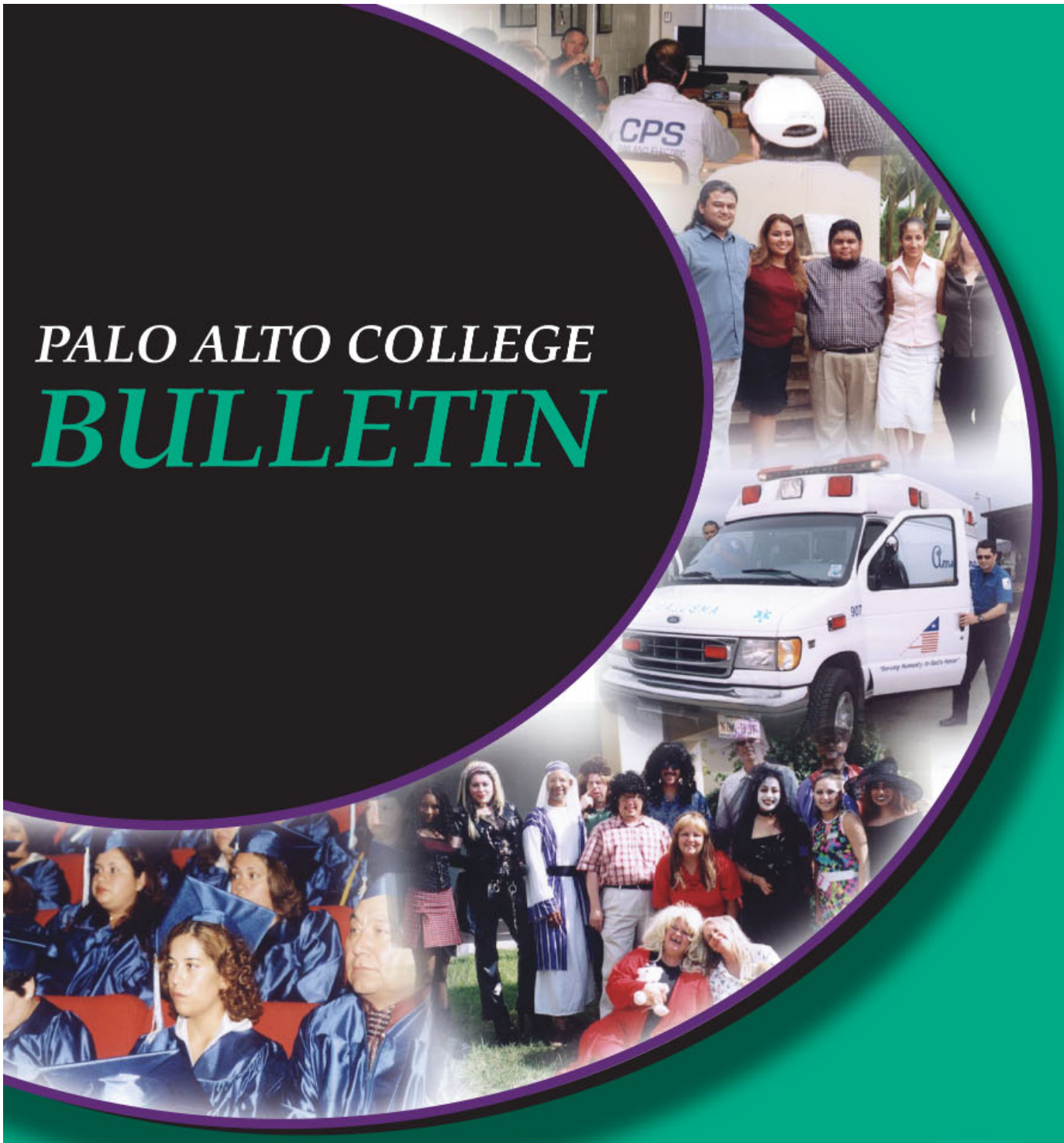
PALO ALTO COLLEGE
BULLETIN



2004 • 2005
Catalog of Courses

2004-2005

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 Universities, 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 2004. 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. The online version of this catalog on the College's web site contains updated information and changes.

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 (210) 921-5287.

Volume 19, No. 1, May 2004

The *Palo Alto College Bulletin* (USPS 018367) is published quarterly
in March, May, July, and October by
Palo Alto College, 1400 W. Villaret Blvd., San Antonio, TX 78224-2499.
Periodicals Postage Paid at San Antonio, Texas
POSTMASTER: Send address changes to PALO ALTO COLLEGE
1400 W. Villaret Blvd., San Antonio, TX 78224-2499. Telephone (210) 921-5000

www.accd.edu/pac

A Message from the President

Photo by Ray Perez

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/Advising Center to guide you through admissions, financial aid and registration processes and a new user-friendly on-line Advising/Degree Audit System to track your degree plan.

As you start your college career, you will find faculty who have rich expertise in their field and possess a strong love of learning and an unwavering commitment to students. The average class size is 24, so our faculty are able to provide you with more individualized attention.

As Palo Alto enters its 20th year, our College is positioned to offer you a variety of programs, including technical programs you will not find anywhere else. You will have access to a world-class natatorium, a child care facility, and a state-of-the-art library.

I invite you to visit our beautiful, mission-style campus to find out why we've been called "the heart of the community" and are becoming an "economic engine" for growth and vitality on the Southside.

Welcome!

