study or a minimum of 18 semester hours of academic, transfer level courses from one or more of the Areas of Concentration. Also, you should meet with an academic advisor and contact the college or university to which you plan to transfer before selecting your courses.

**Approved Fields of Study**

Business Administration (and all related majors)

Computer Science

Criminal Justice

Engineering

Engineering Technology

Music

Nursing

Teacher Preparation: Early Childhood Education (Grades K-4)

Teacher Preparation: Middle School Education (Grades 4-8)

The new Fields of Study are designed to be transferred to all other Texas public colleges and universities.

When you have completed the Core Curriculum and a Field of Study, and you have taken 60 semester hours of transfer level courses, you should be able to enter the receiving institution as a Junior.

The Texas Higher Education Coordinating Board has created the Fields of Study and has mandated the specific courses in those Fields.

**Areas of Concentration – Arts**

Students interested in the disciplines listed below are urged to follow the Associate of Arts Degree Plan:

Anthropology	Geography
Art	Government
Business Administration	History
Communications	Humanities
Criminal Justice	Interdisciplinary Studies
Drama	Music
Economics	Philosophy
Education	Psychology
English	Speech
Foreign Languages	Social Work
French	Sociology
German	
Spanish	

**Areas of Concentration – Science**

Students interested in the disciplines listed below are urged to follow the Associate of Science Degree Plan:

Biology	Mathematics
Business Administration	Physical Education and Health
Chemistry	Physics
Computer Science	Pre-Dentistry
Criminal Justice	Pre-Medicine
Earth & Environmental Science	Pre-Nursing
Engineering	Pre-Pharmacy
Geology	Pre-Veterinary Science
Health	Allied Health Transfer Degrees
Kinesiology	

**Associate of Arts or Science College/University  
Transfer Degree Curricular Requirements**

To receive the Associate of Arts or Science College/University Transfer Degree, the student must:

1. Complete the Associate of Arts or Science College/University Transfer Degree application (available at the College's Transfer Advisement Center),
2. Complete the first two years (Freshman and Sophomore) of a regionally-accredited college's or university's four-year baccalaureate degree program,
3. Submit a copy of the applicable degree program prior to the College's published degree application deadlines, and
4. Meet all general degree requirements as outlined in this catalog.

### **Transfer Curricula and Resolution of Transfer Disputes**

In cases where a public institution of higher education does not accept a course or courses for transfer,\* the following procedure shall be followed in the resolution of transfer disputes.

1. If an institution of higher education does not accept course credit earned by a student at another institution of higher education, that institution shall give written notice to the student and the other institution that the transfer of the course credit is denied.
2. The two institutions and the student shall attempt to resolve the transfer of the course credit in accordance with the Coordinating Board rules and/or guidelines.
3. If the transfer dispute is not resolved to the satisfaction of the student or the sending institution within 45 days after the date the student received written notice of denial, the institution whose credit is denied for transfer shall notify the Commissioner of the denial.
4. The Commissioner of Higher Education or the Commissioner's designee shall make the final determination about a dispute concerning the transfer of course credit and give written notice of the determination to the involved student and institutions.

\*Developmental courses excluded.

Both the A.A. and A.S. degrees have been developed to accommodate transfer to senior colleges. All of the required curricular courses are equivalent to courses found in the current edition of the "Community College General Academic Course Guide" manual, and are approved by the Texas Higher Education Coordinating Board.

### **Articulation Agreements and 2 + 2 Programs**

Palo Alto College and the senior colleges work closely to ensure a smooth transition from Palo Alto College to the senior colleges. Some of the institutions with which Palo Alto College has articulation agreements are:

Angelo State University  
 Embry-Riddle Aeronautical University  
 Our Lady of the Lake University  
 St. Mary's University  
 Sam Houston State University  
 Southwest Texas State University  
 Texas A & M University at College Station  
 Texas A&M University at Corpus Christi  
 Texas A&M University at Kingsville  
 Texas Lutheran University  
 University of Houston  
 University of Northern Iowa  
 University of Texas at Austin  
 University of Texas at Dallas

University of Texas at San Antonio

University of Texas Health Science Center - San Antonio

University of the Incarnate Word

University of Wisconsin at Madison

Articulation agreements and 2+2 Programs guarantee that students can transfer their first two years of college work at Palo Alto College to the senior colleges. Articulation agreements do not exist for all majors.

To achieve their educational objectives quickly, students must work closely with their faculty advisors. **Palo Alto College students need to check with Transfer Services in the Student Success Center (Palomino Center Room 126) for copies of the existing agreements or course transfer equivalency tables.**

### **Biomedical Science & Texas A&M University College of Veterinary Medicine**

Palo Alto College is the only community college in Texas with an agreement allowing its students to complete a prescribed degree plan and automatically be admitted to the Biomedical Science program in the Texas A&M University College of Veterinary Medicine at College Station. Students must meet general admission requirements for Texas A&M University, must maintain no less than a 3.6 GPA in courses taken at Palo Alto, be eligible for graduation from Palo Alto, and must not have made any grade below a "B" in all of the Common Body of Knowledge science and math course work. The transfer agreement took effect with the Fall 2001 semester. For a detailed degree plan, contact Transfer Services in the Student Success Center (Palomino Center Room 126).

The Biomedical Science program, the largest undergraduate major at Texas A&M University, is a pathway to careers such as medicine, veterinary medicine, dentistry, nursing, education, and many other related fields.

### **Associate of Applied Science Degree**

A workforce education program consists of a coherent sequence of courses designed to prepare students for employment in a career field. A workforce education program is developed by a college working in close cooperation with business and industry to satisfy a need for timely and effective workforce education. Additionally, many workforce education programs today are articulated with four-year college programs to provide students the opportunity for transfer and further education.

A workforce education program has a competency-based curriculum organized to teach industry-driven educational outcomes in terms of appropriate skills, knowledge, and perspectives needed by students to enter and succeed within a designated occupational field or fields. Additionally, all workforce education programs must provide students with opportunities to attain competence in oral and written communication as well as math and computer skills. These skills may be demonstrated by the inclusion of either applications or assignments in multiple courses within the award or by courses in these basic competencies.

A workforce education program may lead to a single award (AAS degree or certificate) or contain a "career cluster" of multiple awards/exit options (degrees and/or certificates).

Palo Alto College offers the Associate of Applied Science Degree in the following areas:

Administrative Computer Technology	Landscape & Horticultural Science
Agribusiness Management	Logistics Management
Aviation Management	Management
Computer Information Systems	Professional Pilot
Education Aide	Turfgrass & Golf Course Mgt.
Electro-Mechanical Technology	Veterinary Technology
Environmental Technologies	

### Associate of Applied Science Degree Curricular Requirements

To be awarded the Associate of Applied Science Degree, the student must:

1. Fulfill the following core competencies in a minimum of 15 semester hours of general education courses. Each occupational technical education program specifies the courses to fulfill this requirement.
  - A. The student must be able to express ideas clearly, both in speaking and in writing; think and write critically in a literary setting. Competencies are fulfilled by successful completion of three-credit hours in English or speech disciplines.
  - B. The student must understand and be able to perform mathematical functions and/or understand scientific concepts. Competencies are fulfilled by successful completion of three-credit hours in math or a science.
  - C. The student must be able to demonstrate computer skills. Competencies are fulfilled by successful completion of a three credit hour course in computer science or computer information systems.
  - D. The student must be able to demonstrate a knowledge of humanities or fine arts by successful completion of three-credit hours in either of these disciplines.
  - E. The student must be able to demonstrate knowledge in the social or behavioral sciences by successful completion of three-credit hours in either of these subject areas.
2. Complete the prescribed courses in the technology curriculum.
3. Maintain a minimum average of "C" in all courses taken at Palo Alto College as well as the cumulative average, including any courses transferred to the College.
4. Complete at least 15 semester hours at Palo Alto College.
5. Complete at least 60 semester hours. Developmental courses are excluded.
6. Complete a capstone experience. For additional information on the capstone experience, contact the program faculty advisor.

### Internships and Cooperative Education

Internships and Cooperative Education are a purposeful blending of on-campus classroom instruction and employment or credit assignment within the community to assist students in developing competencies in their field of concentration. Students enrolled in Occupational and Technical programs follow a program of studies which requires the student to complete the development of competencies needed to enter and succeed in their career field. Arts and Sciences students benefit from cooperative work experience through meeting identified competencies in the professional field which they plan to enter. The student, the school, and the community benefit from the programs as they interact to develop individuals having a broader range of competencies, as the students complete their education at Palo Alto College.

**Certificate of Completion**

Certificate programs of 15-42 semester hours are TASP-waived although all certificate programs must provide for local assessment and remediation of the students. Students who accumulate 6 semester credit hours outside of a declared waived certificate curriculum must meet all TASP requirements including taking the TASP/Alternative TASP and entering developmental education if required.

Certificate programs of 43-59 semester credit hours are TASP-eligible regardless of the number of general education courses.

Completion of a capstone experience is required before the award of a Certificate of Completion. For additional information on the capstone experience, contact the program faculty advisor.

Palo Alto College offers Certificates of Completion in the following areas:

- Administration
- Administrative Assistant - Certificate Level III
- Animal Health Assistant
- Basic Nursery & Landscape Operations
- Basic Electro-Mechanical Technology
- Business Communications
- Customer Service Representative
- Data Entry Technician
- Education Aide
- Electro-Mechanical Assistant
- Electro-Mechanical Technician
- Entrepreneurship
- Entry Level Supervision
- Environmental Compliance Management
- Environmental Regulations Management
- Environmental Project Management
- General Office - Certificate Level I
- General Office - Certificate Level II
- Horticultural Business Management
- International Business
- International Environmental Management
- International Logistics Management
- Landscape and Horticultural Science
- Leadership
- Logistics Management
- Manufacturing Management
- Marketing
- Microsoft Certified Network Systems Technician Preparation
- Microsoft Certified Systems Administrator
- Microsoft Certified Systems Engineer Preparation
- Microsoft Certified Systems Technician Preparation
- Personal Computer Skills
- Private Pilot
- Product Marketing Specialist
- Skills Upgrade
- Teacher Assistant/Aide
- Telecomm Technology
- Transportation Management
- Turf and Landscape Irrigation

Turfgrass and Golf Course Management  
Warehouse Management  
Water Resources Management  
Web Publishing Skills

## Tech Prep

Palo Alto College is engaged in major technical and professional career preparation by providing continuity of learning and quality educational opportunities for all students. The Tech Prep Associate of Applied Science Degree program is a significant component of this concept providing educational and career preparation in technical fields to high school students who will be the workforce of the future.

The concept of Tech Prep involves a sequence of knowledge and skills acquisition beginning in elementary school, linked with a guided, integrated high school plan of academic and technical subjects, which connects the student to the community college. This provides a jointly-developed competency-based, industry-validated curriculum without duplication or repetition. The Tech Prep curriculum in high schools and colleges represents a rigorous body of knowledge and skills which will prepare a better-educated worker with advanced skills and the ability to apply these skills as the world of technology changes.

Palo Alto College works with area ISDs and receives approval by the Texas Higher Education Coordinating Board for the Tech Prep Associate of Applied Science degree. For more information, contact the Palo Alto College Recruiting Office.

## Continuing Education/Workforce Development

The Continuing Education Department at Palo Alto College is committed to the concept of lifelong learning for residents within the College's service area.

Continuing Education/Workforce Development consists of four major goals.

- To help prepare students for college matriculation.
- To assist the community with specific skills to improve its citizens' everyday quality of life.
- To provide wholesome recreation alternatives for the young people in the community.
- To improve employee skills to facilitate better jobs and/or promotions.

A variety of non-credit and short-term courses, workshops, and seminars in adult literacy education, business development, career development, health care development, physical education and personal development are offered. While offering something for everyone, Palo Alto Continuing Education has exemplary programs in computer software, child care, workforce literacy, English as a Second Language, food service, housekeeping certification, substitute teacher/teacher aide, and web/multimedia designer training. Palo Alto also offers a summer children's program, Kids College, renowned for its varied activities and educational content.

Certificates of completion are issued for all classes and Continuing Education Units (CEU's) are awarded where appropriate.

The CEU is a nationally recognized standard of measurement defined as one (1) CEU for ten contact hours of participation in an organized continuing education experience under responsible sponsorship, capable direction, and qualified instruction.

Please call (210) 921-5330 for a current schedule.

## 9 Programs of Study



This chapter is designed to give students the ability to identify areas of concentration in which to focus their studies. For some students, pursuing an Associate of Applied Science degree will identify a career choice and a set of workplace skills that will help to qualify them for a position upon completion of their programs. For others, choosing an area of concentration will be the first step toward declaring a major for their Bachelor's Degree upon transferring to a four-year institution. In either case, it is beneficial for all students to start their studies with an end goal in mind. Choosing a plan of study in this chapter will help focus a student's educational experience at Palo Alto College.

Palo Alto College has signed 2 +2 articulation agreements with area colleges and universities. Students following these degree plans should consult with a faculty advisor for guidance.



*A Commencement Ceremony is held each Spring.*

## ASSOCIATE OF APPLIED SCIENCE IN ADMINISTRATIVE COMPUTER TECHNOLOGY

The Administrative Computer Technology Program prepares students to enter the dynamic world of the modern automated office. The program provides a solid foundation in general education and the depth in technical skills needed in the changing office environment. In consultation with a faculty advisor, students can use directed electives to strengthen or broaden their own preparation for employment.

The overall focus of the computer classes in ACT is to provide students with quality instruction and many hours of "hands on" experience at the computer. Students will be taught software packages that are currently used in the workplace.

For certificate level and transfer students, ACT offers two classes, POFT 1329 and ITSW 1301, to prepare them to properly keystroke and format their college papers, reports, simple tables and letters. These courses are a must for all college students.

The Enhanced Skills Certificate promotes economic and competitive advantages for graduates, provides an avenue for workforce development, and supports students in the areas of retention and completion of career goals.

### Advisory Committee

Erin L. Carr, Phi Beta Lambda  
Art Castro, Frost National Bank  
Tino Duran, La Prensa  
Alan MacCabe, Frost National Bank  
Leo Pacheco, Bexar County  
Olga Samaniego, Lackland AFB  
Cynthia Silva, City of San Antonio  
Michael Thomas, Thomas & Associates, L.L.C.  
Abel Vela, McDonald's

### First Year

		<b>First Semester – 15 Hours</b>
POFT	1319	Records and Information Management I
HRPO	1311	Human Relations
POFT	1301	Business English
POFT	2301	Document Formatting and Skillbuilding
ENGL	1301	Freshman Composition I
		<b>Second Semester – 13 Hours</b>
POFI	2301	Word Processing
POFT	1313	Professional Development for Office Personnel
PHED		Physical Education (any one-credit course)
SPCH	1311	Fundamentals of Speech
Directed Elective		(see list following Certificates)
		<b>Summer Session I &amp; II – 3 Hours</b>
Elective		Social/Behavioral Science Elective

### Second Year

		<b>First Semester – 15 Hours</b>
POFT	2312	Business Correspondence & Communications
POFT	2321	Machine Transcription
Directed Elective		(see list following Certificates)
Humanities/Fine Arts Elective		(see list following Certificates)
Free Elective		(see list following Certificates)

**Second Semester – 15 Hours**

ACCT	2301	Principles of Accounting I
POFT	2333	Advanced Document Formatting and Skillbuilding
POFT	2380**	Cooperative Education – Administrative Assistant/ Secretarial Science, General
or		
POFT	1349**	Administrative Office Procedures II
		Directed Elective (see list following Certificates)
		Natural Science/Math Elective (see list following Certificates)

\*\*Capstone course for AAS degree

**Total Hours**

**61**

**ADMINISTRATIVE COMPUTER TECHNOLOGY  
CERTIFICATE PROGRAMS**

Administrative Computer Technology offers a three-level certificate program designed to meet the needs of students who primarily seek employment skills. After completing one of the 15-, 30-, or 45-hour certificate plans, students will have sufficient skills to obtain employment in certain entry-level jobs or to advance in their current position. Courses at each level dovetail with the next level and all lead toward the Associate in Applied Science degree. With the assistance of a faculty advisor, a student can design a program of study to meet his or her individual needs. Proficiency in basic English, reading, and math must be demonstrated prior to entry and/or advancement in the program.

Administrative Computer Technology also offers a Customer Services Representative Certificate program. This certificate, developed in cooperation with local business and industry, is designed to provide skills in communication, human relations, and computers. The Customer Services Representative meets the needs of employers in telemarketing and related businesses.

**GENERAL OFFICE CERTIFICATE-LEVEL I**

POFT	1331	Business Machine Applications
POFT	1319	Records and Information Management I
HRPO	1311	Human Relations
POFT	1301	Business English
		Directed Elective (see list following Certificates)

\* Capstone for Certificate I: Keyboarding proficiency of 40 words per minute

**Total Hours**

**15**

**GENERAL OFFICE CERTIFICATE-LEVEL II**

**First Semester – 15 Hours**

POFT	1331	Business Machine Applications
POFT	1319	Records and Information Management I
HRPO	1311	Human Relations
POFT	1301	Business English
		Directed Elective (see list following Certificates)

**Second Semester – 15 Hours**

COSC	1300	Computer Literacy
POFT	2301	Document Formatting and Skillbuilding
POFT	1313	Professional Development for Office Personnel
		ACT Directed Elective (see list following Certificates)
		General Education (see list following Certificates)

\*Capstone for Certificate II: Keyboarding Proficiency of 45 words per minute

**Total Hours**

**30**

## ADMINISTRATIVE ASSISTANT CERTIFICATE LEVEL III

**First Year\*****First Semester – 15 Hours**

POFT	1331	Business Machine Applications
POFT	1319	Records and Information Management I
HRPO	1311	Human Relations
POFT	1301	Business English
Directed Elective		(see list following Certificates)

**Second Semester – 15 Hours**

COSC	1300	Computer Literacy
POFT	2301	Document Formatting and Skillbuilding
POFT	1313	Professional Development for Office Personnel
Directed Elective		(see list following Certificates)
General Education		(see list following Certificates)

**Second Year****First Semester – 15 Hours**

ACNT	1303	Introduction to Accounting I
POFT	2312	Business Correspondence & Communications
POFI	2301*	Word Processing
Directed Elective		(see list following Certificates)
General Education		(see list following Certificates)

\*Capstone for Certificate III: Keyboarding Proficiency of 50 words per minute with 5 or less errors.

**Total Hours****45**

Keyboarding speed & accuracy as well as technical proficiency may be achieved through any combination of POFT 2303, 1329, 1429, 2301, or 2333, or credit by exam.

**BUSINESS COMMUNICATIONS CERTIFICATE**

POFT	1301	Business English
POFT	1329*	Keyboarding and Document Formatting (Non-Majors)
HRPO	1311	Human Relations
or		
POFT	1313	Professional Development for Office Personnel
POFT	2312	Business Correspondence & Communications
Directed Elective		(see list following Certificates)

\*Capstone for Business Communications Certificate: Keyboarding Proficiency of 30 words per minute with 5 or less errors

**Total Hours****15****Directed Electives**

POFI	1301	Computer Applications I
POFT	1319	Records and Information Management I
POFT	2301*	Document Formatting and Skillbuilding

**CUSTOMER SERVICES REPRESENTATIVE CERTIFICATE**

**First Semester – 18 Hours**

COSC	1300	Computer Literacy
SPCH	1342	Voice and Articulation
POFT	1329*	Keyboarding and Document Formatting (Non-majors)
POFT	1301	Business English
HRPO	1311	Human Relations
POFT	1331	Business Machine Applications

\*Keyboarding Skill: Demonstrated proficiency at 30 wpm may be achieved through any of the following:

A.	Proficiency Test	30 wpm
B.	Keyboarding and Document Formatting (Non-majors)	POFT 1329
C.	Speed and Accuracy Building	POFT 2303
D.	Keyboarding and Document Formatting (Majors)	POFT 1429

**Second Semester – 15 Hours**

ACNT	1303	Introduction to Accounting I
POFT	1313	Professional Development for Office Personnel
POFT	2312	Business Correspondence & Communications
SPCH	1318	Interpersonal Communication
POFT	2380**	Cooperative Education – Administrative Assistant/Secretarial Science, General

\*\*Capstone course for Certificate

**Total Hours** **33**

**DATA ENTRY TECHNICIAN CERTIFICATE**

ITSC	1301	Introduction to Computers
POFI	1301	Computer Applications I
or		
ITSC	1309	Integrated Software Applications I
POFT	1329*	Keyboarding and Document Formatting (Non-Majors)
HRPO	1311	Human Relations
POFT	1331	Business Machine Applications

\*Capstone course for Data Entry Technician Certificate: Keyboarding Proficiency of 30 words per minute with 5 or less errors

**Total Hours** **15**

**SKILLS UPGRADE CERTIFICATE\***

(Designed for the student seeking job promotions)

POFT	2301	Document Formatting and Skillbuilding
POFT	2321	Machine Transcription
HRPO	1311	Human Relations
or		
POFT	1313	Professional Development for Office Personnel
POFT	1301	Business English
or		
POFT	2312	Business Correspondence & Communications
		Directed Elective (see list following Certificates)

\*Capstone Proficiency: 2.0 GPA within certificate courses and keyboard proficiency of 45 words per minute with 5 or less errors.

**Total Hours** **15**

**DIRECTED ELECTIVES**

ACNT	1303	Introduction to Accounting I
POFI	1301	Computer Applications I
POFT	1329	Keyboarding and Document Formatting (Non-Majors)
POFT	1429	Keyboarding and Document Formatting (Majors)
POFT	2321	Machine Transcription

**GENERAL EDUCATION****HUMANITIES/FINE ARTS:**

HUMA	1301	Intro to Humanities
HUMA	1302	World Cultures and Global Issues
ARTS	1301	Art Appreciation
DRAM	1310	Theater Appreciation
MUSI	1306	Music Appreciation

**MATH/NATURAL SCIENCE:**

MATH	1314	College Algebra
BIOL	2306	Environmental Biology

**ORAL AND WRITTEN COMMUNICATIONS:**

ENGL	1301	Freshman Composition I
ENGL	1302	Freshman Composition II
SPCH	1311	Fundamentals of Speech
SPCH	1321	Business & Professional Speech

**SOCIAL/BEHAVIORAL SCIENCES:**

ECON	2301	Macroeconomics
ECON	230	Microeconomics
GOVT	2305	American Government I (National)
GOVT	2306	American Government II (State)
HIST	1301	History of U.S. I
HIST	1302	History of U.S. II
PSYC	2301	Intro to Psychology
SOCI	1301	Intro to Sociology

**DIRECTED ELECTIVES:**

ACNT	1303	Introduction to Accounting I
POFI	1301	Computer Applications I
POFI	1341	Computer Applications II
POFI	2331	Desktop Publishing for the Office
POFT	1309	Administrative Office Procedures I
POFT	1331	Business Machine Applications
POFT	1345	Shorthand/Notetaking I
POFT	1392	Special Topics in Administrative Assistant/Secretarial Science
POFT	2303	Speed and Accuracy Building
POFT	2343	Shorthand/Notetaking II
ACCT	2302	Principles of Accounting II
BMGT	1303	Principles of Management
BUSI	1301	Introduction to Business
COSC	1300	Computer Literacy
COSC	1301	Introduction to Computers & Info Systems
ITSC	1309	Integrated Software Applications
ITSE	1331	Introduction to Visual Basic Programming
ITSW	1301	Introduction to Word Processing
ITSW	2334	Advanced Spreadsheets
ITSW	2337	Advanced Database
SPAN	1411	Elementary Spanish I
SPAN	1412	Elementary Spanish II
SPAN	2311	Intermediate Spanish I
SPAN	2312	Intermediate Spanish II

## ASSOCIATE OF APPLIED SCIENCE IN AGRIBUSINESS MANAGEMENT

The Agribusiness Management Associate of Applied Science degree program is designed to prepare students to apply modern business and economic principles relating to the production and marketing of agricultural products and services. Students are taught technical skills and competencies required/necessary to assume occupational positions in: operations management and marketing including food and fiber manufacturing, environmental technologies, office systems management, agricultural products sales, animal products and nutrition sales, and horticulture/florist products sales. A Product Marketing Specialist Certificate and a Horticultural Business Management Certificate are available.

### Advisory Committee

Shane Brysch, Seville Farms  
Gene Dunbar, Bank of America  
J.A. "Tony" Hinojosa, Texas A&M University System  
Robert Maggiani, Texas Department of Agriculture  
Mike Petter, Resource and Land Management Inc.  
Tomas Garcia, National Food Products

### First Year

#### First Semester – 15/16 Hours

MATH	1314		College Algebra
	or		
CHEM	1406		Introductory Chemistry I
ENGL	1301		Freshman Composition I
BMGT	1303		Principles of Management
ITSC	1309		Integrated Software Applications
AGMG	1311		Introduction to Agribusiness

#### Second Semester – 15 Hours

AGRI	2317		Introduction to Agricultural Economics
BMGT	1301		Supervision
EPCT	1311		Introduction to Environmental Science
	or		
BIOL	2306		Environmental Biology
HRPO	1311		Human Relations
	or		
ENGL	1302		Freshman Composition II
SPCH	1311		Fundamentals of Speech
	or		
SPCH	1321		Business and Professional Speech

### Second Year

#### First Semester – 15 Hours

SOCI	1301		Introduction to Sociology
	or		
PSYC	2301		Introduction to Psychology
MRKG	1311		Principles of Marketing
POFT	1313		Professional Development for Office Personnel
	or		
GOVT	2306		American Government II (State)
AGMG	1307		Safety, Laws, and Regulations
Elective			Directed Elective (a)

**Second Semester – 16/17 Hours**

ACNT	1303	Introduction to Accounting I
or		
ACCT	2301	Principles of Accounting I
AGMG	1192	Special Topics in Agricultural Business/Agribusiness Operations
AGRI	1325	Marketing of Agricultural Products
AGMG	1350	International Agriculture
Directed Elective		CIS or Foreign Language Elective (b)
Elective		Humanities/Fine Arts Elective (c)

**Summer Session – 5 Hours**

AGMG	2588*	Internship – Agricultural Business
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\* Capstone Course for AAS degree

**Total Hours**

**66/68**

## HORTICULTURAL BUSINESS MANAGEMENT CERTIFICATE

**First Semester – 15 Hours**

ITSC	1309	Integrated Software Applications
AGMG	1311	Introduction to Agribusiness
BMGT	1303	Principles of Management
AGRI	1315	Horticulture
or		
HALT	1301	Principles of Horticulture
or		
AGMG	1392	Special Topics in Agribusiness
BMGT	1301	Supervision
or		
AGMG	1392	Special Topics in Agribusiness

**Second Semester – 5 Hours**

AGMG	2588*	Cooperative Education: Agricultural Business Management
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\* Capstone Course for Horticulture Business Management Certificate

**Total Hours**

**20**

## PRODUCT MARKETING SPECIALIST CERTIFICATE

**First Semester – 15 Hours**

ENGL	1301	Freshman Composition I
AGMG	1311	Introduction to Agribusiness
AGRI	2317	Introduction to Agricultural Economics
ITSC	1309	Integrated Software Applications
HRPO	1311	Human Relations

**Second Semester – 15 Hours**

AGMG	1307	Agribusiness Safety, Laws and Regulations
AGRI	1325*	Marketing of Agricultural Products
ACNT	1303	Introduction to Accounting I
POFT	1301	Business English
MRKG	1311	Principles of Marketing

**Total Hours**

**30**

\* Capstone Course for Product Marketing Specialist Certificate

**Notes:**

- (a) Directed Electives (3 hours minimum): AGRI 1307, 1311, 1315, 1327, 2317, 2330, 2377, or AGMG 1392, or EPCT 1307.
- (b) Directed CIS or Foreign Language Electives (3 hours minimum): ITSW 1334 or 2337, or SPAN 1411, 1412, 2311, 2312.
- (c) Humanities/Fine Arts Electives: HUMA 1301, ARTS 1301, MUSI 1306, DRAM 1310.



*Agribusiness is a year-round career in the Texas environment.*

## ASSOCIATE OF ARTS IN ART

The Art program functions as a vital part of the college by providing quality instruction to our students and our community. It offers courses for students majoring in Arts, leading to the Associate's Degree; also offered is the required course work to fulfill the first two years of available 2 + 2 transfer agreements, leading to a bachelor's degree.

The program also provides courses that satisfy the general education requirements in aesthetics for students majoring in other disciplines. The courses available which will fulfill the core aesthetic requirement are ARTS 1301, Art Appreciation; ARTS 1303, Art History Survey I; and ARTS 1304, Art History Survey II. The art studio courses require skills development that includes outside work. The time required varies with each student, and students should be prepared to adjust out-of-class schedules to achieve course competencies. The art studio courses include different levels of the following: DESIGN, DRAWING, PAINTING, SCULPTURE, GRAPHICS, CERAMICS, and PHOTOGRAPHY.

Some four-year institutions may not accept all courses that are listed under "area of concentration" as part of a baccalaureate major. Students must check with their advisors in the Fine & Performing Arts/Speech Communication Department and/or the four-year institution to which they plan to transfer for information on the 2+2 agreement.

Students who intend to major in Art and have not yet decided on the senior college that they will attend should meet with their PAC advisor and follow Palo Alto College's generic degree plan for Arts.

<b>Associate of Arts</b>	<b>ART</b>	
<b>1. Communication</b>		<b>9</b>
Composition	ENGL 1301	3
	ENGL 1302	3
Speech	SPCH 1311 or 1321	3
<b>2. Mathematics</b>		<b>3</b>
	MATH 1332	3
<b>3. Natural Sciences</b>		<b>7-8</b>
	Natural Lab Science	4
	Second Natural Science	3
	BIOL, CHEM, ENVR, GEOL or PHYS	
<b>4. Humanities &amp; Visual and Performing Arts</b>		<b>9</b>
Humanities	ENGL, SPAN, FREN, GERM, HUMA, IDST or PHIL	6
Visual and Performing Arts	ARTS 1301	3
<b>5. Social and Behavioral Sciences</b>		<b>15</b>
History	HIST 1301	3
	HIST 1302	3
Government	GOVT 2305	3
	GOVT 2306	3
Social/Behavioral Sciences	ANTH, COMM, CRIJ, ECON, GEOG, HIST, IDST, PSYC or SOCI	3
<b>6. Computer Literacy</b>		<b>3</b>
	COSC 1300	3
<b>7. Physical Education</b>		<b>1-2</b>
	PHED or KINE	<u>1-2</u>
		<b>48</b>
<b>8. Area of Concentration</b>		
	Course 1: ARTS 1303 or 1304	3
	Course 2: ARTS 1311	3
	Course 3: ARTS 1312	3
	Course 4: 1st level of any studio art course	3
		<b>12</b>
<b>Total Hours</b>		<b>60</b>

**ASSOCIATE OF APPLIED SCIENCE  
IN AVIATION MANAGEMENT**

The Aviation Technology degree program has two options:

✧ Aviation Management ✧ Professional Pilot

The Aviation Management program prepares an individual at the mid-management level for various areas of the aviation industry including support positions in airport management; air carrier operations; corporate aviation departments; and national, state, and local aviation agencies, authorities or boards. Potential positions also may be available with aviation service organizations and manufacturers.

Classes leading to Federal Aviation Administration (FAA) certification must adhere to FAA guidelines. These guidelines require students to attend a minimum number of classroom hours. Students not meeting these attendance requirements will not be certified.

**Advisory Committee**

Captain Calvin Allen, Delta Airlines  
Hugh Crull Jr., Fairchild Aerospace  
First Officer Victoria Giordana, Southwest Airlines  
Jose Mulet, Mexicana Airlines  
Captain Byron Reed, H.B. Zachry Company  
Captain Vicki Ross, Southwest Airlines  
Captain Ernest Seiffert, US Airways

**First Year**

		<b>First Semester – 15 Hours</b>
ENGL	1301	Freshman Composition I
PSYC	2301	Introduction to Psychology
GOVT	2305	American Government I (National)
AIRP	1313	Introduction to Aviation
AIRP	1317	Private Pilot Ground School
		<b>Second Semester – 15 Hours</b>
ENGL	1302	Freshman Composition II
SPCH	1311	Fundamentals of Speech
ITSC	1309	Integrated Software Applications
MATH	1314	College Algebra
AIRP	1345	Aviation Safety
		<b>Summer Session – 3 Hours</b>
ECON	2301	Principles of Macroeconomics

**Second Year**

		<b>First Semester – 15 Hours</b>
ECON	2302	Principles of Microeconomics
ACCT	2301	Principles of Accounting I
AVIM	2337	Introduction to Aviation Law
AVIM	1301*	Intro. to Aviation Management
Elective		Humanities/Fine Arts Elective
		<b>Second Semester – 16 Hours</b>
ACCT	2302	Principles of Accounting II
MATH	1442	Elements of Statistics
AVIM	2331	Airline Principles
AVIM	2335*	Airport Management
Elective		Directed Elective (3 hours)

\*Capstone Course

**Total Hours**

**64**

**HUMANITIES/FINE ARTS ELECTIVES:**

ARTS	1301	Art Appreciation
MUSI	1306	Music Appreciation
DRAM	1310	Theater Appreciation
HUMA	1301	Introduction to the Humanities
PHIL	1301	Introduction to Philosophy
PHIL	2303	Logic
SPAN	1411	Elementary Spanish I
PHIL	2306	Ethics

**DIRECTED ELECTIVES:**

AIRP	2380	Cooperative Work Experience
ENGL	2311	Technical Writing



*The Aviation program provides flight simulator training.*

**ASSOCIATE OF SCIENCE IN BIOLOGY**

With the increasing complexities of our modern world, the biological sciences will most certainly be at the forefront of scientific research, solving today's problems while developing a thorough understanding of our past. Biologists look at our world through molecular biology, genetics, and microbiology as well as organismal biology and ecology.

The objectives of the biology program are (1) to present students with scientific methodology and fundamental principles of biology and (2) to provide students a broad foundation in preparation for professional careers in medicine, dentistry, physician assistant, optometry, pharmacy, biotechnology, industry, education, government, research, and veterinary medicine.

<b>Associate of Science</b>	<b>BIOLOGY</b>	
<b>1. Communication</b>		<b>9</b>
Composition	ENGL 1301	3
	ENGL 1302	3
Speech	SPCH 1311, 1318, 1321 OR 2341	3
<b>2. Mathematics</b>		<b>6-8*</b>
	MATH XXXX	
	MATH XXXX	
<b>3. Natural Sciences</b>		<b>7-8**</b>
	BIOL 1406	4
	BIOL 1407	4
<b>4. Humanities &amp; Visual and Performing Arts</b>		<b>6</b>
Humanities	ENGL, FREN, GERM, HUMA, IDST or PHIL	3
Visual and Performing Arts	ARTS, DRAM or MUSI	3
<b>5. Social and Behavioral Sciences</b>		<b>15</b>
History	HIST 1301	3
	HIST 1302	3
Government	GOVT 2305	3
	GOVT 2306	3
Social/Behavioral Sciences	ANTH, COMM, CRIJ, ECON, GEOG, HIST, IDST, PSYC or SOCI	3
<b>6. Computer Literacy</b>		<b>3</b>
	COSC 1300	3
<b>7. Physical Education</b>		<b>1-2</b>
	PHED OR KINE	<u>1-2</u>
		<b>48</b>
<b>8. Area of Concentration</b>		
	BIOL 1411/1413	8
	BIOL 2416	4
	BIOL 2421	4
		<b>16</b>
<b>Total Hours</b>		<b>64</b>
<b>9. Other Science Courses</b>		
	CHEM 1311/1111	4
	CHEM 1312/1112	4
	PHYS 1401	4
	PHYS 1402	4

\* Students will need a strong math foundation; therefore, additional math courses may be required if students are underprepared. Please contact the transfer institution for their specific mathematics requirements.

\*\*Some baccalaureate degree granting institutions will only accept BIOL 1406/1407 while others will only accept BIOL 1411/1413. Please contact the transfer institution for other requirements.

## ASSOCIATE OF SCIENCE IN CHEMISTRY

Chemistry is the science that stands at the junction between physical and biological sciences. An associate degree concentrating in chemistry provides a solid foundation for students to use when transferring to a four-year institution. This foundation will allow a student to pursue a bachelor's degree in chemistry or professional training in the fields of dentistry, medicine, or pharmacy. A bachelor's degree in chemistry qualifies the student to obtain employment in industry as a chemist or go on for a graduate degree. It is strongly encouraged students complete eight hours of calculus and physics.

<b>Associate of Science</b>	<b>CHEMISTRY</b>	
<b>1. Communication</b>		<b>9</b>
Composition	ENGL 1301	3
	ENGL 1302	3
Speech	SPCH 1311, 1318, 1321 OR 2341	3
<b>2. Mathematics</b>		<b>8</b>
	MATH 2413	4
	MATH 2414	4
<b>3. Science</b>		<b>8</b>
	CHEM 1311/1111	4
	CHEM 1312/1112	4
<b>4. Humanities &amp; Visual and Performing Arts</b>		<b>6</b>
Humanities	ENGL, FREN, GERM, HUMA, IDST or PHIL	3
Visual and Performing Arts	ARTS, DRAM or MUSI	3
<b>5. Social and Behavioral Sciences</b>		<b>15</b>
History	HIST 1301	3
	HIST 1302	3
Government	GOVT 2305	3
	GOVT 2306	3
Social/Behavioral Sciences	ANTH, COMM, CRIJ, ECON, GEOG, HIST, IDST, PSYC or SOCI	3
<b>6. Computer Literacy</b>		<b>3</b>
	COSC 1300	3
<b>7. Physical Education</b>		<b>1-2</b>
	PHED OR KINE	<u>1-2</u>
		<b>51</b>
<b>8. Area of Concentration</b>		
	CHEM 2323/2223	5
	CHEM 2325/2225	5
<b>Total Hours</b>		<b>61</b>
<b>9. Other Required Math Course</b>		
	MATH 2415	4
<b>10. Other Required Math Courses</b>		
	PHYS 1401/1402	4
	or PHYS 1570/2570	4

Palo Alto College has signed 2 + 2 articulation agreements with area colleges and universities. Students following these degree plans should consult with a faculty advisor for guidance.

## ASSOCIATE OF ARTS IN COMMUNICATIONS

The Communications Department of Palo Alto College offers classes that empower all students, both Communications majors and non-majors, with a greater understanding of the Information Age they live in and with the skills necessary to thrive in this ever-changing environment.

Students majoring in Communications are offered courses with a strong emphasis in journalism, including hands-on experience publishing *The Pulse*, a student newsletter produced twice a semester.

Students planning to pursue a baccalaureate degree in Communications should base all course selections on the degree plan from the institution to which they plan to transfer.

Students who intend to major in Communications and have not yet decided on the senior college that they will attend should follow Palo Alto College's generic degree plan for Communications.

<b>Associate of Arts</b>	<b>COMMUNICATIONS</b>	
<b>1. Communication</b>		<b>9</b>
Composition	ENGL 1301	3
	ENGL 1302	3
Speech	SPCH 1311	3
<b>2. Mathematics</b>		<b>3</b>
	MATH 1332	3
<b>3. Natural Sciences</b>		<b>7-8</b>
	Natural Lab Science	4
	Second Natural Science	3
	BIOL, CHEM, ENVR, GEOL or PHYS	
<b>4. Humanities &amp; Visual and Performing Arts</b>		<b>9</b>
Humanities	HUMA 1301	3
	PHIL 2306	3
Visual and Performing Arts	ARTS 1301	3
<b>5. Social and Behavioral Sciences</b>		<b>15</b>
History	HIST 1301	3
	HIST 1302	3
Government	GOVT 2305	3
	GOVT 2306	3
Social/Behavioral Sciences	COMM 1307	3
<b>6. Computer Literacy</b>		<b>3</b>
	COSC 1300	3
<b>7. Physical Education</b>		<b>1-2</b>
	PHED or KINE	<u>1-2</u>
		<b>48</b>
<b>8. Area of Concentration</b>		<b>12</b>
	Course 1: COMM 2311	3
	Course 2: COMM 2305	3
	Course 3: COMM 2324	3
	Course 4: ENGL 2311 or ARTS 2331	3
<b>Total Hours</b>		<b>60</b>

## ASSOCIATE OF APPLIED SCIENCE IN COMPUTER INFORMATION SYSTEMS

The Computer Information Systems courses at Palo Alto College include both lecture and hands-on instruction. Many of the courses include an embedded lab which requires work outside the classroom time.

### Advisory Committee

Ricardo Bartra, VLSI Corporation  
William Burke, Texas Department of Human Services  
Dr. Charles W. Burmeister, Alamo Community College District  
Richard Cavin, Southwestern Bell  
Ivan Chestnut, MITRE Corporation  
Cinda Rodriguez, Air Force Intelligence Agency

### First Year

#### First Semester – 15 Hours

ITSC	1301	Introduction to Computers
ITSC	1309	Integrated Software Applications I
ENGL	1301	Freshman Composition I
BUSI	1301	Introduction to Business
SPCH	1311	Fundamentals of Speech

#### Second Semester – 15 Hours

ITSW	2334	Advanced Spreadsheets
ITSW	1310	Presentation Media Software
ITSC	1313	Internet/Web Page Development
ECON	2302	Principles of Microeconomics
PSYC	2301	Introduction to Psychology
or		
SOCI	1301	Introduction to Sociology

#### Summer Session – 3 Hours

ITSW	2337	Advanced Database
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### Second Year

#### First Semester – 15 Hours

ITSC	1305	Introduction to PC Operating Systems
ITSE	1350	Systems Analysis and Design
MATH	1314	College Algebra
Elective		Any other computer course (beyond the introductory level) 3 Hours
ARTS	1301	Arts Appreciation
or		
ARTS	2331	Graphics I
or		
HUMA	1301	Introduction to Humanities

#### Second Semester – 14 Hours

ITNW	1321	Introduction to Networking
ITSC	1325	Personal Computer Hardware
ITSC	2586*	Internship
ACCT	2301	Principles of Accounting

\*Capstone Course

**Total Hours**

**62**

## PERSONAL COMPUTER SKILLS CERTIFICATE PROGRAM

The objective of the Personal Computer Skills Certificate is to increase job performance and productivity of white-collar workers. Businesses are increasingly expecting employees to be computer-literate and to provide enhanced performance and productivity through their computer skills. Graduates of the certificate program would satisfy this criterion thus retaining their competitiveness in the current market. Assuming that the majority of students attracted to the program are already employed, this would assist them in retaining employment and/or advancing in the company with "skills upgrade."

Students will gain specific proficiency in operating spreadsheet, presentation graphics, and database management software, as well as exposure to word processing and general computer theory. The focus is on microcomputer-based software tools, sometimes called "productivity software."

### First Semester – 6 Hours

ITSC	1301	Introduction to Computers
ITSC	1309	Integrated Software Applications I

### Second Semester – 9 Hours

ITSW	2334	Advanced Spreadsheets
ITSW	1310	Presentation Media Software
ITSW	2337*	Advanced Database

\* Capstone Course

## WEB PUBLISHING SKILLS CERTIFICATE

The objective of the Web Authoring Certificate is to provide students with the knowledge to compete in the digital market place. Businesses are growing and needing personnel that understand the tools of the Internet and are able to provide the company a presence on the World Wide Web. Graduates of the certificate program would satisfy this criterion with knowledge of HTML, Graphics Design, Communications and Electronic Media, and web site maintenance to include e-commerce. This program will also assist students in retaining employment and/or advancing in the company with "skills upgrade."

### First Semester – 9 Hours

ITSC	1301	Introduction to Computers
ITSC	1309	Integrated Software Applications I
ITSC	1313	Internet/Web Page Development

### Second Semester – 9 Hours

ARTS	2331	Graphics I
COMM	2324	Practicum in Electronic Media
ITSE	2313*	Web Authoring

\* Capstone Course

## CERTIFICATE IN CERTIFIED SYSTEMS TECHNICIAN PREPARATION (CST)

The objective of the Certificate in Certified Systems Technician Preparation is to increase job performance and productivity of current employees and job-seeking students who wish to work in the lucrative computer repair field. These courses are taught at the Texas Engineering Extension Service (TEEX) facility at 9350 South Presa, San Antonio, and must all be taken at the same time. At TEEX the student takes the Computer Service Technician program which leads to the Computing Technology Industry Association's A+ Certification (COMPTIA) and the Computer Service Technician Certification (ETA). This 104-hour program consists of a 24-hour personal computer literacy course and an 80-hour PC configuration, troubleshooting and upgrading course. This course provides students with the

skills necessary to troubleshoot and repair PC hardware and peripheral equipment. The A+ or CST certification is required for all other technician-training programs. **Special Fees apply.**

ITSC	1301	Intro to Computers
ITSC	1317	PC Operating Systems - DOS
ITSC	1325*	Personal Computer Hardware

\*Capstone Course

### CERTIFICATE IN CERTIFIED NETWORK SYSTEMS TECHNICIAN PREPARATION (CNST)

The objective of the Certificate in Certified Network Systems Technician Preparation is to increase job performance and productivity of current employees and job-seeking students who wish to work in the lucrative computer-networking field. These courses are taught at the Texas Engineering Extension Service (TEEX) facility at 9350 South Presa, San Antonio, and must all be taken at the same time. At TEEX the student takes the 144-hour program which is designed to prepare students for the emerging networking systems field-engineering profession. Upon completing this program, students are prepared to take the Electronics Technician Association's CNST examination and the Microsoft Network Essentials Exam. This program is composed of three 48-hour courses: network fundamentals, network operations and administration, and advanced network technologies. The curriculum includes basic operations of a personal computer as well as the technical understanding of its internal functions, component parts and associated peripheral equipment and the technical knowledge and skills required to install and configure the various types of local area (LAN) and wide area (WAN) computer networks. This program is frequently preceded by the Computer Service Technician Program to ensure A+ or CST certification, which is a prerequisite for the CNST certification exam. This program is a prerequisite for other advanced programs. **Special Fees apply.**

ITNW	1325	Fundamentals of Networking
ITNW	1333	Microsoft Networking Essentials
ITNW	1354*	Implementation and Support of Windows NT Server 4.0

\*Capstone Course

### CERTIFICATE IN MICROSOFT CERTIFIED SYSTEMS ENGINEER (MCSE) PREPARATION

The objective of the Certificate in Microsoft Certified Systems Engineer (MCSE) Preparation is to increase job performance and productivity of current employees and job-seeking students who wish to work in the lucrative computer-networking field with a MCSE certification. These courses are taught at the Texas Engineering Extension Service (TEEX) facility at 9350 South Presa, San Antonio, and should all be taken at the same time to take advantage of the price break. At TEEX the student takes the Microsoft Networking Systems program, which consists of six courses totaling 224 hours. This program is designed to prepare students for the MCSE designation. One core networking class, three core operating systems classes and two elective support classes are required to satisfy MCSE training requirements. The Network Essential course can be satisfied through the Certified Network Systems Technician program. Students must pass at least six separate certification exams given by Microsoft to receive the MCSE designation. **Special Fees apply.**

ITMC	1301	MS Windows 2000 Network & OS Essentials
ITMC	1419	Installing and Administering Windows 2000
ITMC	1341	Implementing MS Windows 2000 Professional and Server
ITMC	1342	Implementing a MS Windows 2000 Network Infrastructure
ITMC	1343*	Implementing & Administering Windows Directory Services

\*Capstone Course

## MICROSOFT® CERTIFIED SYSTEMS ADMINISTRATOR (MCSA)

(632 hours/32-39 weeks)

The Microsoft® Certified Systems Administrator (MCSA) proves that you have the skills to successfully implement, manage, and troubleshoot the ongoing needs of Microsoft® Windows 2000-based operating environments, including Windows NET Server. Certification testing at TEEX of A+, CST, CNST, NET+ and MCSA is necessary to satisfy program requirements. An unpaid internship at an area employer who needs troubleshooters and uses computer network protocols daily is an integral part of the curriculum. **Special Fees apply.**

ITMC	1341	Implementing Microsoft Windows Professional and Server
ITMC	2332	Designing a Microsoft Windows Networking Services Infrastructure
ITMC	2333	Designing a Secure Microsoft Windows Network
ITNW	2165*	Practicum – Business Systems Networking and Telecommunications

\*Capstone Course



*Up-to-date computer labs are available for students.*

## ASSOCIATE OF SCIENCE IN COMPUTER INFORMATION SYSTEMS

The Computer Information Systems degree program prepares students for entry-level positions in the increasingly important personal computer support field. Students will progress from fundamentals of the computer to advanced exercises simulating the skills required on the job. A Cooperative Internship with a participating local employer also may be part of the program.

<b>Associate of Science</b>	<b>COMPUTER INFORMATION SYSTEMS</b>	
<b>1. Communication</b>		<b>9</b>
Composition	ENGL 1301	3
	ENGL 1302	3
	Speech	3
<b>2. Mathematics</b>		<b>3</b>
	MATH 1314	3
<b>3. Natural Sciences</b>		<b>8</b>
	Two sequential lab courses from BIOL 1406, BIO1 1407, BIOL 1408, BIOL 1409, BIOL 2401, BIOL 2402, CHEM 1311/1111, CHEM 1312/1112, GEOL 1401, GEOL 1402, PHYS 1401, PHYS 1402	
<b>4. Humanities &amp; Visual and Performing Arts</b>		<b>9</b>
Humanities	ENGL 2322, ENGL 2323, ENGL 2327, ENGL 2328, ENGL 2332, ENGL 2333, ENGL 2373, HUMA 1301, HUMA 1302, IDST 2377, PHIL 1301, PHIL 1304, PHIL 2303, PHIL 2306, PHIL 2371, SPAN 2311, or SPAN 2312	6
Visual and Performing Arts	ARTS 1301, ARTS 1303, ARTS 1304, DRAM 1310, OR MUSI 1306	3
<b>5. Social and Behavioral Sciences</b>		<b>15</b>
History	HIST 1301	3
	HIST 1302	3
Government	GOVT 2305	3
	GOVT 2306	3
Social/Behavioral Sciences	ANTH 2346, COMM 1307, CRIJ 1301, CRIJ 1307, ECON 2301, ECON 2302, GEOG 1301, GEOG 1303, HIST 2301, HIST 2311, HIST 2312, HIST 2313, HIST 2314, HIST 2321, HIST 2322, HIST 2323, HIST 2380, HIST 2381, IDST 2370, IDST 2371, IDST 2372, IDST 2373, PSYC 2301, PSYC 2303, PYSC 2306, PSYC 2308, PSYC 2314, PSYC 2316, PSYC 2317, PSYC 2370, SOC1 1301, SOCI 1306, or SOCI 2301	3
<b>6. Computer Literacy</b>		<b>3</b>
	COSC 1301	3
<b>7. Physical Education</b>		<b>2</b>
	PHED or KINE	1
<b>8. Area of Concentration</b>		<b>3</b>
	ITSC 1309	3
	ITSE 1318	3
	ITSE 2351	3
	ITSE 1331 or COSC 1315	3
<b>Total Hours</b>		<b>60</b>

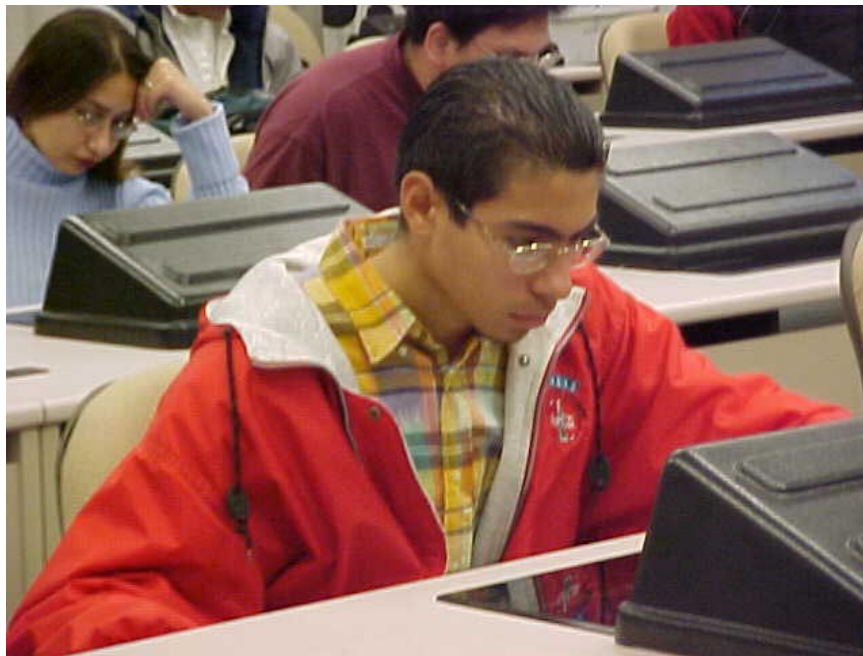
**ASSOCIATE OF SCIENCE IN COMPUTER SCIENCE**

Computer Science (COSC) focuses on the design and development of the computer system “platform” (the basic computer system including the hardware and operating system). While there is some overlap with the related field of Computer Information Systems, COSC is generally more engineering-oriented and less business-oriented than CIS.

A four-year degree in Computer Science can lead to career positions such as Systems-level Programmer, Software Engineer (for a specialized software development company), or Network Engineer. For a student who is interested in these areas but has not selected his/her university, the following general Associate of Science degree plan is recommended for the first two years of study. (Since university degree plans vary, in some cases extra courses may be required after the student selects his/her university.) For a student who has already selected his/her university, specific 2+2 plans in COSC are available for most local universities, including Texas A&M University-Kingsville and The University of Texas at San Antonio. These can be obtained from Transfer Services in the Student Success Center or the Information Technology Department.

<b>Associate of Science</b>	<b>COMPUTER SCIENCE</b>	
<b>1. Communication</b>		<b>9</b>
Composition	ENGL 1301	3
	ENGL 1302	3
Speech	SPCH 1311, 1318, 1321 or 2341	3
<b>2. Mathematics</b>		<b>6</b>
	MATH 1314	3
	MATH 2412	3
<b>3. Natural Sciences</b>		<b>8</b>
	Two sequential lab courses from BIOL 1406, BIOI 1407, BIOL 1408, BIOL 1409, BIOL 2401, BIOL 2402, CHEM 1311/1111, CHEM 1312/1112, GEOL 1401, GEOL 1402, PHYS 1401, PHYS 1402	
<b>4. Humanities &amp; Visual and Performing Arts</b>		<b>9</b>
Humanities	ENGL 2322, ENGL 2323, ENGL 2327, ENGL 2328, ENGL 2332, ENGL 2333, ENGL 2373, HUMA 1301, HUMA 1302, IDST 2377, PHIL 1301, PHIL 1304, PHIL 2303, PHIL 2306, PHIL 2371, SPAN 2311 or SPAN 2312	6
Visual and Performing Arts	ARTS 1301, ARTS 1303, ARTS 1304, DRAM 1310, OR MUSI 1306	3
<b>5. Social and Behavioral Sciences</b>		<b>15</b>
History	HIST 1301	3
	HIST 1302	3
Government	GOVT 2305	3
	GOVT 2306	3
Social/Behavioral Sciences	ANTH 2346, COMM 1307, CRIJ 1301, CRIJ 1307, ECON 2301, ECON 2302, GEOG 1301, GEOG 1303, HIST 2301, HIST 2311, HIST 2312, HIST 2313, HIST 2314, HIST 2321, HIST 2322, HIST 2323, HIST 2380, HIST 2381, IDST 2370, IDST 2371, IDST 2372, IDST 2373, PSYC 2301, PSYC 2303, PYSC 2306, PSYC 2308, PSYC 2314, PSYC 2316, PSYC 2317, PSYC 2370, SOC 1301, SOCI 1306, or SOCI 2301	3
<b>6. Computer Literacy</b>		<b>3</b>
	COSC 1301	3

7. Physical Education		2
	PHED or KINE	2
8. Area of Concentration		9
	COSC 1318	3
	COSC 2315	3
	COSC 2330	3
<b>TOTAL HOURS</b>		<b>60</b>



*Some computers are embedded in the desk.*

## ASSOCIATE OF ARTS IN CRIMINAL JUSTICE

Criminal Justice is the study of the structures, functions and decision processes of those agencies that are responsible for managing criminal behavior. The field includes law enforcement, court systems, and correctional systems. The Criminal Justice Program at Palo Alto College strives to provide students with all the necessary skills and knowledge to become competent public servants in those fields. Higher education is essential for today's criminal justice professional. There are numerous career opportunities criminal justice majors may pursue, such careers as police officers, adult and juvenile probation officers, correctional and detention officers, and prosecutors and defense attorneys.

The Criminal Justice Program offers courses leading to an Associate of Arts Degree in Criminal Justice. This 66-hour degree requires the completion of a 48-hour Core Curriculum, designed to provide the student with a broad liberal arts foundation, and an additional 18 hours of criminal justice course requirements. All courses will transfer to any public four-year institution in Texas which offers either a BS or BA degree in Criminal Justice. Students who are intending to transfer to a four-year institution must seek advisement with a Criminal Justice Program Advisor for information on transfer agreements with specific universities.

<b>Associate of Arts</b>	<b>CRIMINAL JUSTICE</b>	
<b>1. Communication</b>		<b>9</b>
Composition	ENGL 1301	3
	ENGL 1302	3
Speech	SPCH 1311, 1321	3
<b>2. Mathematics</b>		<b>3</b>
	MATH 1314 or higher	3
<b>3. Natural Sciences</b>		<b>7-8</b>
	Natural Lab Science	4
	Second Natural Science	3
	BIOL, CHEM, ENVR, GEOL or PHYS	3
<b>4. Humanities &amp; Visual and Performing Arts</b>		<b>9</b>
Humanities	ENGL, FREN, GERM, HUMA, IDST or PHIL	6
Visual and Performing Arts	ARTS, DRAM or MUSI	3
<b>5. Social and Behavioral Sciences</b>		<b>15</b>
History	HIST 1301	3
	HIST 1302	3
Government	GOVT 2305	3
	GOVT 2306	3
Social/Behavioral Sciences	CRIJ 1301	3
<b>6. Computer Literacy</b>		<b>3</b>
	COSC 1300	3
<b>7. Physical Education</b>		<b>1</b>
	PHED or KINE	1
		<b>48</b>
<b>8. Major Field of Study</b>		
	CRIJ 1306	3
	CRIJ 1307	3
	CRIJ 1310	3
	CRIJ 2313	3
	CRIJ 2328	3
		<b>15</b>
<b>Total Hours</b>		<b>63</b>

## ASSOCIATE OF ARTS IN DRAMA

The Drama program is geared to help students, both as participants and as audience, to understand and appreciate the unique value of theater, and to prepare drama majors for successful transfer. Drama majors and/or interested students are given the opportunity to perform in or to help design and run a theatrical production. All drama majors must take one technical production lab hour each semester to total four technical production lab hours; this is a consistent requirement for drama majors going on to a university. All auditions for the productions are open to any student in good academic standing. Theater Appreciation, DRAM 1310, will fulfill the core aesthetics requirement. The other courses offered are: STAGE MAKE-UP, ACTING I & II, CREATIVE DRAMATICS, AND VOICE AND ARTICULATION.

All electives should be chosen in accordance with the degree requirements at the college or university to which the student will be transferring. Some four-year institutions may not accept all courses that are listed under "area of concentration" as part of a baccalaureate major. Students must check with their advisors in the Fine & Performing Arts/Speech Communication Department and/or the four-year university to which they plan to transfer for information on the 2+2 agreements.

Students who intend to major in Drama and have not yet decided on the senior college that they will attend, should meet with their PAC advisor and follow Palo Alto College's generic degree plan for Drama.

<b>Associate of Arts</b>	<b>DRAMA</b>	
<b>1. Communication</b>		<b>9</b>
Composition	ENGL 1301	3
	ENGL 1302	3
Speech	SPCH 1311 or SPCH 2341	3
<b>2. Mathematics</b>		<b>3</b>
	MATH 1332	3
<b>3. Natural Sciences</b>		<b>7-8</b>
	Natural Lab Science	4
	Second Natural Science	3
	BIOL, CHEM, ENVR, GEOL or PHYS	3
<b>4. Humanities &amp; Visual and Performing Arts</b>		<b>9</b>
Humanities	ENGL, SPAN, FREN, GERM, HUMA, IDST or PHIL	6
Visual and Performing Arts	DRAM 1310	3
<b>5. Social and Behavioral Sciences</b>		<b>15</b>
History	HIST 1301	3
	HIST 1302	3
Government	GOVT 2305	3
	GOVT 2306	3
Social/Behavioral Sciences	ANTH, COMM, CRIJ, ECON, GEOG, HIST, IDST, PSYC or SOCI	3
<b>6. Computer Literacy</b>		<b>3</b>
	COSC 1300	3
<b>7. Physical Education</b>		<b>12</b>
	PHED or KINE	<u>12</u>
		<b>48</b>
<b>8. Area of Concentration</b>		
	Course 1: DRAM 1341	3
	Course 2: DRAM 1351	3
	Course 3: DRAM 1352	3
	Course 4: DRAM 2336	3
	Course 5: DRAM 1120	4
	(4 technical lab hours over 4 semesters)	<u>16</u>
<b>Total Hours</b>		<b>64</b>

## ASSOCIATE OF APPLIED SCIENCE IN EDUCATION AIDE

The Teacher Assistant/Aide Program prepares students to enter the education field with the necessary tools to effectively assist instructional leaders in the classroom. This program provides a solid foundation in pedagogy and in general education needed to meet the current demand for teacher's assistants and instructional aides in today's classrooms. Fulfillment of this program will meet the current No Child Left Behind requirements mandated by federal legislation.

Students will focus on a variety of topics necessary to facilitate learning in the classroom. Reading strategies, math and science curriculum, classroom management, and multicultural principles will be highlighted.

### Advisory Committee

Jesse Aldana, South San ISD  
William Harmon, Southwest ISD  
Robert Jaklich, Harlandale ISD  
Rose Longoria, Harlandale ISD  
Joey Moczygemba, Natalia ISD

### First Year

#### First Semester – 15 Hours

EDTC	1325	Principles and Practices of Multicultural Education
	or	
EDTC	1301	Instructional Practices – Educational Processes
EDTC	1307	Teaching Reading – Elementary School
	or	
CDEC	1356	Emergent Literacy for Early Childhood
EDTC	1311	Instructional Practices – Effective Learning Environments
ITSC	1301	Introduction to Computers
CDEC	1359	Children with Special Needs

#### Second Semester – 15 Hours

CDEC	1354	Child Growth and Development
ENGL	1301	Freshman Composition I
EDTC	1305	Reading Problems
EDTC	1321	Bilingual Education
	or	
CDEC	1313	Curriculum Resources for EC Programs
SPCH	1311	Fundamentals of Speech
	or	
SPCH	1318	Interpersonal Communication

#### Summer Session I & II – 6 Hours

ENGL	1302	Freshman Composition II
Social Science Elective		

### Second Year

#### First Semester– 15 Hours

HUMA	1301	Intro to World Cultures
	or	
HUMA	1302	World Cultures and Global Issues
MATH	1314	College Algebra
	or	
MATH	1322	Math for Liberal Arts
	or	
BIOL	2306	Environmental Biology
EDTC	1317	Developing Positive Student Behavior

CDEC	1357	Math and Sciences for Early Childhood
TECA	1311	Introduction to Early Childhood Education

**Second Semester – 16 Hours**

SPAN	1411	Elementary Spanish
or		
SPAN	1412	Elementary Spanish II
CDEC	2341	The School Age Child
ENGL	2375	Children and Adolescent's Literature
or		
SNLG	1304	American Sign Language
PSYC	2307	Adolescent Psychology I
EDTC	1364*	Practicum (Field Experience) Teacher's Assistant

\* Capstone Course for AAS degree

**Total Hours**

**67**

**TEACHER'S ASSISTANT CERTIFICATE PROGRAM**

The Teacher's Assistant Program offers one certificate designed to prepare the students to enter the classroom as instructional assistants. The 37-hour certificate leads directly into the Associate of Applied Science program. The certificate offers courses in pedagogy and methodology necessary to be successful in school settings.

**EDUCATION AIDE CERTIFICATE I****First Semester – 15 Hours**

EDTC	1325	Principles and Practices of Multicultural Education
or		
EDTC	1301	Instructional Practices - Educational Processes
EDTC	1307	Teaching Reading - Elementary School
or		
CDEC	1356	Emergent Literacy for Early Childhood
ITSC	1301	Introduction to Computers
CDEC	1354	Child Growth and Development
ENGL	1301	Freshman Composition I

**Second Semester – 16 Hours**

CDEC	1359	Children with Special Needs
ENGL	1302	Freshman Composition II
EDTC	1305	Reading Problems
EDTC	1321	Bilingual Education
or		
CDEC	1313	Curriculum Resources for EC Programs
SPAN	1411	Elementary Spanish
or		
SPAN	1412	Elementary Spanish II

**Summer Session I or II – 6 Hours**

EDTC	1311*	Instructional Practices – Effective Learning Environments
SPCH	1311	Fundamentals of Speech
or		
SPCH	1318	Interpersonal Communication

\* Capstone course for 37-hour certificate

**Total Hours**

**37**

**ASSOCIATE OF APPLIED SCIENCE  
IN ELECTRO-MECHANICAL TECHNOLOGY**

This degree program is designed to prepare the student to perform technical skills necessary for employment in positions including Mechanical Lab Technician, Industrial Locksmith, Assembler, Inspector, and Electro/Mechanical Technician. Employment for graduating students of this program may be available at any business or company that contains automation equipment. This includes but is not limited to industrial manufacturing, car wash facilities, agriculture, warehouses and traffic management.

**Advisory Committee**

Todd Campbell, Sopatco Texas  
Skip Mills, Texas Engineering Experiment Station  
Jim Luther, H-E-B Facility Services  
Mike Mashal, Tyson Foods  
John Swift, SMI Steel Mill

**First Year**

		<b>First Semester – 14 Hours</b>
PHYS	1305	Introductory Physics I
ITSC	1309	Integrated Software Applications
CETT	1208	DC-AC Circuits
HYDR	1305	Basic Hydraulics
CETT	1325	Digital Fundamentals

		<b>Second Semester – 17 Hours</b>
PHYS	1307	Introductory Physics II
WLDG	1421	Introduction to Welding Fundamentals
IEIR	1306	Electric Motors
INTC	1357	AC/DC Motor Control
HART	2431	Advanced Electricity

**Summer Session – 3 Hours**

Humanities Elective

**Second Year**

		<b>First Semester – 15 Hours</b>
INTC	1305	Introduction to Electronic Instrumentation
SPCH	1318	Interpersonal Communication
DFTG	1329	Electro-Mechanical Drafting
HYDR	1345	Hydraulics and Pneumatics
INTC	1312	Introduction to Instrumentation Technology

		<b>Second Semester – 15 Hours</b>
ELMT	1301	Basic Programmable Logic Controllers
EPCT	1307	Introduction to Environmental Safety & Health
ELPT	1351	Electrical Machines
ENGL	1301	Freshman Composition
SOCI	1301	Introduction to Sociology
	or	
PSYC	2301	Introduction to Psychology

		<b>Summer Session – 3 Hours</b>
ELMT	1380*	Cooperative Education—Electromechanical Technology/Technician

\*Capstone course

**Total Hours**

**67**

## BASIC ELECTRO-MECHANICAL TECHNOLOGY CERTIFICATE

PHYS	1305	Introductory Physics I
ITSC	1309	Integrated Software Applications
CETT	1208	DC-AC Circuits
HYDR	1305	Basic Hydraulics
WLDG	1421*	Introduction to Welding Fundamentals

\* Capstone course

**Total Hours**

**15**

## ELECTRO-MECHANICAL ASSISTANT CERTIFICATE

### First Semester – 14 Hours

PHYS	1305	Introductory Physics I
ITSC	1309	Integrated Software Applications
CETT	1208	DC-AC Circuits
HYDR	1305	Basic Hydraulics
CETT	1325	Digital Fundamentals

### Second Semester – 17 Hours

PHYS	1307	Introductory Physics II
WLDG	1421	Introduction to Welding Fundamentals
IEIR	1306	Electric Motors
INTC	1357	AC/DC Motor Control
HART	2431*	Advanced Electricity

\* Capstone course

**Total Hours**

**31**

## ELECTRO-MECHANICAL TECHNICIAN CERTIFICATE

### First Year

#### First Semester – 14 Hours

PHYS	1305	Introductory Physics I
ITSC	1309	Integrated Software Applications
CETT	1208	DC-AC Circuits
HYDR	1305	Basic Hydraulics
CETT	1325	Digital Fundamentals

#### Second Semester – 17 Hours

PHYS	1307	Introductory Physics II
WLDG	1421	Introduction to Welding Fundamentals
IEIR	1306	Electric Motors
INTC	1357	AC DC Motor Control
HART	2431	Advanced Electricity

#### Summer Session – 3 Hours

Humanities Elective

**Second Year**

**First Semester – 15 Hours**

INTC	1305	Introduction to Electronic Instrumentation
SPCH	1318	Interpersonal Communication
DFTG	1329	Electro-Mechanical Drafting
HYDR	1345	Hydraulics and Pneumatics
INTC	1312	Introduction to Instrumentation Technology

\* Capstone course

**Total Hours**

**64**



## ASSOCIATE OF SCIENCE IN ENGINEERING

This is a Field of Study in Engineering degree plan that prepares students with a foundation in science, math, and basic engineering courses so that students can transfer to a senior institution and continue their studies in various engineering fields such as civil, mechanical, electrical, chemical, environmental, and industrial engineering. It is important that students check the requirements at the senior institution and seek the guidance of an advisor on campus.

Palo Alto College has signed 2 +2 articulation agreements with area colleges and universities. Students following these degree plans should consult with a faculty advisor for guidance.

<b>Associate of Science</b>	<b>ENGINEERING</b>	<b>9</b>
<b>1. Communication</b>		<b>9</b>
Composition	ENGL 1301	3
	ENGL 1302	3
Speech	SPCH 1311, 1318, 1321 or 2341	3
<b>2. Mathematics</b>		<b>8*</b>
	MATH 2413	4
	MATH 2414	4
<b>3. Science</b>		<b>9 **</b>
	CHEM 1311/1111	4
	PHYS 1570	5
<b>4. Humanities &amp; Visual and Performing Arts</b>		<b>6</b>
Humanities	ENGL, FREN, GERM, HUMA, IDST or PHIL	3
Visual and Performing Arts	ARTS, DRAM or MUSI	3
<b>5. Social and Behavioral Sciences</b>		<b>15</b>
History	HIST 1301	3
	HIST 1302	3
Government	GOVT 2305	3
	GOVT 2306	3
Social/Behavioral Sciences	ANTH, COMM, CRIJ, ECON, GEOG, HIST, IDST, PSYC or SOCI	3
<b>6. Computer Literacy</b>		<b>3</b>
	COSC 1300	3
<b>7. Physical Education</b>		<b>1-2</b>
	PHED or KINE	1-2
<b>8. Area of Concentration</b>		<b>6*</b>
	ENGR 2301, 2302 or 2303	3
	ENGR 2305	3
	MATH 2318	3
	MATH 2320	3
	MATH 2415	4
	PHYS 2570	5
<b>9. Elective Engineering Courses</b>		<b>6</b>
	ENGR 1201	
	ENGR 1304	
	ENGR 2304	
	ENGR 2332	
<b>Total Hours</b>		<b>64</b>

\* The number of engineering courses may vary depending on the requirements of the senior institution.

## ASSOCIATE OF SCIENCE IN ENGINEERING TECHNOLOGY

Students should specify the engineering area of interest and follow the appropriate degree plan. Undecided engineering majors should enroll in ENGR 1201, Introduction to Engineering, during their first semester in order to learn about engineering careers in civil, mechanical, electrical, and manufacturing. Civil engineering can include careers that focus on transportation, environmental protection and facilities and/or structures. Electrical engineering prepares student for careers in electronics, computer design, digital systems, communications, controls and robotics, computer-aided design, bioscience, and instrumentation. Mechanical engineering prepares students for careers that require knowledge and training in energy (thermal/fluid sciences) and structures and motions in mechanical systems. This degree offers students opportunities to work in the automotive, energy, petroleum, manufacturing, and aerospace industries.

Palo Alto College has signed 2 +2 articulation agreements with area colleges and universities. Students following these degree plans should consult with a faculty advisor for guidance.

This plan follows The Field of Study in Engineering Technology.

<b>Associate of Science</b>	<b>CIVIL &amp; CONSTRUCTION ENGINEERING TECHNOLOGY</b>	
<b>1. Communication</b>		<b>9</b>
Composition	ENGL 1301	3
	ENGL 1302	3
	SPCH 1311, 1318, 1321 OR 2341	3
<b>2. Mathematics</b>		<b>8</b>
	MATH 2413	4
	MATH 2414	4
<b>3. Natural Sciences</b>		<b>9</b>
	CHEM 1311/1111	4
	PHYS 1570	5
<b>4. Humanities &amp; Visual and Performing Arts</b>		<b>6</b>
Humanities	ENGL, FREN, GERM, HUMA, IDST or PHIL	3
Visual and Performing Arts	ARTS, DRAM or MUSI	3
<b>5. Social and Behavioral Sciences</b>		<b>15</b>
History	HIST 1301	3
	HIST 1302	3
Government	GOVT 2305	3
	GOVT 2306	3
Social/Behavioral Sciences	ANTH, COMM, CRIJ, ECON, GEOG, HIST, IDST, PSYC or SOCI	3
<b>6. Computer Literacy</b>		<b>3</b>
	COSC 1300	3
<b>7. Physical Education</b>		<b>1-2</b>
	PHED or KINE	1-2
<b>8. Area of Concentration</b>		<b>5</b>
	ENGR 1201	2
	ENGR 1304	3
	MATH 2415	4
	PHYS 2570	5
<b>9. Elective Engineering Courses</b>		<b>6</b>
	ENGR 1210	2
	ENGR 1375	3
	ENGR 1371	3
	ENGR 2303	3
<b>Total Hours</b>		<b>64</b>

<b>Associate of Science</b>	<b>ELECTRICAL/ELECTRONIC ENGINEERING TECHNOLOGY</b>	
<b>1. Communication</b>		<b>9</b>
Composition	ENGL 1301	3
	ENGL 1302	3
Speech	SPCH 1311, 1318, 1321 OR 2341	3
<b>2. Mathematics</b>		<b>8</b>
	MATH 2413	4
	MATH 2414	4
<b>3. Natural Sciences</b>		<b>9</b>
	CHEM 1311/1111	4
	PHYS 1570	5
<b>4. Humanities &amp; Visual and Performing Arts</b>		<b>6</b>
Humanities	ENGL, FREN, GERM, HUMA, IDST or PHIL	3
Visual and Performing Arts	ARTS, DRAM or MUSI	3
<b>5. Social and Behavioral Sciences</b>		<b>15</b>
History	HIST 1301	3
	HIST 1302	3
Government	GOVT 2305	3
	GOVT 2306	3
Social/Behavioral Sciences	ANTH, COMM, CRIJ, ECON, GEOG, HIST, IDST, PSYC or SOCI	3
<b>6. Computer Literacy</b>		<b>3</b>
	COSC 1300	3
<b>7. Physical Education</b>		<b>1-2</b>
	PHED OR KINE	1-2
<b>8. Area of Concentration</b>		<b>8</b>
	ENGR 2305	4
	MATH 2415	4
	PHYS 2570	5
<b>9. Elective Engineering Courses</b>		
	ENGR 1201	2
	ENGR 1371	3
	ENGR 1375	3
	ENGR 2303	3
<b>Total Hours</b>		<b>65</b>

<b>Associate of Science</b>	<b>MANUFACTURING &amp; MECHANICAL ENGINEERING TECHNOLOGY</b>	
<b>1. Communication</b>		<b>9</b>
Composition	ENGL 1301	3
	ENGL 1302	3
Speech	SPCH 1311, 1318, 1321 or 2341	3
<b>2. Mathematics</b>		<b>8</b>
	MATH 2413	4
	MATH 2414	4
<b>3. Science</b>		<b>9</b>
	CHEM 1311/1111	4
	PHYS 1570	5
<b>4. Humanities &amp; Visual and Performing Arts</b>		<b>6</b>
Humanities	ENGL, FREN, GERM, HUMA, IDST or PHIL	3
Visual and Performing Arts	ARTS, DRAM or MUSI	3
<b>5. Social and Behavioral Sciences</b>		<b>15</b>
History	HIST 1301	3
	HIST 1302	3
Government	GOVT 2305	3
	GOVT 2306	3
Social/Behavioral Sciences	ANTH, COMM, CRIJ, ECON, GEOG, HIST, IDST, PSYC or SOCI	3
<b>6. Computer Literacy</b>		<b>3</b>
	COSC 1300	3
<b>7. Physical Education</b>		<b>1-2</b>
	PHED or KINE	1-2
<b>8. Area of Concentration</b>		<b>6</b>
	ENGR 1304	3
	ENGR 2332	3
	MATH 2415	4
<b>9. Elective Engineering Courses</b>		<b>6</b>
	ENGR 1201	2
	ENGR 1371	3
	ENGR 1375	3
	ENGR 2303	3
<b>Total Hours</b>		<b>63</b>

## ASSOCIATE OF ARTS IN ENGLISH

The English Department offers a variety of writing and literature courses. For students who enroll in English classes for the first time, placement testing is required. If performance on these tests reveals inadequate preparation for satisfactory completion of the college-level course work, ENGL 0300 and/or ENGL 0301 are required. If students are required to take ENGL 0300, they must pass the course with a "C" or better before enrolling in ENGL 0301. If students are required to take ENGL 0301, they must pass the course with a "C" or better before enrolling in ENGL 1301.

ENGL 1301 and ENGL 1302 are designed to satisfy the requirement of most colleges that demand six hours of freshman composition and to meet AA and AS exit competencies.

In selecting sophomore English courses, students should consider both their major and the institution to which they plan to transfer. When only three hours of sophomore English are required, the student may choose any of the three-hour sophomore courses. If the total required is six hours, most colleges accept any combination of the three-hour sophomore courses.

Students planning to pursue a baccalaureate degree in English should base all course selections on the degree plan from the institution to which they plan to transfer. Students who intend to major in English and have not yet decided on the senior college that they will attend should follow Palo Alto College's generic degree plan for English.

<b>Associate of Arts</b>	<b>ENGLISH</b>	
<b>1. Communication</b>		<b>9</b>
Composition	ENGL 1301	3
	ENGL 1302	3
Speech	SPCH 1311 or SPCH 2341	3
<b>2. Mathematics</b>		<b>3</b>
	MATH 1332	3
<b>3. Natural Sciences</b>		<b>7-8</b>
	Natural Lab Science	4
	Second Natural Science	3
	BIOL, CHEM, ENVR, GEOL or PHYS	
<b>4. Humanities &amp; Visual and Performing Arts</b>		<b>9</b>
Humanities	HUMA 1301	3
	SPAN 2311	3
Visual and Performing Arts	ARTS, DRAM or MUSI	3
<b>5. Social and Behavioral Sciences</b>		<b>15</b>
History	HIST 1301	3
	HIST 1302	3
Government	GOVT 2305	3
	GOVT 2306	3
Social/Behavioral Sciences	COMM 1307	3
<b>6. Computer Literacy</b>		<b>3</b>
	COSC 1300	3
<b>7. Physical Education</b>		<b>1-2</b>
	PHED or KINE	<u>1-2</u>
		<b>48</b>
<b>8. Area of Concentration</b>		
	Course 1: ENGL 2322	3
	Course 2: ENGL 2323	3
	Course 3: ENGL 2333	3
	Course 4: ENGL 2328	<u>3</u>
		<b>12</b>
<b>Total Hours</b>		<b>60</b>

**ENGLISH FOR SPEAKERS OF OTHER LANGUAGES**

The ESOL program of study at Palo Alto College is designed to: 1) prepare non-native speakers of English for academic success at Palo Alto College; 2) empower them to become productive in their communities; and 3) assist them in reaching their professional and personal goals. Although ESOL classes do not fulfill requirements for any degree, students receive credit for taking them. Upon completion of the last level, students take a placement test to determine their readiness for college-level classes or for placement into the appropriate developmental classes.

The ESOL program consists of four levels. Each level has four courses (three semester hours for each course) for a total of 12 hours per semester. Each level contains writing, grammar, speaking, reading/vocabulary development. In the day classes, the writing and grammar classes are linked together, as are the reading/vocabulary and conversation classes, and students must take a linked writing/grammar class and/or a linked reading/vocabulary/conversation class. The grammar classes in Levels II-IV, as well as two optional special topics (listening comprehension) classes, are based on mastery-learning. Students in these courses progress at their own pace.

ESOL faculty use various learner-centered teaching strategies, including cooperative learning and group activities. Reading and writing courses enhance critical thinking skills and are based on themes; conversational courses include small group interaction; and grammar courses are taught in context. Additionally, students have access to computer technology for writing assignments, communicating with other ESOL students and/or faculty by e-mail, researching on the Internet, and using multi-media software such as the English Language Learning Instructional System (ELLIS).



*Various Student Fairs during the year showcase opportunities at Palo Alto.*

## ASSOCIATE OF APPLIED SCIENCE IN ENVIRONMENTAL TECHNOLOGIES

The Environmental Technologies program will provide graduates with technical skills for career opportunities in the environmental sciences. Options in the program include completion of an Associate of Applied Science degree in Environmental Technologies, a Certificate in Environmental Compliance Management, or a Certificate in Water Resources Management, a Certificate in Environmental Project Management, and a Certificate in International Environmental Management.

### Advisory Committee

Michael Albach, Bexar Metropolitan Water District  
Catherine Rainwater, Our Lady of the Lake University  
Gerard Sikkema, Synergistic Environmental Systems  
James Montgomery, Air Force Center for Environmental Excellence  
Doug Wright, Southwest Research Institute  
Glen Turney, Versar, Inc.  
Richard Atiyeh, Southwest Research Institute  
Debi Hurrell-Zitelman, PSI  
Charysse Knotts, Geo-Marine, Inc.  
Lynn Kitchen, Adams Environmental, Inc.

### First Year

		<b>First Semester – 15/16* Hours</b>
EPCT	1343	Treatment, Remediation, and Disposal Techniques
ENGL	1301	Freshman Composition I
MATH	1314	College Algebra
EPCT	1349	Environmental Regulation Interpretation and Applications
ENVR	1401*	Environmental Science
or		
EPCT	1311	Introduction to Environmental Science
		<b>Second Semester – 16 Hours</b>
GEOL	1401	Earth Sciences I
BMGT	1303	Principles of Management
EPCT	1344	Environmental Sampling and Analysis
EPCT	2333	Environmental Toxicology
ENGL	1302	Freshman Composition II

### Second Year

		<b>First Semester – 17 Hours</b>
ITSC	1309	Integrated Software Applications I
SPCH	1321	Business and Professional Speech
EPCT	1401	Hazardous Waste Operations and Emergency Response (HAZWOPER) Training and Related Topics
ENGL	2311	Technical Writing
MATH	1442	Elements of Statistics
		<b>Second Semester – 15 Hours</b>
ENGR	1304	Engineering Graphics
Elective		Humanities/Fine Arts Elective
Elective		Social/Behavioral Science Elective
EPCT	1328	Basic Wastewater Operations
or		
EPCT	2403	Surface and Groundwater Collection
BMGT	2331	Total Quality Management

**CHAPTER 9: Programs of Study****103****Summer Session – 3 Hours**

EPCT	1392	Special Topics in Water Quality and Wastewater Treatment Technology/Technician—Water Resources Management in South Central Texas
	or	
EPCT	1392	Special Topics in Water Quality and Wastewater Treatment Technology/Technician—International Environmental Management

**Total Hours****67****ENVIRONMENTAL REGULATIONS MANAGEMENT  
CERTIFICATE**

ENVR	1401	Environmental Science
EPCT	1349	Environmental Regulation Interpretation and Applications
EPCT	1343	Treatment, Remediation, and Disposal Techniques
EPCT	1401	Hazardous Waste Operations and Emergency Response (HAZWOPER) Training and Related Topics
EPCT	2333	Environmental Toxicology

**Total Hours****17****INTERNATIONAL ENVIRONMENTAL MANAGEMENT  
CERTIFICATE**

ENVR	1401	Environmental Science
EPCT	1349	Environmental Regulation Interpretation and Applications
BMGT	1303	Principles of Management
EPCT	1344	Environmental Sampling and Analysis
EPCT	1401	Hazardous Waste Operations and Emergency Response (HAZWOPER) Training and Related Topics
EPCT	1392	Special Topics in Water Quality and Wastewater Treatment Technology/Technician—International Environmental Management

**Total Hours****20****ENVIRONMENTAL COMPLIANCE MANAGEMENT  
CERTIFICATE**

ENVR	1401	Environmental Science
EPCT	1349	Environmental Regulation Interpretation and Applications
EPCT	1343	Treatment, Remediation, and Disposal Techniques
EPCT	1344	Environmental Sampling and Analysis
EPCT	2333	Environmental Toxicology
EPCT	1401	Hazardous Waste Operations and Emergency Response (HAZWOPER) Training and Related Topics

**Total Hours****20**

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**WATER RESOURCES MANAGEMENT CERTIFICATE**
**First Year****First Semester – 13 Hours**

ENVR	1401	Environmental Science
EPCT	1349	Environmental Regulation Interpretation and Applications
EPCT	1344	Environmental Sampling and Analysis
EPCT	2333	Environmental Toxicology

**Second Semester – 10 Hours**

EPCT	1328	Basic Wastewater Operations
EPCT	2403	Surface and Groundwater Collection
EPCT	1392	Special Topics in Water Quality and Wastewater Treatment Technology/Technician—Water Resources Management in South Central Texas

**Total Hours****23**
**ENVIRONMENTAL PROJECT MANAGEMENT  
CERTIFICATE**

ENVR	1401	Environmental Science
EPCT	1349	Environmental Regulation Interpretation and Applications
BMGT	1303	Principles of Management
EPCT	1344	Environmental Sampling and Analysis
EPCT	1401	Hazardous Waste Operations and Emergency Response (HAZWOPER) Training and Related Topics
BMGT	2331	Total Quality Management

**Total Hours****20**

## ASSOCIATE OF ARTS IN FOREIGN LANGUAGES

The Foreign Languages Department provides instruction that helps students develop the ability to communicate orally and in writing in a variety of foreign languages. Instruction is provided in a context that heightens students' awareness, understanding and appreciation of foreign culture. The department also offers courses to equip students with language skills that will enhance employment opportunities and enable them to interact and function more effectively in an increasingly global society.