Dr. Ana M. "Cha" Guzmán
President

Table of Contents

NORTHWEST VISTA COLLEGE
PALO ALTO COLLEGE
ST. PHILIP'S COLLEGE
SAN ANTONIO COLLEGE
ALAMO COMMUNITY COLLEGE DISTRICT

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

1 Academic Calendar

2004-2005

Consult class schedule for registration/advisement

First Summer Session — Day 2004 (six weeks)

June 1 Tuesday. Classes begin.
June 3 Thursday. 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.
The last day for incomplete (I) grades to be completed is 120 calendar days after the close of the semester

Second Summer Session — Day 2004 (six weeks)

July 12 Monday. Classes begin.
July 15 Thursday. Census date.
Aug. 4 Wednesday. Last day to withdraw.
Aug. 10 Tuesday. Last day of classes.
Aug. 11-12 Wednesday-Thursday. Final Examinations.
The last day for incomplete (I) grades to be completed is 120 calendar days after the close of the semester

Summer Session — Evening 2004 On Campus & Off-Campus/ Daytime Off-Campus (eight weeks)

June 1 Tuesday. Classes begin.
June 8 Tuesday. Census date.
July 5 Monday. Independence Day. College closed.
July 7 Wednesday. Last day to withdraw.
July 20 Tuesday. Last evening of classes.
July 21 Wednesday. Final Examinations for Monday-Wednesday classes.
July 22 Thursday. Final Examinations for Tuesday-Thursday classes.
The last day for incomplete (I) grades to be completed is 120 calendar days after the close of the semester

Fall 2004 Regular Semester

Aug. 16	Monday. Faculty Convocations.
Aug. 23	Monday. Classes begin.
Aug. 28	Saturday. Weekend classes begin.
Sept. 3	Friday. Census date.
Sept. 4-6	Saturday-Monday. Labor Day Holiday. Weekend classes will not meet.
Oct. 11	Monday. Employee Development Day. College closed during day. Evening classes will meet after 5 p.m.
Nov. 12	Friday. Last day to withdraw.
Nov. 25-28	Thursday-Sunday. Thanksgiving Holiday. Weekend classes will not meet.
Dec. 5	Sunday. Last day of classes.
Dec. 6-12	Monday-Sunday. Final Examinations.
Dec. 12	Sunday. End of Fall Semester.
Dec. 18-Jan. 2	Saturday-Sunday. Christmas/New Year Holiday. College closed.

The last day for incomplete (I) grades to be completed is 120 calendar days after the close of the semester

Fall Flex Session I 2004 (first eight weeks)

Aug. 23	Monday. Classes begin.
Aug. 28	Saturday. Census date.
Sept. 4-6	Saturday-Monday. Labor Day Holiday. College closed.
Oct. 1	Friday. Last day to withdraw.
Oct. 11	Monday. Employee Development Day. College closed during day. Evening classes will meet after 5 p.m.
Oct. 12	Tuesday. Last day of classes.
Oct. 13-14	Wednesday- Thursday. Final Examinations.
Oct. 14	Thursday. End of Fall Flex Session I.

The last day for incomplete (I) grades to be completed is 120 calendar days after the close of the semester

Fall Flex Session II 2004 (second eight weeks)

Oct. 18	Monday. Classes begin.
Oct. 23	Saturday. Census date.
Nov. 19	Friday. Last day to withdraw.
Nov. 25-28	Thursday-Sunday. Thanksgiving Holiday. Weekend classes will not meet.
Dec. 5	Sunday. Last day of classes.
Dec. 6-12	Monday-Sunday. Final Examinations.
Dec. 12	Sunday. End of Fall Flex Session II.
Dec. 18-Jan. 2	Saturday-Sunday. Christmas/New Year Holiday. College closed.

The last day for incomplete (I) grades to be completed is 120 calendar days after the close of the semester

Spring 2005 Regular Semester

Jan. 3	Monday. College re-opens.
Jan. 10	Monday. Classes begin.
Jan. 15	Saturday. Weekend Classes begin.
Jan. 17	Monday. Martin Luther King Holiday. College closed.
Jan. 26	Wednesday. Census date.
March 14-20	Monday-Sunday. Spring Break. College closed. All administrative offices will be closed Thursday-Sunday.
March 25-27	Friday-Sunday. Easter Holiday. College closed.
April 8	Friday. Last day withdraw.
April 22	Friday. Fiesta Holiday. College closed. Weekend classes will meet.
May 1	Sunday. Last day of classes.
May 2-8	Monday-Sunday. Final Examinations.
May 8	Sunday. End of semester
May 28-30	Saturday-Monday. Memorial Day Holiday. College closed.

The last day for incomplete (I) grades to be completed is 120 calendar days after the close of the semester

Spring Flex Session I 2005 (first eight weeks)

Jan. 10	Monday. Classes begin.
Jan. 17	Monday. Martin Luther King Holiday. College closed.
Jan. 18	Tuesday. Census date.
Feb. 11	Friday. Last day to withdraw.
March 1	Tuesday. Last day of classes.
March 2-3	Wednesday-Thursday. Final Examinations.
March 3	Thursday. End of Spring Flex Session I.

The last day for incomplete (I) grades to be completed is 120 calendar days after the close of the semester

Spring Flex Session II 2005 (second eight weeks)

March 7	Monday. Classes begin.
March 14-20	Monday-Sunday. Spring Break. College closed. All administrative offices will be closed Thursday-Sunday.
March 21	Monday. Census date.
March 25-27	Friday-Sunday. Easter Holiday. College closed.
April 15	Friday. Last day to withdraw.
April 22	Friday. Fiesta Holiday. College closed.
May 1	Sunday. Last day of classes.
May 2-8	Monday-Sunday. Final Examinations.
May 8	Sunday. End of Spring Flex Session II.
May 30	Monday. Memorial Day Holiday. College closed.