Courses are currently offered in Spanish, French, and German.

Students who intend to major in foreign languages and have not yet decided on the senior college that they will attend should follow Palo Alto College's generic degree plan.

<b>Associate of Arts</b>	<b>SPANISH**</b>	
<b>1. Communication</b>		<b>9</b>
Composition	ENGL 1301	3
	ENGL 1302	3
Speech	SPCH 1311 or SPCH 2341	3
<b>2. Mathematics</b>		<b>3</b>
	MATH 1332	3
<b>3. Natural Sciences</b>		<b>7-8</b>
Natural Lab Science		4
Second Natural Science		3
	BIOL, CHEM, ENVR, GEOL or PHYS	
<b>4. Humanities &amp; Visual and Performing Arts</b>		<b>9</b>
Humanities	ENGL 2332	3
	ENGL 2333	3
Visual and Performing Arts	ARTS, DRAM or MUSI	3
<b>5. Social and Behavioral Sciences</b>		<b>15</b>
History	HIST 1301	3
	HIST 1302	3
Government	GOVT 2305	3
	GOVT 2306	3
Social/Behavioral Sciences	ANTH 2346	3
<b>6. Computer Literacy</b>		<b>3</b>
	COSC 1300	3
<b>7. Physical Education</b>		<b>1-2</b>
	PHED or KINE	<u>1-2</u>
		<b>48</b>
<b>8. Area of Concentration</b>		
	Course 1: SPAN 1411	4
	Course 2: SPAN 1412	4
	Course 3: SPAN 2311	3
	Course 4: SPAN 2312	<u>3</u>
		<b>14</b>
<b>Total Hours</b>		<b>62</b>

\*\* Degree requirements are the same for students majoring in **French** or **German**. Area of concentration courses will reflect the particular language focus.

## ASSOCIATE OF SCIENCE IN GEOLOGY

Geology is the study of the earth. It is a field of study that involves the nature and properties of the materials composing the earth, the processes that continuously change the Earth, and the history and development of the earth during its 4.6 billion year history. The study of geology offers unusual opportunities to integrate knowledge from many disciplines in trying to understand natural earth phenomena.

Students who choose to major in geology typically do so in order to increase their understanding of our natural environment and to gain the geologic knowledge and skills that can be applied to a professional career in natural resource exploration, resource development and management, environmental geology, teaching, and/or research.

Palo Alto College has signed 2 + 2 articulation agreements with area colleges and universities. Students following these degree plans should consult with a faculty advisor for guidance.

<b>Associate of Science</b>	<b>GEOLOGY</b>	
<b>1. Communication</b>		<b>9</b>
Composition	ENGL 1301	3
	ENGL 1302	3
Speech	SPCH 1311, 1318, 1321 OR 2341	3
<b>2. Mathematics</b>		<b>8</b>
	MATH 2413	4
	MATH 2414	4
<b>3. Science</b>		<b>8</b>
	CHEM 1311/1111	4
	CHEM 1312-1112 or	4
	PHYS 1401/1402	8
<b>4. Humanities &amp; Visual and Performing Arts</b>		<b>6</b>
Humanities	ENGL, FREN, GERM, HUMA, IDST or PHIL	3
Visual and Performing Arts	ARTS, DRAM or MUSI	3
<b>5. Social and Behavioral Sciences</b>		<b>15</b>
History	HIST 1301	3
	HIST 1302	3
Government	GOVT 2305	3
	GOVT 2306	3
Social/Behavioral Sciences	ANTH, COMM, CRIJ, ECON, GEOG, HIST, IDST, PSYC or SOCI	3
<b>6. Computer Literacy</b>		<b>3</b>
	COSC 1300	3
<b>7. Physical Education</b>		<b>1-2</b>
	PHED OR KINE	1-2
<b>8. Area of Concentration</b>		
	GEOL 1403	4
	GEOL 1404	4
	GEOL 1445	4
	GEOL 1446	4
<b>Total Hours</b>		<b>65</b>

**ASSOCIATE OF SCIENCE IN HEALTH**

The Department of Kinesiology, Health, and Dance offers the physical fitness and wellness courses required by the Palo Alto College Core Curriculum. The department also offers options for further studies in the field of Health. The Associate of Science in Health prepares students for professions in health promotion, teaching elementary or secondary school, or working in community health agencies. Students who choose careers in Health may work in education, emergency medical services, senior citizens programming, worksite wellness programs, public health departments, volunteer health organizations and other various fields.

Palo Alto College has signed 2+2 articulation agreements with area colleges and universities. Students following these degree plans should consult with a faculty advisor for guidance.

<b>Associate of Science</b>	<b>HEALTH</b>	
<b>1. Communication</b>		<b>9</b>
Composition	ENGL 1301	3
	ENGL 1302	3
Speech	SPCH 1311, 1318, 1321 OR 2341	3
<b>2. Mathematics</b>		<b>7</b>
	MATH 1314	3
	MATH 1442	4
<b>3. Natural Sciences</b>		<b>8</b>
	BIOL 1406 or BIOL 2401	4
	BIOL 1407 or BIOL 2402	4
<b>4. Humanities &amp; Visual and Performing Arts</b>		<b>6</b>
Humanities	ENGL, FREN, GERM, HUMA, IDST or PHIL	3
Visual and Performing Arts	ARTS, DRAM or MUSI	3
<b>5. Social and Behavioral Sciences</b>		<b>15</b>
History	HIST 1301	3
	HIST 1302	3
Government	GOVT 2305	3
	GOVT 2306	3
Social/Behavioral Sciences	ANTH, COMM, CRIJ, ECON, GEOG, HIST, IDST, PSYC or SOCI	3
<b>6. Computer Literacy</b>		<b>3</b>
	COSC 1300	3
<b>7. Physical Education</b>		<b>2</b>
	ANY PHED OR KINE	1
	ANY PHED OR KINE	1
		<b>50</b>
<b>8. Area of Concentration</b>		
	PHED 1304	3
	PHED 1305	3
	PHED 1306	3
	PHED 1346	3
<b>Total Hours</b>		<b>62</b>

## ASSOCIATE OF ARTS IN HISTORY

Palo Alto College offers a variety of History courses leading towards an Associate of Arts degree with an area of concentration in History. History 1301 and 1302 (American History Parts I and II) are required of all students registered at any two-or-four year college and university in the state of Texas. History 2301, History of Texas may be taken to satisfy three semester hours of the legislative requirement of six hours of United States History.

Every Fall semester the History Department offers HIST 2311-Western Civilization to the 17th Century. Every Spring Semester the History Department offers HIST 2312-Western Civilization Since the 17th Century. On a rotating basis the History Department offers HIST 2313-History of England I, HIST 2314-History of England II, HIST 2323-Eastern Civilizations, HIST 2380-Mexican-American History and 2381-African-American History.

A concentration in History is recommended for students seeking a four-year degree in Elementary and Secondary Education. It is a helpful academic subject area for those individuals seeking four-year degrees in Political Sciences, Geography, Economics and in some programs, Journalism.

<b>Associate of Arts</b>	<b>HISTORY</b>	<b>9</b>
<b>1. Communication</b>		<b>3</b>
Composition	ENGL 1301	3
	ENGL 1302	3
	Speech	3
	SPCH 1311, 1318, 1321 or 2341	3
<b>2. Mathematics</b>		<b>3</b>
	MATH 1314 or higher	3
<b>3. Natural Sciences</b>		<b>7-8</b>
	Natural Lab Science	4
	Second Natural Science	3
	BIOL, CHEM, ENVR, GEOL or PHYS	3
<b>4. Humanities &amp; Visual and Performing Arts</b>		<b>9</b>
Humanities	ENGL, FREN, GERM, HUMA, IDST or PHIL	6
Visual and Performing Arts	ARTS, DRAM or MUSI	3
<b>5. Social and Behavioral Sciences</b>		<b>15</b>
History	HIST 1301	3
	HIST 1302	3
Government	GOVT 2305	3
	GOVT 2306	3
Social/Behavioral Sciences	ANTH, COMM, CRIJ, ECON, GEOG, HIST, IDST, PSYC or SOCI	3
<b>6. Computer Literacy</b>		<b>3</b>
	COSC 1300	3
<b>7. Physical Education</b>		<b>1-2</b>
	PHED or KINE	<u>1-2</u>
		<b>48</b>
<b>8. Area of Concentration*</b>		<b>12</b>
	Students may select from any of the following History Courses: 2301, 2311, 2312, 2313, 2314, 2321, 2322, 2323, 2380, and 2381	12
<b>Total Hours</b>		<b>60</b>

\* IDST courses do not count towards fulfillment of the History area of concentration.

## INTERNATIONAL STUDIES CERTIFICATE

Given the global nature of our world, Palo Alto College offers students the opportunity to enhance their understanding of the environmental, cultural, spiritual, sociological, political and economic inter-relatedness of all people. This certificate will provide students, regardless of their major, with a core knowledge of global issues.

Note: In addition to the 12 hours (completed with a “C” or better grade) needed for the International Studies Certificate, students will be required to submit a portfolio that will be reviewed by a faculty committee.

### 3 hrs Gateway Course: HUMA 1302 –World Cultures & Global Issues

#### 6 hrs Core Courses (Student must choose a minimum of two courses)

IDST 2372	World Civilization I	SPAN 1411:	Spanish I
IDST 2373	World Civilization II	SPAN 1412:	Spanish II
ANTH 2346	Intro. to Anthropology	SPAN 2311:	Intermediate. Spanish I
ARTS 1301	Art Appreciation	SPAN 2312:	Intermediate Spanish II
ARTS 1303	Art History I	FREN 1411:	French I
ARTS 1304	Art History II	FREN 1412:	French II
ENGL 2332	World Literature I	FREN 2311:	Intermediate French I
ENGL 2333	World Literature II	FREN 2312:	Intermediate French II
GEOG 1303	World Geography	GERM 1411:	German I
MUSI 1306	Music Appreciation	PHIL 1304:	World Religions

### 3 hrs International Component Courses (Student must choose a minimum of one course).

The faculty identified with each course have “internationalized” the curricula for their sections.

Students will need to take sections taught by these faculty members.

ARTS 1301	Art Appreciation – Mark Hogensen
BIOL 2306	Environmental Science – Ed Hagen
BIOL 1322	Nutrition and Diet Therapy – Eleanor Skelley
BMGT 2331	Total Quality Management – Elsa Zambrano
BMGT 1303	Principles of Business Management – Elsa Zambrano
BUSI 1301	Principles of Imports /Exports I – Elsa Zambrano
BUSI 1314	Principles of Purchasing – Rick Bonnell
BUSI 1301	Intro to Business – (all sections )
COMM 1307	Intro to Mass Communication – Denise Barkis Richter
COMM 2311	News Gathering/Writing – Denise Barkis Richter
ENGL 1302	Freshman Composition II – Ellen Shull
ENGL 2373	American Multi-cultural Literature – Ellen Shull
ENGL 2332	World Literature from Antiquity through the Renaissance – Mary-Ellen Jacobs
EPCT 1392	Special Topics – International Environmental Management – Tom Smith
GEOL 1401	Earth Sciences I – Glen Tanck
GEOL 1402	Earth Sciences II – Glen Tanck
GEOL 1404	Historical Geology – Glen Tanck
GEOL 1403	Physical Geology – Glen Tanck
GOVT 2305	American Government I – Sandra Gieseler
GOVT 2305	American Government I – Gabriel Ume
HIST 1301	History of the United States, Part I – Peter Myers/ Irene Scharf
HUMA 1301	Intro to Humanities – Mariana Ornelas
IBUS 1305	Intro. to International Business & Trade – (all sections)
IBUS 2341	International Comparative Management – (all sections)
IBUS 2345	Import Customs Regulations – (all sections)
IDST 2371	Society and Social Issues – Mariana Ornelas
LMGT 2330	International Logistics Management – (all sections)
LMGT 1319:	Intro. to Business Logistics – Bill Daugherty
LMGT 1323:	Domestic & International Transportation Management – Bill Daugherty
LMGT 1325:	Warehouse & Distribution Center – Bill Daugherty
LMGT 1393:	Special Topic (Warehouse Issues) – Bill Daugherty
LMGT 2345:	Import Customs Regulations – Bill Daugherty

MRKG 1311:	Principles of Marketing – Elsa Zambrano
SPAN 2311:	Intermediate Spanish I – Rosa Samelson
SPNL 1342:	Business Spanish (Logistics) – Bill Daugherty
SPCH 1321:	Business and Professional – Ken Harris
SPCH 1301:	Oral Communications Skills – Ann Turner
SPCH 1318:	Interpersonal Communication – Carolyn DeLecour

**Total Hours for Certificate Plus Portfolio Project**

**12**



*The College's Natatorium hosts national and international events.*

**ASSOCIATE OF SCIENCE IN KINESIOLOGY**

The Department of Kinesiology, Health, and Dance offers the physical fitness and wellness courses required by the Palo Alto College Core Curriculum. The department also offers options for further studies in the field of Kinesiology. The Associate of Science in Kinesiology prepares students for careers in teacher preparation or to direct fitness, wellness, or health awareness in commercial, corporate, and institutional settings.

<b>Associate of Science</b>	<b>KINESIOLOGY</b>	
<b>1. Communication</b>		<b>9</b>
Composition	ENGL 1301	3
	ENGL 1302	3
Speech	SPCH 1311, 1318, 1321 OR 2341	3
<b>2. Mathematics</b>		<b>7</b>
	MATH 1314	3
	MATH 1442	4
<b>3. Natural Sciences</b>		<b>8</b>
	BIOL 1406 or BIOL 2401	4
	BIOL 1407 or BIOL 2402	4
<b>4. Humanities &amp; Visual and Performing Arts</b>		<b>6</b>
Humanities	ENGL, FREN, GERM, HUMA, IDST or PHIL	3
Visual and Performing Arts	ARTS, DRAM or MUSI	3
<b>5. Social and Behavioral Sciences</b>		<b>15</b>
History	HIST 1301	3
	HIST 1302	3
Government	GOVT 2305	3
	GOVT 2306	3
Social/Behavioral Sciences	ANTH, COMM, CRIJ, ECON, GEOG, HIST, IDST, PSYC or SOCI	3
<b>6. Computer Literacy</b>		<b>3</b>
	COSC 1300	3
<b>7. Physical Education</b>		<b>2</b>
	ANY PHED OR KINE	1
	ANY PHED OR KINE	1
<b>8. Area of Concentration</b>		
	PHED 1238	2
	PHED 1301	3
	PHED 1304	3
	PHED 1306	<u>3</u>
		<b>11</b>
<b>Total Hours</b>		<b>61</b>

Palo Alto College has signed 2+2 articulation agreements with area colleges and universities. Students following these degree

**KINESIOLOGY/COACHING CERTIFICATION PROGRAMS**

The Palo Alto Coaching Academy (PACA) offers three levels of coaching certification based on the National Standards for Athletic Coaches. Students seeking an Associate of Science degree can also earn up to three levels of coaching certification. A Level One Coach is an entry level youth sport coach; Level Two is qualified to be a head youth sport coach and the third level of coaching certification is an entry level High School coach.

<b>1. Communication</b>		<b>9</b>
Composition	ENGL 1301	3
	ENGL 1302	3
Speech	SPCH 1311, 1318, 1321 OR 2341	3
<b>2. Mathematics</b>		<b>3</b>
	MATH 1314 or higher except	3
	MATH 1332, 1350 and 1351	
<b>3. Natural Sciences</b>		<b>8</b>
	BIOL 2401	4
	BIOL 2402	4
<b>4. Humanities &amp; Visual and Performing Arts<sup>1</sup></b>		<b>9</b>
Humanities	ENGL, FREN, GERM, HUMA, IDST or PHIL	6
Visual and Performing Arts	ARTS, DRAM or MUSI	3
<b>5. Social and Behavioral Sciences<sup>2</sup></b>		<b>15</b>
History	HIST 1301	3
	HIST 1302	3
Government	GOVT 2305	3
	GOVT 2306	3
Social/Behavioral Sciences	ANTH, COMM, CRIJ, ECON, GEOG, HIST, IDST, PSYC or SOCI	3
<b>6. Computer Literacy</b>		<b>3</b>
	COSC 1300	3
<b>7. Physical Education</b>		<b>1-2</b>
	PHED OR KINE x 2	<u>2</u>
	(Beginning, Intermediate and/or advanced sport)	
<b>8. Coaching Certification Level I</b>		<b>49</b>
	(must have 2 activity classes or equivalent)	
	PHED 1321 Coaching/Sport/Athletics I	3
	PHED 1306 First Aid/CPR	3
<b>9. Coaching Certification Level II</b>		
	PHED 2101, 2102 or 2103	
	Skills Analysis <sup>3</sup>	1
	PHED 1322 Coaching/Sport/Athletics II	3
	PHED 1308 or 1309	
	Officiating (Team or Individual sports)	3
<b>10. Coaching Certification III</b>		
	PHED 1338	3
	Concepts of Physical Fitness & Sport	
	PHED 2356	3
	Care/prevention of Athletic Injuries	3

<sup>1</sup>Philosophy 2306 – Ethics is recommended for coaches

<sup>2</sup>Psychology 2301 – Introduction to Psychology is recommended for coaches

<sup>3</sup>Student should take a Skills Analysis course that addresses their sport specialty. For example, a future football coach would take 2102 Team Sports Skills Analysis, a tennis coach would take 2101 Individual Sport Analysis.

## ASSOCIATE OF APPLIED SCIENCE IN LANDSCAPE AND HORTICULTURAL SCIENCE

The degree and certificate programs are designed for the student entering the field of landscaping and for the professional who wants to expand his or her knowledge in the field. Emphasis is placed on the commercial application of skills learned in the program. Three certificates in specialized areas are also available to students who already possess skills in the area. These certificates are: Basic Nursery and Landscape Operations, Turf and Landscape Irrigation, and Landscape and Horticultural Science. Employment for graduating students of this program may be available in landscaping businesses (independent and corporate), residential complexes (apartment and residential organizations), parks and recreational facilities. Positions include but are not limited to superintendents, management and sales.

### Advisory Committee

Richard Thompson, Thompson Landscaping  
Mark Wanke, Calloway Development  
Lynn Rawe, Bexar County Cooperative Extension Service  
Olivier Bourgoin, Progressive Landscape  
Mike Wilkinson, Sprinkler King of Texas, Inc.  
Jose Perez, Fairway Landscape and Nursery  
M. Scott Kelley, Spalten Nurseries  
John Worrell Jr., Bartlett Tree Experts

### First Year

#### First Semester – 15 Hours

HALT	1301	Principles of Horticulture
BMGT	1303	Principles of Management
ITSC	1309	Integrated Software Applications
HALT	1303	Herbaceous Plants
ENGL	1301	Freshman Composition I

#### Second Semester – 15/16 Hours

HALT	1398	Special Topics in Horticulture
BIOL	1411	General Botany
HALT	1331	Woody Plant Materials
HALT	1333	Landscape Irrigation
MATH	1314	College Algebra
or		
MATH	1332	Math for Liberal Arts
or		
CHEM	1406	Introduction to Chemistry I

#### Summer Session – 3 Hours

Humanities Elective

### Second Year

#### First Semester – 15 Hours

HALT	2318	Soil Fertility and Fertilizers
HALT	2323	Horticultural Pest Control
HALT	1324	Turfgrass Science & Management
HALT	1319	Landscape Construction
SOCI	1301	Introduction to Sociology
or		
PSYC	2301	Introduction to Psychology

**Second Semester – 15 Hours**

SPCH	1311	Fundamentals of Speech
or		
SPCH	1321	Business and Professional Speech
HALT	1351	Landscape Business Operations
HALT	2331	Advanced Landscape Design
or		
HALT	2301	Arboriculture
or		
HALT	2320	Nursery Production & Management
HALT	1322	Landscape Design
HALT	2314	Plant Propagation
<b>Summer Session – 3 Hours</b>		
HALT	2386*	Internship—Horticultural Service Operations & Management, General

\* Capstone Course

**Total Hours**

66/67

## LANDSCAPE AND HORTICULTURAL SCIENCE CERTIFICATE

**First Year****First Semester – 12 Hours**

HALT	1301	Principles of Horticulture
ITSC	1309	Integrated Software Applications
HALT	1324	Turfgrass Science & Management
HALT	1303	Herbaceous Plants

**Second Semester – 12 Hours**

BMGT	1303	Principles of Management
HALT	1333	Landscape Irrigation
HALT	1331	Woody Plant Materials
HALT	1322	Landscape Design
or		
HALT	1319	Landscape Construction
or		
HALT	2314*	Plant Propagation

\* Capstone Course

**Second Year****First Semester – 15 Hours**

HALT	2318	Soil Fertility and Fertilizers
HALT	2323	Horticultural Pest Control
HALT	1351	Landscape Business Operations
HALT	1398	Special Topics in Horticulture
HALT	2331	Advanced Landscape Design
or		
HALT	2301	Arboriculture
or		
HALT	2320	Nursery Production & Management

**Total Hours**

39

**TURF AND LANDSCAPE IRRIGATION CERTIFICATE****First Semester – 12 Hours**

HALT	1301	Principles of Horticulture
INTC	1357	AC/DC Motor Control
HALT	1324	Turfgrass Science & Management
HALT	1303	Herbaceous Plants

**Second Semester – 12 Hours**

HALT	1319	Landscape Construction
HALT	1333	Landscape Irrigation
HALT	1331*	Woody Plant Materials
HALT	1398	Special Topics in Horticulture

\* Capstone Course

**Total Hours****24****BASIC NURSERY AND LANDSCAPE OPERATIONS  
CERTIFICATE****First Semester – 12 Hours**

HALT	1301	Principles of Horticulture
HALT	1324	Turfgrass Science & Management
HALT	2318	Soil Fertility and Fertilizers
HALT	1303	Herbaceous Plants

**Second Semester – 9 Hours**

HALT	1331	Woody Plant Materials
HALT	1333	Landscape Irrigation
HALT	1322*	Landscape Design
or		
HALT	1319*	Landscape Construction
or		
HALT	2314 *	Plant Propagation

\*Capstone course

**Total Hours****21**

## ASSOCIATE OF APPLIED SCIENCE IN LOGISTICS MANAGEMENT

The Logistics Management Program is designed to prepare students for management careers in transportation, warehousing, distribution, inventory control, purchasing, and international logistics. Students will study logistics principles and practices involved in procurement, transportation, storage, and third party provision as they apply to solving management problems in movement, storage, control, and information flow. The program includes an internship at an approved logistics management worksite. The Logistics Management Program will graduate students with the managerial skills and competencies required for jobs in logistics, materials management, distribution, and transportation. The program is certified by the American Society of Transportation and Logistics.

### Advisory Committee

Alejandra Calvillo, Auto Zone, Inc.  
Carlos Cruz, Menlo Logistics  
Tom Delgado, Fiesta Warehousing & Distribution  
Tom Dial, USAA  
Joel Garza, H-E-B International Procurement  
K. Blake Hastings, Free Trade Alliance San Antonio  
Rick Staller, Bee Trucking Inc.  
Bob Veters, Texas Warehouse Association

### First Year

		<b>First Semester – 15 Hours</b>
MATH	1314	College Algebra
ENGL	1301	Freshman Composition I
ITSC	1309	Integrated Software Apps. I
BMGT	1301	Supervision
LMGT	1319	Intro to Business Logistics Management

		<b>Second Semester – 15 Hours</b>
Elective		Social/Behavioral Science
BMGT	1303	Principles of Management
LMGT	1325	Warehouse & Distribution Center Management
SPCH	1321	Business & Professional Speech
Elective		Directed – Selected Certificate Program

### Second Year

		<b>First Semester – 15 Hours</b>
Elective		Humanities/Fine Arts
SPAN	1411/2311	Elementary or Intermediate Spanish I
Elective		Directed – Selected Certificate Program
MRKG	1311	Principles of Marketing
LMGT	1323	Domestic & Int'l Trans. Management
BMGT	1331	Production & Operations Management

		<b>Second Semester – 18 Hours</b>
SPAN	1412/2312	Elementary or Intermediate Span II
BUSI	2301	Business Law I
ACCT	2301	Principles of Accounting I
ECON	2302	Principles of Microeconomics
BMGT	1313	Principles of Purchasing Management

		<b>Third Semester – 3 Hours</b>
BMGT	2488*	Internship – Business Administration and Management General (Logistics)

\*Capstone course

**Total Hours**

**LOGISTICS MANAGEMENT CERTIFICATE****First Semester – 15 Hours**

MATH	1314	College Algebra
ENGL	1301	Freshman Composition I
ITSC	1309	Integrated Software Applications
BMGT	1301	Supervision
LMGT	1319	Introduction to Business Logistics Management

**Second Semester – 15 Hours**

BMGT	1301	Principles of Management
LMGT	1325	Warehouse & Distribution Center Management
ECON	2302	Principles of Microeconomics
LMGT	1323*	Domestic & International Transportation Mgt.

\* Capstone course

**Total Hours****30****WAREHOUSE MANAGEMENT CERTIFICATE**

LMGT	1319	Introduction to Business Logistics Management
LMGT	1325*	Warehouse & Distribution Center Management
ITSC	1309	Integrated Software Applications
BMGT	1301	Supervision
LMGT	1393	Special Topics in Logistics Management I

\* Capstone course

**Total Hours****15****MANUFACTURING MANAGEMENT CERTIFICATE**

LMGT	1319	Introduction to Logistics
ITSC	1309	Integrated Software Applications
BMGT	1301	Supervision
MATH	1314	College Algebra
BMGT	2331	Total Quality Management
BMGT	1313	Purchasing Management
BMGT	1331*	Production/Operations Management

\*Capstone course

**Total Hours****21****TRANSPORTATION MANAGEMENT CERTIFICATE**

LMGT	1319	Introduction to Logistics
ITSC	1309	Integrated Software Applications
BMGT	1301	Supervision
LMGT	1323	Domestic & International Transportation Mgt.
LMGT	1393	Special Topics: Transportation Issues
LMGT	2334*	Principles of Traffic Management

\*Capstone course

**Total Hours****18**

**INTERNATIONAL LOGISTICS MANAGEMENT  
CERTIFICATE**

LMGT	1319	Introduction to Logistics
ITSC	1309	Integrated Software Applications
BMGT	1301	Principles of Supervision
LMGT	1323	Domestic & International Transportation Mgt
SPNL	1342	Business Spanish
	or	
SPAN	2312	Intermediate Spanish II
LMGT	2330*	International Logistics Management
IBUS	2345	Import Customs Regulations

\*Capstone course

**Total Hours**

**21**

**DIRECTED ELECTIVES**

Students should pick two electives from the following list based on which certificates they choose to achieve as part of the AAS.

LMGT	1393	Special Topics – Warehouse Issues
LMGT	1393	Special Topics – Transportation Issues
LMGT	1393	Special Topics – Logistics Issues
SPNL	1342	Business Spanish (Logistics)
LMGT	2330	International Logistics Management
LMGT	2334	Principles of Traffic Management
IBUS	2345	Import Customs Regulations
BMGT	2331	Total Quality Management

**Social/Behavioral Science**

ANTH	2346
GOVT	2305, 2306
HIST	1301-2380
IDST	1301-2377
PSYC	2301-2371
SOCI	1301-2301

**Humanities/Fine Arts**

ARTS	1301-2372
DRAMA	1310-2336
HUMA	1301, 1302
MUSIC	1306-1312, 2311-2312
PHIL	1301-2306

**ASSOCIATE OF APPLIED SCIENCE IN MANAGEMENT**

The primary focus of the Management Program is to prepare students currently employed for entry-level and mid-level supervisory/management positions. The program, with its AAS degree, has been designed to provide students with skills, knowledge and abilities required in the current management environment. This program places heavy emphasis on interpersonal, communication, and decision-making skills. Cooperative work experience course work is a requirement for completion of this program.

**Advisory Committee**

Jeffrey Escobedo, USAA  
 M.P. Garza, Accutronics, Inc.  
 Angie Lopez, USAA  
 Antonio Perales, RCC-Kookier Norwood  
 Veronica Rosas-Tatum, University of Texas at San Antonio  
 Tony Villanueva, Palo Alto College

**First Year****First Semester – 15 Hours**

ENGL	1301	Freshman Composition I
MATH	1314	College Algebra
ITSC	1309	Integrated Software Applications
BUSI	1301	Introduction to Business
	or	
IBUS	1305	Introduction to International Business & Trade
BMGT	1301	Principles of Supervision

**Second Semester – 18 Hours**

BMGT	1303	Principles of Management
SPCH	1321	Business & Professional Speech
MRKG	1311	Principles of Marketing
	or	
IBUS	1354	International Marketing Management
HRPO	2301	Human Resource Management
MRKG	1301	Customer Relations
	or	
BUSG	2309	Small Business Management
	or	
SPAN	1411	Elementary Spanish I
COMM	1307	Intro to Mass Communications
	or	
IBUS	2345	Import Customs Regulation
	or	
IBUS	1301	Principles of Imports-Exports

**Second Year****First Semester – 15 Hours**

ACCT	2301	Principles of Accounting I
BMGT	2303	Problem Solving and Decision Making
BUSI	2301	Business Law
PHIL	2371	Business Ethics
	or	
HUMA	1302	World Cultures and Global Issues
	or	
HUMA	1301	Intro to Humanities
	or	
ARTS	1301	Art Appreciation

COMM	2324	Practicum in Electronic Media
or		
SPAN	1412	Elementary Spanish II
or		
SPNL	1342	Business Spanish
<b>Second Semester – 15 Hours</b>		
BMGT	2382*	Cooperative Education - Business Administration & Management, General
BMGT	2309	Leadership
ECON	2301	Principles of Macroeconomics
or		
ECON	2302	Microeconomics
QCTC	1305	Teaming
HRPO	2307	Organizational Behavior

\* Capstone course

**Total Hours**

**63**

### ADMINISTRATION CERTIFICATE

The Administration Certificate is a general entry-level certificate for beginning business students.

BUSI	1301	Introduction to Business
ITSC	1309	Integrated Software Applications
MRKG	1311*	Principles of Marketing
MRKG	1301	Customer Relations
COMM	1307	Intro to Mass Communications

\* Capstone course for Administration Certificate

**Total Hours**

**15**

### ENTREPRENEURSHIP CERTIFICATE

The Entrepreneurship Certificate provides basic skills for the potential and current small business owner.

<b>First Semester – 15 Hours</b>		
ENGL	1301	Freshman Composition I
or		
POFT	1301	Business English
BUSI	1301	Intro to Business
ITSC	1309	Integrated Software Applications
MRKG	1311	Principles of Marketing
or		
COMM	1307	Intro to Mass Communications
MRKG	1301	Customer Relations
<b>Second Semester – 15 Hours</b>		
BMGT	2303	Problem Solving and Decision Making
COMM	2324	Practicum in Electronic Media
ACCT	2301	Principles of Accounting I
or		
ACNT	1303	Introduction to Accounting I
BUSI	2301	Business Law
BUSG	2309*	Small Business Management

\* Capstone course

**Total Hours**

**30**

**ENTRY-LEVEL SUPERVISION CERTIFICATE**

The Entry-Level Supervision Certificate curriculum is for students to be entry-level supervisors with the necessary knowledge and skills. This certificate program is designed to provide a student with an exit point in the AAS Management Program and with the marketable skills, knowledge, and abilities that will make them more attractive and marketable for entry level management (supervisory) positions.

**First Semester – 12 Hours**

COSC	1300	Computer Literacy
ENGL	1301	Freshman Composition I
BMGT	1303	Principles of Management
SPCH	1311	Fundamentals of Speech

**Second Semester – 9 Hours**

PSYC	2301	Introduction to Psychology
BMGT	1301	Supervision
BMGT	2382*	Cooperative Education, Business Administration & Management, General

\*Capstone course

**Total Hours**

**21**

**INTERNATIONAL BUSINESS CERTIFICATE**

The International Business Certificate examines cross-cultural business practices in today's global society.

**First Semester – 16 Hours**

ENGL	1301	Freshman Composition I
or		
POFT	1301	Business English
IBUS	1305	Intro to International Business & Trade
ITSC	1309	Integrated Software Applications
BMGT	1301	Principles of Supervision
SPAN	1411	Elementary Spanish
or		
SPAN	2316	Career Spanish
or		
GERM	1411	Elementary German
or		
FREN	1411	Elementary French

**Second Semester – 16 Hours**

IBUS	2345	Import Customs Regulation
or		
IBUS	1301	Principles of Imports-Exports
SPNL	1342	Business Spanish
or		
SPAN	2317	Career Spanish
or		
SPAN	1412	Elementary Spanish II
or		
GERM	1412	Elementary German II
IBUS	1354	International Marketing Management
IBUS	2380*	Cooperative Education-International Business

ACCT	2301	Principles of Accounting I
	or	
ACNT	1303	Introduction to Accounting I

\* Capstone course

**Total Hours**

**32**

## LEADERSHIP CERTIFICATE

This certificate focuses on the skills expressly desired in management and supervision. This program is designed for the student wanting to enter a position of leadership and for the professional who wants to expand his or her knowledge. Courses will prepare the student to identify and utilize specific leadership styles and skills in motivating and communicating with fellow workers. It will prepare students for employment and volunteer services in both profit and not-for-profit organizations.

### Advisory Committee

Priest Cantu, Office of Carlos I. Uresti  
 Rene Ruiz, Office of John A. Longoria  
 Beverly Zech, VIA Metropolitan Transit  
 Jonathan Lane, The Enterprise Foundation  
 J. R. Molleda, City Public Service  
 Jim Johnson, San Antonio River Authority  
 Dave (Randy) Bruett, Alamo Workforce Development Inc.  
 Pam Garcia, Goodwill Industries  
 Roger Gonzalez, SER Jobs for Progress, Inc.  
 Sameera Hashmi, American Red Cross-San Antonio Chapter  
 Katrina Ornelas, Heartland Home Care & Hospice  
 Richard Rocha, Edgewood ISD  
 Cesar Rocha, South San Antonio Chamber of Commerce  
 Ed Shannon, Brooks AFB  
 Joanne Valdez, Southwest General Hospital

### First Semester – 12 Hours

BMGT	1301	Supervision
QCTC	1305	Teaming
HRPO	1301	Customer Relations
PSYT	1303	Dynamics of Human Relations

### Second Semester – 15 Hours

BMGT	2309	Leadership
BMGT	2347	Critical Thinking and Problem Solving
	or	
IBUS	2341	International Comparative Management
	or	
POFT	1328	Business and Professional Presentations
BMGT	2303	Problem Solving and Decision Making
HRPO	2307	Organizational Behavior
BMGT	2341*	Strategic Management

\* Capstone Course

**Total Hours**

**27**

**MARKETING CERTIFICATE**

The Marketing Certificate provides a fundamental knowledge of the marketing career field in addition to computer-related hands-on experience.

**First Semester – 15 Hours**

BUSI	1301	Introduction to Business
ITSC	1309	Integrated Software Applications
MRKG	1311	Principles of Marketing
MRKG	1301	Customer Relations
COMM	1307	Intro to Mass Communications

**Second Semester – 12 Hours**

BMGT	1301	Supervision
COMM	2324	Practicum in Electronic Media
SPCH	1321	Business & Professional Speech
MRKG	2380*	Cooperative Education – Business Marketing and Marketing Management

\* Capstone course

**Total Hours**

**27**

**TELECOMM TECHNOLOGY CERTIFICATE**

This certificate program is designed to prepare students for employment as Help Desk Techs, Service Technicians, Telecomm Specialists, and Account Managers within the wireless industry. Communication, Human Relation, and technical skills and knowledge are the focus of this course of study.

**Advisory Committee**

Dave (Randy) Bruett, Alamo Workforce Development  
 Mary Buckley, Voicestream Wireless  
 Don Crites, Radio Shack  
 Iris Seals, Brooks AFB  
 Peter Farrow, Security Service FCU

**First Semester – 15 Hours**

HRPO	1311	Human Relations
SPCH	1318	Interpersonal Communications
EECT	1303	Introduction to Telecommunications
POFT	1329	Keyboarding and Document Formatting
BUSI	1301	Introduction to Business

**Second Semester – 15 Hours**

HRPO	1301	Customer Relations
BUSI	1311	Principles of Salesmanship
EECT	1391*	Special Topics in Electrical, Electronic and Communication Engineering Technology
RTVB	1317	Survey of Electronic Media
EECT	2337	Wireless Telephony Systems

\* Capstone Course

**Total Hours**

**30**

**ASSOCIATE OF SCIENCE IN MATHEMATICS**

Mathematics prepares students for careers in fields such as education, actuarial science and statistics. Based on the student's placement level and high school background, the student may place out of Math 1314, College Algebra and Math 2412, Precalculus. Students not prepared to begin MATH 2413 must enroll in MATH 2412, Precalculus.

Palo Alto College has signed 2 + 2 articulation agreements with area colleges and universities. Students following these degree plans should consult with a faculty advisor for guidance.

<b>Associate of Science</b>	<b>MATHEMATICS</b>	
<b>1. Communication</b>		<b>9</b>
Composition	ENGL 1301	3
	ENGL 1302	3
Speech	SPCH 1311, 1318, 1321 OR 2341	3
<b>2. Mathematics</b>		<b>8</b>
	MATH 2413	4
	MATH 2414	4
<b>3. Natural Sciences</b>		<b>7-8</b>
	BIOL, CHEM, ENVR, GEOL or PHYS	7-8
<b>4. Humanities &amp; Visual and Performing Arts</b>		<b>6</b>
Humanities	ENGL, FREN, GERM, HUMA, IDST or PHIL	3
Visual and Performing Arts	ARTS, DRAM or MUSI	3
<b>5. Social and Behavioral Sciences</b>		<b>15</b>
History	HIST 1301	3
	HIST 1302	3
Government	GOVT 2305	3
	GOVT 2306	3
Social/Behavioral Sciences	ANTH, COMM, CRIJ, ECON, GEOG, HIST, IDST, PSYC or SOCI	3
<b>6. Computer Literacy</b>		<b>3</b>
	COSC 1300	3
<b>7. Physical Education</b>		<b>1-2</b>
	PHED OR KINE	1-2
<b>8. Area of Concentration</b>		<b>10</b>
	MATH 2415	4
	MATH 2318 and/or	3
	MATH 2320	3
<b>Total Hours</b>		<b>60</b>

## ASSOCIATE OF ARTS IN MUSIC

The Music program provides instruction in the appreciation and performance of instrumental and vocal music. It offers specific courses that fulfill the first two years of a four-year course of study leading to a bachelor's degree and music teaching preparation. The program also provides MUSI 1306, Music Appreciation, which will satisfy the general education requirement in aesthetics for students majoring in other disciplines. The Music program is divided into three areas of study: 1) MUEN, which is ensembles. The ensembles offered are Choir, Conjunto, Jazz Band, Jazz Show Choir, and Mariachi; 2) MUAP, which is applied music or private lessons. The private lessons include: accordion, violin, flute, clarinet, saxophone, trumpet, trombone, percussion, voice, piano, and guitar. 3) MUSI, which is other music courses. This area covers beginning levels of guitar, piano, and voice, ear training and sight singing, improvisation, literature, Jazz Appreciation, Tejano Appreciation, and music theory. The program will also provide an Academic Cooperative in Music that will allow music students who are already performing in the music field to receive college credit.

All electives should be chosen in accordance with the degree requirements at the college or university to which the student will be transferring. Some four-year institutions may not accept all courses that are listed under "area of concentration" as part of a baccalaureate major. Students must check with their advisors in the Fine & Performing Arts/Speech Communication Department and/or the four-year university to which they plan to transfer for information on the 2+2 agreements. Students who intend to major in Music and have not yet decided on the senior college that they will attend should meet with their PAC advisor and follow Palo Alto College's generic degree plan for Music.

<b>Associate of Arts</b>	<b>MUSIC</b>	
<b>1. Communication</b>		<b>9</b>
Composition	ENGL 1301	3
	ENGL 1302	3
Speech	SPCH 1311, SPCH 1318, SPCH 1321 or SPCH 2341	3
<b>2. Mathematics</b>		<b>3</b>
	MATH 1332	3
<b>3. Natural Sciences</b>		<b>7-8</b>
Natural Lab Science		4
Second Natural Science	BIOL, CHEM, ENVR, GEOL or PHYS	3
<b>4. Humanities &amp; Visual and Performing Arts</b>		<b>9</b>
Humanities	ENGL, SPAN, FREN, GERM, HUMA, IDST or PHIL	6
Visual and Performing Arts	MUSI 1306	3
<b>5. Social and Behavioral Sciences</b>		<b>15</b>
History	HIST 1301	3
	HIST 1302	3
Government	GOVT 2305	3
	GOVT 2306	3
Social/Behavioral Sciences	ANTH, COMM, CRIJ, ECON, GEOG, HIST, IDST, PSYC or SOCI	3
<b>6. Computer Literacy</b>		<b>3</b>
	COSC 1300	3
<b>7. Physical Education</b>		<b>1-2</b>
	PHED or KINE	<u>1-2</u>
		<b>48</b>
<b>8. Area of Concentration</b>		
	Course 1: MUSI 1308	3
	Course 2: MUSI 1311	3
	Course 3: MUSI 1312	3
	Course 4: MUSI 1216	2
	Course 5: MUSI 1217	2
	Course 6: MUEN 11xx	<u>1</u>
		<b>14</b>
<b>Total Hours</b>		<b>62</b>

## ASSOCIATE OF ARTS IN PHILOSOPHY

Philosophy is an activity. It is the attempt to understand the general concepts and principles that lie behind the various aspects of our lives. There are various branches of philosophy. Metaphysics seeks to understand the nature of ultimate reality. Political Philosophy inquires into the ideas of justice and equality. Ethics seeks to understand what we ought to do, as well as what kind of persons we ought to be. Epistemology studies such concepts as truth, certainty, and knowledge. Simply put, philosophy involves thinking hard about life; it asks the 'big' questions. One of the most distinctive features of philosophy is that philosophers and students of philosophy attempt to answer these 'big' questions, primarily, through reflection, by thinking clearly and rigorously about difficult and important questions. The study of philosophy is valuable because it can help us examine our lives. Engaging in philosophy can provide us with a clearer sense of direction, personal priorities, values, and meaning.

Traditionally, students majored in philosophy to prepare for teaching positions in institutions of higher education. Currently, more and more philosophers are pursuing non-academic careers. In addition to teaching, philosophers can now be found in business, computer-related fields, education, engineering, science, math, and government. A solid philosophical education can function as the cornerstone of virtually every other career preparation path.

Students who intend to major in Philosophy and have not yet decided on the senior college that they will attend should meet with their Palo Alto advisor and follow Palo Alto's generic degree plan for Philosophy.

<b>Associate of Arts</b>	<b>PHILOSOPHY</b>	
<b>1. Communication</b>		<b>9</b>
Composition	ENGL 1301	3
	ENGL 1302	3
Speech	SPCH 1311, 1318, 1321 or 2341	3
<b>2. Mathematics</b>		<b>3</b>
	MATH 1314 or higher	3
<b>3. Natural Sciences</b>		<b>7-8</b>
Natural Lab Science		4
Second Natural Science		3
	BIOL, CHEM, ENVR, GEOL or PHYS	
<b>4. Humanities &amp; Visual and Performing Arts</b>		<b>9</b>
Humanities	ENGL, FREN, GERM, HUMA, or IDST	6
Visual and Performing Arts	ARTS, DRAM or MUSI	3
<b>5. Social and Behavioral Sciences</b>		<b>15</b>
History	HIST 1301	3
	HIST 1302	3
Government	GOVT 2305	3
	GOVT 2306	3
Social/Behavioral Sciences	ANTH, COMM, CRIJ, ECON, GEOG, HIST, IDST, PSYC or SOCI	3
<b>6. Computer Literacy</b>		<b>3</b>
	COSC 1300	3
<b>7. Physical Education</b>		<b>1-2</b>
	PHED or KINE	<u>1-2</u>
		<b>48</b>
<b>8. Area of Concentration</b>		
	PHIL 1301	3
	PHIL 1304	3
	PHIL 2303	3
	PHIL 2306 or 2371	<u>3</u>
		<b>12</b>
<b>Total Hours</b>		<b>60</b>

**ASSOCIATE OF SCIENCE IN PHYSICS**

Physics is at the forefront of today's scientific research. Physicists focus on automation, robotics, and electromechanical and electromagnetic systems. Students are provided with a broad foundation in physics in preparation for professional careers in both industry and government programs such as the Department of Defense and Department of Energy.

Palo Alto College has signed 2 + 2 articulation agreements with area colleges and universities. Students following these degree plans should consult with a faculty advisor for guidance.

<b>Associate of Science</b>	<b>PHYSICS</b>	
<b>1. Communication</b>		<b>9</b>
Composition	ENGL 1301	3
	ENGL 1302	3
Speech	SPCH 1311, 1318, 1321 OR 2341	3
<b>2. Mathematics</b>		<b>8</b>
	MATH 2413	4
	MATH 2414	4
<b>3. Science</b>		<b>8</b>
	CHEM 1311/1111	4
	CHEM 1312/1112	4
<b>4. Humanities &amp; Visual and Performing Arts</b>		<b>6</b>
Humanities	ENGL, FREN, GERM, HUMA, IDST or PHIL	3
Visual and Performing Arts	ARTS, DRAM or MUSI	3
<b>5. Social and Behavioral Sciences</b>		<b>15</b>
History	HIST 1301	3
	HIST 1302	3
Government	GOVT 2305	3
	GOVT 2306	3
Social/Behavioral Sciences	ANTH, COMM, CRIJ, ECON, GEOG, HIST, IDST, PSYC or SOCI	3
<b>6. Computer Literacy</b>		<b>3</b>
	COSC 1300	3
<b>7. Physical Education</b>		<b>1-2</b>
	PHED OR KINE	1-2
<b>8. Area of Concentration</b>		<b>10</b>
	PHYS 1570	5
	PHYS 2570	5
		<b>60</b>
<b>9. Other Required Math Course</b>		
	MATH 2415	4
<b>Total Hours</b>		<b>64</b>

## ASSOCIATE OF SCIENCE IN PRE-DENTISTRY, PRE-MEDICINE AND PRE-VETERINARY

The Associate of Science concentration that provides students a broad foundation in preparation for professional careers in medicine, dentistry, physician assistant, optometry, pharmacy, biotechnology, industry, education, government, research, and veterinary medicine are very closely linked to Biology. Students preparing for careers in these areas will be exposed to a solid foundation of scientific methodology and the fundamental principles of Biology. Students are encouraged to contact the institution to which they plan to transfer for specific requirements in Mathematics and the Sciences.

Palo Alto College has signed 2 + 2 articulation agreements with area colleges and universities. Students following these degree plans should consult with a faculty advisor for guidance.

<b>Associate of Science</b>	<b>PRE-DENTISTRY, PRE-MEDICINE AND PRE-VETERINARY</b>	
<b>1. Communication</b>		<b>9</b>
Composition	ENGL 1301	3
	ENGL 1302	3
Speech	SPCH 1311, 1318, 1321 OR 2341	3
<b>2. Mathematics</b>		<b>6-8</b>
	MATH XXXX	
	MATH XXXX	
<b>3. Science*</b>		<b>8</b>
	BIOL 1406 or BIOL 1411	4
	BIOL 1407 or BIOL 1413	4
<b>4. Humanities &amp; Visual and Performing Arts</b>		<b>6</b>
Humanities	ENGL, FREN, GERM, HUMA, IDST or PHIL	3
Visual and Performing Arts	ARTS, DRAM or MUSI	3
<b>5. Social and Behavioral Sciences</b>		<b>15</b>
History	HIST 1301	3
	HIST 1302	3
Government	GOVT 2305	3
	GOVT 2306	3
Social/Behavioral Sciences	ANTH, COMM, CRIJ, ECON, GEOG, HIST, IDST, PSYC or SOCI	3
<b>6. Computer Literacy</b>		<b>3</b>
	COSC 1300	3
<b>7. Physical Education</b>		<b>1</b>
	PHED OR KINE	1
<b>8. Area of Concentration</b>		<b>16</b>
	BIOL 1413	4
	BIOL 2416	4
	BIOL 2421	4
	CHEM 1311/1111	4
<b>9. Other Science Courses**</b>		
	CHEM 1311/1111	4
	CHEM 1312/1112	4
	PHYS 1401	4
	PHYS 1402	4
<b>Total Hours</b>		<b>65</b>

\* Some baccalaureate degree granting institutions will only accept BIOL 1406/1407 while others will only accept BIOL 1411/1413. Please contact the transfer institution for other requirements.

\*\* Students may have to complete both Chemistry and Physics. Most schools will require 12-16 hours of Chemistry and 8 hours of Physics.

## ASSOCIATE OF SCIENCE IN PRE-NURSING

The nursing profession positively affects the delivery of health care in a variety of settings. The mission of the pre-nursing degree program is to prepare students for further studies that will result in obtaining either a Bachelor of Science in Nursing (BSN) or an Associate Degree in Nursing (ADN). Pre-nursing studies integrate theory and research-based knowledge from the arts, humanities and sciences to develop a foundation for good nursing practice. Additionally, students will acquire written, spoken, and technological skills to communicate effectively in the work place.

Several nursing programs are offered through area colleges and universities. Students planning to apply and transfer to certified nursing programs should consult with their faculty advisor for further information concerning the specific requirements. This plan follows the Texas Field of Study in Nursing.

The following set of courses, totaling 28 semester credit hours (SCH), are lower-division academic courses that are generally required for most nursing program students. Students should note additional requirements. Provided below are local nursing programs.

Content Area	Number and type of courses	Texas Common Course Numbering System Equivalent
1. <b>Anatomy &amp; Physiology</b>	2 courses: A&P I with lab and A&P II with lab	BIOL 2401 and BIOL 2402 only
2. <b>Microbiology</b>	1 course: Microbiology with lab	BIOL 2402 or BIOL 2421
3. <b>Chemistry</b>	1 course: Chemistry with lab	CHEM 1406
4. <b>Nutrition</b>	1 course: Nutrition & Diet Therapy I	BIOL 1322
5. <b>Psychology</b>	2 courses: General Psychology and Lifespan Growth & Development	PSYC 2301 and PSYC 2314
6. <b>Mathematics</b>	1 course: Elementary Statistical Methods	MATH 1442

Public and Private institutions vary in their course requirements as indicated below.

### BSN Nursing Incarnate Word requires:

ENGL 2332	World Literature
MATH 1442	Elements of Statistics
COSC 1301	Intro to Computer Information Systems or CIS 1301
PSYC 2301	Intro <b>or</b> SOCI 1301 <b>and</b> PSYC 2308 Developmental Psychology Conception through Childhood
Foreign Language	(Elem. Level or higher – 4 hours)
PHIL 1301	Intro to Philosophy

### BSN Nursing UTSA requires:

PSYC 2301	Intro <b>and</b> PSYC 2314 Developmental Psychology: Life Span
SOCI 1301	Introduction to Sociology
MATH 1442	Elements of Statistics <b>or</b> PSYC 2317 Statistics of Behavior Sciences

### ADN Associate Degree in Nursing (Baptist) requires:

PSYC 2301	Intro to Psychology
PHIL 2306	Ethics
SOCI 1301	Intro to Sociology

Palo Alto College has signed 2+2 articulation agreements with area colleges and universities. Students following these degree plans should consult with a faculty advisor for guidance.

**ASSOCIATE OF SCIENCE IN PRE-PHARMACY**

Students wishing to pursue a career in pharmacy should follow this plan of study. Pharmacy programs at universities have specific requirements, and students are encouraged to contact the university to which they plan to transfer to determine which requirements are needed. Also, Palo Alto College has signed 2 + 2 articulation agreements with area colleges and universities. Students following these degree plans should consult with a faculty advisor for guidance.

The student is encouraged to carefully examine requirements at the transfer institution. Requirements vary at institutions and can change from one year to the next.

<b>Associate of Science</b>	<b>PRE-PHARMACY</b>	
<b>1. Communication</b>		<b>9</b>
Composition	ENGL 1301	3
	ENGL 1302	3
Speech	SPCH 1311, 1318, 1321 OR 2341	3
<b>2. Mathematics</b>		<b>6-8</b>
	MATH XXXX	
	MATH XXXX	
<b>3. Science</b>		<b>8</b>
	PHYS 1401/1402	4
	PHYS 1570/2570	4
<b>4. Humanities &amp; Visual and Performing Arts</b>		<b>6</b>
Humanities	ENGL, FREN, GERM, HUMA, IDST or PHIL	3
Visual and Performing Arts	ARTS, DRAM or MUSI	3
<b>5. Social and Behavioral Sciences</b>		<b>15</b>
History	HIST 1301	3
	HIST 1302	3
Government	GOVT 2305	3
	GOVT 2306	3
Social/Behavioral Sciences	ANTH, COMM, CRIJ, ECON, GEOG, HIST, IDST, PSYC or SOCI	3
<b>6. Computer Literacy</b>		<b>3</b>
	COSC 1300	3
<b>7. Physical Education</b>		<b>1-2</b>
	PHED OR KINE	1-2
<b>8. Area of Concentration</b>		<b>18</b>
	CHEM 2323/2325	6
	CHEM 2223/2225	4
	CHEM 1311/1111	4
	CHEM 1312/1112	4
<b>Total Hours</b>		<b>65</b>

## ASSOCIATE OF APPLIED SCIENCE IN PROFESSIONAL PILOT

The Aviation Technology degree program has two options:

- ✈ Aviation Management
- ✈ Professional Pilot

The Professional Pilot program prepares students who look forward to careers as air carrier pilots, general aviation pilots, and military pilots. Each student successfully completing the degree program will have obtained a minimum of a commercial pilot certificate with an instrument rating.

A prerequisite to enter the degree program is possession of a current second class aviation medical certificate. **Special Fees apply.**

### Advisory Committee

Captain Calvin Allen, Delta Airlines  
Hugh Crull Jr., Fairchild Aerospace  
First Officer Victoria Giordana, Southwest Airlines  
Jose Mulet, Mexicana Airlines  
Captain Byron Reed, H.B. Zachry Company  
Captain Vicki Ross, Southwest Airlines  
Captain Ernest Seiffert, US Airways

### First Year

		<b>First Semester – 15 Hours</b>
ENGL	1301	Freshman Composition I
PSYC	2301	Introduction to Psychology
AIRP	1313	Introduction to Aviation
AIRP	1317	Private Pilot Ground School
AIRP	1315	Private Pilot Flight
		<b>Second Semester – 16 Hours</b>
ENG	1302	Freshman Composition II
SPCH	1311	Fundamentals of Speech
ITSC	1309	Integrated Software Applications I
MATH	1314	College Algebra
AIRP	1345	Aviation Safety
PHED		PE Activity Elective
		<b>Summer Session – 6 Hours</b>
AIRP	1351	Instrument Ground School
AIRP	1355	Intermediate Flight

### Second Year

		<b>First Semester – 16 Hours</b>
AIRP	2337	Commercial Ground School
AIRP	2350	Instrument Flight
AVIM	2337	Introduction to Aviation Law
AVIM	1301	Introduction to Aviation Management
Elective		Humanities/Fine Arts Elective (3 hours)
PHED		PE Activity Elective
		<b>Second Semester – 15 Hours</b>
AIRP	1307	Meteorology
AVIM	2331	Airline Management
AIRP	2333	Aircraft Systems
AIRP	2339	Commercial Flight
AIRP	1191	Special Topics in Aircraft Pilot & Navigator (Professional)
AIRP	2251*	Multi-engine Flight Training

\*Capstone Course

**Total Hours**

## PRIVATE PILOT CERTIFICATE

AIRP	1313	Introduction to Aviation
AIRP	1315*	Private Pilot Flight (LAB)
AIRP	1317	Private Pilot Ground School

**Total Hours****9**

\*Capstone Course

**Special Conditions:**

All flight courses **must be completed** through the college approved flight contractor for college credit, with the following exceptions:

- A. Students having obtained a private, commercial and/or instrument rating **prior to their first admission** to the Palo Alto College Professional Pilot program may apply for advanced placement testing, according to the following guidelines:
  1. Credit hours may be awarded by advanced placement testing. Consult with the Aviation Technology chairperson.
  2. All flight course requirements must be verified by a departmental examination of pilot logbooks and records.
  3. An in-flight evaluation conducted by the Palo Alto College flight contractor must verify that the student meets FAR Part 141 curriculum requirements. The cost of this in-flight evaluation must be paid by the student.
  
- B. Students providing documentation of flight hours and ground training accumulated **prior to their first admission** to the Palo Alto College Professional Pilot program, and who have obtained this training:
  1. At a FAR Part 141 certified school, may apply for transfer of one-half of those hours\* into the Palo Alto College Professional Pilot program toward course requirements.
  2. Under FAR Part 61, may apply for transfer of one-quarter of those hours\* into the Palo Alto College Professional Pilot program toward course requirements.

All students should seek advisement from the Aviation Technology and Professional Pilot Department before enrolling in the program.

\*As required by FAA regulation CFR 14, FAR 141.77 Paragraph C1 and C2.

**ASSOCIATE OF ARTS IN PSYCHOLOGY**

Psychology is the scientific study of human behavior and mental processes. Common goals for an undergraduate student in psychology include: a broad knowledge base of information in psychology that truly reflects an understanding of human behavior; developing effective critical thinking skills in reading and writing; increased information gathering skills (e.g., library, computerized databases, the Internet); developing quantitative and qualitative methods of data analysis in research; developing interpersonal skills that includes sensitivity to the diversity in the environment as well as increased self-knowledge to manage one’s own behavior; gaining increased knowledge relative to the historical development of psychology; and developing an increased sense of ethical standards essential to maintaining academic and scientific integrity.

An Associate Degree of Arts in Psychology prepares a student to pursue a career in the following areas: clinical psychologists, assessing and treating mental, emotional, and behavioral disorders; cognitive psychologists, focusing on thought processes and the ability to reason including how people generate logical and coherent ideas; counseling psychologists, providing vocational, career, and academic guidance as well as helping individuals adjust to the challenges of everyday life; educational psychologists, concentrating on those conditions that influence teaching and learning; developmental psychologists, focusing on scientific research in such areas as motivation, thinking, learning and memory, and physiology; forensic psychologists, applying psychological principles to legal issues; focusing on how psychological factors influence health and illness; industrial/organizational psychologists, applying psychological principles and research methods to the workplace; and neuropsychologists, studying the relationships between behavior and physiology including the brain.

Students who intend to major in Psychology and have not yet decided on the senior college that they will attend should meet with their Palo Alto advisor and follow Palo Alto’s generic degree plan for Psychology.

<b>Associate of Arts</b>	<b>PSYCHOLOGY</b>	
<b>1. Communication</b>		<b>9</b>
Composition	ENGL 1301	3
	ENGL 1302	3
	SPCH 1311, 1318, 1321 or 2341	3
<b>2. Mathematics</b>		<b>3</b>
	MATH 1314 or higher	3
<b>3. Natural Sciences</b>		<b>7-8</b>
Natural Lab Science		4
Second Natural Science		3
	BIOL, CHEM, ENVR, GEOL or PHYS	
<b>4. Humanities &amp; Visual and Performing Arts</b>		<b>9</b>
Humanities	ENGL, FREN, GERM, HUMA, or IDST	6
Visual and Performing Arts	ARTS, DRAM or MUSI	3
<b>5. Social and Behavioral Sciences</b>		<b>15</b>
History	HIST 1301	3
	HIST 1302	3
Government	GOVT 2305	3
	GOVT 2306	3
Social/Behavioral Sciences	ANTH, COMM, CRIJ, ECON, GEOG, HIST, IDST, PSYC or SOCI	3
<b>6. Computer Literacy</b>		<b>3</b>
	COSC 1300	3
<b>7. Physical Education</b>		<b>1-2</b>
	PHED or KINE	<u>1-2</u>
		<b>48</b>
<b>8. Area of Concentration</b>		
	PSYC 2301	3
	Students may select any 3 of the following	9
	Psychology Courses	12
	2316, 2317, 2314, 2370, 2308, 2306 and 2303	
<b>Total Hours</b>		<b>60</b>

## ASSOCIATE OF ARTS IN SPEECH

The courses in the Speech program are designed to promote self-confidence and speaking ability in order to enhance students' potential for achieving their personal, educational, and professional goals. The program serves the degree requirements of students in a variety of majors, technical fields, and certificate programs. Course topics include PUBLIC SPEAKING, INTERPERSONAL COMMUNICATION, BUSINESS AND PROFESSIONAL SPEECH, ORAL INTERPRETATION, AND VOICE AND DICTION. The program also offers pronunciation and public speaking courses for the non-native speakers of English.

AMERICAN SIGN LANGUAGE BASIC I, SPCH 1373, AND AMERICAN SIGN LANGUAGE BASIC II, SPCH 1374, are also taught through the Speech program.

All electives should be chosen in accordance with the degree requirements at the college or university to which the student will be transferring. Some four-year institutions may not accept all courses that are listed under "area of concentration" as part of a baccalaureate major. Students must check with their advisors in the Fine & Performing Arts/Speech Communication Department and/or the four-year university to which they plan to transfer for information on the 2+2 agreements.

Students who intend to major in Speech and have not yet decided on the senior college that they will attend, should meet with their PAC advisor and follow Palo Alto College's generic degree plan for Speech.

<b>Associate of Arts</b>	<b>SPEECH</b>	
<b>1. Communication</b>		<b>9</b>
Composition	ENGL 1301	3
	ENGL 1302	3
Speech	SPCH 1311	3
<b>2. Mathematics</b>		<b>3</b>
	MATH 1314 or 1332	3
<b>3. Natural Sciences</b>		<b>7-8</b>
	Natural Lab Science	4
	Second Natural Science	3
	BIOL, CHEM, ENVR, GEOL or PHYS	
<b>4. Humanities &amp; Visual and Performing Arts</b>		<b>9</b>
Humanities	ENGL, SPAN, FREN, GERM, HUMA,	6
	IDST or PHIL	
Visual and Performing Arts	ARTS 1301 or DRAM 1310 or MUSI 13063	
<b>5. Social and Behavioral Sciences</b>		<b>15</b>
History	HIST 1301	3
	HIST 1302	3
Government	GOVT 2305	3
	GOVT 2306	3
Social/Behavioral Sciences	ANTH, COMM, CRIJ, ECON, GEOG,	3
	HIST, IDST, PSYC or SOCI	
<b>6. Computer Literacy</b>		<b>3</b>
	COSC 1300	3
<b>7. Physical Education</b>		<b>1-2</b>
	PHED or KINE	<u>1-2</u>
		<b>48</b>
<b>8. Area of Concentration</b>		
	Course 1: SPCH 1318	3
	Course 2: SPCH 1321	3
	Course 3: SPCH 1342	3
	Course 4: SPCH 2341	<u>3</u>
		<b>12</b>
<b>Total Hours</b>		<b>60</b>

## ASSOCIATE OF APPLIED SCIENCE IN TURFGRASS AND GOLF COURSE MANAGEMENT

The degree and certificate program qualifies the graduate as a turfgrass manager or turfgrass specialist. Employment for graduating students of this program may be available at golf courses, turf farms, parks or recreational facilities. Positions include but are not limited to superintendents of golf courses, or sales representatives of seed or agricultural supply companies.

### Advisory Committee

Bruce Burger, The Quarry Golf Club  
Barry Carter, Oak Hills Country Club  
Mike Davison, Estes, Inc.  
David Doguet, Bladerunner Farms  
Don Hardin, Northside Independent School District  
Brad Hines, La Cantera Golf Course  
James Holcomb, Oak Hills Country Club  
David Murphy, Austin Turf & Tractor  
Jimmy Thomas, Hyatt Regency Hill Country Resort  
Don Thompson, Turfgrass America

### First Year

#### First Semester – 15 Hours

HALT	1301	Principles of Horticulture
HALT	1324	Turfgrass Science & Management
ITSC	1309	Integrated Software Applications
HALT	1303	Herbaceous Plants
ENGL	1301	Freshman Composition I

#### Second Semester – 16 Hours

BMGT	1303	Principles of Management
HALT	2312	Turfgrass Maintenance
HALT	1331	Woody Plant Materials
HALT	1333	Landscape Irrigation
BIOL	1411	General Botany

### Second Year

#### First Semester – 15/16 Hours

HALT	2318	Soil Fertility and Fertilizers
HALT	2323	Horticultural Pest Control
HALT	1345	Golf/Sport Field/Park Management
HALT	1346	Specialized Turfgrass Management
MATH	1314	College Algebra
	or	
MATH	1332	Math for Liberal Arts
	or	
CHEM	1406	Introduction to Chemistry I

#### Second Semester – 15 Hours

SPCH	1311	Fundamentals of Speech
	or	
SPCH	1321	Business and Professional Speech
HALT	1397	Special Topics in Turf Management
HALT	1322	Landscape Design
		Humanities/Fine Arts Elective
SOCI	1301	Introduction to Sociology
	or	
PSYC	2301	Introduction to Psychology

**Summer Session – 3 Hours**

HALT	2383*	Cooperative Education—Turf Management
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\* Capstone Course

**Total Hours****64/65**

## TURFGRASS AND GOLF COURSE MANAGEMENT CERTIFICATE

**First Year****First Semester – 12 Hours**

HALT	1301	Principles of Horticulture
HALT	1324	Turfgrass Science & Management
ITSC	1309	Integrated Software Applications
HALT	1303	Herbaceous Plants

**Second Semester – 12 Hours**

BMGT	1303	Principles of Management
HALT	2312	Turfgrass Maintenance
HALT	1331	Woody Plant Materials
HALT	1333	Landscape Irrigation

**Second Year****First Semester – 12 Hours**

HALT	2318	Soil Fertility and Fertilizers
HALT	2323	Horticulture Pest Control
HALT	1345	Golf/Sport Field/Park Management
HALT	1346*	Specialized Turfgrass Management

\* Capstone Course

**Total Hours****36****Humanities/Fine Arts Electives**

ARTS	1301	Art Appreciation
MUSI	1306	Music Appreciation
DRAM	1310	Theater Appreciation
HUMA	1301	Introduction to Humanities

## ASSOCIATE OF APPLIED SCIENCE IN VETERINARY TECHNOLOGY

The Veterinary Technology Associate of Applied Science degree program is designed to prepare students to work as registered veterinary technicians. Students completing the program will have technical skills and competencies to assist veterinarians in industrial, commercial, and research settings as well as in pharmaceutical companies and animal handling retail businesses.

The Veterinary Technology program was accredited in 1998 by the Committee on Animal Technician Activities and Training of the American Veterinary Medical Association (AVMA). Accreditation allows graduates to be eligible to take the Texas Veterinary Medical Association's examination to become a Registered Veterinary Technician.

Admission to the Veterinary Technology program is limited to 32 qualified students every fall semester. Prospective students must have the following to be reviewed for a possible slot: must meet the general admission requirements to Palo Alto College, successful completion of all parts of the TASP, successful completion with a GPA of 2.0 or higher on the required prerequisites, three letters of recommendation (one from veterinarian and two from other sources), successful completion of 80 hours of work experience in a veterinary clinic, and complete application received by June 1.

All applications will be reviewed and qualified applicants will be notified by June 15. Once notified, applicants will be required to successfully complete a general aptitude test and have a personal interview with the veterinary technology staff.

After completion of all the above, the students will be ranked and 32 qualified applicants will be accepted into the program. Accepted students will be required to have a physical exam, tetanus prophylaxis and pre-exposure rabies prophylaxis before entrance into the fall semester.

For further information, refer to the Veterinary Technology website: [w.awwccd.edu/pac/vettech/Home.htm](http://w.awwccd.edu/pac/vettech/Home.htm).

### Advisory Committee

Noberto Espitia, Texas A & M University  
Dr. Roque Gonzales, Highland Animal Hospital  
John Graham, South Texas Serum  
Dr. John Herbold, UT-Houston School of Public Health  
Linda Larson, Mission Animal Hospital  
Dr. Dennis McIntosh, El Dorado Animal Hospital  
Dr. Tom Vice, Broadway Animal Hospital  
Dr. Jake Wells, Cibolo Valley Animal Hospital  
Dr. Robert Wolf, UT Health Science Center

### First Year

#### Summer I Session – 10 Hours

CHEM	1406	Introductory Chemistry I
ITSC ***		Computer Course
SPCH**		Speech Course

#### Summer II Session – 7 Hours

BIOL	1408	General Biology I
or		
BIOL	1413	General Zoology
ENGL	1301	Freshman Composition I

#### Fall Semester – 13 Hours

VTHT	1291	Special Topics (Animal Care)
VTHT	1301	Introduction to Veterinary Technology
VTHT	1205	Veterinary Medical Terminology
VTHT	1209	Veterinary Nutrition
VTHT	1413	Veterinary Anatomy and Physiology

**Spring Semester – 14 Hours**

VTHT	1291	Special Topics (Parasitology)
VTHT	1349	Veterinary Pharmacology
VTHT	2313	Laboratory Animal Clinical Management
VTHT	2301	Canine & Feline Clinical Management
VTHT	2323	Veterinary Clinical Pathology I

**Summer Session – 3 Hours**

VTHT	2366*	Practicum
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**Second Year****Fall Semester – 13 Hours**

PSYC	2301	Introduction to Psychology
VTHT	2325	Large Animal Assisting Techniques
VTHT	2331	Veterinary Clinical Pathology II
VTHT	1341	Anesthesia and Surgical Assistance
VTHT	1191	Special Topics (Exotics)

**Spring Semester – 12 Hours**

VTHT	1317	Veterinary Office Management
VTHT	1345	Veterinary Radiology
VTHT	2260	Veterinary Technology Clinicals
VTHT	1125	Pharmacological Calculations
Elective		Humanities / Fine Arts Elective

\* Capstone Course

\*\* SPCH 1311, 1318 or 1321

\*\*\* ITSC 1309, 1301 or COSC 1301

**Total Hours**

72

The student must select one course from the following Humanities/Fine Arts Electives:

ARTS 1301	MUSI 1306	DRAM 1310	HUMA 1301
PHIL 1301	PHIL 2303	PHIL 2306	SPAN 1411

**ANIMAL HEALTH ASSISTANT CERTIFICATE****First Year****Summer I Session – 10 Hours**

CHEM	1406	Introductory Chemistry I
ITSC	1309	Integrated Software Applications I
SPCH	1318	Interpersonal Communication

**Summer II Session – 7 Hours**

BIOL	1413	General Zoology
ENGL	1301	Freshman Composition I

**Fall Semester – 11 Hours**

VTHT	1301	Introduction to Veterinary Technology
VTHT	1205	Medical Terminology
VTHT	1413	Animal Anatomy and Physiology
VTHT	1291	Special Topics in Veterinary Technology

**Spring Semester – 11 Hours**

VTHT	2313	Laboratory Animal Clinical Management
VTHT	1349	Veterinary Pharmacology
VTHT	2301	Canine and Feline Clinical Management
VTHT	1291	Special Topics in Veterinary Technology

**Second Year**

**Fall Semester – 7 Hours**

VTHT	2325	Large Animal Assisting Techniques
VTHT	1317*	Veterinary Office Management
VTHT	1191	Special Topics in Veterinary Technology

\*Capstone course for Animal Health Assistant Certificate

**Total Hours**

**46**



*Veterinary Technology students receive paws-on training.*

## 10 Course Descriptions

The first numeral of the Course Number indicates the level of the course. A freshman level course begins with a "1," and a sophomore level course begins with a "2." Developmental courses begin with a "0." The second numeral indicates the semester hour value of the course. The last two numerals are used for departmental sequence. Example: History 1301 is a freshman level course of three semester hours credit.

As part of each course description, there are three numbers within parentheses. The first number indicates the semester hour value of the course, the second number indicates the number of lecture hours per week the class meets, and the third number indicates the number of laboratory hours per week the class meets. Example: (3-3-3) indicates the course has three semester hours credit value, meets for three hours of lecture per week and three laboratory hours per week. Hours met per week are based on semester-length classes.

Palo Alto College has adopted the common course numbering system being used by many of the colleges in Texas. This system allows students to compare courses between colleges and know that those with the same designations are the same course. This affects academic courses only.

Many courses have lab fees. These include science courses, computer classes, music, physical education, and veterinary technology. These lab fees will be listed in the class schedule and on the student's invoice.



*Selecting the right courses is critical to succeeding in college.*

### Course Prefix List

ACCT	Accounting	HRPO	Human Resources Management
ACNT	Accounting	HUMA	Humanities
AGMG	Agribusiness Management	HUMD	Human Development
AGRI	Agriculture	HYDR	Hydraulics Technology
AIRP	Professional Pilot	IBUS	International Business
ANTH	Anthropology	IDST	Interdisciplinary Studies
ARTS	Art	IEIR	Industrial Electronics
AVIM	Aviation	INFO	Library & Information Studies
BCIS	Computer Info Systems	INTC	Electro-Mechanical Technology
BIOL	Biology	ITMC	Computer Information Systems
BMGT	Business Management/Logistics Management	ITNW	Computer Info Systems
BUSG	Business, General	ITSC	Computer Info Systems
BUSI	Business Administration	ITSE	Computer Info Systems
CDEC	Teacher Asst/Aide	ITSW	Computer Info Systems
CETT	Electro-Mechanical Technology	LMGT	Business Management/Logistics Management
CHEM	Chemistry	MATH	Mathematics
COMM	Communications	MRKG	Marketing/Business Management
COSC	Computer Science	MUAP	Music – Individual Instruction
CRIJ	Criminal Justice	MUEN	Music – Small Ensemble
DFTG	Drafting	MUSI	Music
DRAM	Drama	PHED	Physical Education
ECON	Economics	PHIL	Philosophy
EDTC	Teacher Asst/Aide	PHYS	Physics
EECT	Telecomm Technology	POFI	Admin Computer Tech
ELMT	Electro-Mechanical Technology	POFT	Admin Computer Tech
ELPT	Electrical Power Transmission	PSYC	Psychology
ENGL	English	PSYT	Industrial & Organizational Psychology
ENGR	Engineering	QCTC	Quality Control Technology/Technician
ENVR	Environmental Science	READ	Reading
EPCT	Environmental Technologies	RTVB	Radio and Television Broadcasting
ESOL	English as a Second Language	SOCI	Sociology
FREN	French	SOCW	Social Work
GEOG	Geography	SPAN	Spanish
GEOG	Geology	SPCH	Speech
GERM	German	SPNL	Spanish Language & Literature
GOVT	Political Science	SS	Student Success
HALT	Landscape & Hort Science/ Turfgrass & Golf Mgt	VTHT	Veterinary Technology
HART	Electricity	WLDG	Welding
HIST	History		

**ACCT 2301 Principles of Accounting I  
(3-3-1)**

An introduction to business external financial reporting; designed to create an awareness of the accounting concepts and principles used in preparing the three basic financial statements: the income statement, balance sheet, and statement of cash flows. The course is designed for all business students.

**ACCT 2302 Principles of Accounting II  
(3-3-1)**

Prerequisite: ACCT 2301

An introduction to the determination, development and uses of internal accounting information needed by business management to satisfy customers while continuously controlling and containing costs. The course is designed for all business students.

**ACCT 2370 Introduction to Accounting Topics  
(3-3-0)**

Prerequisite: ACCT 2302

This course covers advanced managerial accounting topics including: cost accounting, cost behavior, cost/volume/profit analysis, variable costing, profit planning/budgeting, standard costs, segmented income statements, relevant cost for business decision-making, and individual federal income taxes. Emphasis is on use of accounting data within an organization by its managers to carry out their responsibilities for planning operations, controlling activities and making decisions.

**ACNT 1303 Introduction to Accounting I  
(3-3-1)**

Prerequisite: None. Recommend MATH 0300 be taken before or concurrently.

A study of analyzing, classifying and recording business transactions in a manual and computerized environment. Emphasis of this course is on understanding the complete accounting cycle and preparing financial statements, bank reconciliation, and payroll.

**AGMG 1192 Special Topics in Agricultural Business/Agribusiness Operations  
(1-1-0)**

Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student.

**AGMG 1307 Agribusiness Safety, Laws and Regulations  
(3-2-2)**

Introduction to the various government agencies involved in regulation, monitoring, compliance, policies, and standards affecting agribusiness. Emphasis on research, interpretation, and implementation of laws and regulations.

**AGMG 1311 Introduction to Agribusiness  
(3-3-0)**

Introduction to agribusiness management, marketing, and sales in the free enterprise system. Topics include economic principles, finance, risk management, record keeping, budgeting, employee/employer responsibilities, communications, human relations skills, and agricultural career opportunities.

**AGMG 1350 International Agriculture  
(3-3-0)**

Examination of world production of and demand for agricultural commodities and world trade in agricultural products. Emphasis on national and international policies.

**AGMG 1392 Special Topics in Agricultural Business/Agribusiness Operations  
(3-3-0)**

Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student.

**AGMG 2588 Internship – Agricultural Business  
(5-0-20)**

Prerequisites: Completion of all course work and departmental approval.

A work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. A learning plan is developed by the College and the employer.

**AGRI 1131 Introduction to Agriculture  
(1-1-0)**

Overview of world agriculture, nature of the industry, resource conservation, and the American agricultural system, including production, distribution, and marketing.

**AGRI 1307 Agronomy  
(3-2-2)**

Principles and practices in the development, production, and management of field crops including plant breeding, plant diseases, soils, insect control, and weed control.

**AGRI 1315 Horticulture  
(3-2-2)**

Structure, growth, and development of horticultural plants from a practical and scientific approach. Environmental effects, basic principles of propagation, greenhouse and outdoor production, nutrition, pruning, chemical control of growth, pest control, and landscaping.

**AGRI 1319 Animal Science  
(3-2-2)**

Scientific animal agriculture. Importance of livestock and meat industries. Selection, reproduction, nutrition, management, and marketing of beef cattle, swine, sheep, goats, and horses.

**AGRI 1325 Marketing of Agricultural Products  
(3-3-0)**

Operations in the movement of agricultural commodities from producer to consumer, including the essential marketing functions of buying, selling, transporting, storing, financing, standardizing, pricing, and risk bearing.

**AGRI 2313 Plant Protection  
(3-2-2)**

Principles and practices of controlling and preventing economic loss caused by plant pests. Includes instruction in entomology, plant pathology, weed science, crop science, environmental toxicology, and related environmental protection measures.

**AGRI 2317 Introduction to Agricultural Economics  
(3-3-0)**

Fundamental economic principles and their applications to the problems of the industry of agriculture.

**AGRI 2321 Livestock Evaluation I  
(3-2-2)**

Selection, evaluation, and classification of livestock and livestock products.

**AGRI 2322 Livestock Evaluation II  
(3-2-2)**

Selection, evaluation, and classification of livestock and livestock products.

**AGRI 2330 Wildlife Conservation and Management  
(3-3-0)**

Principles and practices used in the production and improvement of wildlife resources. Aesthetic, ecological, and recreational uses of public and private lands.

**AGRI 2377 Feeds and Feeding  
(3-3-0)**

Characteristics of feedstuffs used in livestock enterprises. Manual and computer ration formulation procedures and life cycle nutritional management of beef, swine, sheep, dairy, horses, and poultry. Methods of grain, protein supplement and forage processing and evaluation. Commercial and on-the-farm feed mixing methods and feed control laws.

**AIRP 1191 Special Topics Multi-Engine Ground  
(1-1-0)**

Topics address recently identified current events, skills, knowledges, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. A comprehensive course designed for private or commercial pilots who wish to add the multi-engine rating to their pilot certificates. The course examines the light twin-engine airplane operations, systems, performance, engine-out operations, weight and balance, and aerodynamics.

**AIRP 1307 Aviation Meteorology  
(3-3-0)**

In-depth coverage of meteorological phenomena affecting aircraft flight. Topics include basic concepts of aviation meteorology in the study of temperature, pressure, moisture, stability, clouds, air masses, fronts, thunderstorms, icing, and fog. Also includes analysis and use of weather data for flight planning.

**AIRP 1313 Introduction to Aviation  
(3-3-0)**

A study of the historical development of the aviation industry, including key events in civil, military, and space exploration and an overview of legislation relating to aviation.

**AIRP 1315 Private Pilot Flight  
(3-3-0)**

Prerequisite: PLT 1301 or concurrent enrollment.

Flight training to prepare the student for the completion of the Federal Aviation Administration private pilot certification process, including dual and solo flight in the areas of maneuvers and cross-country navigation. A current Second Class FAA Medical Certificate and Student Pilot Certificate are required. **Special Fees apply.**

**AIRP 1317 Private Pilot Ground School  
(3-3-0)**

Basic ground school for the Private Pilot Certificate, providing the student with the necessary aeronautical knowledge that can be used for private pilot certification. Topics include principles of flight, radio procedures, weather, navigation, aerodynamics, and Federal Aviation Administration regulations. This ground school is a foundation course for all students of aviation and is required for subsequent flight training. Fulfills the ground training for the private pilot certificate.

**AIRP 1345 Aviation Safety  
(3-3-0)**

A study of the fundamentals essential to the safety of flight. A survey of the aviation industry including decision-making factors, accident reporting, accident investigation, air traffic systems, and aircraft technologies. This course is an introduction to significant elements involved with the safe operation of aircraft, the airport environment, and associated equipment both in flight and on the ground. Consideration is given to examining safety philosophies, programs, research, and the role of various agencies.

**AIRP 1351 Instrument Ground School  
(3-3-0)**

A study of basic instrument radio and navigation fundamentals used in instrument flight. Topics include a description and practical use of aerial navigation systems and instruments, charts used for instrument flight, and Federal Aviation Administration regulations. Qualifies as part of a program leading to Federal Aviation Administration Certification. This course covers regulations that apply to flight under instrument conditions, the air traffic system and procedures, navigation and approach procedures, and elements of forecasting weather trends.

**AIRP 1355 Intermediate Flight  
(3-1-6)**

Prerequisite: AIRP 1317 and AIRP 1415, and a current and unrestricted second-class medical certificate.

Provides students with flight hours and skills necessary to fulfill solo cross-country hours required for the Federal Aviation Administration Commercial Pilot, single engine land, airplane rating. **Special Fees Apply.**

**AIRP 1391 Special Topics in Aircraft Pilot and Navigator (Professional)  
(3-1-3)**

Prerequisite: AIRP 1317 and AIRP 1415, and a current and unrestricted second-class medical certificate.

Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. Dual instruction designed to enhance judgment, coordination and overall flying skills. Instruction includes review of basic airmanship and introduces loops, rolls, precision spins and recovery, wingovers, and snap rolls. **Special Fees Apply.**

**AIRP 2236 Certified Flight Instructor – Airplane (Lab)  
(2-1-3)**

Prerequisites: AIRP 1317, AIRP 1415, AIRP 1351, AIRP 1355, AIRP 2337, AIRP 2339, and AIRP 2349 or concurrent enrollment, AIRP 2350, and a current and unrestricted second class medical certificate.

Flight instruction necessary to qualify for the Federal Aviation Administration Certified Flight Instructor-Airplane Certificate. Topics include ground and flight instruction. **Special Fees Apply.**

**AIRP 2251 Multi-Engine Flight Training (Lab)  
(2-2-0)**

Prerequisite: AIRP 1317 and AIRP 1415 and AIRP 1191 or concurrent enrollment, and a current and unrestricted second-class medical certificate.

Preparation for the multi-engine class rating, which will be added to a current pilot certificate. Includes explanation and demonstration of all required Federal Aviation Administration normal and emergency operations and procedures. Dual flight instruction in twin-engine airplane operations, systems, emergencies, single-engine flight and performance. **Special Fees Apply**

**AIRP 2333 Aircraft Systems  
(3-3-0)**

Study of the general principles, operations, and application of pneumatic, hydraulic, electrical, fuel environmental, protection, and warning systems. Emphasis on types of aircraft structures and their control systems. The modern aircraft is rapidly changing as technology advances. This course will introduce the student to the important systems of medium twin and turbine aircraft. Areas of study will include theory and operation of such systems as propulsion, environmental, fuel, and avionics.

**AIRP 2339 Commercial Flight  
(3-1-6)**

Prerequisite: AIRP 1317, AIRP 1351, AIRP 1355, AIRP 1315, AIRP 2337 or concurrent enrollment, AIRP 2350, and a current and unrestricted second-class medical certificate.

Flight instruction necessary to qualify for the Federal Aviation Administration Commercial Pilot Certificate. Instruction includes both dual and solo flight training to prepare the student for mastery of all commercial pilot maneuvers. The course is the final phase of flight training in preparation for the Commercial Pilot Certificate with Instrument Rating. **Special Fees apply.**

**AIRP 2337 Commercial Ground School  
(3-3-0)**

A study of advanced aviation topics that can be used for Federal Aviation Administration certification at the commercial pilot level. Includes preparation for the Commercial Airplane written test. Review of aerodynamics, theory of flight, and Federal Aviation Regulations.

**AIRP 2349 Instructor Ground School  
(3-3-0)**

Skill development in the fundamentals of teaching and learning in an aviation-oriented environment. Introduction to the techniques of instruction and analysis of flight maneuvers. Topics include flight instructor responsibilities and federal aviation regulations relating to the instructor rating. Instructional techniques, analysis of maneuvers, and Federal Aviation Regulations are included. This course prepares the student for the flight instructor written examinations: Fundamentals of Instruction and Flight Instructor-Airplane.

**AIRP 2350 Instrument Flight (Lab)  
(3-1-6)**

Prerequisite: AIRP 1317, AIRP 1351 or concurrent enrollment, AIRP 1355, AIRP 1415, and a current and unrestricted second class medical certificate.

Preparation for completion of the Federal Aviation Administration Instrument Pilot Rating with mastery of all instrument procedures. **Special Fees Apply.**

**AIRP 2380 Cooperative Education – Aircraft Pilot and Navigator (Professional)  
(3-1-20)**

Prerequisite: Consent of department chairperson.

Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component.

**ANTH 2346 Introduction to Anthropology  
(3-3-0)**

This course is a survey of humankind — of peoples both ancient and modern. It will examine the unity and diversity of cultural patterns including consideration of their political, intellectual, technical, aesthetic, and other social institutions from a cross-cultural and multi-cultural perspective.

**ARTS 1301 Art Appreciation  
(3-3-0)**

A lecture course exploring the elements of visual language, their nature, functions and relationships in painting, sculpture, architecture, and industrial design. Focus is on the development and application of critical thinking skills.

**ARTS 1303 Art History Survey I  
(3-3-0)**

A lecture course in the history of painting, sculpture, architecture, and other art forms from prehistoric times to the 14th Century.