The last day for incomplete (I) grades to be completed is 120 calendar days after the close of the semester

Maymester 2005

May 9 Monday. Classes begin.
May 10 Tuesday. Census date.
May 19 Thursday. Last day to withdraw.
May 26 Thursday. Last day of classes.
May 30 Monday. Memorial Day Holiday. College closed.

First Summer Session — Day 2005 (six weeks)

May 31 Tuesday. Classes begin.
June 6 Monday. Census date.
June 22 Wednesday. Last day to withdraw.
July 4 Monday. Independence Day Holiday. College closed.
July 5 Tuesday. Last day of classes.
July 6-7 Wednesday-Thursday. Final Examinations.
The last day for incomplete (I) grades to be completed is 120 calendar days after the close of the semester

Second Summer Session — Day 2005 (six weeks)

July 11 Monday. Classes begin.
July 14 Thursday. Census date.
Aug. 3 Wednesday. Last day to withdraw.
Aug. 16 Tuesday. Last day of classes.
Aug. 17-18 Wednesday-Thursday. Final Examinations.
The last day for incomplete (I) grades to be completed is 120 calendar days after the close of the semester

Summer Session — Evening 2005 (eight weeks)

May 31 Tuesday. Classes begin.
June 8 Wednesday. Census date.
July 4 Monday. Independence Day Holiday. College closed.
July 6 Wednesday. Last day to withdraw.
July 19 Tuesday. Last evening of classes.
July 20-21 Wednesday-Thursday. Final Examinations.
The last day for incomplete (I) grades to be completed is 120 calendar days after the close of the semester

2 About Palo Alto

Palo Alto College History

The opening of Palo Alto College was the realization of a community dream to build an institution of higher learning in the Southside of San Antonio. Communities Organized for Public Service (COPS) — a grassroots organization, predominantly Hispanic, with the mission of advocacy for the underserved, and a commitment to making government responsive to citizen needs — spearheaded the efforts to establish the college in the southern section of San Antonio. Palo Alto College was established by the Alamo Community College District (ACCD) Board of Trustees on February 21, 1983, and chartered by the Texas Legislature on March 19, 1983, as an open admission, public, two-year institution.

Palo Alto College is federally designated as a Hispanic-Serving Institution and fully accredited by the Commission on Colleges of the Southern Association of Colleges and Schools. Classes began in September 1985 with 231 students enrolled. Originally expected to peak at only 2,500 and then projected to reach 6,000 by 1996, enrollment reached a high of 7,894 students in Fall 2003. Historically, Hispanic enrollment is more than half and females generally outnumber males.

Over the years, the college has developed programs based on community needs. Throughout its 19-year history, Palo Alto College has consistently provided outreach activities to residents of the immediate service area, as well as southern Bexar County and eight outlying rural counties, including Atascosa, Comal, Frio, Guadalupe, Karnes, Kendall, Medina, and Wilson counties. The college's outreach activities and programs have been designed to enhance the Southside's community and economic development in support of the revitalization of this underserved area. Palo Alto College has become a center for the community and a great source of pride. The college is indeed, as its motto suggests, *The Heart of the Community/El Corazón de la Comunidad*. In support of the city's Southside Initiatives, the college is poised to become an economic engine for education in the Southside.

Palo Alto College upholds four core values: *Student Success, Quality of Instruction, Commitment to Community,* and *Appreciation of Diversity*. These values are aligned with the mission of the College: to educate, nurture, and inspire students through a dynamic and supportive learning environment, which promotes the intellectual, cultural, economic and social life of the community. (Purpose Statement adopted by ACCD Board of Trustees on April 17, 2001)

For the first two years, the college's administrative offices were located at Billy Mitchell Village near the front gate of KellyUSA. Initial classes were held at various locations including the ACCD Southwest Center in East Kelly Field, local high schools, and other military bases. The main campus opened in January 1987 designed to accommodate 2,500 students on 111 acres at the intersection of I-410 South and Texas Hwy 16. Consistent increases in enrollment prompted much physical growth. The Texas Higher Education Coordinating Board cited the college as the fastest growing community college in the state in Fall 1991.

New facilities added space for classrooms, as well as sports and recreation. The first 11 buildings had a total of 145,409 square feet. Additions included 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. The world-class natatorium is operated as a joint venture with the City of San Antonio and provides activities for the community. The library in the Ozuna Learning Resources Center is open to all residents for research or leisure reading.

To accommodate the growth on campus, construction and renovation projects have

been initiated. Scheduled for completion in 2004 is an addition to the Student Center totaling 4,000 square feet. Another symbol of growth on our campus is the new Applied Science and Technology Building that will include 29,583 square feet in a two-story structure. The new building will house occupational technical and workforce programs. The City of San Antonio will also dedicate $250,000 to develop the first soccer field on the Southside. A campus parking expansion plan is also underway.

Founded on the belief that education is the central element of 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 occupational and workforce programs. Through Palo Alto, students can earn certificates or complete their first two years of a four-year degree plan for transfer to a university.

The college was selected for its high transfer rate as one among eight community colleges studied by the Ford Foundation's national "Cultures of Success." The college is continually receiving accolades from four-year universities commenting on the high caliber of preparation the students who transfer have attained. An example of a transfer program in place is with the University of Northern Iowa in Cedar Falls. In the Fall Semester 2004, UNI will accept 20 Palo Alto students. In its fifth year, the Palo Alto College UNI program, which includes a full scholarship plus room and board, has accepted 145 students. Thirty-nine have graduated from UNI and 19 of them will be attending graduate school in the Fall 2004.

In response to an expressed need for a public four-year university serving the Southside, the Texas A&M University System opened a branch that offers junior-and senior-level classes on the Palo Alto College campus. Using the "pathway model" endorsed by the Texas Higher Education Coordinating Board, the Texas A&M University-Kingsville System Center-San Antonio will become a freestanding Texas A&M campus when it reaches an enrollment equal to 2,500 full-time students.

In Fall 2002, Palo Alto College received a $2.5 million federal grant, the largest in its history. The college in cooperation with Texas A&M University-Kingsville will provide supplemental instruction and tutoring to students to increase enrollment, persistence, and retention by enhancing the amount and quality of academic support services provided. 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.

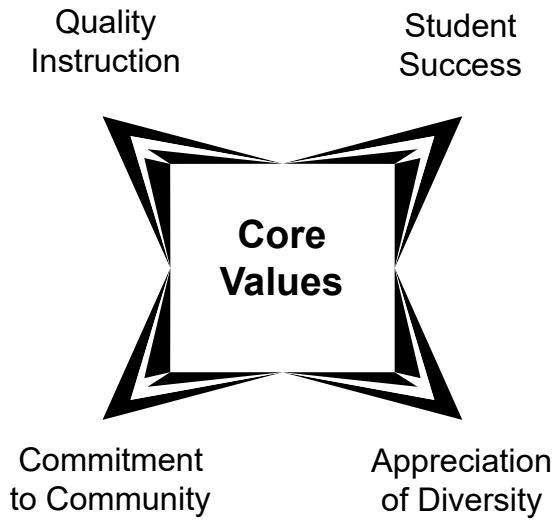
Palo Alto College was also awarded in Fall 2002, a $257,760 federal grant from the U.S. Department of Agriculture's Distance Learning and Telemedicine Grant Program. The Distance Learning program provides quality instruction through interactive video and multimedia courses for individuals in Falls City High School in Karnes County, Marion High School in Guadalupe County and McMullen County High School in McMullen County.

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.



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 fulfillment of the Texas Success Initiative.

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 & Customized Training 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
Career Services
Child Care
Counseling Center
Early Alert/Early Intervention Programs
Health Center
International Student Services
Job Placement
PASS*key* Program (TRIO grant)
Recreational Activities & Sports
Special Populations (disABILITY Services)
Student Activities
Student Financial Services
Transfer Services
Veterans Affairs
Welcome/Advising 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

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, information technologies, and instructional services 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 and Information Studies faculty librarians also help develop database searches and verify requests for interlibrary loans.

The Learning Resources Center of Palo Alto College reinforces the concept of lifelong 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, staff and faculty. The Office is comprised of Distance Education, the Instructional Innovation Center, the Recruitment Center and the Upward Bound program. Pre-College initiatives and transitional programs to include the Bridge program funded by the League for Innovation, and the PACES (Palo Alto College Early Start) program assists students in the transition from high school to college are also supported by Distance and Extended Education.

Distance Education provides instruction through Internet courses, Interactive Video Conferencing courses, Telecourses and off campus. Palo Alto College offers over 120 Internet

courses that can be applied toward an Associate degree or Certificate. Distance Education courses are a convenient way for students who work or have other commitments to continue their education.

The Instructional Innovation Center provides support in graphic design, video editing, signage and photography for faculty and staff at Palo Alto College. Faculty and staff are encouraged to attend training sessions on Dreamweaver, Photoshop, Web design, WebCT and many more courses that are offered by the center to enhance their skills. There is also a workroom for faculty who need to utilize computers or need Internet access for their courses. An audiovisual equipment depository provides equipment distribution to classrooms throughout the campus.

The Recruitment Center provides support for area high schools, businesses and community organizations. The staff provides support in testing, enrollment, academic advising and financial aid/scholarship information. This office also maintains the dual credit program and serves over 1,000 students in 21 independent school districts. Students interested in attending Palo Alto College or participating in the dual credit program should contact the recruitment office at (210) 921-5278.

The Upward Bound program (TRIO), funded by the U.S. Department of Education, provides support to students from participating high schools. This program enables students to participate in academic enrichment courses as well as explore collegiate opportunities. Tutoring, advisement and financial aid information are provided to all participating students.

Additional information about this office and programs can be viewed online at www.accd.edu/pac or by calling the Office of Distance and Extended Education at (210) 921-5494.

Workforce Education Programs

Palo Alto College offers and continues to add a variety of Workforce Education Programs. These are identified as Associate of Applied Science Degrees (AAS), Marketable Skills Certificates, and Certificates leading toward AAS degrees. These competency-based workforce education programs consist of a coherent sequence of courses designed to prepare students for immediate employment in the designated career field. Workforce education programs are developed in close cooperation with business and industry to satisfy a need for timely and effective workforce education. Additionally, many workforce programs at Palo Alto College are articulated with four-year college programs to provide students the opportunity for transfer and further education.

External Learning Experiences

External Learning Experiences at Palo Alto College are designed to provide opportunities for students to combine practical work experience with academic work.