**ARTS 1304 Art History Survey II**  
**(3-3-0)**

A lecture course in the history of painting, sculpture, architecture, and other art forms from the 14th Century to the present.

**ARTS 1311 Design I**  
**(3-3-3)**

An art studio course in the theory and practice of design. The fundamental principles and elements of design as related to visual structure. Focus is on the development and application of critical thinking skills.

**ARTS 1312 Design II**  
**(3-3-3)**

Prerequisite: ARTS 1311.

An art studio course in the formal elements of design in three dimensions with an emphasis on personal expression.

**ARTS 1316 Drawing I**  
**(3-3-3)**

An art studio course investigating a variety of media, techniques, and subjects exploring perceptual and descriptive possibilities with consideration of drawing and figure construction as a developmental process as well as an end in itself. Focus is on the development and application of critical thinking skills.

**ARTS 1317 Drawing II**  
**(3-3-3)**

Prerequisite: ARTS 1316.

An art studio course offering further investigation of drawing, stressing the expressive and conceptual aspects of drawing and figure construction within a spatial environment.

**ARTS 1325 Drawing and Painting**  
**(3-3-3)**

Prerequisite: None

An art studio course in the basic problems encountered in the process of drawing and painting. Recommended for non-art majors.

**ARTS 2316 Painting I**  
**(3-3-3)**

Prerequisite: ARTS 1311 and ARTS 1316.

An art studio course which explores the potential of painting media with emphasis on color, composition, dynamics of vision.

**ARTS 2317 Painting II**  
**(3-3-3)**

Prerequisite: ARTS 2316.

An art studio course which offers a continuation of ARTS 2316 with emphasis on individual expression. With the instructor's approval, this course may be repeated once for an additional 3 hours credit as a study in advanced problems and techniques.

**ARTS 2323 Drawing III  
(3-3-3)**

Prerequisite: ARTS 1317.

An art studio course focusing on problems of structure and action of the human figure and conceptual aspects of drawing.

**ARTS 2324 Drawing IV  
(3-3-3)**

Prerequisite: ARTS 2323.

An art studio course which investigates drawing with emphasis on individual expression. With the instructor's approval, this course may be repeated once for an additional 3 hours credit as a study in advanced problems and techniques.

**ARTS 2326 Sculpture I  
(3-3-3)**

An art studio course which explores three-dimensional concepts of form through a variety of materials and techniques.

**ARTS 2327 Sculpture II  
(3-3-3)**

Prerequisite: ARTS 2326.

An art studio course which offers a continuation of ARTS 2326 with emphasis on individual expression. With the instructor's approval, this course may be repeated once for an additional 3 hours credit as a study in advanced problems and techniques.

**ARTS 2331 Graphics I  
(3-3-3)**

An art studio course investigating the use of the computer as a graphic arts tool with an overview on computer graphics technology. Students will work with a variety of software in common use, a survey of input/output devices, and hardware. Focus is on the development of critical thinking skills with hands-on training of basic drawing, painting, animation and photographic applications.

**ARTS 2332 Graphics II  
(3-3-3)**

An art studio course offering further investigation of the computer as a graphics arts tool and introduction of paint and image manipulation software.

**ARTS 2346 Ceramics I  
(3-3-3)**

An art studio course exploring various processes of making pottery and ceramic sculpture with an emphasis on handbuilding techniques. Students will be introduced to different methods of glazing and firing.

**ARTS 2347 Ceramics II  
(3-3-3)**

Prerequisite: ARTS 2346.

An art studio course with continued exploration of various handbuilding techniques as well as an introduction to the potter's wheel. Emphasis is on increased student proficiency, continued aesthetic development, and self-expression. With the instructor's approval, this course may be repeated once for an additional 3 hours credit as a study in advanced problems and techniques.

**ARTS 2356 Photography I  
(3-3-3)**

An art studio course introducing the possibilities of photography as an art medium. Technical information will include camera operation, black and white film developing and printing techniques, knowledge of chemistry, and presentation skills. Emphasis will be placed upon study of design aesthetics, history, and contemporary trends as a means of developing an understanding of photographic aesthetics. Students will provide their own cameras.

**ARTS 2357 Photography II  
(3-3-3)**

Prerequisite: ARTS 2356.

An art studio course offering further investigation into photographic processes and techniques with emphasis on individual expression with regard to specific application of the photographic process. Students will provide their own cameras. With the instructor's approval, this course may be repeated once for an additional 3 hours credit as a study in advanced problems and techniques.

**ARTS 2372 Studies in Contemporary Art: Chicano Art  
(3-3-0)**

A lecture course with a focus on a specific period or art movement within the study of contemporary art: Chicano art. This course traces the historical development of Mexican and Chicano art, from early Pre-Colombian art in Mexico to contemporary Chicano art, and cites the influence of Mexican and Southwest art on Chicano art. Therefore, Studies in Contemporary Art may be repeated for credit when topics vary.

**ARTS 2389 Academic Cooperative in Fine Arts  
(3-3-0)**

An instructional program designed to integrate on-campus study with practical hands-on work experience in Fine Arts. In conjunction with class seminars, the individual student will set specific goals and objectives in the study of visual arts.

**AVIM 1301 Introduction to Aviation Management  
(3-3-0)**

An introduction to small aviation business management. Emphasis on financial marketing, human resources, and administrative and information systems essential for successful business operations.

**AVIM 1380 Cooperative Education – Aviation Management  
(3-1-20)**

Prerequisite: Consent of department chairperson

Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component.

**AVIM 2331 Airline Management  
(3-3-0)**

An examination of the organization, operation, and management of airlines. Topics include financing, aircraft selection, route feasibility studies, load factors, and marketing.

**AVIM 2335 Airport Management  
(3-3-0)**

A study of the major functions of airport management including facilities and services, organization, human resources, maintenance, planning and zoning, operations, revenues and expenses, public relations, ecology, and safety.

**AVIM 2337 Aviation Law  
(3-3-0)**

A study of the historical development of aviation law including in-depth coverage of constitutional, criminal, civil, common, and international law as it relates to aviation activities.

**BCIS 1305 Business Computer Applications  
(3-3-1)**

An examination of computer terminology, hardware, software, operating systems, and information systems relating to a business environment. The main focus of this course is on business applications of software, including word processing, spreadsheets, databases, presentation graphics, and business-oriented utilization of the Internet.

**BIOL 1322 Nutrition and Diet Therapy  
(3-3-0)**

Recommended: One semester of biology and one semester of chemistry.

For allied health majors. The study of food components and their function in the life process including functions, food sources digestion, and metabolism with application to normal and therapeutic human nutritional needs.

**BIOL 1406 General Biology I  
(4-3-3)**

An introductory course that includes the following topics: history and philosophy of the science of biology, basic chemistry, energy transformation, physical phenomena, genetics, evolution, and taxonomy. Laboratory exercises will complement lecture topics. Must be followed by BIOL 1407 to fulfill the science requirement. For Science Majors.

**BIOL 1407 General Biology II  
(4-3-3)**

Prerequisite: BIOL 1406

A continuation of a two-semester course in biological concepts. This course will emphasize the structure and function of living organisms, comparative animal physiology, evolutionary adaptation, and ecology. The laboratory exercises will complement the lecture topics. For Science Majors.

**BIOL 1408 General Biology I  
(4-3-3)**

For non-science majors. Introductory course, history and philosophy of the science of biology, basic chemistry, energetic, physical phenomena, genetics, evolution, taxonomy and survey of the kingdoms. Laboratory exercises will complement lecture topics. Must be followed by 1409 to fulfill the science requirement.

**BIOL 1409 General Biology II  
(4-3-3)**

Prerequisite: BIOL 1408.

For non-science majors. This is a continuation of BIOL 1408. Emphasis is on the structure, function, and physiology of animals and flowering plants. Ecology is also discussed. Laboratory exercises will complement the lecture topics.

**BIOL 1411 General Botany  
(4-3-3)**

Recommended for science majors. The study of the structure, function and physiology of plant cells, tissues and structures. Included is an evolutionary survey and the life histories of the following groups of organisms: viruses, bacteria, algae, fungi, true mosses, ferns, gymnosperms, angiosperms, and their close relatives. Evolution, genetics, reproduction, and ecology are also discussed. Laboratory exercises will complement the lecture. Both BIOL 1411 and 1413 must be taken in order to satisfy the science requirement.

**BIOL 1413 General Zoology  
(4-3-3)**

Recommended for science majors. The study of the structure, function, and physiology of animal cells, tissues, organs, and organ systems. Included is a survey of the diversity of animal and animal-like organisms. Emphasis is placed on the classification, morphology, physiology, and ecology of all animals. The laboratory exercises will complement the lecture topics. Both BIOL 1413 and 1411 must be taken to satisfy the science requirement.

**BIOL 2106 Environmental Biology Laboratory  
(1-0-3)**

Biology 2106 is a laboratory course designed to complement the BIOL 2306 lecture. Selected laboratory studies will relate to topics in the BIOL 2306 lecture.

**BIOL 2306 Environmental Biology  
(3-3-0)**

This course is a study of human interrelationships and their interdependence with the environment. Studies will include the impact of human activities on the environment and their effect on natural and human resources. This course includes an evaluation of present and future strategies to preserve a healthy environment. This course may fulfill a science requirement for the Associate of Arts Degree.

**BIOL 2389 Academic Cooperative in the Biological Sciences  
(3-1-6)**

Prerequisite: Instructor Approval

Experience working with biologists through a cooperative agreement between the college, employer, and the student. Under the supervision of the college and employer, the student will combine classroom learning and work experience. Academic learning objectives and job-related goals will be assessed.

**BIOL 2401 Human Anatomy and Physiology I  
(4-3-3)**

Recommendation: Students with little or no Biology background should take Biology 1408 prior to enrollment in this class.

The study of the structure and function of the cells, tissues, organs, special senses and the skeletal, muscular, and nervous systems. Must be followed by 2402 to complete a science requirement. NOTE: Some sections are web-enhanced. Consult course schedule.

**BIOL 2402 Human Anatomy and Physiology II  
(4-3-3)**

Prerequisite: BIOL 2401.

The study of the structure and function of the endocrine, digestive, respiratory, cardiovascular, lymphatic, urinary, and reproductive systems. Human growth, development and genetics are also included. NOTE: Some sections are web-enhanced. Consult course schedule.

**BIOL 2416 Genetics  
(4-3-3)**

Prerequisites: One semester of BIOL 1406, 1413 or 2401 and one semester of CHEM 1311 or CHEM 1406

A study of the principles of molecular and classical genetics and the function and transmission of hereditary material. May include population genetics and genetic engineering.

**BIOL 2420 Microbiology and Pathology  
(4-3-4)**

Prerequisites: None

This course includes a study of the microbiology and clinical pathology vital to the paramedical health profession, upon which infectious diseases and their prevention and nursing care depend. Special emphasis is placed on disease etiology, epidemiology, and host-parasite interactions.

**BIOL 2421 General Microbiology  
(4-3-4)**

Prerequisites: BIOL 1406 and CHEM 1311

This course includes a comprehensive microbiological survey of the Monerans, Protists, Fungi, and viruses. Taxonomy, genetics, physiology, metabolism, and microbial ecology are considered, as well as medical microbiology and immunology.

**BMGT 1301 Supervision  
(3-3-0)**

A study of the role of the supervisor. Managerial functions as applied to leadership, counseling, motivation, and human skills are examined.

**BMGT 1303 Principles of Management  
(3-3-0)**

Concepts, terminology, principles, theories, and issues in the field of management.

**BMGT 1313 Purchasing Management  
(3-3-0)**

Prerequisites: LMGT 1319 or Departmental Approval

This course is designed to present the purchasing process as it relates to such topics as inventory control, price determination, vendor selection, negotiation techniques and ethical issues. The focus of the course will be on the role and function of purchasing in the Logistics Management process.

**BMGT 1331 Production/Operations Management  
(3-3-0)**

Prerequisites: LMGT 1319 or Departmental Approval and MATH 1314

This course focuses on the fundamentals of the various techniques used in the practice of production management to include location, design, and resource allocation. Topics include Demand Forecasting, Quality Processes, Flow Control, Project Management, Facility and Workforce Management using mathematical and statistical techniques.

**BMGT 1395 Special Topics in Operations Management and Supervision  
(3-3-0)**

Topics address recently identified current event, skill, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student.

**BMGT 2303 Problem-Solving and Decision-Making  
(3-3-0)**

Decision-making and problem-solving processes in organizations, utilizing logical and creative problem-solving techniques. Application of theory is provided by experiential activities such as small group discussions, case studies, and the use of other managerial decision aids.

**BMGT 2309 Leadership  
(3-3-0)**

Concepts of leadership and its relationship to management. Prepares the student with leadership and communication skills needed to inspire and influence.

**BMGT 2331 Principles of Quality Management  
(3-3-0)**

Prerequisites: BMGT 1303 and MATH 1314

Quality of productivity in organizations. Includes planning for quality throughout the organization, analysis of costs of quality, and employee empowerment.

**BMGT 2341 Strategic Management  
(3-3-0)**

A study of the strategic management process, including analysis of how organizations develop and implement a strategy for achieving organizational objectives in a changing environment.

**BMGT 2347 Critical Thinking and Problem-Solving  
(3-3-0)**

Instruction in interpreting data for effective problem-solving and recommending corrective action with emphasis on a structured approach to critical thinking and problem solving in a term environment.

**BMGT 2382 Cooperative Education - Business Administration & Management  
(3-1-20)**

Prerequisites: Departmental approval

Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the College, employer, and student. Under the supervision of the College and the employer, the student combines classroom learning with work experience. Includes a lecture component.

**BMGT 2488 Internship – Business Administration and Management, General  
(Logistics Management)  
(4-0-20)**

Prerequisites: Completion of all formal course work for the AAS Degree or Departmental Approval.

A work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts. A learning plan is developed by the college and the employer. **Professional Liability Fee Required.**

**BUSG 2309 Small Business Management  
(3-3-0)**

A course on how to start and operate a small business. Topics include facts about a small business, essential management skills, how to prepare a business plan, financial needs, marketing strategies, and legal issues.

**BUSI 1301 Introduction to Business  
(3-3-0)**

A general business course emphasizing basic industries, forms of organization, capitalism, alternative economic systems, marketing, finance, management, human resources, pricing, business risks, and the relation of government to business.

**BUSI 1307 Personal Finance  
(3-3-0)**

A study of the major elements of effective money management that individuals and families encounter. These include the various aspects of financial planning such as budgeting, managing taxes, making major financial acquisition decisions, adopting effective debt management techniques, insurance alternative considerations and choices, retirement planning through wise investment decisions, and estate preservation.

**BUSI 1311 Principles of Salesmanship  
(3-3-0)**

Analysis of the various styles of sales management and advertising techniques used in wholesale and retail selling, preparation of sales canvasses and advertising layouts and distribution media are presented in this course.

**BUSI 2301 Business Law I  
(3-3-0)**

Prerequisite: Sophomore Standing

The study of the origin and development of law. Topics included will be torts, criminal law, government regulations, consumerism and environmental law as applied to business. The application of law to contracts, personal property, bailments and sales will be presented.

**BUSI 2302 Business Law II  
(3-3-0)**

Prerequisite: BUSI 2301

The application of the law to the business subjects of commercial paper, creditors rights, secured transactions, agency, partnerships, special ventures, corporations, real property and estates will be presented.

**CDEC 1313 Curriculum Resources for Early Childhood Programs  
(3-3-0)**

A study of the fundamentals of curriculum design and implementation in developmentally appropriate programs for children.

**CDEC 1354 Child Growth and Development  
(3-3-0)**

A study of the principles of child growth and development from conception through adolescence. Focus on physical, cognitive, social, and emotional domains of development.

**CDEC 1356 Emergent Literacy for Early Childhood  
(3-3-0)**

An exploration of principles, methods, and materials for teaching young children language and literacy through discovery and play.

**CDEC 1357 Math and Science for Early Childhood  
(3-3-0)**

An exploration of principles, methods, and materials for teaching children math and science concepts through discovery and play.

**CDEC 1359 Children with Special Needs  
(3-3-0)**

A survey of information regarding children with special needs including possible causes and characteristics of exceptionalities, intervention strategies, available resources, referral processes, the advocacy role, and legislative issues.

**CDEC 2341 The School Aged Child  
(3-3-0)**

A study of appropriate programs for the school age child (5 to 13 years), including and overview of development, appropriate environments, materials, activities, and teaching/guidance techniques.

**CETT 1208 DC-AC Circuits  
(2-1-2)**

Fundamentals of DC circuits and AC circuits operation including Ohm's law, Kirchoff's laws, networks, transformers, resonance, phasors, capacitive and inductive and circuit analysis techniques.

**CETT 1325 Digital Fundamentals  
(3-2-2)**

An entry level course in digital electronics covering number systems, binary mathematics, digital codes, logic gates, Boolean algebra, Karnaugh maps, and combinational logic. Emphasis on circuit logic analysis and troubleshooting digital circuits.

**CHEM 1111 General Chemistry Laboratory I  
(1-0-4)**

Prerequisite: MATH 1314 or permission of the instructor.

Corequisite: Concurrent enrollment in CHEM 1311 or permission of the instructor.

Chemistry 1111 is a laboratory course involving principles and practices of identification of basic molecules and selected laboratory studies related to topics in Chemistry 1311.

**CHEM 1112 General Chemistry Laboratory II  
(1-0-4)**

Prerequisite: CHEM 1111.

Corequisite: Concurrent enrollment in CHEM 1312 or permission of the instructor.

Chemistry 1112 is a laboratory course involving principles and practice of separation and identification of ions and selected laboratory studies related to topics in Chemistry 1312.

**CHEM 1207 Biological and Chemical Calculations  
(2-2-0)**

Chemistry 1207 is a study of the mathematical applications used in chemistry and biology. Topics such as scientific notation, molarity, molality, dosage usage and reconstituting powder media. This course will not fulfill any science or math requirements.

**CHEM 1311 General Chemistry I  
(3-3-0)**

Prerequisite: MATH 1314 or permission of the instructor.

Corequisite: Concurrent enrollment in CHEM 1111 or permission of the instructor.

A course in the fundamental principles of inorganic chemistry, modern atomic theory, chemical bonding, states of matter, solutions, stoichiometry and other selected topics. Must be followed by Chemistry 1312 to fulfill a science requirement.

**CHEM 1312 General Chemistry II  
(3-3-0)**

Prerequisite: CHEM 1311.

Corequisite: Concurrent enrollment in CHEM 1112 or permission of the instructor.

This course is a continuation of Chemistry 1311. It covers molecular and ionic equilibria, elementary thermodynamics, electrochemistry, nuclear chemistry and an introduction to organic chemistry.

**CHEM 1406 Introductory Chemistry I  
(4-3-3)**

Prerequisite: MATH 0302 or its equivalent, or permission of the instructor.

A course for non-science majors and those pursuing a B.S. degree in Nursing. It is an introduction to elementary inorganic chemistry; contains laboratory experiences. Must be followed by Chemistry 1407 to satisfy a science requirement.

**CHEM 1407 Introductory Chemistry II  
(4-3-3)**

Prerequisite: CHEM 1406 or its equivalent or permission of the instructor.

A course for non-science majors and those pursuing a B.S. degree in Nursing. It covers aspects of organic, nuclear, and biochemistry, and physiological chemistry; contains laboratory experiences.

**CHEM 2223 Organic Chemistry Laboratory I  
(2-0-4)**

Prerequisite: CHEM 1312 and 1112 or permission of the instructor.

Corequisite: CHEM 2323 or permission of the instructor.

This course is an introduction to organic laboratory techniques such as distillation, crystallization, chromatography, and basic organic reactions.

**CHEM 2225 Organic Chemistry Laboratory II**  
**(2-0-4)**

Prerequisite: CHEM 2223.

Corequisite: CHEM 2325 or permission of the instructor.

This course is a continuation of Chemistry 2223 with emphasis on spectroscopy, organic analysis, and major organic reactions.

**CHEM 2323 Organic Chemistry I**  
**(3-3-0)**

Prerequisite: CHEM 1312 and 1112 or permission of the instructor.

An introductory course in organic chemistry. This course includes a study of the structure and properties of carbon compounds. The semester covers primarily stereochemistry and the structure and properties of aliphatic and aromatic hydrocarbons.

**CHEM 2325 Organic Chemistry II**  
**(3-3-0)**

Prerequisite: CHEM 2323

A continuation of Chemistry 2323. This course studies the chemistry of carboxylic acids, carbonyl compounds, and amines. Also included is a study of the physical means, spectroscopy, used to determine the structure of organic molecules.

**COMM 1307 Introduction to Mass Communications**  
**(3-3-0)**

A survey of mass communication. The course provides an overview of the traditional mass media: print, broadcast, film, as well as the related institutions of advertising, public relations, and journalism — their function, structure, support and influence.

**COMM 2305 Editing, Layout and Headline Writing**  
**(3-3-2)**

Prerequisite: COMM 2311.

This course develops an understanding of the editing process. Instruction in copy reading, proofreading, headline writing, typography and newspaper makeup.

**COMM 2311 News Gathering and Writing I**  
**(3-3-2)**

Recommended: Keyboarding proficiency.

A course in fundamentals to acquaint students with the newspaper traditions of a free and responsible press. The course includes instruction in proper techniques of information gathering as well as writing the basic news story.

**COMM 2315 News Gathering and Writing II**  
**(3-3-2)**

Prerequisite: COMM 2311 and ENGL 1302 with a grade of "C" or better

This course continues the aims and objectives of News Gathering and Writing I, with an emphasis on advanced and in-depth reporting techniques in gathering facts and writing interpretative, investigative and specialized news stories.

**COMM 2324 Practicum in Electronic Media**  
**(3-3-1)**

A studio course for understanding and using electronic media techniques through the conceptualizing, gathering, writing, editing, and creating processes. Classes may stress one or more genres, formats, or themes. May be repeated for different topics with departmental approval.

**COMM 2327 Principles of Advertising****(3-3-0)**

A study in the fundamentals of advertising, including advertising appeal, copy writing, layout, selection of media and budgeting.

**COSC 1300 Computer Literacy****(3-3-1)**

The student is introduced to the effect of computers on society, the history and use of computers, computer applications in various segments of society, programming concepts, and hardware and software terminology. Exact topics may be varied to reflect emerging technological changes. Includes exercises in productivity software tools such as word processing, spreadsheets, database management, presentation graphics, and web browsing. Course **not** intended for Computer Science majors.

**COSC 1301 Introduction to Computer and Information Systems****(3-3-1)**

Overview of computer information systems. Introduces computer hardware, software, data, procedures, systems and human resources, and explores their integration and application in business and other segments in society. The fundamentals of computer problem-solving and programming may be discussed and applied. Specific topics may be varied to reflect emerging technological changes. Provides a foundation for further study in computer science or computer information systems.

**COSC 1315 Fundamentals of Programming****(3-3-1)**

Prerequisite: COSC 1301 or ITSC 1301 or COSC 1300.

The student is introduced to the fundamentals of computer programming, using a current programming language. Emphasis is on the fundamentals of structured design, development, testing, implementation, and documentation. Includes coverage of language syntax, data and file structures, input/output devices, and disks/files.

**COSC 1317 Programming in FORTRAN****(3-3-1)**

Prerequisite: Any of the following: ITSE 1318 or COSC 1318, or COSC 1315.

The student adapts his/her knowledge of fundamental programming techniques to programming in FORTRAN language. Attention to such topics as file access, data structures, program control structures and modular program design as well as syntax of FORTRAN. Students design, write, and test programs.

**COSC 1318 Structured Programming in PASCAL****(3-3-1)**

Prerequisite: COSC 1300 or 1301.

Recommended: ITSE 1318 or COSC 1315.

The student is introduced to structured programming techniques. Fundamental concepts such as data types, data structures and algorithms are emphasized. Special attention is paid to top down, modular design, testing and documentation. Programming language PASCAL is used for exercises. Students design, write and test programs.

**COSC 1320 Programming in "C"****(3-3-1)**

Prerequisite: COSC 1301 and any other computer programming course.

The student is introduced to the use of fundamental programming techniques and related data structures as implemented in the "C" language. Students design, write and test programs in a microcomputer environment.

**COSC 2315 Data Structures****(3-3-1)**

Prerequisite: COSC 1318

The student is introduced to complex data structures such as stacks, queues, heaps, linked lists and trees. Advanced programming techniques such as recursion, sorting, searching and algorithm analysis are also used. A structured programming language (PASCAL) is used for exercises. Students design, write, analyze and test programs that enforce the theoretical part of the course.

**COSC 2330 Advanced Structured Programming****(3-3-1)**

Prerequisite: COSC 1301 and any other computer programming class.

This course will cover advanced preparing techniques not ordinarily found in an introductory programming course. Topics such as object oriented, cross-platform and visual programming will be covered. Students will be expected to develop real-life, stand alone applications in a language such as JAVA or C++. Previous programming experience in a high level structured language required.

**CRIJ 1301 Introduction to Criminal Justice****(3-3-0)**

This course is a survey of the history and philosophy of criminal justice. It will examine ethical considerations, crime definitions by nature and impact, and an overview of the components of the criminal justice system. Included are law enforcement, court systems, prosecution and defense, trial process, and corrections.

**CRIJ 1306 Court Systems and Practices****(3-3-0)**

Prerequisite: CRIJ 1301.

This course studies the judiciary in the criminal justice system. Included are the structure of the court system, right to counsel, pretrial release, grand juries, the adjudication process, types and rules of evidence, and sentencing.

**CRIJ 1307 Crime in America****(3-3-0)**

This course is the study of American crime problems in historical perspective. Included are social and public policy factors affecting crime, impact and crime trends, a multi-disciplinary survey of major criminological theories, and the prevention of crime.

**CRIJ 1310 Fundamentals of Criminal Law****(3-3-0)**

Prerequisite: CRIJ 1301.

This course is a study of the nature of criminal law. Topics are: philosophical and historical development, major definitions and concepts, classification of crime, elements of crime and penalties using Texas statutes as illustrations, and criminal responsibility.

**CRIJ 1313 Juvenile Justice System  
(3-3-0)**

Prerequisite: CRIJ 1301.

This course is a study of the juvenile justice process. Topics included in this course are specialized juvenile law, the role of juvenile law, of juvenile courts, of police agencies, and of correctional agencies, and the theories of delinquent conduct.

**CRIJ 2301 Community Resources in Corrections  
(3-3-0)**

Prerequisite: CRIJ 1301.

This course is an introductory study of the role of the community in corrections, community programs for adults and juveniles, administration of community programs, legal issues and future trends in community treatment.

**CRIJ 2313 Correctional Systems and Practices  
(3-3-0)**

Prerequisite: CRIJ 1301.

This course is a study of corrections in the criminal justice system, organization of correctional systems, correctional role, institutional operations, alternatives to institutionalization, treatment and rehabilitation and current and future issues.

**CRIJ 2314 Criminal Investigation  
(3-3-0)**

Prerequisite: CRIJ 1301.

This course explores investigative theory, collection and preservation of evidence, sources of information, interview and interrogation, and uses of forensic sciences case and trial preparation.

**CRIJ 2323 Legal Aspects of Law Enforcement  
(3-3-0)**

Prerequisite: CRIJ 1301.

The course studies police authority, responsibilities, constitutional constraints, laws of arrest, search, and seizure and police liability.

**CRIJ 2328 Police Systems and Practices  
(3-3-0)**

Prerequisite: CRIJ 1301.

The course studies the police profession, organization of law enforcement systems, the police role, police discretion, police community interaction, current and future issues.

**DFTG 1329 Electro-Mechanical Drafting  
(3-2-2)**

A basic course including layout and design of electro-mechanical equipment from engineering notes and sketches. Emphasis on drawing of electronic equipment control panels, interior hardware, exterior enclosures, detailed and assembly drawings with a parts list, and flat pattern layouts.

**DRAM 1120 Rehearsal and Performance  
(1-0-3)**

A practicum in scene construction, lighting, sound, costuming, publicity, stage properties, acting, and general theater practice. This course may be repeated each semester for a maximum of four semester hours credit. All majors must be enrolled every semester.

**DRAM 1310 Theater Appreciation**  
**(3-3-0)**

A course designed to provide a survey of the main fields of theater activity, thus providing a background for the appreciation and enjoyment of live theater through an understanding of the elements of theater management, play analysis, acting, directing, and technical theater.

**DRAM 1341 Stage Make-up**  
**(3-3-0)**

This course examines the design and execution of make-up for the purpose of creating believable characters. A discussion of basic make-up principles and practical experience of make-up application.

**DRAM 1351 Acting I**  
**(3-3-0)**

The development of basic skills and techniques of acting, including increased sensory awareness, greater self-confidence, stage movement, characterization, and improvisation.

**DRAM 1352 Acting II**  
**(3-3-0)**

Prerequisite: DRAM 1351.

A continuation of Drama 1351 with special emphasis on the exploration and development of techniques for the creation of a characterization through the preparation and presentation of scenes and monologues.

**DRAM 1376 Creative Dramatics**  
**(3-3-0)**

An introductory course which emphasizes the use of creative dramatics as a teaching tool. Scripting and directing children's plays, improvisation, pantomime, puppetry, storytelling, and a brief survey of dramatic literature for children. An excellent course for pre-school and elementary teachers.

**DRAM 2336 Voice and Articulation**  
**(3-3-0)**

A practical course designed to develop an understanding of the use and function of the performer's voice as well as provide individual instruction in pronunciation and articulation to facilitate oral communication. (Same as Speech 1342.)

**ECON 2301 Principles of Macroeconomics**  
**(3-3-0)**

Economic analysis of the entire economy is studied. The determination of aggregate income and employment, fiscal policy, operation of the monetary system, short-term income fluctuations, long-term income growth, problems of international trade and finance are all reviewed in this course.

**ECON 2302 Principles of Microeconomics**  
**(3-3-0)**

Consumer behavior, cost of production, price and output decisions in various output situations are studied. Microeconomic problems and policies related to business, labor, cost-benefit analysis for the public sector, poverty, and discrimination are reviewed.

**EDTC 1301 Instructional Practices: Educational Processes  
(3-3-0)**

A study of the role and responsibilities of the instructional teacher assistant with emphasis on development of professionalism and effective communication strategies with adults. Topics include the various codes of ethics governing the educational field, the issue of confidentiality, learners' rights and responsibilities, and challenges facing schools.

**EDTC 1305 Reading Problems  
(3-3-0)**

Introduction of effective methods of identifying and correcting various reading difficulties. Emphasis on the effect of reading difficulties on reading ability and the various techniques recommended for correcting each difficulty and the use of strategic approaches to the teaching of reading. Topics include the importance of direct instruction and motivational learning activities with abundant practice in the act of reading.

**EDTC 1307 Teaching Reading in the Elementary School  
(3-3-0)**

Fundamental concepts and principles of reading instruction. Topics include readiness, beginning reading instruction, how literacy emerges, classroom learning environments, word-attack skills, study skills, comprehension, other aspects of the reading program, and examination of varied materials and techniques for teaching reading.

**EDTC 1311 Instructional Practices: Effective Learning Environments  
(3-3-0)**

A study of developmentally appropriate strategies in core curriculum areas and the environment. Topics include methods for supporting the lead classroom teacher in planning and implementing educational goals, teamwork skills, and ways of providing and reporting instructional accommodations or modifications.

**EDTC 1317 Developing Positive Student Behavior  
(3-3-0)**

A study of techniques to influence the development of positive behavior in the school environment. Topics include development of competencies in establishing and managing routines, promoting self-esteem, teaching negotiation/conflict resolution strategies, and enhancing positive self-direction. Emphasis on implementation of a behavior management plan and the role of the teacher assistant in this process.

**EDTC 1321 Bilingual Education  
(3-3-0)**

A course in the core techniques of bilingual education. Topics include awareness of cultural diversity, teaching techniques, material development, and historical and philosophical concepts of bilingual/bicultural education.

**EDTC 1325 Principles and Practices of Multicultural Education  
(3-3-0)**

Examination of cultural variations found in our society and reflected in our pluralistic classrooms. Topics include culturally influenced behavior, major cultures, cultural diversity, and the process of intercultural communication and teaching, including differences in lifestyles, communication styles, learning styles, and various sources of stress for diverse cultural groups.

**EDTC 1364 Practicum (or Field Experience) – Teacher Assistant  
(3-3-0)**

A basic or intermediate type of non-health professions work-based instruction that provides basic career exploration or helps students gain practical experience in the discipline, enhance skills, and integrate knowledge. The emphasis is on practical work experience. Indirect supervision is provided by the work supervisor. A practicum may be paid or unpaid learning experience.

**EECT 1303 Introduction to Telecommunications  
(3-3-0)**

An overview of the telecommunications industry. Topics include the history of the telecommunications industry, terminology, rules and regulations, and industry standards and protocols.

**EECT 1391 Special Topics in Electrical, Electronic and Communications  
Engineering Technology — Telecomm Product Orientation  
(3-3-0)**

Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. Specific training in the industry is addressed concerning products to be sold, serviced, or troubleshot. (Credit may be awarded for Vendor Training).

**EECT 2337 Wireless Telephony Systems  
(3-3-0)**

Principles of wireless/cellular telephony systems to include call processing, hand-off, site analysis, antenna radiation patterns, commonly used test/maintenance equipment and access protocol.

**ELMT 1301 Basic Programmable Logic Controllers  
(3-2-2)**

An introduction to programmable logic controllers as used in industrial environments including basic concepts, programming, applications, troubleshooting of ladder logic, and interfacing of equipment.

**ELMT 1380 Cooperative Education – Electromechanical Technology/Technician  
(3-1-20)**

Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component.

**ELPT 1351 Electrical Machines  
(3-2-2)**

General principles and fundamentals of direct current (DC) motors, single-phase and polyphase alternating current (AC) motors, generators, and alternators. Emphasis on their construction, characteristics, efficiencies, starting, and speed control.

**ENGL 0101 Basic English Skills Lab  
(1-0-1)**

Designed for students currently registered in ENGL 0301, this lab emphasizes writing improvement. Individualized and group settings provide additional instruction and practice to supplement ENGL 0301. This lab course may be repeated three times. Generally, it is optional and not a requirement.

**ENGL 0300 Basic English I  
(3-3-1)**

This course is for students who need to improve their basic skills in grammar, capitalization, punctuation, spelling, vocabulary, and sentence structure. The writing process is introduced, and practice is provided in writing, editing, and proofreading. English 0300 cannot be substituted for any part of the regular English curriculum. Students must earn a minimum grade of "C" in English 0300 before being permitted to enroll in English 0301. (3 lecture hours plus 1 laboratory hour per week)

**ENGL 0301 Basic English II  
(3-3-0)**

Reviews standard English with emphasis on writing the complete essay. In addition, the student will review fundamental grammar, spelling, vocabulary, sentence structure, and punctuation. Laboratory hours in ENGL 0101 may be prescribed. ENGL 0301 cannot be substituted for any part of the regular English curriculum. Students must earn a minimum grade of "C" in ENGL 0301 before being permitted to enroll in ENGL 1301. (3 lecture hours per week)

**ENGL 0346 Basic English for Non-Native Speakers of English I  
(3-3-2)**

Introduces the writing process. Students enhance the accuracy of their writing by doing various grammar and sentence exercises, write paragraphs based on a variety of themes, learn basic editing strategies, learn to revise assignments, and increase fluency through vocabulary development. Only non-native Speakers of English are eligible for this course; native English speakers must take ENGL 0300. Students must receive a grade of "C" to transition to ENGL 0347.

**ENGL 0347 Basic English for Non-Native Speakers of English II  
(3-3-2)**

A study of the writing process as it applies to multiple paragraph and short essay development. Students will increase fluency in English through grammar and sentence exercises. Only non-native Speakers of English are eligible for this course; native English speakers must take ENGL 0301. Students must receive a grade of "C" to transition to ENGL 0301.

**ENGL 1301 Freshman Composition I  
(3-3-0)**

Emphasizes training in academic reading and writing. Essays written will be based on a variety of purposes and be created in a multitude of forms. Students will study the principles of invention and arrangement and work to develop a sense of audience and purpose in their writing. Students must earn a minimum grade of "C" in ENGL 1301 before enrolling in ENGL 1302. ENGL 1301 and 1302 cannot be taken concurrently. (3 lecture hours per week)

**ENGL 1302 Freshman Composition II  
(3-3-0)**

Prerequisite: ENGL 1301.

An introduction to the study of literature which will include poetry, drama, fiction, and other genres. Students are instructed in and required to write a formal research paper. (3 lecture hours per week)

**ENGL 2307 Creative Writing: Poetry and Fiction**  
**(3-3-0)**

Prerequisite: Any literature course.

Designed for students interested in learning the craft of fiction and poetry and enhancing the development of creative writing skills, this course generally is taught as a workshop in imaginative writing. The course may be repeated once for credit. (3 lecture hours per week)

**ENGL 2311 Technical Writing**  
**(3-3-0)**

Prerequisites: ENGL 1301 and ENGL 1302.

Aimed at improving students' abilities to gather and to communicate technical information in their major fields of study, this course concentrates on technical papers, scientific reports, and business correspondence. An emphasis is placed on form and method. (3 lecture hours per week)

**ENGL 2322 British Literature through the 18th Century**  
**(3-3-0)**

Prerequisites: ENGL 1301 and ENGL 1302.

A survey of British literature from its Anglo-Saxon beginnings through the Restoration and the 18th Century. A research paper or term project is required. (3 lecture hours per week)

**ENGL 2323 British Literature in the 19th and 20th Centuries**  
**(3-3-0)**

Prerequisites: ENGL 1301 and ENGL 1302.

A survey of British literature and its major movements and genres from the Romantic Period to the present. A research paper or term project is required. (3 lecture hours per week)

**ENGL 2327 Early American Literature**  
**(3-3-0)**

Prerequisites: ENGL 1301 and ENGL 1302.

A survey of American literature and its major movements and genres from the earliest times to the beginning of Realism. A research paper or term project is required. (3 lecture hours per week)

**ENGL 2328 Modern American Literature**  
**(3-3-0)**

Prerequisites: ENGL 1301 and ENGL 1302.

A survey of American literature and its major movements and genres from the beginning of Realism to the present. A research paper or term project is required. (3 lecture hours per week)

**ENGL 2332 World Literature from Antiquity through the Renaissance**  
**(3-3-0)**

Prerequisites: ENGL 1301 and ENGL 1302.

A study of representative genres and masterpieces of the literature of the world beginning with ancient writings and ending with the Renaissance. A research paper or term project is required. (3 lecture hours per week)

**ENGL 2333 Modern World Literature  
(3-3-0)**

Prerequisites: ENGL 1301 and ENGL 1302.

A study of the major genres, movements, and representative works from the Neoclassical period to the present. A research paper or term project is required. (3 lecture hours per week)

**ENGL 2370 African American Literature  
(3-3-0)**

Prerequisites: ENGL 1301 and ENGL 1302.

Investigates the range of African American letters beginning with oral songs, stories, and slave narratives. It will examine the major genres and literary movements up to the present. Writing will be required, both informal writing and the formal research paper or project. (3 lecture hours per week)

**ENGL 2371 Mexican American Literature  
(3-3-0)**

Prerequisites: ENGL 1301 and ENGL 1302.

Investigates the prose, poetry, and drama of Mexican American or Chicano literature. It will examine the various literary movements. Writing will be required, both informal writing and the formal research paper or project. (3 lecture hours per week)

**ENGL 2373 American Multi-cultural Literature  
(3-3-0)**

Prerequisites: ENGL 1301 and ENGL 1302.

Investigates the literature of various multi-cultural groups, such as African-American, Asian-American, Mexican-American, Native American, Jewish, Women, and any and all others. Topics vary according to each section offered. A research paper or term project is required. **The course may be repeated once for credit.** (3 lecture hours per week)

**ENGR 1201 Introduction to Engineering  
(2-2-0)**

An introduction to engineering as a discipline and a profession. It includes instruction in the application of mathematical and scientific principles to the solution of practical problems for the benefit of society.

**ENGR 1304 Engineering Graphics  
(3-2-4)**

Prerequisite: MATH 1314, or departmental approval.

Graphical approach to the engineering design process. Includes technical communication, introduction to engineering drawing using standard drafting instruments and computer graphics application.

**ENGR 1371 Engineering Problems  
(3-3-0)**

Prerequisite: MATH 1316 (Trigonometry) or departmental approval.

Engineering as a career. Instruments are used to measure and collect data for dimensional analysis. Solution of problems for students of engineering, physics and related technical fields; these problems include statics, dynamics, work, energy, and power, etc.

**ENGR 1375 Engineering Drawing  
(3-2-4)**

Prerequisite: MATH 1314.

Graphical approach to the engineering design process. Includes geometric construction, orthographic projections, pictorials, etc.

**ENGR 2105 Fundamentals of Electric Engineering Laboratory  
(1-0-3)**

Prerequisites: ENGR 2305 or concurrent enrollment

ENGR 2105 is a laboratory course designed to complement the ENGR 2105 lecture. Selected laboratory studies will relate to topics covered in ENGR 2105 lecture. An introduction to basic measurement equipment and techniques. Analogue and digital simulation tools, performance of simple circuits using discrete devices and circuits, simple subsystem circuit design and laboratory technical communication.

**ENGR 2301 Statics  
(3-3-0)**

Prerequisites: MATH 2413 or concurrent enrollment; PHYS 1570 or concurrent enrollment.

Calculus-based study of force systems, free body diagrams. Engineering applications of equilibrium, centroids, and moments of inertia.

**ENGR 2302 Dynamics  
(3-3-0)**

Prerequisites: ENGR 2301, MATH 2413 or concurrent enrollment; PHYS 1570.

Kinematics and kinetics, including Newton's Laws, work-energy and impulse-momentum applied to engineering problems involving particles and rigid bodies.

**ENGR 2303 Engineering Mechanics - Statics & Dynamics  
(3-3-0)**

Prerequisites: PHYS 1570

Combined, single-semester study of statics and dynamics. Calculus-based study of statics and dynamics of rigid bodies; vectors, forces, moments, centroids and moments of inertia; force-mass-acceleration, work-energy, and impulse momentum computation; kinematics and kinetics of particles.

**ENGR 2304 Computer Programming for Engineering Applications  
(3-2-2)**

Prerequisites: MATH 2412

Introduction to computer programming with emphasis on the applications of engineering problem solutions using contemporary computer languages. Algorithms, data presentation, and program structures are developed and practiced on the computer.

**ENGR 2305 Fundamentals of Electrical Engineering  
(3-3-0)**

Prerequisites: MATH 2414

An introduction to basic measurement equipment and techniques. Analogue and digital simulation tools, performance of simple circuits using discrete devices and circuits, simple subsystem circuit design and laboratory technical communication.

**ENGR 2332 Mechanics of Solids  
(3-3-0)**

Prerequisites: ENGR 2301, MATH 2413 or concurrent enrollment;  
PHYS 2570.

Internal forces and deformations in solids; stress, strain in elastic and plastic solids; applications to simple engineering problems.

**ENVR 1401 Environmental Science  
(4-3-3)**

A general science course that serves as an introduction to the disciplines and methods involved in environmental studies from a natural science perspective. Topics will include principles of the scientific method, environmental philosophy and ethics, ecosystems, population dynamics, soil systems, hydrology, air, water, and soil pollution, land conservation, and public environmental policy. Topics also will include hazardous wastes and chemicals in the environment, basic toxicology, human health risk assessment, municipal waste disposal, energy sources, environmental regulation, geological and biological resources, and sustainability. The three-hour laboratory will provide opportunities to gather and analyze ecological data, learn techniques for environmental auditing, conduct local field trips, and use specialized equipment for basic environmental investigations.