Students work in commercial, governmental, educational, and other business or service organizations. These competency-based work experiences are related to the student's course of study, individual interest and level of development. The experiences are planned and supervised by the college and employers to allow the student to utilize skills learned in the classroom and to acquire new knowledge, skills, and attitudes for successful career planning and future employment.

The external learning experience allows the student to have practical hands-on training and to apply learned concepts and theories in a workplace setting. There are five types of external learning experiences: clinical experiences, internships, practica, co-operative education, and apprenticeships.

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
Computer Information Systems
Criminology
Interdisciplinary Studies (Elementary Education)
English
History
Kinesiology
Management
Mathematics
Psychology
Sociology

Secondary teaching certification is available in most of these areas.

An Alternative Teacher Certification program allows students with Bachelor's degrees to gain hours toward their Master's degree while becoming certified to teach in an elementary or secondary school.

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 and Saturdays

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 the System Center Complex, call (210) 921-5488 or visit the website at www.tamuk.edu/sanantonio.

TEXAS A&M
UNIVERSITY-KINGSVILLE SYSTEM CENTER
SAN ANTONIO

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:

Alcohol		**Penalty**
Minor in Possession (Sec.106.05.)	Class C Misdemeanor Class B Misdemeanor	Up to $200 fine 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
Other Drugs		
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 opportunities for socializing and relaxation. A T.V. area is available for student viewing. The bookstore, cafeteria, student activities, Veterans Affairs, student government, 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

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 campus. Supplemental medical insurance plans are available upon request for an additional cost. Additional information may be obtained at the Campus 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

OFFENSE	2001	2002	2003
Kidnapping	0	0	0
Murder	0	0	0
Sexual Assault	0	0	0
Hate Crime	0	0	0
Robbery	1	0	0
Burglary	3	2	2
Auto Theft	0	0	3
Theft	42	25	43
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 Texas Success Initiative (TSI) or Alternative TSI Test scores.

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

4. Official SAT/ACT/or TAAS scores if requesting a TSI 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.

TSI or alternative TSI-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 who are applying for admissions based on the completion of an independent study equivalent to the high school level in a nontraditional setting (home schooled) rather than through a public high school or accredited private high school may be admitted if they:

1. present a notarized record of the high school equivalent work completed and the date of successful completion. This work should be consistent with the TEA minimums for high school completion;
2. comply with institutional testing requirements; and
3. agree to limitations or conditions of admissions established by the institution.

Students MUST take developmental courses in disciplines where performance scores indicate a deficiency.

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 creden-

tials 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 TSI-eligible scores if not TSI-exempt; and
5. Provide placement test scores if passing TSI eligible exam scores 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 2003, students enrolling for the first time in a Texas public institution of higher education must fulfill the Texas Success Initiative (TSI). All International Students must follow the guidelines for TSI as determined by law and enforced by the College. For more information on TSI, 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; and

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-20 AB 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 TSI exemption can be granted. Students are responsible for arranging the 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 official Texas Success Initiative eligible scores showing passing levels in the content area required for the dual-credit course or be exempt from TSI based on certain ACT, SAT, or 11th grade TAKS scores; and
3. 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:

l. 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; and
3. Fulfill the Texas Success Initiative requirement by completing an assessment instrument approved by the Board, or qualifying for an exemption defined by the State of Texas.

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 Success Initiative (TSI), students in high school intending to enroll at Palo Alto College must take a TSI-eligible exam 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.

Student Development – New and Transfer Student Orientation Policy

All new students and students entering Palo Alto with less than 15 hours of college-level credit are required to enroll in SDEV 0170 – Strategies for Succeeding in College. **(Hours taken as Dual Credit or Early Admissions do not exempt a student from enrolling in SDEV 0170.)** SDEV 0170 is designed to acquaint students with administrative policies and regulations, student activities, grading, financial aid, TSI 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 0170 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 0170 during thier first semester will have an administrative hold placed on their record until course requirements are met. Students who register for SDEV 0170 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 0170. HUMD 0300 and SDEV 0170 cover many of the same topics; however, HUMD 0300 places a greater emphasis on personal development and academic achievement. Descriptions for each of the courses can be found under Course Descriptions in this publication.

In some circumstances, students enrolled in programs offered exclusively at off-campus sites can be waived from SDEV 0170. The decisions to waive SDEV 0170 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 Internet creates undue hardship. Students enrolled in the Virtual College of Texas are not required to enroll in SDEV 0170. Course waiver forms are available from the Counseling Office.

Texas Success Initiative (TSI)

The Texas Success Initiative (TSI) is a state-mandated program of assessment, advisement, and remediation implemented to ensure the success of students in higher education.

Section 51.3062 of the Texas Education Code requires all entering undergraduate students to have their academic skills assessed in order to fulfill the TSI requirement. Each TSI-eligible assessment instrument is designated by the state, as are the prescribed standards that reflect a student's readiness to enroll in college-level academic coursework. The assessment results are not used as a condition of admission. All students are required to meet with an advisor prior to enrollment.

If a student fails to meet the assessment standards, a plan will be developed on an individual basis to provide the best opportunity for each student to attain college-level readiness. Developmental courses and activities are designed to strengthen academic skills and assist students in becoming ready to perform college-level academic coursework. These courses do not apply toward degree requirements at any Texas public college. Students who initially do not meet the college-level standard may retake an assessment instrument within college and test instrument guidelines.

Students are exempt from taking a TSI-eligible exam if they satisfy one of the following conditions:

- ❑ Meet qualifying ACT, SAT, or TAAS scores 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, a math TLI of 86, and a writing scaled score of 1770 is required. Scores can be no more than 3 years old.

❑ Associate or Baccalaureate Degree from an accredited Institution of Higher Education (IHE).

❑ Eligible course completions in all areas (Reading, Math, English) from private/ independent IHE or an accredited out-of-state IHE.

❑ "Readiness" status in all areas (R, M, E) determined by any previous IHE.

❑ Honorably discharged, retired or released from active duty on or after August 1, 1990, from the armed forces, Texas National Guard, or reserve component of the armed forces.

In addition, the following persons are temporarily waived from taking an exam for state purposes:

❑ Enrolled in a certificate of one year or less; (state-approved, level-one certificates of 42 or fewer semester credit hours).

❑ Active Duty in armed forces, Texas National Guard, or as of three years preceding enrollment, been in a reserve component of the armed forces.

❑ Students officially not seeking a degree or certificate.

Students seeking an exemption must provide official documentation as deemed necessary per the exemption being sought.

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**.

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.**

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.

ALAMO COMMUNITY COLLEGE DISTRICT
TUITION AND FEES

Tuition and Fees are subject to change by the Alamo Community College District Board of Trustees.

	RESIDENT OF TEXAS				NON-TEXAS	
	In-District		Out-of-District		Residents & International Students	
Semester hrs. taken	Tuition	General Fee	Tuition	General Fee	Tuition	General Fee
1	$228.00	$100	$456.00	$100	$912.00	$100
2	$228.00	$100	$456.00	$100	$912.00	$100
3	$228.00	$100	$456.00	$100	$912.00	$100
4	$228.00	$100	$456.00	$100	$912.00	$100
5	$228.00	$100	$456.00	$100	$912.00	$100
6	$228.00	$100	$456.00	$100	$912.00	$100
7	$266.00	$105	$532.00	$105	$1,064.00	$105
8	$304.00	$105	$608.00	$105	$1,216.00	$105
9	$342.00	$105	$684.00	$105	$1,368.00	$105
10	$380.00	$105	$760.00	$105	$1,520.00	$105
11	$418.00	$105	$836.00	$105	$1,672.00	$105
12	$456.00	$105	$912.00	$105	$1,824.00	$105
13	$494.00	$105	$988.00	$105	$1,976.00	$105
14	$532.00	$105	$1,064.00	$105	$2,128.00	$105
15	$570.00	$105	$1,140.00	$105	$2,280.00	$105
16	$608.00	$105	$1,216.00	$105	$2,432.00	$105
17	$646.00	$105	$1,292.00	$105	$2,584.00	$105
18	$684.00	$105	$1,368.00	$105	$2,736.00	$105
19	$722.00	$105	$1,444.00	$105	$2,888.00	$105
20	$760.00	$105	$1,520.00	$105	$3,040.00	$105
21	$798.00	$105	$1,596.00	$105	$3,192.00	$105

1-6 credits are priced at a flat rate of $228.00 for In-District Tuition, $456.00 for Out-of-District Tuition, $912.00 for Non-Resident and International Student Tuition.

7-21 credits are priced at a rate of $38.00 per credit for In-District Tuition, $76.00 for Out-of-District Tuition, and $152.00 per credit for Non-Resident and International Student Tuition.

The General Fee will be $100 for each summer term.

Minimum tuition for each summer term will be $114.00 for In-District Texas residents, $228.00 for Out-of-District Texas residents, and $456.00 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 of $10 will be charged per student per semester and each summer term.

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. Eighty percent 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 $90
Private lessons,
one hour or two half-hour lessons per week, per summer term $20
Class lessons, two lessons per week, per semester $24
Private lessons,
one half-hour lesson per week, per semester $60
Private lessons,
16 hours of lesson, per summer term $90
Private lessons,
8 hours of lesson, per summer term $60
Class lessons, 30 hours of lesson, per summer term $24

Audit Fee $10

General Fee
1-6 hours $100
7 or more hours $105
Summer or Flex term, per term $100

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., aviation, golf, photography, etc.) ..... Varies

Student Insurance Fees
Fall or Spring Semester $4
Per Summer Session and Continuing Education Courses $1
(Continuing Education courses up to $4 per semester).

International Student Insurance Fees
Per Semester, Fall or Spring Semester $61
Summer and Mini-Semester $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

Adult Vocational ..... $2.10 to $3.50 per instructional hour
Apprenticeship Programs ..... $2.00 per instructional hour
Community Service Programs ..... $1.50 to $3.50 per instructional hour

Contract Courses ..... Instructor cost plus all direct costs and indirect costs divided by minimum number of students needed.
Instructional Technology Fee ..... $5 to $20 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 ..... $38 per credit hour with $114 minimum
- TSI Eligible (THEA Alternative) exam $15
- CLEP (per test) $70
- CLEP (Freshman College Composition) $80
- Correspondence Exam $10

Texas Securities (Austin) $10
Women's Programs (including Women's Center participants) $5
Credit Card Usage Fee ..... $4 per transaction
Foreign Student Registration Processing Fee $15
Installment Payment Plan
- Administrative Fee, per semester $25
- Late Fee, per each late payment $10

Late Registration Fee: **$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/per day
- Each Video ..... $0.25 per day

Parking Permits:
- Full Year $15
- After January 1 ..... $10
- Summer Term $7
- Replacement $8

Parking Fines $10
- Parking Fines if not paid within 10 days $16

Registration Receipt Copy Fee $2
Returned Check Fee $35
Returned Automated Clearing House (ACH) Fee $35

Schedule Change Fee $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 $35 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: (l) 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.