**EPCT 1307 Introduction to Environmental Safety and Health  
(3-2-3)**

Prerequisite: EPCT 1311

An historic overview of environmental safety and health. Emphasis is on the interpretation, summarization, and application of occupational safety and health standards. This course provides a study of the U.S. Occupational Safety and Health Administration (OSHA) regulations that pertain to protecting workers from exposure to environmental hazards. This course is also designed to provide instruction concerning the development and implementation of a Hazard Communication Program for employees.

**EPCT 1311 Introduction to Environmental Science  
(3-3-0)**

An overview of environmental science and current global concerns, and a brief history of environmental ethics, resource use, and conservation. Discussion of fundamental principles of resource economics and environmental health. This course is the occupational-technical equivalent to ENVR 1401 Environmental Science.

**EPCT 1328 Basic Wastewater Operations  
(3-3-0)**

Prerequisite: ENVR 1401 or EPCT 1311

An introduction to the information and operational skills needed for wastewater treatment plants. The course will define the characteristics of wastewater, explain the collection system, differentiate the wastewater treatment process, provide knowledge of the operations of different treatment plants, and examine the Texas rules and regulations.

**EPCT 1343 Treatment, Remediation, and Disposal Techniques  
(3-3-0)**

Prerequisite: ENVR 1401 or EPCT 1311

A study of the skills required in treatment, remediation, and disposal processes of solid waste, hazardous materials, and hazardous waste. Emphasizes the technologies applicable in the field. Emphasis is placed on the treatment, remediation and disposal technologies currently applicable in the field.

**EPCT 1344 Environmental Sampling and Analysis  
(3-2-2)**

Sampling protocol, procedures, quality control, preservation technology, and field analysis. Emphasis on analysis commonly performed by the field technician.

**EPCT 1349 Environmental Regulation Interpretation and Applications  
(3-3-0)**

Prerequisite: ENVR 1401 or EPCT 1311

An in-depth study of the major federal and state environmental regulations, including NEPA, RCRA, CERCLA, CAAA, NPDES, the Texas Risk Reduction Standards, and selected DOT regulations.

**EPCT 1392 Special Topics in Water Quality and Wastewater Treatment  
Technology/Technician – International Environmental Management  
(3-3-0)**

Prerequisite: ENVR 1401 or EPCT 1311

Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. An overview of international environmental issues as they relate to Mexico. The economy, population, and industrial setting of Mexico will be addressed, as well as resource depletion and water supply needs. Additionally, wastewater treatment systems and techniques pertinent to Mexico will be studied. A field trip into Mexico may be required.

**EPCT 1392 Special Topics in Water Quality and Wastewater Treatment  
Technology/Technician – Water Resources Management in South  
Central Texas  
(3-3-0)**

Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. An overview of our water supply and wastewater treatment issues as they relate to the economy and population of South Central Texas. The Edwards Aquifer will be addressed, as well as water use restrictions and water supply needs. Additionally, wastewater treatment systems and techniques pertinent to South Central Texas will be studied. Several field trips to nearby wastewater treatment plants, surface water supply reservoirs, and groundwater collection wells may be required.

**EPCT 1401 Hazardous Waste Operations and Emergency Response (HAZWOPER)  
Training and Related Topics  
(4-3-3)**

Minimum certification requirements of a hazardous waste site worker as found in 29CFR-1910.120 and 40CFR.264 and 265.16.

**EPCT 2333 Environmental Toxicology  
(3-3-0)**

A review of the research determining the systematic health effects of exposures to chemicals. Discussion of risk factors, routes of entry, control measures, and acute and chronic effects.

**EPCT 2367 Practicum (or Field Experience) – Environmental and Pollution Control Technologies (3-0-21)**

Prerequisite: Discretion of advisor.

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

**EPCT 2403 Surface and Groundwater Collection (4-3-2)**

Prerequisite: ENVR 1401 or EPCT 1311.

An in-depth study of operations and maintenance procedures for surface and ground-water collection.

**ESOL 0310 Writing I (3-3-0)**

Level I instruction in writing, which focuses on the students' prior experiences and knowledge, as well as appropriate contexts and themes. The course provides an introduction to learning the writing process, including revision. Placement in this course is based on assessment as well as advisement.

**ESOL 0311 Conversational English I (3-3-0)**

Level I instruction in conversational English, which focuses on the students' prior experiences and knowledge, as well as appropriate contexts and themes. The course includes small group interaction and cooperative learning activities. Placement in this course is based on assessment as well as advisement.

**ESOL 0312 Reading and Vocabulary I (3-3-0)**

Level I instruction in reading and vocabulary focuses on the students' prior experiences and knowledge, as well as appropriate contexts and themes. The course emphasizes enhancing critical thinking skills. Placement in this course is based on assessment as well as advisement.

**ESOL 0313 Grammar/Mechanics I (3-3-0)**

Level I instruction in grammar focuses on the students' prior experiences and knowledge, as well as appropriate contexts and themes. Placement in this course is based on assessment as well as advisement.

**ESOL 0320 Writing II (3-3-0)**

Level II instruction in writing focuses on the students' prior experiences and knowledge, as well as appropriate contexts and themes. The course provides an introduction to learning the writing process, including revision. This course is for those students who have completed Level I or whose placement test evaluation indicates Level II.

**ESOL 0321 Conversational English II (3-3-0)**

Level II instruction in conversational English focuses on the students' prior experiences and knowledge, as well as appropriate contexts and themes. The course includes small group interaction and cooperative learning activities. This course is for those students who have completed Level I or whose placement test assessment indicates Level II.

**ESOL 0322 Reading and Vocabulary II**  
**(3-3-0)**

Level II instruction in reading and vocabulary focuses on the students' prior experiences and knowledge, as well as appropriate contexts and themes. The course emphasizes enhancing critical thinking skills. This course is for those students who have completed Level I or whose placement test assessment indicates Level II.

**ESOL 0323 Grammar/Mechanics II**  
**(3-3-0)**

Level II instruction in grammar focuses on the students' prior experiences and knowledge, as well as appropriate contexts and themes. The course is based on mastery learning, and students progress at their own pace. This course is for those students who have completed Level I or whose placement test assessment indicates Level II.

**ESOL 0330 Writing III**  
**(3-3-0)**

Level III instruction in writing focuses on the students' prior experiences and knowledge, as well as appropriate contexts and themes. This course provides an introduction to learning the writing process, including revision. This course is for those students who have completed Level II or whose placement test assessment indicates Level III.

**ESOL 0331 Conversational English III**  
**(3-3-0)**

Level III instruction in conversational English focuses on the students' prior experiences and knowledge, as well as appropriate contexts and themes. The course includes small group interaction and cooperative learning activities. This course is for those students who have completed Level II or whose placement test assessment indicates Level III.

**ESOL 0332 Reading and Vocabulary III**  
**(3-3-0)**

Level III instruction in reading and vocabulary focuses on the students' prior experiences and knowledge, as well as appropriate contexts and themes. The course emphasizes enhancing critical thinking skills. The course is for those students who have completed Level II or whose placement test assessment indicates Level III.

**ESOL 0333 Grammar/Mechanics III**  
**(3-3-0)**

Level III instruction in grammar focuses on the students' prior experiences and knowledge, as well as appropriate contexts and themes. The course is based on mastery learning, and students progress at their own pace. This course is for those students who have completed Level II or whose placement test assessment indicates Level III.

**ESOL 0340 Writing IV**  
**(3-3-0)**

Level IV instruction in writing focuses on the students' prior experiences and knowledge, as well as appropriate contexts and themes. The course provides opportunities for students to further develop their knowledge and use of the writing process, including revision. This course is for those students who have completed Level III or whose placement test assessment indicates Level IV.

**ESOL 0341 Conversational English IV  
(3-3-0)**

Level IV instruction in conversational English focuses on the students' prior experiences and knowledge, as well as appropriate contexts and themes. The course includes small group interaction and cooperative learning activities. This course is for those students who have completed Level III or whose placement test assessment indicates Level IV.

**ESOL 0342 Reading and Vocabulary IV  
(3-3-0)**

Level IV instruction in reading and vocabulary focuses on the students' prior experiences and knowledge, as well as appropriate contexts and themes. The course emphasizes enhancing critical thinking skills. This course is for those students who have completed Level III or whose placement test assessment indicates Level IV.

**ESOL 0343 Grammar/Mechanics IV  
(3-3-0)**

Level IV instruction in grammar focuses on the students' prior experiences and knowledge, as well as appropriate contexts and themes. The course is based on mastery learning, and students progress at their own pace. This course is for those students who have completed Level III or whose placement test assessment indicates Level IV.

**ESOL 0350 Special Topics  
(3-3-0)**

This course emphasizes customized instruction for mastery-based, self-paced learning. The content for the courses is determined by the students' proficiency in one or more of the following areas: conversational English, listening comprehension, reading, vocabulary building, writing, and/or grammar. Placement into this course is based on assessment and advisement.

**ESOL 0355 Special Topics  
(3-3-0)**

This course emphasizes customized instruction for mastery-based, self-paced learning. The content for the courses is determined by the students' proficiency in one or more of the following areas: conversational English, listening comprehension, reading, vocabulary building, writing, and/or grammar. Placement into this course is based on assessment and advisement.

**FREN 1411 Elementary French I  
(4-3-2)**

An introduction to the four basic skills: listening comprehension, oral production, reading, and writing. Pronunciation, grammar, and practical vocabulary will be introduced. Language laboratory required.

**FREN 1412 Elementary French II  
(4-3-2)**

Prerequisite: FREN 1411 or Departmental approval.

A continuation of French 1411. Language laboratory required.

**FREN 2311 Intermediate French I  
(3-3-0)**

Prerequisite: FREN 1412 or placement test.

Review of French grammar and the expansion of basic language skills.

**FREN 2312 Intermediate French II**  
**(3-3-0)**

Prerequisite: FREN 2311 or placement test.

The application of the French language in conversation, composition, and readings.

**GEOG 1301 Physical Geography**  
**(3-3-0)**

An introduction to the elements of physical geography. Includes the use and interpretation of maps and globes, the study of landforms, climate, weather, soils, and earth-sun relationships, with a focus on the result of these processes and their relationship to human activity.

**GEOG 1303 World Geography**  
**(3-3-0)**

A study of the similarities and differences of the major world regions with a focus on culture and human behavior.

**GEOL 1401 Earth Sciences I**  
**(4-3-3)**

An introduction to principles and methods of Earth Science. Nature of the earth and its settings in space as revealed by a survey of Physical and Environmental Geology, Meteorology, and Oceanography. Designed for students not majoring in science or Engineering. Occasional field trips may be arranged. Must be taken with GEOL 1402 to fulfill the science requirement.

**GEOL 1402 Earth Sciences II**  
**(4-3-3)**

A survey of Astronomy, the effects of physical processes operating on the earth's surface (Geomorphology), and of earth history as interpreted from fossils and rocks (Historical Geology). Studies will include the significance to society of the earth sciences including environmental problems and natural resource exploration and utilization designed for students not majoring in science or Engineering. Occasional field trips may be arranged. Must be taken with GEOL 1401 or GEOL 1446 to fulfill the science requirement.

**GEOL 1403 Physical Geology**  
**(4-3-3)**

The nature and properties of rocks and minerals; processes by which they are formed, altered and transported. Nature and development of the landscape. Laboratory work includes the study of minerals, rocks and topographic maps. Occasional field trips may be arranged. Both 1403 and 1404 must be taken to fulfill the science requirement.

**GEOL 1404 Historical Geology**  
**(4-3-3)**

History of earth and development of life relative to geological time. Laboratory exercises will complement the lecture topics. Occasional field trips may be arranged. Both 1403 and 1404 must be taken to fulfill the science requirement.

**GEOL 1445 Oceanography**  
**(4-3-3)**

Methods and principles of Oceanography. Geological, physical, chemical and biological studies of the earth's oceans. Origin and continuing evolution of the ocean basins, air-sea and land-sea interactions, and life in the oceans. Field trips may be arranged.

**GEOL 1446 Astronomy  
(4-3-3)**

A survey of Astronomy including the history of Astronomy, telescopes, celestial mechanics, time and the seasons, the sun and the planets, stars and stellar evolution, nebula, galaxies, and cosmology. Field trips may be arranged.

**GERM 1411 Elementary German I  
(4-3-2)**

For students with little or no knowledge of German. An introduction to the four basic skills: listening comprehension, oral production, reading, and writing. Pronunciation, grammar, and practical vocabulary will be introduced. Language laboratory required.

**GERM 1412 Elementary German II  
(4-3-2)**

Prerequisite: GERM 1411 or Departmental approval.  
A continuation of German 1411. Language laboratory required.

**GERM 2311 Intermediate German I  
(3-3-0)**

Prerequisite: GERM 1412 or placement test.  
Review of German grammar and the expansion of basic skills.

**GERM 2312 Intermediate German II  
(3-3-0)**

Prerequisite: GERM 2311 or placement test.  
The application of the German language in conversation, composition, and readings.

**GOVT 2305 National Government  
(3-3-0)**

Government 2305 is a general survey course in American government covering the theories and concepts of government, the United States Constitution, politics, public opinion, political parties, human rights, and the functions of national, state and local government.

**GOVT 2306 State Government  
(3-3-0)**

Government 2306 is a general survey of the United States and Texas Constitutions, federalism, citizenship, voting and local governments with an emphasis on Texas government. Credit in both Government 2305 and 2306 is necessary to satisfy the legislative requirement for graduation. It is recommended that students enroll in Govt. 2306 if only three hours of government are needed to meet the requirements of a technical curriculum or to satisfy the state requirements for teacher certification.

**HALT 1301 Principles of Horticulture  
(3-2-2)**

An overview of the horticulture industry, plant science, terminology, classification, propagation, environmental responses, and careers and opportunities in the field of horticulture.

**HALT 1303 Herbaceous Plants**  
**(3-2-2)**

An in-depth study of herbaceous plant material. Topics include practices and procedures used in the identification, growth, propagation, maintenance, and utilization of herbaceous plants in the horticulture industry.

**HALT 1319 Landscape Construction**  
**(3-2-2)**

Exploration of landscape construction materials and the methods used for installation. Topics on soil preparation, including wood, concrete, and masonry construction; and landscape lighting, including pools, spas, and general construction details.

**HALT 1322 Landscape Design**  
**(3-2-2)**

A study of the principles and elements of landscape design. Topics include client interview, site analysis, plan view, scale, plant selection, basic drawing and drafting skills, and plan preparation.

**HALT 1324 Turfgrass Science & Management**  
**(3-2-2)**

In-depth coverage of various species of warm and cool season grasses including their uses, application, adaptability, environmental tolerances, anatomy, and physiological responses.

**HALT 1331 Woody Plant Materials**  
**(3-2-2)**

An in-depth study of the woody plant materials used in the horticulture industry. Topics include identification, characteristics, adaptation, cultural requirements, pest and disease problems, and use in the landscape.

**HALT 1333 Landscape Irrigation**  
**(3-2-2)**

In-depth coverage of irrigation systems including equipment, design, performance, and maintenance. Topics include residential and commercial applications, troubleshooting, repair, and technological advances in irrigation systems.

**HALT 1345 Golf/Sports Field/Park Management**  
**(3-3-0)**

Instruction in the management of golf courses, sports fields, and municipal parks departments. Topics include record keeping, budgeting, labor management, maintenance programs, financial reports, personnel management, and business functions.

**HALT 1346 Specialized Turfgrass Management**  
**(3-2-2)**

An overview of the construction and management of specialized turf features such as putting greens, tee boxes, bunkers, and sand-based ball fields. Topics include the equipment and cultural practices utilized for intensively managed turf areas.

**HALT 1351 Landscape Business Operations  
(3-3-0)**

Instruction in the structure of the landscape business including cost estimation; organization; equipment needs; interpretation of financial reports; and material, labor, and equipment management. Emphasis on the types of landscape operations, marketing, legal forms, construction law, and safety.

**HALT 1397 Special Topics in Turf Management – Irrigation Water Management & Conservation  
(3-2-2)**

Topics address recently identified current events, skills, knowledges, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. Application of the science of soil-water plant relations and climactic conditions to develop effective scheduling and management of irrigation water systems for residential, commercial, industrial, park and golf course, etc. Water conservation issues, water policies and codes and other related matters will be discussed.

**HALT 1398 Special Topics in Horticulture Services Operations and Management, Other – Irrigation Water Management & Conservation  
(3-2-2)**

Topics address recently identified current events, skills, knowledge's, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. Application of the science of Soil-water plant relations and climactic conditions to develop effective scheduling and management of irrigation water systems for residential, commercial, industrial, park and golf course, etc. Water conservation issues, water policies and codes and other related matters will be discussed.

**HALT 1398 Special Topics in Horticulture Services Operations and Management, Other – Irrigation Trouble Shooting  
(3-2-2)**

Topics address recently identified current events, skills, knowledge's, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. Prevention and analysis of problems and failures in landscape irrigation systems, such as irrigation controllers, remote control valves, wiring failures, sprinklers, and drip system failures. Other specialty items such as cross connections, pressure regulators, vacuum breakers, pipes, etc., will be included.

**HALT 2301 Arboriculture  
(3-2-2)**

Fundamentals of woody plant physiology and growth including techniques and procedures utilized in making sound tree care decisions related to growth and pest and disease control. Topics include design principles of planning and maintenance for city streets, parks, and commercial and residential properties.

**HALT 2312 Turfgrass Maintenance  
(3-2-2)**

Instruction in common turfgrass cultural practices. Topics include calculation and application of materials and the operation and maintenance of equipment.

**HALT 2314 Plant Propagation**  
(3-2-2)

A study of the sexual and asexual propagation of plants used in horticulture. Topics include propagation by seeds, cuttings, grafting, budding, layering, division, separation, and tissue culture; and environmental factors of propagation.

**HALT 2318 Soil Fertility and Fertilizers**  
(3-2-2)

An in-depth study of the chemistry, soil interaction, plant uptake, and utilization of essential plant nutrients. Topics include deficiency and toxicity symptoms, and the selection, application, and characteristics of fertilizer materials.

**HALT 2320 Nursery Production and Management**  
(3-2-2)

An overview of the procedures for establishing and operating a commercial nursery. Topics include site selection, structures, equipment, stock selection, production practices, harvesting, marketing, and management practices.

**HALT 2323 Horticulture Pest Control**  
(3-2-2)

Examination of federal, state, and local laws and regulations governing the control of horticultural pests. Topics include procedures; methods; safety requirements; integrated pest management (IPM); and chemical, natural, and biological controls.

**HALT 2331 Advanced Landscape Design**  
(3-2-2)

In-depth coverage of advanced practices in landscape planning for commercial and residential landscapes. Topics include advanced design analysis, architectural elements, space articulation, and land engineering concepts.

**HALT 2383 Cooperative Education – Turf Management**  
(3-1-20)

Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component.

**HALT 2386 Internship-Horticulture Service Operations & Management, General**  
(3-1-20)

A work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts. A learning plan is developed by the college and the employer.

**HART 2431 Advanced Electricity**  
(4-4-1)

Advanced electrical instruction and skill building in installation and servicing of air conditioning and refrigeration equipment including detailed instruction in motors and power distribution and introduction to solid state devices.

**HIST 1301 History of the United States, Part I  
(3-3-0)**

A general survey of United States history from the discovery of America through the Civil War era. Satisfies one-half the legislative requirement of six semester hours in American history.

**HIST 1302 History of the United States, Part II  
(3-3-0)**

A general survey of United States history from the Civil War era to the present. Satisfies one-half the legislative requirement of six semester hours in American history.

**HIST 2301 Texas History  
(3-3-0)**

A survey of Texas History from the Spanish exploration to the present.

**HIST 2311 Western Civilization to the Seventeenth Century  
(3-3-0)**

History of Western civilization from the earliest time through the Seventeenth Century. Surveys Western civilization's roots in the Ancient Middle East, Greece, and Rome. Emphasis of the course is on Medieval Europe, Christian church history, the Renaissance, and the Reformation.

**HIST 2312 Western Civilization Since the Seventeenth Century  
(3-3-0)**

History of Western civilization from the Seventeenth Century to the present. Surveys major aspects of the political, social, economic, and intellectual history of France, England, Germany, Italy, Russia, Spain, and other Western European nations. Emphasis of the course is on the Enlightenment, the Age of Revolution, Romanticism, and Twentieth Century totalitarianism.

**HIST 2313 History of England I  
(3-3-0)**

Survey of the political, social, economic, military, cultural, and intellectual development of England from prehistory to 1600.

**HIST 2314 History of England II  
(3-3-0)**

Survey of the political, social, economic, military, cultural, and intellectual development of England from 1600 to present.

**HIST 2321 World Civilization to the Fifteenth Century  
(3-3-0)**

Equivalent to IDST 2372  
Prerequisite: None.

Study of the cultural histories of particular civilizations important for understanding the modern world: classical Greco-Roman civilization, China of the Han and Tang dynasties, Latin America, medieval Europe, and Islam in the Middle East and Africa through the Fifteenth Century. Within a general framework of political, social, and economic history, the course emphasizes the literature, philosophy, art, and music of each of these civilizations.

**HIST 2322 World Civilization Since the Fifteenth Century  
(3-3-0)**

Equivalent to IDST 2373

Prerequisite: None.

Study of the contact of civilizations and cultural change since the Fifteenth Century. It emphasizes cultural history, literature, philosophy, art, and music of selected civilizations such as Asian, African, and Meso American as well as selected time periods from European history.

**HIST 2323 Eastern Civilizations  
(3-3-0)**

Survey of the political, social, economic, military, cultural, and intellectual development of Asia from prehistory to the present.

**HIST 2380 Mexican-American History  
(3-3-0)**

Prerequisite: HIST 1301 and HIST 1302.

The historical economic, social and cultural development of minority groups. May include African-American, Mexican-American, Asian-American and Native American issues.

**HIST 2381 African-American History  
(3-3-0)**

Historical, economic, social, and cultural development of African-American groups from the 1600s to present.

**HRPO 1301 Customer Relations  
See MRKG 1301****HRPO 1311 Human Relations  
(3-3-0)**

Practical application of the principles and concepts of the behavioral sciences to interpersonal relationships in the business and industrial environment.

**HRPO 2301 Human Resource Management  
(3-3-0)**

Prerequisites: BMGT 1301 and BMGT 1303

Behavioral and legal approaches to the management of human resources in organizations.

**HRPO 2307 Organizational Behavior  
(3-3-0)**

The analysis and application of organizational theory, group dynamics, motivation theory, leadership concepts, and the integration of interdisciplinary concepts from the behavioral sciences.

**HUMA 1301 Introduction to the Humanities  
(3-3-0)**

This course is an interdisciplinary assessment of cultural, political, philosophical and aesthetic factors critical to the formulation of the values that shaped the historical development of the individual and of society. The course will involve frequent field trips.

**HUMA 1302 World Cultures and Global Issues****(3-3-0)**

An interdisciplinary, multi-perspective assessment of cultural, political, philosophical, scientific and aesthetic factors critical to the formulation of values and historical development of the individual and society. This course will focus on recent global and international issues.

**HUMD 0300 Human Development****(3-3-0)**

This course provides students with a variety of experiences and information related to learning, memory, motivation, and adjustment to help the student:

1. Identify personal strengths and weaknesses, interests, and values;
2. Develop effective study skills, college success strategies, and interpersonal skills;
3. Understand the process involved in making rational decisions for academic, personal, and career planning.

Students who satisfactorily complete this course will be exempt from the orientation requirement for an associate degree.

NOTE: Students desiring a course in Human Developmental Psychology should refer to the section of Psychology Courses.

**HYDR 1305 Basic Hydraulics****(3-2-2)**

Fundamentals of hydraulics including types of hydraulic pumps, cylinders, valves, motors, and related systems. Introduction to hydraulic schematic symbols as related to components.

**HYDR 1345 Hydraulics and Pneumatics****(3-2-2)**

Fundamentals of hydraulics and types of hydraulic pumps, cylinders, valves, motors, and related systems including operations, maintenance, and system analysis.

**IBUS 1301 Principles of Imports/Exports I****(3-3-0)**

A study of export management processes and procedures. Topics include governmental controls, licensing of products, documentation, commercial invoices, and traffic procedures. Application to human and public relations, management of personnel, finance, and accounting procedures.

**IBUS 1305 Introduction to International Business and Trade****(3-3-0)**

The techniques for entering the international marketplace. Emphasis on the impact and dynamics of sociocultural, demographic, economic, technological, and political-legal factors in the foreign trade environment. Topics include patterns of world trade, internationalization of the firm, and operating procedures of the multinational enterprise.

**IBUS 1354 International Marketing Management****(3-3-0)**

Prerequisites: BMGT 2373 or Departmental Approval

Analysis of international marketing strategies using market trends, costs, forecasting, pricing, sourcing, and distribution factors. Students will develop an international import/export plan.

**IBUS 2341 International Comparative Management  
(3-3-0)**

A study of cross-cultural comparisons of management and communications processes. Emphasis on cultural geographic distinctions and antecedents that affect individual, group, and organizational behavior. Topics include sociocultural demographic, economic, technological, and political-legal environment of cluster countries and their relationship to organizational communication and decision-making.

**IBUS 2345 Import Customs Regulations  
(3-3-0)**

A study of the duties and responsibilities of the licensed customs broker or custom-house broker. Topics include processes for customs clearance including appraisalment, bonded warehouse entry, examination of goods, harmonized tariffs, fees, bonding, penalties, quotas, immediate delivery, consumption, and liquidation, computerized systems, laws, and regulations.

**IBUS 2380 Cooperative Education-International Business  
(3-1-20)**

Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the College, employer, and student. Under the supervision of the College and the employer, the student combines classroom learning with work experience. Includes a lecture component.

**IDST 1301 Schools and Society: An Introduction to Education  
(3-3-0)**

An enriched and integrated preservice course and content experience that:

1. Provides active recruitment and support of undergraduates interested in careers in teaching, especially in high need fields such as secondary math and science education, bilingual education and special education;
2. Provides students with opportunities to participate in early field experiences including middle and high school classrooms with varied and diverse populations;
3. Provides students with support from college and school faculty, preferably in small cohort groups, for the purpose of introducing and analyzing the culture of schooling and classrooms from the perspectives of language, gender, socioeconomic, ethnic and disability-based academic diversity and equity.

**IDST 2370 Individual, Family, and Community  
(3-3-0)**

Prerequisite: ENGL 1301.

This course is an examination of the history, basic questions, major theories and significance of the social and behavioral sciences. It will focus on the scientific understanding of the individual, the family, and the community.

**IDST 2371 Society and Social Issues  
(3-3-0)**

Prerequisite: ENGL 1301.

This course is a study of the history, causes and implications of selected social and institutional issues such as change, ethnicity, gender, and social conflict. It emphasizes the making of informed, rational and moral decisions

**IDST 2372 World Civilization to the Fifteenth Century  
(3-3-0)**

Prerequisite: ENGL 1301.

This course is a study of the cultural histories of particular civilizations important for understanding the modern world: classical Greco-Roman civilization, China of the Han and Tang dynasties, Latin America, medieval Europe, and Islam in the Middle East and Africa through the Fifteenth Century. Within a general framework of political, social and economic history, the course emphasizes the literature, philosophy, art, and music of each of these civilizations.

**IDST 2373 World Civilization Since the Fifteenth Century  
(3-3-0)**

Prerequisite: ENGL 1301.

This course is a study of the contact of civilizations and cultural change since the Fifteenth Century. It emphasizes cultural history, literature, philosophy, art, and music of selected civilizations such as Asian, African, and Meso American as well as selected time periods from European history.

**IDST 2374 World Literature I, The Narrative Mode  
(3-3-0)**

**Equivalent to ENGL 2332**

Prerequisite: ENGL 1302

This course explores the narrative mode in literature across the world and across time. Readings will include a variety of short fiction and other works.

**IDST 2375 World Literature, Dramatic and Lyric Modes  
(3-3-0)**

**Equivalent to ENGL 2333**

Prerequisite: ENGL 1302

This course explores the dramatic and lyric modes in literature across the world and across time. Works such as Medea, Blood Wedding, the screenplay of Citizen Kane, and anthology of lyric poetry will be studied. Film will be reviewed in class in conjunction with reading of screenplay and the question of translation will be addressed in conjunction with lyric poetry.

**IDST 2377 Modes of Inquiry Across the Fields of Study  
(3-3-0)**

Prerequisite: ENGL 1302

This course is a study of thinking in the sciences, social studies, mathematics, language arts, and fine arts through interdisciplinary investigations. Course experiences include modeling, practice, and analysis of ways of inquiring in the several subject areas, seeking their implications for interdisciplinary inquiries.

**IEIR 1306 Electric Motors  
(3-2-2)**

Fundamentals of single phase and three phase alternating current motors and direct current motors including operating principles, characteristics, application, selection, installation, maintenance, and troubleshooting.

**INFO 1371 Information Literacy  
(3-3-0)**

A study of the fundamentals of information — storage, retrieval, evaluation, documentation, and communication — from theoretically diverse perspectives. Topics include how to do research, MLA and APA styles of documentation, copyright laws, using the PC for acquiring information and solving problems, critical thinking about information, a survey of the types of information resources available, and the general principles of information organization, storage, and retrieval. The course will include the preparation of students for a rapidly changing environment and their adaptation to new information formats and technologies as they become available. (In core curriculum and transferable, pending Coordinating Board approval.)

**INTC 1312 Introduction to Instrumentation Technology  
(3-3-0)**

An overview of industries employing instrumentation technicians. A study of hazardous industrial locations and safe work practices. Introduction to ISO-9000 Process Safety Management concepts and fire prevention and fire fighting techniques.

**INTC 1357 AC/DC Motor Control  
(3-2-2)**

A study of electric motors and motor control devices common to a modern industrial environment. A presentation of motor characteristics with emphasis on starting, speed control, and stopping systems.

**ITMC 1301 Microsoft Windows Network and Operating Systems Essentials  
(3-3-0)**

Prerequisites: ITSC 1301 and ITSC 1317 and ITSC 1325 and ITNW 1325 and ITNW 1333 and ITNW 1354

An introduction to Microsoft Windows network operating systems and to the fundamentals of networking technologies that they support.

**ITMC 1341 Implementing MS Windows 2000 Professional and Server  
(3-3-0)**

Prerequisites: ITSC 1301 and ITSC 1317 and ITSC 1325

In-depth coverage of the knowledge and skills necessary to install and configure Microsoft Windows on stand-alone computers and on client computers that are part of a workgroup or domain, and the skills and knowledge necessary to install and configure Windows Server to create file, print, and servers.

**ITMC 1342 Implementing a Microsoft Windows 2000 Network Infrastructure  
(3-3-0)**

Prerequisites: ITSC 1301 and ITSC 1317 and ITSC 1325

Skills development in installing, configuring, managing, and supporting a network infrastructure that uses the Microsoft Windows server family of products.

**ITMC 1343 Implementing and Administering Microsoft Directory Services  
(3-3-0)**

Prerequisites: ITSC 1301 and ITSC 1317 and ITSC 1325 and ITNW 1325 and ITNW 1333 and ITNW 1354

Provides students with the knowledge and skills necessary to install, configure, and administer Microsoft Windows Active Directory service. Focuses on implementing Group Policy and understanding the Group Policy tasks required to centrally manage users and computers.

**ITMC 1401 Microsoft Windows Network and Operating System Essentials  
(4-3-1)**

Prerequisites: ITSC 1301 and ITSC 1317 and ITSC 1325

An introduction to Microsoft Windows networking operating systems and to the fundamentals of networking technologies that they support.

**ITMC 1419 Installing and Administering Windows 2000  
(4-3-1)**

Prerequisites: ITSC 1301 and ITSC 1317 and ITSC 1325

An introduction to Microsoft® Windows server operating system in a single domain environment. Topics include basic installation, configuration tasks, and day-to-day administration tasks in a Windows-based network.

**ITMC 2332 Designing a Microsoft Windows Networking Services Infrastructure  
(3-3-0)**

Prerequisites: ITSC 1301 and ITSC 1317 and ITSC 1325 and ITNW 1325 and ITNW 1333 and ITNW 1354

Provides experienced support professionals with the information and skills to create a networking services infrastructure design that supports the required network applications.

**ITMC 2333 Designing a Secure Microsoft Windows Network  
(3-3-0)**

Prerequisites: ITSC 1301 and ITSC 1317 and ITSC 1325 and ITNW 1325 and ITNW 1333 and ITNW 1354

Provides students with the knowledge and skills necessary to design a security framework for small, medium, and enterprise networks by using Microsoft Windows networking technologies.

**ITNW 1321 Introduction to Networking  
(3-3-1)**

Prerequisite: ITSC 1301

Introduction to the fundamentals, basic concepts, and terminology of networks. Topics include the access and use of the Internet and networking hardware and software, including current developments in networking.

**ITNW 1325 Fundamentals of Networking  
(3-3-0)**

Prerequisites: ITSC 1301 and ITSC 1317 and ITSC 1325

Instruction in networking technologies and their implementation. Topics include the OSI reference model, network protocols, transmission media, and networking hardware and software.

**ITNW 1333 Microsoft Networking Essentials  
(3-3-0)**

Prerequisites: ITSC 1301 and ITSC 1317 and ITSC 1325

Instruction in networking essential concepts including the OSI reference model, network protocols, transmission media, and networking hardware and software.

**ITNW 1337 Introduction to the Internet  
(3-3-1)**

Introduction to the internet with emphasis on using the World Wide Web to locate, transfer and publish information. Survey of emerging technologies on the Internet.

**ITNW 1354 Implementing and Supporting Servers  
(3-3-0)**

Prerequisites: ITSC 1301 and ITSC 1317 and ITSC 1325

A course in the development of skills necessary to implement, administer, and troubleshoot information systems that incorporate Windows-Based Servers in a networked computing environment.

**ITNW 1392 Special Topics in Business Systems Networking  
and Telecommunications  
(3-3-0)**

Prerequisites: ITSC 1301 and ITSC 1317 and ITSC 1325

Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student.

**ITNW 2165 Practicum (or Field Experience) - Business Systems Networking  
and Telecommunications  
(1-0-10)**

Prerequisites: ITSC 1301 and ITSC 1317 and ITSC 1325 and ITNW 1325 and ITNW 1333 and ITNW 1354

Practical, general workplace training supported by an individualized learning plan developed by the employer, College, and student.

**ITSC 1301 Introduction to Computers  
(3-3-1)**

Overview of computer information systems. Introduces computer hardware, software, procedures, and human resources. Exact topics may be varied to reflect emerging technological changes. Provides a foundation for further study in computer science or computer information systems.

**ITSC 1305 Introduction to PC Operating Systems  
(3-3-1)**

A study of personal computer operating systems. Topics include installation and configuration, file management, memory and storage management, control of peripheral devices, and use of utilities. Emphasis on commands commonly needed by business applications programmers. Specific PC operating system may vary. This course is appropriate for CIS skills upgrade.

**ITSC 1309 Integrated Software Applications I  
(3-3-1)**

Integration of applications from popular business productivity software suites. Instruction in embedding data, linking and combining documents using word processing, spreadsheets, databases, and/or presentation media software. Specific software may vary. Students operate the chosen software in the laboratory. This course is appropriate for skills upgrade.

**ITSC 1313 Internet/Web Page Development  
(3-3-1)**

Prerequisites/Co-requisites: ITSC 1301 and ITSC 1309 or equivalent.

Instruction in the use of Internet services and the fundamentals of web page design and web site development. The student will create Web pages and supporting elements using HTML and current authoring tools and maintain Web pages and supporting elements.

**ITSC 1317 PC Operating Systems - DOS  
(3-3-0)**

Introduction to the DOS operating system. Topics include installation and configuration, file management, memory and storage management, peripheral device control, and use of utilities.

**ITSC 1325 Personal Computer Hardware  
(3-3-1)**

Prerequisite: ITSC 1309 or equivalent.

A study of current personal computer hardware including personal computer assembly and upgrading, setup and configuration, and troubleshooting. The student is introduced to the fundamentals of PC architectural design to include basic hardware components and devices. Students learn how to troubleshoot minor hardware problems, make minor hardware repairs, configure and install hardware, and install necessary software drivers.

**ITSC 1391 Special Topics in Computer & Information Sciences  
(3-3-1)**

Prerequisite: ITSC 1301 and ITSC 1309 or equivalent.

Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to technology or occupation and relevant to the professional development of the student. Provides students with training in a current, relevant personal computer (PC) hardware, software or networking topic. This course may be repeated for credit as the topic changes.

**ITSC 2586 Internship – Computer and Information Sciences, General  
(5-1-20)**

Prerequisite: Consent of advisor.

A work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts. A learning plan is developed by the College and the employer. This course may be repeated if topics and learning outcomes vary.

**ITSE 1318 Introduction to COBOL Programming  
(3-3-1)**

Introduction to computer programming using COBOL. Emphasis on the fundamentals of structured design, development, testing, implementation, and documentation. Includes language syntax, data and file structures, input/output devices, and files. Attention to topics such as loops, conditional branches, arrays, and subroutines. Students design, write, and test elementary programs.

**ITSE 1331 Introduction to Visual BASIC Programming  
(3-3-1)**

Prerequisite/Co-requisite: ITSC 1301 or COSC 1300 or COSC 1301.

Introduction to computer programming using Visual BASIC. Emphasis on the fundamentals of structured design, development, testing, implementation, and documentation. Includes language syntax, data and file structures, input/output devices, and files. Includes a brief review of machine-level concepts, such as the binary number system and ASCII coding, which provide the foundation for higher-level programming. Emphasis on programming, with attention to topics such as loops, conditional branches, arrays, and subroutines. Students design, write, and test simple business-oriented programs in a microcomputer environment. This course is appropriate for skills upgrade.

**ITSE 1350 Systems Analysis and Design  
(3-3-1)**

Prerequisites: ITSC 1301 or equivalent and BUSI 1301 or equivalent.

Comprehensive introduction to the planning, design, and construction of computer information systems using the systems development life cycle and other appropriate design tools. The student examines the process of systems analysis/design and the typical business systems resulting from that process. Common structured methods, tools, and techniques of systems analysis are studied together with common computer-based business systems such as order tracking, accounting, materials and operations control.

**ITSE 1391 Special Topics in Computer Programming  
(3-3-1)**

Prerequisite: ITSC 1301 and ITSC 1309.

Recommended: any other programming class.

Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. This course is appropriate for CIS skills upgrade.

**ITSE 2309 Database Programming  
(3-3-1)**

Prerequisites: ITSW 2337

Application development using database programming techniques emphasizing database structures, modeling, and database access. The student adapts his/her knowledge of structured programming techniques to a language created specifically for database use. Emphasis is on the manipulation of databases at the program level, and the development of user-friendly, interactive programs. Students design, write and test programs.

**ITSE 2313 Web Authoring  
(3-3-1)**

Prerequisites: ITSC 1313 or equivalent.

Instruction in designing and developing web pages that incorporate text, graphics, and other supporting elements using current technologies and authoring tools. Emphasis is on web site maintenance and business support to include e-commerce functions.

**ITSE 2351 Advanced COBOL Programming  
(3-3-1)**

Prerequisite: ITSE 1318

Further applications of programming techniques using COBOL, including file access methods, data structures and modular programming, program testing and documentation. This course is a continuation of Introduction to COBOL Programming. The student is taught the use of standard business algorithms that require combination and nesting of the fundamental techniques covered in Introduction to COBOL Programming. Indexed file processing is also studied. Students design, write, and test programs.

**ITSW 1301 Introduction to Word Processing  
(3-3-0)**

Recommended: Introduction to Computers and keyboarding proficiency.

An overview of the production of documents, tables, and graphics.

**ITSW 1310 Introduction to Presentation Graphics Software  
(3-3-1)**

Prerequisite: ITSC 1301 and ITSC 1309 or equivalent.

Instruction in the utilization of presentation software to produce multimedia presentations. Graphics, text, sound, animation and/or video may be used in presentation development. The student is also taught the use of presentation graphics software as a tool to enhance productivity. Emphasis on the creation or modification of graphics applications as needed for typical business and professional situations. Students design, build, and test graphics applications in the laboratory.

**ITSW 1391 Special Topics in Data Processing Technology/Technician  
(3-3-1)**

Prerequisites: ITSC 1301 and ITSC 1309

Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. This course is a practical application of the skills developed throughout the A.A.S. program in software applications. Case studies require the student to begin with needs analysis and continue through software selection, applications design, implementation, testing, and documentation. Students thus practice the application of software tools to simulated business situations in which a computer-based solution would be appropriate. The class is expected to work in a self-paced mode, as would professionals under a manager.

**ITSW 2334 Advanced Spreadsheets  
(3-3-1)**

Prerequisite: ITSC 1301 or COSC 1301 and ITSC 1309 or equivalent, or COSC 1300.

Designed to provide an understanding of advanced functionality of electronic spreadsheets. The student is taught the use of electronic spreadsheet software as a tool to enhance productivity. Emphasis on the creation or modification of work-sheet templates as needed for typical business and professional situations. Students design, build, and test spreadsheet applications in the laboratory.

**ITSW 2337 Advanced Database  
(3-3-1)**

Prerequisite: ITSC 1301 or COSC 1301 and ITSC 1309 or equivalent.

Designed to provide an understanding of advanced functionality of databases. The student is taught the use of database management software as a tool to enhance productivity. Emphasis on the creation of database applications as needed for typical business and professional situations. Attention is on topics such as data design, updating, access and reporting. Students design, build, and test database applications in the laboratory.

**LMGT 1319 Introduction to Business Logistics Management  
(3-3-0)**

A systems approach to managing activities associated with traffic, transportation, inventory management and control, warehousing, packaging, order processing, and materials handling.

**LMGT 1323 Domestic and International Transportation Management  
(3-3-0)**

Prerequisites: LMGT 1319 or Departmental Approval

An overview of the principles and practices of transportation and its role in the distribution process. Emphasis on the physical transportation systems involved in the United States as well as on global distribution systems. Topics include carrier responsibilities and services, freight classifications, rates, tariffs, and public policy and regulations. Also includes logistical geography and the development of skills to solve logistical transportation problems and issues.

**LMGT 1325 Warehouse and Distribution Center Management  
(3-3-0)**

Prerequisites: LMGT 1319 or Departmental Approval

Emphasis on physical distribution and total supply chain management. Includes warehouse operations management, hardware and software operations, bar codes, organizational effectiveness, just-in-time manufacturing, continuous replenishment, and third party.

**LMGT 1393 Special Topics in Logistics and Materials Management –  
Transportation Issues  
(3-3-0)**

Prerequisites: LMGT 1319 or Departmental Approval

Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. This course provides students the opportunity to explore relevant and changing topics in the logistics field with emphasis on transportation. Based on Internet and current literature research, student present oral presentations for grade on approved transportation topics. Topics include state-of-the-art information technology, equipment, training, recruitment, pricing/costs, facilities, and latest thinking of the industry. The course includes a research paper on an approved transportation topic.