PASS*key* Program (TRIO grant). Available to PASS*key* 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 Student Financial Services Office or through 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. Tejeda 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.

For more information about these and other scholarships, contact Student Financial Services at 921-5316.

An annual Scholarship Ceremony honors recipients.

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 2004	November 1, 2004
Spring 2005	April 1, 2005
Summer 2005	May 12, 2005

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-l) 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.

6 Student Support Services & Activities

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

The Welcome/Advising Center is the first stop in your journey to success. The Welcome/Advising Center Staff is specifically trained to negotiate the maze of admissions, financial aid, assessment, and advising. Services we offer include:

- ❑ Guide students through Advising process
- ❑ Supply general information regarding Palo Alto College majors and academic degree plans and other college/university academic degree plans
- ❑ Assist with on-line Fall/Spring/Summer registration
- ❑ Help complete FAFSA forms on-line
- ❑ Computer Lab to view or print out grades, unofficial transcripts, class schedules and tuition bills

The Welcome/Advising Center has been designed to provide students with the information and assistance needed to be successful in college by offering these additional programs and services:

- ❑ Academic Advising
- ❑ Transfer Services
- ❑ Early Alert Program
- ❑ International Student Services
- ❑ PASSkey Program
- ❑ disABILITY Services
- ❑ Community Resources

We are hopeful that these student services and resources can help make your PAC experience a success.

Academic Advising

Initial academic advising is provided by the Welcome/Advising and Counseling Centers for first-time Palo Alto College students, both new and transfer students. During their second semester, all currently enrolled and former Palo Alto students who have a declared major will be advised by faculty advisors. Students must check with the appropriate department office to schedule an appointment with their advisor.

Currently enrolled and former students not having declared majors who will be registering for a full-time course load will be advised by counselors. Part-time students may be advised by advisors in the Welcome/Advising Center. Undeclared 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 Counseling Center.

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 with declared majors 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. Each student is responsible for verifying the transferability of credit with the receiving institution.

Please follow the Advising Process Steps usually found near the front of the Palo Alto College Bulletin Schedule of Classes or in the Welcome/Advising Center.

Transfer Services

Transfer Services, located in the Welcome/Advising 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 Welcome/Advising 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
5. Sponsored workshops held throughout the academic year which highlight the transfer and admissions process and educational funding resources available for PAC students.

Early Alert Program

Early Alert is an outreach program that focuses on students who are experiencing academic and/or attendance difficulties so that appropriate interventions can occur. The program assists students to achieve successful academic progress through use of Student Support Services. The Early Alert program is triggered when a faculty member identifies students who are experiencing academic difficulties. As a result of a faculty initiated referral, an Early Alert Specialist contacts the student and advises the student about ways to address their academic difficulties. A final report is given to the faculty regarding the outcome of the meeting with the student.

International Student Services

All persons seeking admission holding non-permanent visas will be processed as International Students. The Designated School Official assists prospective international students with admission application, registration, medical insurance, USCIS (former INS) compliance, etc. Enrolled international students are also assisted with transfer to other institutions or return to their home country.

PASS*key* Program (TRIO Student Support Services Program)

PASS*key*, located in Palomino Center Room 115, is a retention program funded by the U.S. Department of Education and is designed to:

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

PASS*key* 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 may 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. PASS*key*'s retention initiatives incorporate a broad, flexible system of supportive services.

Description of services:

- ❑ Academic, career, and personal counseling
- ❑ Financial aid preparation and securing of educational funds
- ❑ Academic advisement and registration assistance
- ❑ Access to cultural events and activities
- ❑ University educational express trips
- ❑ Laptop and PDA lending program
- ❑ Referral and assistance with campus services and resources.
- ❑ Assistance in securing community resources to resolve issues relating to health, relationships, and financial needs.
- ❑ Linkages with colleges and universities, professionals, and other students nationwide
- ❑ Computer and Internet access.
- ❑ One-on-One & Group Math Tutoring.
- ❑ Supplemental Instruction for MATH 0303 and 1314.

In addition to the services outlined above weekly student success workshops are offered on:

- ❑ Stress management
- ❑ Test-taking strategies
- ❑ Money management and budgeting
- ❑ Healthy families
- ❑ Budgeting your time
- ❑ Career exploration
- ❑ Resume writing

- ❑ Dealing with depression
- ❑ Essay writing
- ❑ Transferring to a four-year university
- ❑ Getting organized

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 provide 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.
- 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 EVERY 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.

Community Resources

The goal of Community Resources is to identify the needs of students and determine the categories of community, institutional, and child care resources required to address those needs. Referrals are made to United Way agencies for financial assistance, utility relief programs, child care, domestic violence, and housing which may include the following: Child Care Delivery Service (CCDS), Catholic Charities, De Paul Family Center, Housing Authority of San Antonio, CARE LINK, City of San Antonio-Department of Community Initiatives and Family Violence Prevention Services. Students may be referred by faculty, staff, and/or self-referral. All inquiries are welcome. For assistance, come the Welcome/ Advising Center located in Palomino Center Room 126 or call (210) 921-5382.