**LMGT 1393 Special Topics in Logistics and Materials Management – Logistics  
Issues  
(3-3-0)**

Prerequisites: LMGT 1319 or Departmental Approval

Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. This course provides students the opportunity to explore relevant and changing topics in the Logistics Management field. Group projects, interaction with local industry, class lectures, and case studies, as appropriate, will allow students to understand, appreciate, and apply the information in these topics in their Logistics Management career. The course includes a review and critical analysis of the novel "Precipice" by Daniel Pollock.

**LMGT 1393 Special Topics in Logistics and Materials Management – Warehouse Issues****(3-3-0)**

Prerequisites: LMGT 1319 or Departmental Approval

Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. This course provides students the opportunity to explore relevant and changing topics in the logistics field with emphasis on warehousing. Based on internet and current literature research, students present several oral presentation for grade on approved warehouse topics. Topics include state-of-the-art information technology, equipment, training, recruitment, pricing/costs, facilities, and latest thinking of the industry. The course includes a research paper on an approved warehousing/distribution center topic.

**LMGT 2330 International Logistics Management****(3-3-0)**

Prerequisites: Departmental Approval

Identification of the principles and practices involved in international distribution systems including the multinational corporation. Attention to global strategic planning, production, supply, manpower/labor, geography, business communications, cultural, political, and legal issues affecting global distribution and firm/host relationships.

**LMGT 2334 Principles of Traffic Management****(3-3-0)**

Prerequisite: LMGT 1319 or Departmental Approval

A study of the role and functions of a transportation traffic manager within a commercial or public enterprise. Includes training in rate negotiation, carrier and mode selection, carrier service evaluation, quality control, traffic pattern analysis, documentation for domestic and international shipments, claims, hazardous materials movement, and the state, federal, and international environments of transportation.

**MATH 0104 Special Topics in Math - TASP Review****(1-1-1)**

Prerequisite: MATH 0303 with a "C" or better, or concurrent enrollment in MATH 0303, and a failing math score on the TASP or Alternative TASP.

This TASP Review course is for students who have finished or are taking their last developmental Math course, but have failed the Math portion of the TASP or Alternative TASP exam. Topics include fundamental mathematics, algebra and geometry.

**MATH 0300 Basic Mathematics****(3-3-2)**

Corequisite: MATH 0100.

Topics include whole numbers including powers, fractions, decimals, ratio and proportion, percents, integers, interpreting charts and graphs, and linear equations involving one operation.

**MATH 0301 Introduction to Algebra and Geometry****(3-3-2)**

Prerequisite: MATH 0300 with a grade of "C" or better, or equivalent.

Topics include operations with real numbers, problem-solving, inductive and deductive reasoning, informal geometry, linear equations and inequalities, and introduction to polynomials and exponents.

**MATH 0302 Elementary Algebra**  
**(3-3-0)**

Prerequisite: MATH 0301 with a grade of "C" or better, or equivalent.

Topics include real numbers, polynomials, integral exponents, scientific notation, factoring, rational expressions, linear equations and inequalities, graphs of linear equations and inequalities in two variables, systems of linear equations, and solutions of quadratic equations.

**MATH 0303 Intermediate Algebra**  
**(3-3-0)**

Prerequisite: MATH 0302 with a grade of "C" or better, or equivalent.

Topics include introduction to relations and functions, factoring, radical expressions and equations, rational exponents, complex numbers, quadratic equations, completing the square, absolute value equations and inequalities, systems of equations, and the use of these concepts in problem-solving.

**MATH 1314 College Algebra**  
**(3-3-0)**

Prerequisite: MATH 0303 with a grade of "C" or better, or equivalent.

Graphing calculator required.

Topics include functions, including algebra of functions, composites, inverses, graphs, Remainder Theorem, Factor Theorem, Rational Root Theorem, logarithmic and exponential functions, solving systems of equations using Cramer's Rule and matrices, the Binomial Theorem, and arithmetic and geometric sequences and series.

**MATH 1316 Plane Trigonometry**  
**(3-3-0)**

Prerequisite: MATH 1314 with a grade of "C" or better, or equivalent.

Graphing calculator required.

Topics include circular and trigonometric functions, inverse circular functions, identities, conditional equations, graphs, solutions of triangles, polar coordinates, complex numbers, and vectors.

**MATH 1324 Finite Mathematics**  
**(3-3-0)**

Prerequisite: MATH 1314 with a grade of "C" or better, or equivalent.

Graphing calculator required.

Primarily for students of business administration and economics. Topics include combinatorial analysis, probability, matrix algebra, linear inequalities for quantitative management problems involving Baye's Theorem, mathematical expectation, binomial probability distributions, linear programming by both graphical and simplex methods, Markov chains, and input-output theory.

**MATH 1325 Calculus for Business**  
**(3-3-0)**

Prerequisite: MATH 1314 with a grade of "C" or better, or equivalent.

Graphing calculator required.

Topics include limits, continuity, derivatives of polynomials and other algebraic functions, implicit differentiation, higher order derivatives, extrema, logarithmic and exponential functions, definite and indefinite integrals, and applications to business and business-related topics.

**MATH 1332 Math for Liberal Arts****(3-3-0)**

Prerequisite: MATH 0303 with a grade of “C” or better, or equivalent, or a score of 230 or higher on the TASP math exam. Graphing calculators required.

This course is designed for non-mathematics and non-science majors who need only three hours of mathematics for their degree requirements. Math 1332 cannot be used as a prerequisite for any other math course nor as part of the six-hour math requirement for an A.S. degree. The course includes topics selected from: sets, logic, number theory, geometry, algebra, personal finance, probability and statistics.

**MATH 1348 Analytic Geometry****(3-3-0)**

Prerequisite: MATH 1314 with a grade of “C” or better, or equivalent, and demonstrated knowledge of trigonometry. Graphing calculator required.

Topics include rectangular and polar coordinate systems, conic sections, vectors, transformations, curve sketching, lines and planes in  $E^3$ , and matrices and linear systems.

**MATH 1350 Fundamentals of Mathematics I****(3-3-0)**

Prerequisite: MATH 1314 with a grade of “C” or better, or equivalent

This course is designed specifically for students who seek elementary or middle grade teacher certification. Topics include numeration systems and properties of whole numbers, integers, rational numbers and real numbers with an emphasis on problem solving.

**MATH 1351 Fundamentals of Mathematics II****(3-3-0)**

Prerequisite: MATH 1350 with a grade of “C” or better, or equivalent.

Topics include statistics, probability, geometric figures, measurement, transformational geometry and coordinate geometry.

**MATH 1442 Elements of Statistics****(4-4-0)**

Prerequisite: MATH 1314 with a grade of “C” or better, or equivalent.

Graphing calculator required.

This course is a non-calculus introduction to statistics with integrated computer applications. Topics include distributions, histograms, exploratory data analysis, measures of location and dispersion, elementary probability functions (binomial, normal, and t-distribution, chi-square distribution), analysis of measurements (confidence intervals and hypothesis testing), analysis of paired data (linear regression and correlation), and the use of pre-packaged programs for the analysis of data.

**MATH 2318 Linear Algebra****(3-3-0)**

Prerequisite: MATH 1314 with a grade of “C” or better, or equivalent.

Graphing calculator required.

Topics include systems of linear equations, matrices and matrix operations, determinants, vectors and vector spaces, inner products, change of bases; linear transformations; and eigenvalues and eigenvectors.

**MATH 2320 Differential Equations****(3-3-0)**

Prerequisite: MATH 2414 with a grade of "C" or better, or equivalent.

Graphing calculator required.

Topics include differential equations of first order, linear equations of higher order, applications, introduction to power series methods, elements of the Laplace Transform; other topics include systems of equations and numerical methods.

**MATH 2412 Precalculus****(4-4-0)**

Prerequisite: MATH 1314 with a grade of "C" or better, or equivalent.

Graphing calculator required.

Topics include functions, including composites, inverses, and graphs; conic sections; circular and trigonometric functions, inverse circular functions, identities, conditional equations, graphs, solutions of triangles, polar coordinates, complex numbers and vectors; and mathematical induction.

**MATH 2413 Calculus I****(4-4-0)**

Prerequisite: The combination of MATH 1316 and MATH 1348 or the single course MATH 2412 with a grade of "C" or better, or equivalent. Graphing calculator required.

Topics include limits, continuity, derivatives of algebraic functions and trigonometric functions, implicit differentiation and higher order derivatives; related rates, Rolle's Theorem, Mean Value Theorem, velocity, acceleration, curve sketching and other applications of the derivatives; antiderivatives, Riemann sums, definite integrals, Fundamental Theorem of Calculus, area, and derivatives and integrals of exponential and logarithmic functions.

**MATH 2414 Calculus II****(4-4-0)**

Prerequisite: MATH 2413 with a grade of "C" or better, or equivalent.

Graphing calculator required.

Topics include derivatives of inverse trigonometric functions, indeterminate forms, L'Hospital's Rule; techniques of integration, numerical methods, improper integrals, volume, arc length and other applications of integration; parametric equations; derivatives and areas in polar coordinates; and sequences and series.

**MATH 2415 Calculus III****(4-4-0)**

Prerequisite: MATH 2414 with a grade of "C" or better, or equivalent.

Graphing calculator required.

Topics include vector calculus, vector valued functions, tangents to curves, velocity vector, curl, partial derivatives, chain rule, gradients, implicit functions, extrema of functions of several variables, multiple integrals including change of order and applications, surface integrals, and path independent line integrals.

**MRKG 1301 Customer Relations (formerly HRPO 1301)****(3-3-0)**

Topics address general principles of customer service including skills, knowledge, attitudes, and behaviors pertinent to the professional development of the student.

**MRKG 1311 Principles of Marketing****(3-3-0)**

Prerequisites: BMGT 1303

Introduction to the marketing functions; identification of consumer and organizational needs; explanation of economic, psychological, sociological, and global issues; and description and analysis of the marketing research.

**MRKG 2380 Cooperative Education – Business Marketing & Marketing Management****(3-1-20)**

Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the College, employer, and student. Under the supervision of the College and the employer, the student combines classroom learning with work experience. Includes a lecture component.

**MUAP 1100 Accordion – Private****(1-1-1)**

A comprehensive study of the performance techniques of the accordion and the different styles of performance such as Tejano, Mariachi, polkas, and waltzes.

**MUAP 1101 Violin – Private****(1-1-1)**

Technical studies to develop instrumental techniques.

**MUAP 1117 Flute – Private****(1-1-1)**

Prerequisite: High School Band.

Includes the study of all scales, chromatic, arpeggios, various articulations, and short compositions from standard repertoire.

**MUAP 1129 Clarinet – Private****(1-1-1)**

Prerequisite: High School Band experience or instructor's permission.

Technical studies to develop instrumental technique. Included will be the Rose studies, the Klose Method, all scales, exercise in various articulations and short compositions from standard clarinet repertoire.

**MUAP 1133 Alto-Saxophone – Private****(1-1-1)**

Prerequisite: High School Band.

Corequisite: MUEN 1121 – Jazz Ensemble.

Technique will be developed through the study of Voxman's Advanced Method and Selected Studies and major scales and arpeggios.

**MUAP 1137 Trumpet – Private****(1-1-1)**

Prerequisite: High School Band.

Corequisite: MUSI 1121 – Jazz Band.

Technical studies will include Voxman, all scales and arpeggios in extended register and transposition.

**MUAP 1145 Trombone – Private****(1-1-1)**

Prerequisite: High School Band. Co-requisite: MUEN 1121 Jazz Ensemble.

Technique will be developed through the studies of Mantia, Couillard, Rochut, Arbon and exercises in various articulations.

**MUAP 1157 Percussion – Private****(1-1-1)**

Prerequisite: High School Band. Co-requisite: MUEN 1121 Jazz Ensemble.

A comprehensive study of the performance techniques of snare drum, and multiple percussion study on drum set and pit drumming.

**MUAP 1161 Bajo Sexto – Private****(1-1-1)**

A comprehensive study of the performance techniques of the bajo sexto: major/minor chords and accompaniment to conjunto rhythms such as polkas, cumbias, waltzes and huapangos.

**MUAP 1181 Beginning Voice/Private Instruction****(1-1-1)**

Open to students without previous vocal experience. Offers the opportunity for the development of the fundamentals of singing.

**MUAP 1182 Elementary Voice/Private Instruction****(1-1-1)**

Prerequisite: MUAP 1181.

Continuation of MUAP 1181. Open to students with previous vocal experience. Offers the opportunity for further development of the fundamentals of singing.

**MUAP 1189 Bass (Private) Development of Bass Techniques****(1-1-1)**

Prerequisite: High School Band. Co-requisite MUEN 1121 Jazz Ensemble

Development of bass techniques.

**MUAP 2162 Intermediate Guitar I/Private Instruction****(1-1-1)**

Prerequisite: MUSI 1193.

Continuation of MUSI 1193.

**MUAP 2163 Intermediate Guitar II/Private Instruction****(1-1-1)**

Prerequisite: MUSI 2162.

Continuation of MUSI 2162.

**MUAP 2170 Intermediate Piano I/Private Instruction****(1-1-1)**

Prerequisite: MUSI 1182 or instructor's permission.

Continuation of MUSI 1182.

**MUAP 2171 Intermediate Piano II/Private Instruction****(1-1-1)**

Prerequisite: MUSI 2170 or instructor's permission.

Continuation of MUSI 2170.

**MUEN 1121 Jazz Ensemble****(1-0-3)**

Prerequisite: High School Band experience or instructor's permission.

The Palo Alto College Jazz Ensemble will perform standard jazz repertoire. Three hours per week of rehearsal are required. May be repeated up to four semesters for credit.

**MUEN 1141 Choir****(1-0-3)**

Group performs a variety of vocal music from all historical periods. May be repeated up to four semesters for credit.

**MUEN 1151 Beginning Mariachi Ensemble****(1-0-3)**

The study of mariachi music through vocal and instrumental performance. May be repeated any number of times; however, only four hours will count toward a degree or transfer.

**MUEN 1152 Elementary Mariachi Ensemble****(1-0-3)**

A continuation of MUEN 1151. Develop further vocal and instrumental performance techniques.

**MUEN 1153 Intermediate Mariachi Ensemble****(1-0-3)**

A continuation of MUEN 1152. The student ensemble "Mariachi Palomino" rehearses and performs for some 30 performances a year. Audition required.

**MUEN 1155 Beginning Conjunto****(1-0-3)**

The study of Conjunto music through vocal and instrumental performance. May be repeated any number of times, however, only four hours will count toward a degree or transfer.

**MUEN 1158 Jazz Show Choir****(1-0-3)**

Audition required

Corequisite: MUEN 1141.

The Jazz Show Choir is a select group of singers who rehearse and perform Jazz and popular choral music for a small ensemble. Students should be concurrently enrolled in Choir (MUEN 1141). The ensemble rehearses three hours per week.

**MUSI 1163 Improvisation I****(1-1-1)**

Prerequisite: High School Band. Co-requisite: MUEN 1121 Jazz Ensemble.

Materials and practices for improvising in the Jazz Idiom.

**MUSI 1181 Beginning Piano**  
**(1-1-1)**

Piano class for music majors with no piano skills or for non-music majors who desire to learn the instrument.

**MUSI 1182 Elementary Piano**  
**(1-1-1)**

Prerequisite: MUSI 1181 or Instructor's permission.

Continuation of MUSI 1181.

**MUSI 1192 Beginning Guitar**  
**(1-1-1)**

Guitar class for music majors with no guitar skills, or non-music majors who desire to learn the instrument.

**MUSI 1193 Elementary Guitar**  
**(1-1-1)**

Prerequisite: MUSI 1192 or instructor's permission.

Continuation of MUSI 1192.

**MUSI 1216 Ear Training and Sight Singing I**  
**(2-0-2)**

This course emphasizes ear training, sight singing and keyboard skills.

**MUSI 1217 Ear Training and Sight Singing II**  
**(2-0-2)**

Prerequisite: MUSI 1216.

This course is a continuation of ET & SSI with additional emphasis on dictation, both melodically and harmonically.

**MUSI 1306 Music Appreciation**  
**(3-3-0)**

Introduction to music for the college student. Information and techniques for appreciation: basic elements, major forms, genres and style periods. Some outside attendance at concerts/recitals required.

**MUSI 1308 Introduction to Music Literature**  
**(3-3-0)**

A survey of vocal and instrumental literature, melding forms and representing styles.  
FALL ONLY.

**MUSI 1310 American Music – Jazz Appreciation**  
**(3-3-0)**

Surveys the evolution of the art of music as related to jazz; both individual musicians and stylistic details are explored. Emphasis is placed upon critical listening.

**MUSI 1310 American Music – Tejano Appreciation**  
**(3-3-0)**

A basic course in music that introduces the student to musical elements, forms, and stylistic periods. A special concentrated focus will be on Tejano music – its history, main performers, and social/cultural significance. Fulfills Fine Arts requirement.

**MUSI 1311 Basic Music Theory I  
(3-3-0)**

Corequisite: All music majors must enroll in MUSI 1181.

For students with little or no previous training in music. Study includes rudiments of music: notation, intervals, major scales, triads, music vocabulary, elementary ear training and keyboard work.

**MUSI 1312 Basic Music Theory II  
(3-3-0)**

Prerequisite: MUSI 1311 or instructor's permission.

A continuation of MUSI 1311 with emphasis on elementary music theory, ear-training and keyboard work.

**MUSI 2216 Ear Training and Sight-Singing III  
(2-0-2)**

Prerequisite: MUSI 1217.

This course includes ear training, sight singing and keyboard work utilizing materials of 18th, 19th, and 20th century music.

**MUSI 2217 Ear Training and Sight-Singing IV  
(2-0-2)**

Prerequisite: MUSI 2216. Corequisite: MUSI 2312.

Ear-training, sight-singing, and keyboard work/materials of Eighteenth, and Twentieth Century music.

**MUSI 2311 Music Theory III  
(3-3-0)**

Prerequisite: MUSI 1312 or instructor's permission.

This sophomore level theory course for music majors includes analytical and composition techniques for Eighteenth, Nineteenth, and Twentieth Century music. Topics will include modulation, chromaticism, modes, and modern music. **Offered Fall Semester Only.**

**MUSI 2312 Music Theory IV  
(3-3-0)**

Prerequisite: Music Theory III – 2311 or instructor's permission.

Continuation of MUSI 2311. MUSI 2217 must be taken concurrently. **Offered Spring Semester Only.**

**MUSI 2389 Academic Cooperative in Music  
(3-3-0)**

An instructional program designed to integrate on-campus study with practical hands-on work experience in music. In conjunction with class seminars, the individual student will set goals and objectives in the study of music and performance.

**PHED 1101 Fencing  
(1-1-2)**

Students will learn basic foil techniques and footwork. History, rules, scoring systems, and terminology will be learned.

**PHED 1102 Adapted Physical Activity  
(1-1-2)**

This class is designed for physically disabled students. A release/limitation form that describes the student's condition and that contains activity suggestions from the student's doctor is required.

**PHED 1103 Beginning Softball  
(1-1-2)**

Infielder and outfielder techniques, batting, and throwing for distance and accuracy will be taught. Rules for slow-pitch will be emphasized but fast-pitch will also be covered.

**PHED 1104 Physical Conditioning  
(1-1-2)**

This class will work on strength, muscular endurance, flexibility, and cardiovascular fitness. Students will perform weight training, stretching, rope jumping, stationary bike riding, and some running activities in class.

**PHED 1105 Beginning Golf  
(1-1-2)**

Students will learn how and when to use woods and irons. Also to be covered are putting, different scoring systems, rules, and etiquette.

**PHED 1106 Weight Training  
(1-1-2)**

This class will focus on the development of strength and muscular endurance as they relate to overall health related fitness. Strength training theories, hypertrophy, balance, and body composition will be topics for discussion. Some cardiovascular work also will be encouraged.

**PHED 1107 Intermediate Weight Training  
(1-1-2)**

Prerequisite: PHED 1106 or permission of the department.

This course is a continuation of PHED 1106. Students will learn and practice advanced concepts such as circuit training and sports-specific training.

**PHED 1108 Beginning Bowling  
(1-1-2)**

This course is to introduce basic bowling skills. Students will learn grips, approaches, releases, rules, history, scoring, and equipment selection use, and care.

**PHED 1109 Spin Bike I  
(1-1-2)**

This course is group exercise class designed to improve individualized cardiovascular fitness with the use of stationary bicycles.

**PHED 1110 Spin Bike II  
(1-1-2)**

This course is an advanced cardiovascular conditioning class using stationary bicycles.

**PHED 1111 Intermediate Fencing  
(1-1-2)**

Prerequisite: PHED 1101 or permission of the department.

This class is for students with credit in Beginning Fencing or equivalent experience. Basic skills will be reviewed and refined. New and advanced skill will be introduced.

**PHED 1112 Yoga  
(1-1-2)**

Yoga introduces the student to the philosophy and practice of various types of yoga, including Hatha Yoga, power yoga, yoga for fitness, and yoga for conditioning as a way to enhance physical, mental and spiritual well-being.

**PHED 1113 Beginning Basketball  
(1-1-2)**

This is a skill development class for beginners. Students will work daily on drills and activities designed to increase skills in passing, dribbling, ball handling, defense, and shooting. Team skills will be learned after fundamentals are mastered.

**PHED 1114 Intermediate Basketball  
(1-1-2)**

Prerequisite: PHED 1113 or permission of the instructor.

This course is a continuation of PHED 1113 and will focus on the development of increased individual skills as well as introducing team strategies and techniques.

**PHED 1115 Beginning Tennis  
(1-1-2)**

This class is for true beginners and others with no previous instruction in tennis. Court movements, grips, forehand and backhand ground strokes, volleys, and serves will be covered.

**PHED 1116 Intermediate Tennis  
(1-1-2)**

This class is designed for students with credit for Beginning Tennis or who have competitive experience. Stroke refinement, game strategies, and advanced drills will be included.

**PHED 1117 Beginning Volleyball  
(1-1-2)**

The student in this class will learn forearm pass, overhead pass, and overhead serve. Individual and paired drills, lead-up games, and conditioning activities will prepare students for competition.

**PHED 1118 Intermediate Volleyball  
(1-1-2)**

Prerequisite: PHED 1117 or permission of the instructor.

This course is for students with credit for Beginning Volleyball or previous competitive experience. Basic skills will be reviewed and tested as well as spiking, blocking, team offense, and team defense strategies.

**PHED 1119 Intermediate Yoga  
(1-1-2)**

This course is a continuation of PHED 1112 and includes the philosophy and practice of various types of yoga, including Hatha Yoga, power yoga, yoga for fitness, and yoga for conditioning as a way to enhance physical, mental and spiritual well-being. Additional concepts and techniques will build on those learned in PHED 1112.

**PHED 1120 Walking  
(1-1-2)**

Students will learn about health-related physical fitness, monitoring their effort and progress, building a personal fitness plan for walking.

**PHED 1121 Advanced Basketball  
(1-1-2)**

This course provides for further development of advanced basketball skills and strategies. Emphasis is placed on team offense and defense concepts and techniques.

**PHED 1122 Folk, Square, and Social Dance  
(1-1-2)**

Fundamental techniques for folk dance, square dance, and social dance will be learned. Cultural aspect of each of these forms will be studied.

**PHED 1123 Intermediate Golf  
(1-1-2)**

Intermediate golf skills, techniques and strategies are the focus of this class. Students will engage in play at a certified golf course. This course is offered off campus.

**PHED 1124 Intermediate Water Aerobics  
(1-1-2)**

Additional exercises designed to increase cardiovascular fitness, flexibility, strength and muscular endurance.

**PHED 1125 Camping and Backpacking  
(1-1-2)**

Hiking, orienteering, packing, camping, and survival skills will be discussed and practiced. A weekend trips may be required.

**PHED 1126 Private – Fencing I  
(1-1-2)**

This course provides individual instruction in the basic fundamentals of movement and simple offense and defense with foil, as well as explanation of rules of foiling fencing.

**PHED 1127 Private Fencing II  
(1-1-2)**

This course provides individual instruction for intermediate fencing skills.

**PHED 1128 Private – Advanced Fencing  
(1-1-2)**

This course is a continuation of PHED 1111, which provides advanced levels of fencing techniques and introduces basic fundamentals of directing and judging fencing.

**PHED 1129 Beginning Swimming  
(1-1-2)**

This is a class for students with no water experience, fear of the water, and/or no previous instruction in the following strokes: elementary backstroke, sidestroke, breaststroke, back crawl, and front crawl. Water orientation, floating, and gliding practice will lead up to stroke instructions.

**PHED 1130 Beginning Soccer  
(1-1-2)**

This is a basic level class. Beginning skills such as ball control, dribbling, passing, shooting, and defense will be practiced. Students will learn the rules and history of the sport.

**PHED 1131 Intermediate Swimming  
(1-1-2)**

Students who register for this class should be able to demonstrate skills on elementary backstroke, sidestroke, breaststroke, back crawl, and front crawl. Strokes to be introduced are: inverted breaststroke, lifesaving stroke, butterfly, and racing strokes. Water safety, basic rescue, and survival techniques will also be taught.

**PHED 1132 Lifesaving  
(1-1-2)**

Students registered for this class should be able to demonstrate all the strokes taught in beginning and intermediate swimming, as well as be able to swim 800 meters of freestyle laps without stopping. Successful completion of this class should qualify students to apply for Red Cross certification.

**PHED 1134 Aquatic Conditioning  
(1-1-2)**

This is a class for good swimmers who want to use swimming as a cardiovascular fitness activity. Training regimen for fitness, endurance swimming, and competition will be learned and practiced.

**PHED 1135 Water Aerobics  
(1-1-2)**

Exercises designed to increase cardiovascular fitness, flexibility, strength, and muscular endurance will be performed in shallow areas of the pool. This is a good class for overweight students with joint problems, and students who want a pool based class that does not involve swimming.

**PHED 1136 Beginning Scuba  
(1-1-2)**

Students will learn about selection, care, and use of equipment. Safety, underwater movements, and other topics will be learned and practiced.

**PHED 1137 Triathlon Training  
(1-1-2)**

Training theories and skill techniques for running, biking, and swimming will be learned and applied. Related factors such as nutrition, weight training, combination workouts, and competition skills also will be covered. Some experience is helpful but not mandatory. Students must provide their own bicycles.

**PHED 1140 Beginning Aerobics**  
**(1-1-2)**

This is an exercise-to-music class that could include any of the following: dance aerobics, sports moves aerobics, step aerobics, stretching, strength work, and muscular endurance work. Activities will be presented progressively. Fitness principles will be learned and practiced.

**PHED 1141 Intermediate Aerobics**  
**(1-1-2)**

Many of the same activities utilized in beginning aerobics also will be used in this class, but will start at a higher level. Additionally, students will apply exercise principles in developing a workout routine to be presented in class.

**PHED 1142 Cardio-Kickboxing**  
**(1-1-2)**

This course is designed to develop cardiorespiratory fitness, muscular endurance, flexibility and body composition through the use of combined kickboxing and aerobic activity. Hand weight, jump ropes and traditional floor work routines will be included in regular circuit, and interval workouts. Concepts of exercise and proper nutrition for a lifetime of health and weight management will also be discussed.

**PHED 1143 Intermediate Cardio-Kickboxing**  
**(1-1-2)**

This course is designed to develop cardiorespiratory fitness, muscular endurance, flexibility and body composition through the use of combined kickboxing and aerobic activity. Hand weight, jump ropes and traditional floor work routines will be included in regular circuit, and interval workouts. Concepts of exercise and proper nutrition for a lifetime of health and weight management will also be discussed. Prerequisite: None.

**PHED 1144 Social Dance**  
**(1-1-2)**

This course will introduce the student to a variety of popular, social, and traditional social dances including Latin dances, swing, jitterbug, hip-hop, and country western.

**PHED 1145 Beginning Modern Dancing**  
**(1-1-2)**

Students in this course will explore movement as an art form to achieve grace, poise, and self-expression. Fundamental movement patterns and dance composition will be part of course content.

**PHED 1146 Intermediate Modern Dancing**  
**(1-1-2)**

Prerequisite: PHED 1145

An understanding of time, space, energy, and focus in dance performance is emphasized. Students will further develop critical response skills and understanding of composition and aesthetics.

**PHED 1147 Jazz Dance**  
**(1-1-2)**

Students will learn how to jazz dance warm-up and cool-down and movement combinations with a focus on alignment, ensemble work, and musicality. As an activity class, each student should be prepared to participate to the best of his/her ability fully in each class session.

**PHED 1149 Beginning Ballet  
(1-1-2)**

Students will learn how to do a ballet warm-up and cool down and dance combinations. Each student should be prepared to participate to the best of his/her ability fully in each class session.

**PHED 1150 Beginning Jogging  
(1-1-2)**

Students will learn how to use aerobic running in a fitness plan. Health-related fitness components, safety, injury prevention, and training system will be taught.

**PHED 1151 Beginning Yoga  
(1-1-2)**

This course introduces the student to fundamental principles of yoga through basic exercises that enhance physical, mental and spiritual well-being and prepare the student for PHED 1112 Yoga.

**PHED 1155 Varsity Athletics  
(1-1-2)**

Prerequisite: Permission from instructor is necessary before enrollment. Students will learn training systems and techniques appropriate for various events in one particular sport. Participation in practice sessions and competitions is required.

**PHED 1238 Physical Fitness  
(2-2-0)**

This course introduces physical fitness concepts and the use of selected physiological variables of fitness. Suitable fitness program will be explored.

**PHED 1301 Introduction to Physical Education  
(3-3-0)**

This course, intended for physical education majors, is an orientation to the field of Health, Physical Education, and Recreation including the history, philosophy, fundamentals, current practices, and trends of profession. Career opportunities will be explored.

**PHED 1304 Personal/Community Health  
(3-3-0)**

This course will investigate relationships among infectious disease, chronic disease, safety, and lifestyle factors in personal health. Government programs and policies, health care provision agencies, types of insurance, and current areas of interest in public health will be studied.

**PHED 1305 Personal/Community Health II  
(3-3-0)**

The principles of health as they relate to individual people and the community. Course includes epidemiology, health through the lifespan, and assessment and implementation of health programs in the community.

**PHED 1306 First Aid  
(3-3-0)**

Students will learn Adult CPR and basic care techniques for injuries, burns, and poisoning. Upon successful completion of this course, students will earn Red Cross First Aid and CPR certification.

**PHED 1308 Intramurals and Officiating  
(3-3-0)**

The student will develop competency in designing, organizing, and promoting intramural programs. Emphasis on officiating techniques and procedures in various activities will be explored.

**PHED 1321 Coaching/Sports/Athletics I  
(3-3-0)**

Survey of the history, theories, philosophies, rules, and terminology of competitive sports. Includes developmentally appropriate coaching techniques and sports psychology.

**PHED 1331 Physical Education in the Elementary Grades  
(3-3-0)**

This is a course in materials, methods and activities in physical education programs in elementary schools. The needs and interests at different grade levels are stressed.

**PHED 1332 Movement Experience for Pre-School Children  
(3-3-0)**

This course meets the needs of those interested in movement and play for the pre-school child. Methods of learning, values of play, development of the child and organization of the environment are stressed.

**PHED 1346 Substance Abuse  
(3-3-0)**

Students will examine the use and abuse of drugs in today's society. Emphasis will include physiological changes that occur, biochemical reactions, and brain triggers involved in substance abuse. Also included are psychological factors.

**PHED 2101 Skill Analysis – Individual Activity  
(1-1-2)**

Specialized activity instruction involving skills, drills, rules, regulations, and skill performance in a variety of selected individual activities.

**PHED 2102 Skill Analysis – Dual Activity  
(1-1-2)**

Specialized activity instruction involving skills, drills, rules, regulations, and skill performance in a variety of selected dual activities.

**PHED 2103 Skill Analysis – Team Sport  
(1-1-2)**

Specialized activity instruction involving skills, drills, rules, regulations, and skill performance in a variety of selected team activities.

**PHED 2303 Dance Appreciation  
(3-3-0)**

This course introduces the student to dance as a universal form of human expression and surveys dance forms as they have developed throughout history and around the world. Comparisons are made between dance and other art forms in a cultural context.

**PHIL 1301 Introduction to Philosophy  
(3-3-0)**

This course investigates the fundamental questions of reality. It explores the meaning of life, truth, freedom, the existence of God, and social and political theory.

**PHIL 1304 Major World Religions  
(3-3-0)**

This course is a comparative introduction to the origins, development, teachings and practices of the major world religions. Included are such faiths as Taoism, Confucianism, Hinduism, Buddhism, Judaism, Christianity, and Islam.

**PHIL 2303 Logic  
(3-3-0)**

This course is an introduction to the art and science of reasoning well. It explores the difference between good and bad arguments through various tools, techniques, and principles.

**PHIL 2306 Ethics  
(3-3-0)**

This course examines the questions of morality from theoretically diverse perspectives. Theories are applied to moral and social issues, with an emphasis on moral reasoning and decision making.

**PHIL 2371 Business Ethics  
(3-3-0)**

This course is an examination of principles of moral conduct from theoretically diverse perspectives, with an emphasis on issues that guide behavior in the world of business. Specific problems to be considered include topics such as corporate responsibility, employee rights, the nature of the free enterprise system, environmental concerns, and ethical business practices.

**PHYS 1171 Concepts of Physics Laboratory  
(1-0-2)**

Prerequisite: PHYS 1305 or concurrent enrollment.

This course is designed to supplement PHYS 1305 or PHYS 1307 with laboratory experience related to the topics of these two courses.

**PHYS 1305 Introductory Physics I  
(3-3-0)**

Prerequisite: MATH 0303 or equivalent.

This course stresses the importance of science in the modern world, while not requiring a mathematical background beyond algebra. Topics include mechanics, heat, and sound. Some degree programs may require concurrent enrollment in PHYS 1171 for additional laboratory experience.

**PHYS 1307 Introductory Physics II  
(3-3-0)**

Prerequisite: PHYS 1305.

Topics to be covered include electricity and magnetism, light, and atomic nuclear physics.

**PHYS 1401 General Physics I  
(4-3-3)**

Prerequisite: MATH 1316 (Plane Trigonometry) or permission of the department.

For those preparing to enter medicine, dentistry, nursing, pharmacy, architecture, and for those who require a two-semester technical course in physics. Mechanics, sound, heat, and their applications. Must be followed by PHYS 1402 to satisfy a science requirement.

**PHYS 1402 General Physics II  
(4-3-3)**

Prerequisite: PHYS 1401.

Topics to be included: electricity, magnetism, light, and atomic nuclear physics.

**PHYS 1570 Mechanics & Heat  
(5-4-3)**

Prerequisite: MATH 2413 and High School Physics or Physics unit.  
Corequisite: MATH 2414

For pre-engineering and physics majors or minors. The principles and applications of mechanics, heat, and fluids are covered through an analytic, problem-solving procedure.

**PHYS 2570 Electricity and Magnetism  
(5-4-3)**

Prerequisite: PHYS 1570.  
Corequisite: MATH 2415.

For pre-engineering and physics majors or minors. The principles and applications of electricity and magnetism, wave phenomena, and some topics in modern physics are investigated.

**POFI 1301 Computer Applications I  
(3-3-1)**

Recommended: Keyboarding proficiency

Overview of computer office applications including current terminology and technology. Introduction to computer hardware, software applications, and procedures.

**POFI 1341 Computer Applications II  
(3-2-3)**

Prerequisites: POFI 1301 or equivalent

Continued study of current computer terminology and technology. Advanced skill development in computer hardware, software applications, and procedures.

**POFI 2301 Word Processing  
(3-2-3)**

Prerequisites: POFT 2301 with a grade of "C" or better

In-depth coverage of word processing software application.

**POFI 2331 Desktop Publishing for the Office  
(3-3-1)**

Recommended: Typing speed of 40 wpm and some word processing skills

In-depth coverage of desktop publishing terminology, text editing, and use of design principles to create publishing features. Emphasis on layout techniques, graphics, and multiple page displays.

**POFT 1301 Business English  
(3-3-0)**

Introduction to a practical application of basic language usage skills with emphasis on fundamentals of writing and editing for business.

**POFT 1309 Administrative Office Procedures I  
(3-3-0)**

Recommended: Basic keyboarding skills

Study of current office procedures, duties and responsibilities in an office environment.

**POFT 1313 Professional Development for Office Personnel  
(3-3-0)**

Preparation for the work force including business ethics, interpersonal relations, professional attire, and career advancement.

**POFT 1319 Records and Information Management I  
(3-3-0)**

Introduction to basic records and information management. Includes the life cycle of a record, manual and electronic record management, and basic filing procedures and rules.

**POFT 1328 Business & Professional Presentations  
(3-3-0)**

Skill development in planning and conducting business presentations on an individual and/or group basis including communication and media skills.

**POFT 1329 Keyboarding and Document Formatting (Non-Majors)  
(3-3-0)**

Skill development in the operation of the keyboard by touch, applying proper keyboarding techniques. Emphasis on development of acceptable speed (25 wpm) and accuracy (5 or less errors) levels and formatting basic documents.

**POFT 1331 Business Machine Applications  
(3-3-0)**

Skill development in the operation of machines used in a business environment. Emphasis on the development of skills in using electronic calculators and other office machines.

**POFT 1345 Shorthand/Notetaking I  
(3-2-3)**

Prerequisite: Basic document production proficiency

An introduction to shorthand/notetaking principles. Practice in accurate reading and writing of notes to produce mailable documents from dictation.

**POFT 1349 Administrative Office Procedures II  
(3-2-3)**

Prerequisites: POFT 1309 or equivalent competencies.

In-depth coverage of office applications with special emphasis on decision making, goal setting, management theories, and critical thinking.

**POFT 1392 Special Topics in Administrative Assistant/Secretarial Science, General  
– Advanced Shorthand****(3-2-3)**

Prerequisite: POFT 2343

Topics address recently identified current events, skills, knowledges, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. Intensive practice in the dictation and transcription of shorthand notes is used to produce mailable letters. Shortcut methods are stressed to facilitate rapid dictation. A minimum dictation speed of 100 wpm for 3 minutes with 97% accuracy is required at the completion of the course.

**POFT 1392 Special Topics in Administrative Assistant/Secretarial Science, General  
– Advanced Machine Transcription****(3-2-3)**

Prerequisite: POFT 2321

Topics address recently identified current events, skills, knowledges, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. Transcription from dictation equipment is done on word processing equipment. Emphasis is placed on language arts skills, proofreading skills, and the development of machine dictation skills including the composition of business communications.

**POFT 1429 Keyboarding and Document Formatting (Majors)****(3-2-3)**

Skill development in the operation of the keyboard by touch applying proper keyboarding techniques. Emphasis on development of acceptable speed (35 wpm) and accuracy (5 or less errors) levels and formatting basic documents.

**POFT 2301 Document Formatting and Skillbuilding****(3-2-3)**

Prerequisites: POFT 1329 or POFT 1429 or equivalent

A continuation of keyboarding skills in document formatting, speed, and accuracy. Emphasis on proofreading, editing, and following instructions, and keying documents from various copy. A minimum speed of 45 wpm with five or less errors is required on 5-minute timed writings.

**POFT 2303 Speed and Accuracy Building****(3-3-0)**

Review, correct, improve, and/or perfect touch keyboarding techniques for the purpose of increasing speed and improving accuracy.

**POFT 2312 Business Correspondence and Communications****(3-3-0)**

Prerequisites: POFT 1301 or equivalent.

Development of writing skills to produce effective business documents.

**POFT 2321 Machine Transcription****(3-2-3)**

Prerequisite: POFT 2301 and POFT 1301 or equivalent

Skill development in mailable business document production using computers and transcription equipment. Skill refinement in grammar and punctuation with emphasis on proofreading and formatting.

**POFT 2333 Advanced Document Formatting and Skillbuilding  
(3-2-3)**

Prerequisite: POFI 2301 or equivalent

Study of advanced concepts in a variety of office-simulated correspondence activities with emphasis on organization, prioritizing, decision making, composition, placement, accuracy, and speed development. A minimum exit speed of 50 wpm with five or less errors is required on 5-minute timed writings.

**POFT 2343 Shorthand/Notetaking II  
(3-2-3)**

Prerequisite: POFT 1345

A continuation of shorthand/notetaking principles with advanced mastery of accurate reading and writing of notes to produce mailable documents from dictation. Minimum dictation speed at completion of course is 80-wpm for 3 minutes with 97% accuracy.

**POFT 2380 Cooperative Education-Administrative Assistant/Secretarial Science,  
General  
(3-1-20)**

Prerequisite: Approval of workstation by instructor/coordinator

Career-related activities encountered in the student's area of specialization are offered through a cooperative agreement among the college, employer, and student. Under supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component..

**PSYC 2301 Introduction to Psychology  
(3-3-0)**

Psychology is the scientific study of behavior and mental processes. Topics include theoretical perspectives, scientific method, brain and nervous system, perception, behavioral conditioning, memory, thinking, human development, and personality. Psychotherapy, social psychology, and the types and causes of mental illness are also covered.

**PSYC 2303 Business Psychology  
(3-3-0)**

This course surveys applications of psychological knowledge and methods in the field of business. Topics included are employee selection, testing, motivation, personality improvement, and factors affecting general morale and employer-employee relationships. This course is recommended for business majors.

**PSYC 2306 Human Sexuality  
(3-3-0)**

This course is the study of the physiological, psychological, anatomical and sociocultural aspects of human sexuality. Topics included are the patterns and control of fertility, sexual orientation and behavior, sexually-transmitted diseases, sexual problems and deviance, and the achievement of a positive sexual self-concept.

**PSYC 2308 Developmental Psychology: Conception Through Childhood  
(3-3-0)**

Prerequisite: PSYC 2301.

This course is a study of cognitive, psychological, and physical aspects of development from conception through the school years with emphasis on current research methods and results.

**PSYC 2314 Developmental Psychology: Life Span**  
**(3-3-0)**

Prerequisite: PSYC 2301.

This course is a study of maturational, social, emotional, cognitive, neurological, perceptual, sexual, and behavioral factors in human development.

**PSYC 2316 Psychology of Personality**  
**(3-3-0)**

Prerequisite: PSYC 2301.

This course is a review of the major theories of personality and of the various techniques used to assess personality.

**PSYC 2317 Statistics for the Behavioral Sciences**  
**(3-3-0)**

Prerequisite or Corequisite: MATH 0303.

This course is a study of basic descriptive and inferential statistics to include hypothesis testing for both correlational and experimental techniques applicable to the behavioral, social, and medical sciences. Probability, sampling theory, frequency distributions, measures of central tendency and variability, and hypothesis testing will be explored as well as various parametric and nonparametric tests of significance. This course will not fulfill mathematics requirements. It is recommended for behavioral science and allied health majors.

**PSYC 2370 Abnormal Psychology**  
**(3-3-0)**

Prerequisite: PSYC 2301.

This course is a study of the description, current classifications, etiology, and treatment of major psychological disorders, including both functional and organic disorders.

**PSYC 2371 Theories of Learning**  
**(3-3-0)**

Prerequisite: PSYC 2301.

This course is an examination of major theories about the nature of the learning process. Discussion will focus on the construction and evaluation of learning models. The practical implications of theoretical findings for the acquisition, maintenance, and elimination of behavior will be considered.

**PSYT 1303 Dynamics of Human Relations**  
**(3-3-0)**

Discussion of the dynamics necessary for developing and maintaining positive/productive interpersonal and work relationships.

**QCTC 1305 Teaming**  
**(3-3-0)**

A study in group dynamics, synergy, team building, consensus decision-making, active listening skills, win/win resolution, confrontation skills, creativity, and brainstorming. Examination of team presentation skills, overall team communication, and resolving personality conflicts.

**READ 0301 Reading I  
(3-3-1)**

Prerequisite: READ 0300 or equivalent placement score.

Designed for the student reading between the 6th and 8th grade level and needing additional review, refinement and reinforcement of basic reading skills. Word recognition, vocabulary development, comprehension, fluency, and study skills will be stressed. Three lecture hours per week plus laboratory experiences as required. **Students must earn a minimum grade of C in READ 0300 before being permitted to enroll in READ 0301.** (3 lecture hours plus 1 laboratory hour per week)

**READ 0302 Reading II  
(3-3-1)**

Prerequisite: READ 0301 or equivalent placement score.

Designed for the student reading between the 8th and 10th grade level. Pertinent vocabulary, specific textbook comprehension, necessary study skills in context, and flexibility of reading rates are emphasized. Efficient reading techniques appropriate for academic demands are developed. Three lecture hours per week plus laboratory experiences as required. **Students must earn a minimum grade of C in READ 0301 before being permitted to enroll in READ 0302.** (3 lecture hours plus 1 laboratory hour per week)

**READ 0303 Intermediate Reading  
(3-3-1)**

Prerequisite: READ 0302 or equivalent placement score.

Designed for the student reading between the 10th and 12th grade level. Pertinent vocabulary, specific textbook comprehension, main idea, writer's intent, organization of ideas, and critical reasoning skills are emphasized. Strong emphasis on study skills. Three lecture hours per week plus laboratory experiences as required. This course is strongly recommended for students concurrently enrolled in college-level courses as well as for students who are working toward passing TASP. **Students must earn a minimum grade of C in READ 0302 before being permitted to enroll in READ 0303.** (3 lecture hours plus 1 laboratory hour per week)

**RTVB 1317 Survey of Electronic Media  
(3-3-0)**

Study of the broadcast and cable industry, the history of the broadcast and cable industries, the operation of radio and TV stations, cable facilities, programming practices of radio, and Federal Communication Commission (FCC) organization and career opportunities in broadcasting and cable industry.

**SDEV 0100 Strategies for Succeeding in College  
(1-1-0)**

This course is designed to provide students with a variety of experiences and information which can help them adjust to college life and help make their experiences in college more successful. It helps students understand the institution's expectations of them. Emphasis is placed on information about college policies and procedures as well as personal development.

**SDEV 0101 Career and Life Planning  
(1-1-0)**

Designed to assist the undecided student in establishing academic and career goals. This is an application course to guide the student through the goal-setting and decision-making process in order to set realistic academic and career goals necessary for being successful in college.

**SDEV 0102 Enhancing Academic Success  
(1-1-0)**

This course is designed for the academically at-risk student needing to improve his or her study and time management skills. Emphasis is placed on time planning, note-taking, test-taking, and various study techniques.

**SOCI 1301 Introduction to Sociology  
(3-3-0)**

This course is designed to achieve insights into the development and workings of society. It includes cultural factors which underlie social change, social organization, socialization, stratification, social institutions, and social issues.

**SOCI 1306 Contemporary Social Problems  
(3-3-0)**

This course is a survey of some of the major social problems of present society: poverty, drug abuse, alcoholism, prejudice, discrimination, family disorganization, mental illness, energy sources, environmental abuse, sexual deviance, and unemployment.

**SOCI 2301 Marriage and the Family  
(3-3-0)**

This course is a practical approach to the institution of marriage and family. It includes examination and analysis of divorce, human sexuality, sex roles, mate selection, marital adjustment, family patterns in the middle and the later years, and family disorganization.

**SOCW 2361 Introduction to Social Work  
(3-3-0)**

This course is an introduction to the history, philosophy, and practice of social work. It examines case work, group work, and community organization.

**SOCW 2362 Introduction to Social Welfare  
(3-3-0)**

Prerequisite: SOCW 2361.

This course studies the role of the social worker as well as social welfare in American society with emphasis on evaluation of current programs.

**SPAN 1300 Beginning Conversational Spanish I  
(3-3-0)**

For students with little or no knowledge of Spanish. Development of the skills required to speak Spanish: conversation and the study of idiomatic expressions, basic grammatical structures, and culture. Does not fulfill degree requirements.

**SPAN 1310 Beginning Conversational Spanish II  
(3-3-0)**

Prerequisite: SPAN 1300.

A continuation of SPAN 1300. Does not fulfill degree requirements.

**SPAN 1411 Elementary Spanish I  
(4-3-2)**

For students with little or no knowledge of Spanish. An introduction to the four basic skills: listening comprehension, oral production, reading, and writing. Pronunciation, grammar, and practical vocabulary will be introduced. Language laboratory required.

**SPAN 1412 Elementary Spanish II  
(4-3-2)**

Prerequisite: SPAN 1411 or Departmental approval.

A continuation of SPAN 1411. Language laboratory required.

**SPAN 2311 Intermediate Spanish I  
(3-3-0)**

Prerequisite: SPAN 1412 or placement test

Conducted primarily in Spanish, this course provides an approach to the Hispanic culture. A review of Spanish grammar, the expansion of basic language skills, and readings of more advanced texts with a view toward Spanish and Latin American cultures are included.

**SPAN 2312 Intermediate Spanish II  
(3-3-0)**

Prerequisite: SPAN 2311

A practical approach to reading literature in Spanish is provided. Conducted primarily in Spanish, the fine points of Spanish grammar and a survey of literary selections from the Hispanic world are covered.

**SPAN 2316 Career Spanish I  
(3-3-0)**

Prerequisites: Elementary Spanish I and Elementary Spanish II or its equivalent

This third semester course presents realistic situations and the specialized vocabulary for business and finance professionals to communicate with members of the Hispanic community (local/global) in the course of their daily work.

**SPAN 2317 Career Spanish II  
(3-3-0)**

A continuation of career Spanish 2316. Emphasis on advanced oral and written communication related to technology, marketing, and the Internet for conducting business transactions.

**SPCH 0301 Oral Communication Skills  
(3-3-0)**

Development of speaking, listening, nonverbal communication skills for situations at home, school, and work. Emphasis on using communication skills to build self-confidence and reduce nervousness in oral presentations.

**SPCH 0302 Intermediate Conversational English for Non-Native English Speakers  
(3-3-0)**

This course is designed to provide extensive oral practice in spoken English. The focus is on oral construction of sentences, idioms, and conversational speech in everyday situations and occasion-specific situations. This course should be taken after SPCH 0370 and 0371 or with departmental permission..

**SPCH 0303 Public Speaking for Non-Native Speakers of English  
(3-3-0)**

This course is designed to be a public speaking preparatory course for non-native speakers of English. The focus is to develop the skills necessary in a formal speaking situation as well as teach techniques used to deal with speaking anxiety. This course should be taken after SPCH 0370, 0371, and 0302 or with departmental permission and before entering the SPCH 1311 (Fundamentals of Speech) course required for most degree plans.

**SPCH 0370 Pronunciation I for the Non-Native Speakers of English  
(3-3-0)**

Specifically designed to enhance the oral competency of non-native English speakers. The focus is on English sounds, the stress patterns used in English and pronunciation.

**SPCH 0371 Pronunciation II and Beginning Conversational English for Non-Native English Speakers  
(3-3-0)**

Prerequisite: SPCH 0370 or counselor/faculty recommendation.

Continuation of SPCH 0370 for students wanting additional work, with emphasis on practice in conversational English.

**SPCH 1311 Fundamentals of Speech  
(3-3-0)**

Aimed at understanding and demonstrating the fundamentals of oral communication and participation in group speaking situations. Focus is on critical thinking skills and preparing and delivering different types of speeches.

**SPCH 1315 Public Speaking  
(3-3-0)**

Prerequisite: SPCH 1311, SPCH 1321, or consent of the instructor.

Designed for students wanting to continue their work in public speaking. Course concentrates on refining techniques of speaking and critical thinking skills learned in the prerequisite course. Possible areas for practice include persuasion techniques and theories, longer informative presentations, and specialty speeches. Appropriate for students entering the fields of Speech, Communication, or Public Relations.

**SPCH 1318 Interpersonal Communication  
(3-3-0)**

Designed for the student wanting to improve communication skills in one-to-one settings and small groups. A study and practice of effective interpersonal concepts and techniques. Includes subjects such as listening, assertive communication, conflict resolution, cultural diversity, and gender/family communications. Emphasis on self-improvement, building confidence, and understanding others. **Offered Fall Semester only.**

**SPCH 1321 Business and Professional Speech  
(3-3-0)**

Designed to provide students with the fundamentals and techniques of business and professional presentations. Study of organizational communication and the types of communication used in business settings. Includes critical thinking skills, interviewing, group process, and formal presentations.

**SPCH 1342 Voice and Articulation  
(3-3-0)**

A practical course designed to develop an understanding of the use and function of the voice, as well as provide individual instruction in pronunciation and articulation to facilitate oral communication. Recommended for communication, education, drama, radio/TV/film, speech and voice majors. (Same as Drama 2336.)

**SPCH 1373 American Sign Language Basic I  
(3-3-0)**

Introduction to American Sign Language. Emphasis will be placed on acquiring visual receptive skills and basic communication using the direct experience method. Aspects of Deaf culture and community will be incorporated. (May be taken for foreign language credit.)

**SPCH 1374 American Sign Language Basic II  
(3-3-0)**

Prerequisite: SPCH 1373.

A continuation of SPCH 1373. Further development of receptive, expressive, and basic conversational skills as well as the cultural features of the language. (May be taken for foreign language credit.)

**SPCH 2341 Oral Interpretation  
(3-3-0)**

The study of the principles and techniques used in the analysis and oral performance of literature. Recommended for elementary education, drama, speech, and English majors preparing to teach literature.

**SPNL 1342 Business Spanish (Logistics)  
(3-3-0)**

Prerequisite: LMG1 1319 and SPAN 2311 or Departmental approval

Development of Spanish oral and written communication skills related to the business environment including medical, business, commercial, and legal terminology, including a review of basic Spanish grammar. This course concentrates on the business logistics environment to include materials management (manufacturing), physical distribution (transportation and warehousing), and import/export terminology.

**VTHT 1125 Pharmacological Calculations  
(1-1-0)**

Skill development in calculating oral and parenteral drug dosages.

**VTHT 1191 Special Topics in Veterinarian Assistant/Animal Health Technician – Exotics (1-1-0)**

Prerequisites: VTHT 2366, VTHT 1349, VTHT 2313, VTHT 2301, VTHT 2323, VTHT 1291

Topics address recently identified current events, skills, knowledges, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. Survey of feeding, common management practices, and care of exotic animals in a clinical or zoological setting. Review of common diseases of exotic animals encountered in the practice of veterinary medicine. **Professional Liability Required.**

**VTHT 1205 Veterinary Medical Terminology (2-2-0)**

Prerequisites: CHEM 1406; SPCH 1311, 1318, or 1321; ITSC 1309, 1301, or COSC 1301; ENGL 1301; BIOL 1413 or 1408

Introduction to word parts, directional terminology, and analysis of common veterinary terms.

**VTHT 1209 Veterinary Nutrition (2-1-2)**

Prerequisites: CHEM 1406; SPCH 1311, 1318, or 1321; ITSC 1309, 1301, or COSC 1301; ENGL 1301; BIOL 1413 or 1408

Fundamentals of energy and non-energy producing nutrients and their sources and functions. Integration of concepts including digestion, absorption, and metabolism with application to normal and therapeutic nutritional needs.

**VTHT 1291 Special Topics in Veterinarian Assistant/Animal Health Technician – Animal Care (2-1-3)**

Prerequisites: CHEM 1406; SPCH 1311, 1318, or 1321; ITSC 1309, 1301, or COSC 1301; ENGL 1301; BIOL 1413 or 1408; VTHT 1301, VTHT 1205, VTHT 1209, VTHT 1413

Topics address recently identified current events, skills, knowledges, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. Survey of feeding, common management practices and care of companion animals in a clinical setting. Review of common diseases, care, housing and sanitation of companion animals encountered in the practice of veterinary medicine.

**VTHT 1291 Special Topics in Veterinarian Assistant/Animal Health Technician – Parasitology (2-1-3)**

Prerequisites: CHEM 1406; SPCH 1311, 1318, or 1321; ITSC 1309, 1301, or COSC 1301; ENGL 1301; BIOL 1413 or 1408; VTHT 1301, VTHT 1205, VTHT 1209, VTHT 1413

Topics address recently identified current events, skills, knowledges, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. Study of parasites common to domestic animals including Zoonotic diseases.

**VTHT 1301 Introduction to Veterinary Technology  
(3-3-0)**

Prerequisites: CHEM 1406; SPCH 1311, 1318, or 1321; ITSC 1309, 1301, or COSC 1301; ENGL 1301; BIOL 1413 or 1408

Survey of the profession of veterinary technology with emphasis on basic techniques, handling and care of domestic animals, and ethical and professional requirements.

**VTHT 1317 Veterinary Office Management  
(3-2-2)**

Prerequisites: VTHT 2325, VTHT 2331, VTHT 1341, VTHT 1191

Practical experience in management of the veterinary hospital. Emphasis on client relations, record keeping, inventory, employment skills, and computer skills in the veterinary environment.

**VTHT 1341 Anesthesia and Surgical Assistance  
(3-2-4)**

Prerequisites: VTHT 2366, VTHT 1349, VTHT 2313, VTHT 2301, VTHT 2323, VTHT 1291

In-depth application of surgical, obstetrical, and anesthesia techniques including identification and use of instruments and equipment. **Professional Liability Required.**

**VTHT 1345 Veterinary Radiology  
(3-2-3)**

Prerequisites: VTHT 2325, VTHT 2331, VTHT 1341, VTHT 1191

Presentation of theory and principles and practical application of radiology within the field of veterinary medicine. **Professional Liability Required.**

**VTHT 1349 Veterinary Pharmacology  
(3-2-2)**

Prerequisites: VTHT 1301 VTHT 1205, VTHT 1209, VTHT 1413, VTHT 1291

Fundamentals of pharmacology including recognition, calculation, labeling, packaging, and administration of common veterinary drugs, biologics, and therapeutic agents. Discussion of normal and abnormal responses to the agents. **Professional Liability Required.**

**VTHT 1413 Veterinary Anatomy and Physiology  
(4-2-4)**

Prerequisites: CHEM 1406; SPCH 1311, 1318, or 1321; ITSC 1309, 1301, or COSC 1301; ENGL 1301; BIOL 1413 or 1408

Gross anatomy of domestic animals including physiological explanations of how each organ system functions.

**VTHT 2260 Clinical – Veterinary Assistant/Animal Health Technician  
(2-0-6)**

Prerequisites: VTHT 2325, VTHT 2331, VTHT 1341, VTHT 1191

A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. **Professional Liability Required.**

**VTHT 2301 Canine & Feline Clinical Management****(3-2-3)**

Prerequisites: VTHT 1301, VTHT 1205, VTHT 1209, VTHT 1413, VTHT 1291

Survey of feeding, common management practices, and care of canines and felines in a clinical setting. Review of common diseases of canine and felines encountered in the practice of veterinary medicine. **Professional Liability Required.**

**VTHT 2313 Lab Animal Clinical Management****(3-2-3)**

Prerequisites: VTHT 1301, VTHT 1205, VTHT 1209, VTHT 1413, VTHT 1291

Survey of feeding, common management practices, and care of laboratory animals in a clinical setting. Review of common diseases of laboratory animals encountered in the practice of veterinary medicine. **Professional Liability Required.**

**VTHT 2323 Veterinary Clinical Pathology I****(3-2-3)**

Prerequisites: VTHT 1301, VTHT 1205, VTHT 1209, VTHT 1413, VTHT 1291

In-depth study of hematology and related chemistries with emphasis on lab procedures. **Professional Liability Required.**

**VTHT 2325 Large Animal Assisting Techniques****(3-2-3)**

Prerequisites: VTHT 2366, VTHT 1349, VTHT 2313, VTHT 2301, VTHT 2323, VTHT 1291

Study of basic restraint and proper management, treatment, and medication techniques for farm animals. **Professional Liability Required.**

**VTHT 2331 Veterinary Clinical Pathology II****(3-2-3)**

Prerequisites: VTHT 2366, VTHT 1349, VTHT 2313, VTHT 2301, VTHT 2323, VTHT 1291

In-depth study of urinalysis and cytology. Survey of microbiological techniques. Emphasis on laboratory procedures. **Professional Liability Required.**

**VTHT 2366 Practicum (or Field Experience) – Veterinarian Assistant/Animal Health Technician****(3-0-21)**

Prerequisites: CHEM 1406; SPCH 1311, 1318, or 1321; ITSC 1309, 1301, or COSC 1301; ENGL 1301; BIOL 1413 or 1408; VTHT 1301, VTHT 1205, VTHT 1209, VTHT 1413, VTHT 1291, VTHT 1349, VTHT 2313, VTHT 2301, VTHT 2323

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student. **Professional Liability Required.**

**WLDG 1421 Introduction to Welding Fundamentals****(4-3-3)**

An introduction to the fundamentals of equipment used in oxy-fuel and arc welding, including welding and cutting safety, basic oxy-fuel welding and cutting, basic arc welding processes and basic metallurgy.

## 11 The People



### Palo Alto College Administration

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Cecilia Gonzales, Ed.D.	Interim Dean, Science, Advanced & Applied Technology
Gloria Elaine Hilario, M.Ed., M.S.L.S.	Dean, Learning Resources
Stacey Johnson, M.A.	Dean, Arts, Humanities & Social Sciences

### Palo Alto College Professional Staff

David Amaya	LAN Administrator/Engineer
Lisabeth Anaya, B.A.	Recruiter/Advisor
Lucy Barlow, B.A.	Distance Learning Program Specialist
Cynthia Blizzard, M.A.	Education Skills Specialist
Beverly Brown, M.A.	Learning Disability Specialist
Ginger Hall Carnes, M.S.	Publications Coordinator
Graciela Carrizales, B.A.	Instructional Skills Specialist
Sharon Carson, M.B.A.	Coordinator of Occupational Programs
Lydia Casas, B.A.	Math Instructional Skills Specialist
Catherine Chapa, M.S.	Coordinator of Measurement & Evaluation
Linda Cooke, B.S.	Assistant Director of Records
Eloisa Cordova, B.A.	Education Support Specialist
Amie DeLeon, M.S.	Coordinator of Welcome Center
Christopher R. Delgado	Coordinator of Campus Technology
Irene Dennis, B.A.	Program Coordinator, Adult Education/Community Outreach
Lamar Duarte, B.A.	Director, Student Financial Services
Lou Dufault, M.A., M.S.	Campus Operations Manager
Thomas N. Duncan, A.S.	LRC Computer/Network Coordinator
Elizabeth Eguia-Garcia, M.A.	Director, Institutional Advancement & Public Affairs
Silas Escalante, B.A.	Educational Skills Specialist
Leandro M. Esparza, B.A.	College Athletic Coordinator
Nora Esparza, M.A.	Education Support Specialist
Susan Espinoza, B.S.	Coordinator of Assessment & TASP
Patricia Estrada, B.S.	Natatorium/Gymnasium Supervisor
Charles Garcia, B.S.	Education Support Specialist
Ana Garcia, B.B.A.	Bursar
Mary Jo Garcia, B.A.	English Instructional Skills Specialist
Robert L. Garza, M.P.A.	Director of Distance & Extended Education
Christine Guerra, M.S.	Coordinator, Upward Bound Program
Frank Guevara, B.A.	Program Coordinator, Ray Ellison Family Center
Leonor Guillen, B.A.	Recruiter/Advisor
Lydia Hannawi, M.A.	Assistant Director, Student Support Services
Larry D. Jackson, M.A.	Director, Continuing Education & Customized Training
Rosemarie Laguna, B.A.	Associate Director of Student Financial Services
Rachel Marez, B.S.	Coordinator of Records & Reports
Deborah Martin-Levoy, B.A.	Grant Writer
Gerardo Mechler, M.Ed.	Coordinator, Developmental Learning Labs
Patricia Ann Medina, M.A.	Coordinator of PASSkey
Rosalicia Medrano, M.B.A.	Dual Credit/Off -Site Coordinator
Luis Mercado, M.A.	Outreach Services Specialist
Ernestina Mesa, M.L.I.S.	Assoc. Director for Library Technical Services
Rachel A. Montejano, B.A.	Associate Director of Admissions
Tami Musser, B.A.	Director, Student Support Services

Steven Ochoa, M.A. ....	Math Instructional Skills Specialist
Lydia Marie Ortega, M.A. ....	Senior Job Placement Specialist
Mario Ramirez, B.A. ....	Audio Visual Coordinator
Robert J. Ramirez, B.B.A. ....	Coordinator of Veterans Affairs
Leticia Sanchez-Retamozo, M.A. ....	Director, Enrollment Management
Yvonne Richardson, M.A. ....	Reading Instructional Skills Specialist
Denny Ryther, B.S. ....	Natatorium Manager
J. Gary Shelman, M.B.A. ....	Director, Information & Communication Technology
F. Pat Terrell ....	Assistant to the President
Jane Velasquez ....	Community Outreach Coordinator
Cynthia Villafranco, M.A. ....	Recruiter/Advisor
Susan Woods, M.A. ....	Continuing Education Specialist
Dolores Zapata, B.E.E.S. ....	Recruiter/Advisor

## Alamo Community College District Administrative Staff

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Ernest A. Martinez, Ph.D. ....	Vice Chancellor of Institutional Support
Vacant ....	Vice Chancellor of Administrative Services/Chief Financial Officer
Charles W. Burmeister, Ph.D. ....	Director for Management, Information Systems & Technology
Roland DuBay ....	Director of Institutional Advancement
Theresa L. Fayette ....	Director of Human Resources
Richard G. Hernandez ....	Director of Student Financial Services
Terrie C. Hoffmann ....	Chief, Department of Public Safety
Linda O'Nave ....	Director of Acquisitions & Administrative Services
Raymond M. Patterson ....	Director of Internal Audits
Carlos Ramirez ....	Director of Fiscal Affairs
Valerio A. Santos ....	Director of Facilities
Adelina S. Silva, Ph.D. ....	Director for Student Program Development
Leo Zuniga ....	Director of Governmental & Public Relations

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Date following board member's name indicates expiration of term.

The College District administers four colleges — Palo Alto College, St. Philip's College, San Antonio College, and Northwest Vista College.

**Full-Time Faculty**

Javier Aguirre, Instructor of History: B.A., M.A., University of Texas at San Antonio

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Jennifer Andermatt, Instructor of English: B.S., Texas A&I University; M.A., Texas A&M University

Mary L. Apolar, Assistant Professor of Counseling: B.A., Southwest Texas State University; M.A., Our Lady of the Lake University

Theresa Morkovsky Arburn, Professor of Biology: B.A., Our Lady of the Lake University; M.S., University of Texas at San Antonio; Ph.D., University of Texas at Austin

Norman Armstrong, Instructor of History: B.A., M.A., St. Mary's University

Diane Beechinor, Assistant Professor of Biology: B.S., M.S., Southwest Texas State University

Joseph Booker, Instructor of English: B.A., M.A., Incarnate Word College

Vincent Bradford, Assistant Professor of Physical Education: B.S., San Jose State University; M.Ed., University of Texas at Austin

Monica M. Bratcher, Instructor of Mathematics: B.S., M.S., University of Texas at San Antonio

Cakky Brawley, Assistant Professor of Art: B.F.A., Texas Tech University; M.F.A. Indiana University

Larry Bruestle, Veterinary Technology: B.S., Ohio University; D.V.M., Ohio State University; M.P.H., University of Texas

Anna Bustamante, Instructor of Physical Education: B.S., M.Ed., University of the Incarnate Word

Antonio Castillo, Associate Professor of Mathematics: B.S., M.S., Southwest Texas State University; Ph.D., University of Texas at Austin

Rafael C. Castillo, Professor of English: B.A., St. Mary's University; M.A., University of Texas at San Antonio

Brad S. Chandler, Assistant Professor of Biology: B.S., M.S., Southwest Texas State University

Doroteo Chavarria, Instructor of Engineering: B.S.E.E., University of Texas at San Antonio; M.S., Trinity University

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Margarita Fresquez, Professor of Mathematics: B.S., University of Texas at El Paso; M.S., New Mexico State University

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Sandra Gieseler, Instructor of Government: B.A., Youngstown State University; M.A., St. Mary's University

Colby Glass, Professor of Learning Resources: B.A., University of North Texas; M.L.I.S., University of Texas at Austin

Kenneth R. Glass, Instructor of Economics: B.A., Trinity University; M.A., St. Mary's University

Theresa Guadiano, Instructor of Interdisciplinary Studies and Director of Teacher Education: B.A., M.A., Our Lady of the Lake University

Dorothy Haecker, Professor of Philosophy: B.A., University of Texas at Austin; M.Ph., Ph.D., University of Kansas

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**247**

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# 12 Index



## A

Absence Policy .....	52
Academic Advisement .....	41
Academic Calendar .....	4
Academic Computing Center .....	10
Academic Dishonesty .....	50
Academic Fresh Start .....	27
Academic Regulations and Policies .....	49
ACCD Administrative Staff .....	222
ACCD Board of Trustees .....	222
ACCD Mission .....	9
ACCD Student Leadership Institute .....	48
Accreditation .....	1
Adding and Dropping Courses .....	52
Administration & Professional Staff .....	221
Administration Certificate .....	120
Administrative Assistant Certificate .....	70
Administrative Computer Technology Program of Study .....	68
Admission of First-Time-In-College Students .....	20
Admission of International Students .....	22
Admission of Transfer Students .....	21
Admission to the Dual-Credit Program .....	23
Admission to Summer School .....	24
Admissions and Registration .....	20
Adult Education & Community Outreach .....	11
Agribusiness Management Program of Study .....	73
Animal Health Assistant Certificate .....	138
Application for Graduation .....	56
Art Program of Study .....	76
Articulation Agreements & 2+2 Programs .....	62
Assessment & TASP Center .....	39
Associate of Applied Science Degree .....	63
Associate of Arts Degree .....	60
Associate of Arts or Science College/Univ. Transfer Degree Curricular Requirements .....	60
Associate of Science Degree .....	60
Athletics .....	48
Attendance .....	51
Audit Admission .....	24
Aviation Management Program of Study .....	77

## B

Basic Electro-Mechanical Technology Certificate .....	94
Basic Nursery and Landscape Operations Certificate .....	115
Biology Program of Study .....	79
Biomedical Science .....	63
Bookstore .....	14
Breakage Fee .....	32
Business Communications Certificate .....	70

## C

Cafeteria .....	14
Campus Map .....	254
Career and Job Placement Services .....	44

**CHAPTER 12: Index****249**

Census Date .....	53
Certificate of Completion .....	65
Certified Network Systems Technician Preparation Certificate .....	84
Certified Systems Technician Preparation Certificate .....	83
Cheating .....	50
Chemistry Program of Study .....	80
Child Care Center .....	44
Children on Campus Policy .....	14
Class Load .....	27
Classification of Students .....	27
College Organization .....	9
College/University Transfer Degree .....	60
College/University Transfer Degree Curricular Requirements .....	60
Collusion .....	51
Commencement Ceremony .....	56
Communications Program of Study .....	81
Computer Information Systems Program of Study .....	82, 86
Computer Science Program of Study .....	14
Concealed Weapons .....	14
Concurrent Enrollment .....	27
Conditional Admission .....	23
Continued Scholastic Probation .....	51
Continuing Education/Workforce Development .....	66
Continuing Education Courses .....	33
Continuing Education Fees .....	31
Cooperative Education .....	64
Core Curriculum .....	58
Core Curriculum Course Selection List .....	59
Core Values .....	9
Corequisite Courses .....	54
Counseling and Support Services .....	40
Course Delivery Options .....	26
Course Descriptions .....	140
Credit by Non-Traditional Methods .....	54
Criminal Justice Program of Study .....	89
Customer Services Representative Certificate .....	71

**D**

Data Entry Technician Certificate .....	71
Deadlines for Filing Financial Aid Applications .....	36
Degree Plans .....	67
Developmental Courses .....	54
disABILITY Services .....	42
Distance & Extended Education .....	12
District Administrative Staff .....	222
Drama Program of Study .....	90
Dropping Courses .....	52
Drug-Free Schools and Communities Act .....	14
Dual-Credit Program .....	23

**E**

Early Admissions .....	23
Education Aide Certificate .....	92
Education Aide Program of Study .....	91
Electro-Mechanical Assistant Certificate .....	94
Electro-Mechanical Technician Certificate .....	94
Electro-Mechanical Technology Program of Study .....	93

Ellison Family Center .....	44
Enforced Scholastic Withdrawal .....	51
Engineering Program of Study .....	96
Engineering Technology Program of Study .....	97
English Program of Study .....	100
English for Speakers of Other Languages (ESOL) .....	101
English Learning Center (ELC) .....	45
Entrepreneurship Certificate .....	120
Entry-Level Supervision Certificate .....	121
Environmental Compliance Management Certificate .....	103
Environmental Project Management Certificate .....	104
Environmental Regulations Management Certificate .....	103
Environmental Technologies Program of Study .....	102
Evaluation of Foreign Credentials .....	23
Examinations .....	52
Excessive Absence Policy .....	52
Extended Education .....	12

## F

Faculty, Adjunct .....	229
Faculty, Full-Time .....	223
Fall & Spring Course Load .....	27
Fees .....	30
Financial Aid .....	33
Financial Aid Eligibility .....	36
Financial Aid Policies .....	37
Financial Services .....	33
Foreign Languages Program of Study .....	105

## G

GED .....	11
Geology Program of Study .....	106
General Office Certificate .....	69
Grade Changes .....	50
Grade Point Average .....	49
Grading System & Reports .....	49
Graduate Guarantee Policy .....	57
Graduation .....	56
Graduation Application .....	56
Graduation Ceremony .....	56
Graduation Requirements .....	56
Grants .....	34
Grievance Policies .....	16

## H

Hazlewood Act .....	37
Health Program of Study .....	107
Health Center .....	46
Helpful Telephone Numbers .....	256
History of Palo Alto College .....	8
History Program of Study .....	108
Honor Graduates .....	57
Honors Convocation .....	53
Honors Lists .....	53
Horticulture Business Management Certificate .....	74
Housing .....	16

**I**

Index .....	248
Instruction .....	9
Instructional Resources .....	15
Intercollegiate Athletics .....	48
International Business Certificate .....	121
International Environmental Management Certificate .....	103
International Logistics Management Certificate .....	118
International Students .....	22
International Studies Certificate .....	109
Internships & Cooperative Education .....	64

**K**

Kids College .....	66
Kinesiology Program of Study .....	111
Kinesiology/Coaching Certificate .....	112

**L**

Landscape & Horticultural Science Certificate .....	114
Landscape & Horticultural Science Program of Study .....	113
Leadership Certificate .....	122
Learning Resources Center .....	10
Loans .....	35
Logistics Management Certificate .....	117
Logistics Management Program of Study .....	116

**M**

Major Functions .....	9
Management Program of Study .....	119
Manufacturing Management Certificate .....	117
Map .....	254
Mariachi Scholarship .....	35
Marketing Certificate .....	123
Mathematics Program of Study .....	124
Math Learning Center (MLC) .....	46
MCSE Preparation Certificate .....	84
Microsoft Certifications .....	84
Military Student Withdrawals .....	52
Minimum Academic Standards .....	50
Mission .....	9
Music Program of Study .....	125

**N**

Natatorium .....	48
New & Transfer Student Orientation Policy .....	24
Non-credit or Audit Admission .....	24
Non-credit Continuing Education Courses .....	30
Non-Refundable Fees .....	32

**O**

Official Census Date .....	53
Online Writing Lab (OWL) .....	45
Ozuna Center .....	10

## P

Palo Alto College History .....	8
Parking .....	17
PASSKey .....	43
Personal Computer Skills Certificate Program .....	83
Philosophy Program of Study .....	126
Phone Numbers .....	256
Physics Program of Study .....	127
Placement Policy .....	26
Plagiarism .....	51
Prerequisite Courses .....	54
Private Pilot Certificate .....	132
Product Marketing Specialist Certificate .....	74
Professional Pilot Program of Study .....	131
Professional Staff .....	221
Programs of Study .....	67
Psychology Program of Study .....	133
Pre-Dentistry, Pre-Medicine & Pre-Veterinary Program of Study .....	127
Pre-Nursing Program of Study .....	129
Pre-Pharmacy Program of Study .....	130
Purpose Statement .....	9

## R

Ray Ellison Family Center .....	44
Reading Learning Center .....	46
Readmission to Class .....	52
Refund of Tuition .....	30
Refundable Fees .....	30
Registration and the Enrollment Process .....	26
Repetition of Courses .....	53
Resolution of Transfer Disputes .....	62
Returned Checks .....	33

## S

Satisfactory Progress .....	36
Scholarships .....	34
Scholastic Dishonesty .....	50
Scholastic Probation .....	51
Senior Citizens Tuition Waiver .....	38
Service-Learning .....	47
Skills Upgrade Certificate .....	71
Smoking .....	17
Southern Association of Colleges and Schools (SACS) .....	1
Spanish Program of Study .....	105
Special Fees .....	31
Speech Program of Study .....	134
Student Center .....	17
Student Clubs & Organizations .....	47
Student Code of Conduct .....	17
Student Financial Services .....	33
Student Government .....	17
Student Health Insurance .....	17
Student Information Release Policy .....	18
Student Load .....	27
Student Obligations .....	18
Student's Permanent Record .....	53
Student Right-to-Know and Campus Security Act .....	19

**CHAPTER 12: Index****253**

Student Services .....	10
Student Success and Human Development Programs .....	44
Student Success Center .....	41
Student Support Services and Activities .....	39
Student Withdrawal for Military Service .....	52
Summer School Course Load .....	27

**T**

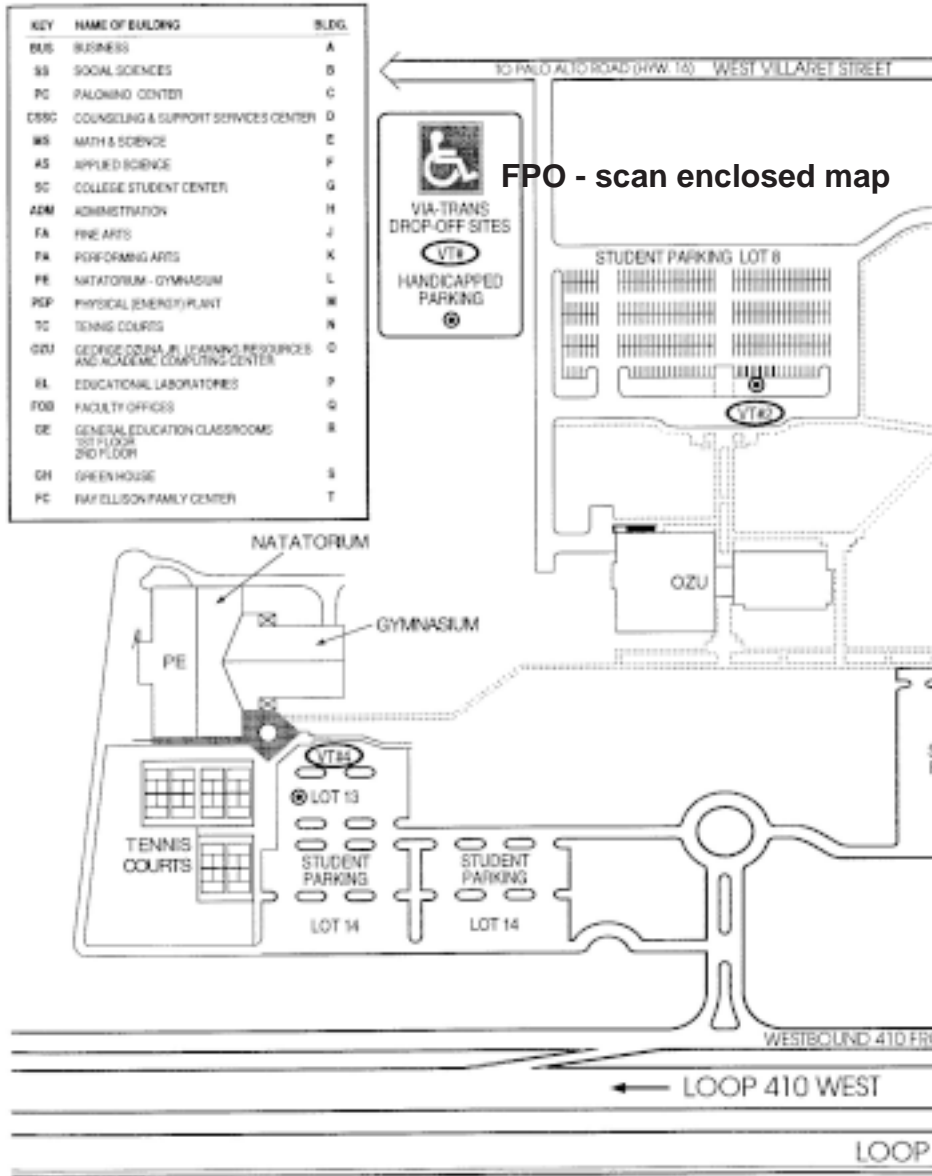
2 + 2 Programs .....	62
Table of Contents .....	3
Teacher's Assistant Certificate .....	92
Tech Prep .....	66
Tejeda Scholarship .....	8, 35
Telecommunications Courses .....	55
Telecomm Technology Certificate .....	123
Telephone Numbers .....	256
Texas Academic Skills Program (TASP) .....	24
Texas A&M University College of Veterinary Medicine .....	63
Texas A&M University-Kingsville System Center-San Antonio .....	8, 13
Texas Engineering Extension Service .....	83
Transcripts .....	20
Transcript Fee .....	33
Transfer Curricula & Resolution of Transfer Disputes .....	62
Transfer Degree .....	60
Transfer Disputes .....	62
Transfer of Credits .....	21
Transfer Services .....	45
Transportation Management Certificate .....	117
Trustees .....	222
Tuition and Fees .....	28
Tuition Reimbursement .....	28
Turf & Landscape Irrigation Certificate .....	115
Turfgrass & Golf Course Management Certificate .....	136
Turfgrass & Golf Course Management Program of Study .....	135
Tutoring Services .....	45

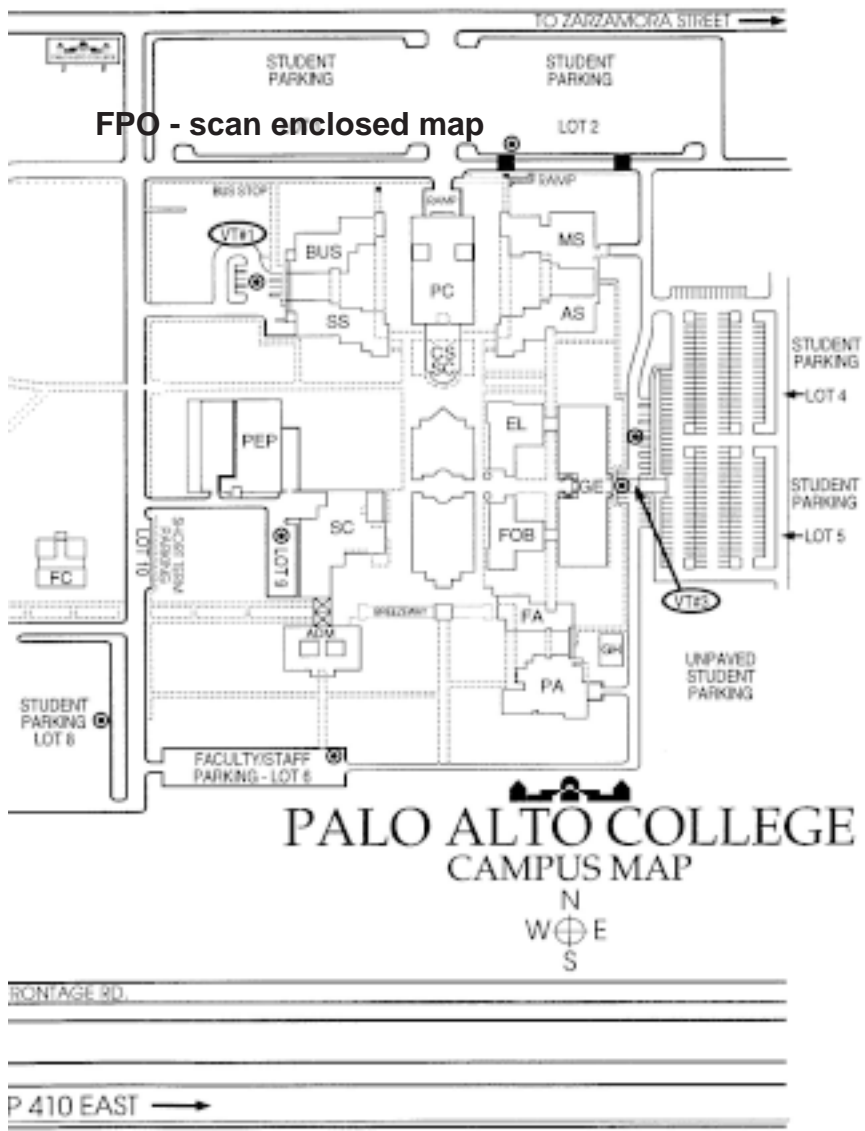
**V**

Veterans Under Federal Programs .....	37
Veterinary Technology Program of Study .....	137

**W**

Warehouse Management Certificate .....	117
Water Resources Management Certificate .....	104
Web Publishing Skills Certificate .....	83
Welcome Center .....	39
Withdrawals .....	52
Withdrawal for Military Service .....	52
Withdrawal Grades .....	53
Workforce Development .....	66
Workshop Fees .....	33
Work-study Program .....	34





FPO - scan enclosed map

PALO ALTO COLLEGE  
CAMPUS MAP



## 14 Helpful Telephone Numbers



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**San Antonio, Texas 78224-2499**  
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<b>Main Fax Number .....</b>	<b>921-5005</b>
Admissions and Records .....	921-5270
Arts, Humanities and Social Sciences/Dean .....	921-5143
Assessment/TASP .....	921-5251
Bookstore .....	921-5230
Career Service .....	921-5170
Continuing Education/Customized Training .....	921-5330
Counseling and Advisement .....	921-5280
disABILITY Services .....	921-5287
Distance Education .....	921-5494
Early Alert/Early Intervention .....	921-5170
Evening/Weekend Operations .....	921-5306
Extended Education/Off-Campus Classes .....	921-5303
Health Center .....	921-5220
Institutional Advancement and Public Affairs .....	921-5269
Institutional Effectiveness and Community Development/Dean .....	921-5303
International Student Services .....	921-5348
Learning Resources/Dean .....	921-5100
Job Placement Services .....	921-5170
Learning Resources Center/Library .....	921-5080
Natorium/Gymnasium Complex .....	921-5234
PASSkey .....	921-5283
President .....	921-5260
Ray Ellison Family Center .....	921-5490
Recruiters .....	921-5494
Science, Advanced & Applied Technology/Dean .....	921-5393
Student Activities .....	921-5289
Student Financial Services .....	921-5316
Student Success Center .....	921-5170
Texas A&M University-Kingsville System Center-San Antonio .....	921-5488
Transfer Services .....	921-5170
Veterans Affairs .....	921-5315
Welcome Center .....	921-5465