Assessment Center

The Palo Alto Assessment 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/Texas Success Initiative Testing
   All Palo Alto students except those enrolling in Continuing Education or pursuing certain technical certificates 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

THEA/QUICK THEA – 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. Academic-Makeup/Distance Testing
   Scheduled dates and times vary by semester. Contact the Assessment Center to confirm an appointment.
5. Texas Higher Education Assessment (THEA)
   The THEA is offered on the Palo Alto campus several times per year. Consult the THEA Registration Bulletin available at the Assessment Center for dates and procedures.
6. Correspondence Course and Contracted Test Administration
   The Assessment 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 TSI exams are offered on a scheduled basis and during registration periods. Contact the Assessment Center for more information.

Counseling and Career Services

The Counseling and Career Services Center provides all students with information on succeeding in college. Students are encouraged to speak with a counselor to develop strategies that will promote academic success. The Counseling and Career Services Center provides comprehensive services designed to assist students with:

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

When enrolling in College for the first time, students meet with counselors 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 Counseling – Students can receive information on courses needed for a certificate, a two-year associate degree or courses required for transfer from Palo Alto College to other schools/universities. Counselors can also assist with information about 2+2 programs, joint admissions programs, and articulation agreements. In addition, counselors help students in overcoming academic difficulties, improving poor study skills, or advising students placed on scholastic probation (SP) or enforced scholastic withdraw (ESW).

Personal Adjustment Strategies – Counselors can assist students in adjusting to college by providing information on time management, stress management, decision-making, effective communication, and crisis intervention, as well as individual counseling. In addition, counselors can provide referrals related to life needs assistance – food, utility bills, medical services, etc.

Career/Goal Setting – Selecting a program of study (major) or making long-term career goals is critical for success in college. This can be accomplished, with assistance from a counselor, through exploring personal attributes and matching them with compatible career choices.

Crisis Counseling – All counselors are skilled at providing one-to-one counseling. However, 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.

Student Development Courses (SDEV 0170, 0171, 0172) – Counselors teach Student Development (SDEV) 0170 and Human Development (HUMD) 0300 courses. These classes are taught in the traditional classroom setting, but can also be taught over the Internet or in a compressed format before the beginning of the semester. All students entering Palo Alto College with less than 15 semester credit hours are required to enroll in either SDEV 0170 or HUMD 0300. Counselors also teach SDEV 0171: Enhancing Academic Success, for students placed on academic probation and SDEV0172: Career and Life Planning, for students who are undecided or need more information in selecting a program of study.

Counselors can by reached by visiting the Counseling Center, calling 921-5280 or visiting the website at http://www.accd.edu/pac/counsel/counselors_staff.htm.

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.

The Ray Ellison Family Center serves children of students, employees and the community.

Career and Job Placement Services

Career Services, located in the Counseling and Career Services Center, 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. Assistance in locating full-time and part-time jobs off-campus is provided.
4. **Internship & Co-Op Education Positions,** as well as volunteer positions, are advertised in the Counseling and Career Services 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
8. **SIGI PLUS** is a comprehensive, interactive, computer-assisted career guidance program designed to assist in **making career choices.** SIGI PLUS combines personal and occupational characteristics to identify appropriate career options. The program introduces the student to a systematic decision-making process, and provides strategies on obtaining a career of choice.

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.

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.

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 (READ 0300, READ 0301). Tutors are available on a "drop in" basis in the tutoring facility, Applied Science Building (AS) Room 105. A variety of instructional software for reading is also available in AS 105.

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.

Science Learning Center (SLC)

The Science Learning Center (SLC) helps students succeed in their science classes. The Center offers:

- Tutoring on a walk-in basis by an Instructional Specialist and peer tutors
- Science models and materials
- Computer-assisted instruction and internet access to support course work
- Practice lab exams
- Workshops on research and lab report writing
- Special events, including a Nursing Career Information Day

The Center is located in the Math & Science Building (MS), Room 105. For more information, go to http://www.accd.edu/pac/science/hopper/TitleV.htm or call (210) 921-5137.

The SLC is funded by a federal Title V grant and is available free of charge to all PAC and TAMUK students.

Health Center

The College maintains a Campus 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.

Accidents incurred on campus should be reported to the Campus Health Center staff as soon as possible.

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. For more information, visit our website at http://www.accd.edu/pac/studact/HealthCenter1.htm.

Student Activities

The Office of Student Activities provides a student friendly resource center at Palo Alto College, offering opportunities to become involved in campus life through participation in clubs, student organizations, student government, cultural, education, entertainment, and arts and crafts activities. We welcome students to take part in co-curricular activities.

The following services and programs are among those provided by the Office of Student Activities:

- ❑ Informational clearinghouse for all campus activities;
- ❑ Advisement on the formation of clubs/student organizations;
- ❑ Promotion of student involvement in campus governance;
- ❑ Development of interpersonal and leadership skills;

- ❑ Advisement for off-campus and on-campus resources;
- ❑ Scheduling and planning of special events on campus;
- ❑ Budget advisement for club funding;
- ❑ Advisement and interpretation of College policies;
- ❑ Assistance in event planning;
- ❑ Responsible for on-campus posting;
- ❑ Responsible for issuing lockers in the Student Center;
- ❑ Issues discount bus cards.

For more information, visit the Student Activities website at http://www.accd.edu/pac/studact/Main1.htm.

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

- ❑ Basketball
- ❑ Basketball Shooting Contest
- ❑ Flag Football
- ❑ Soccer
- ❑ Softball
- ❑ Table Tennis
- ❑ Tennis Tournaments
- ❑ Volleyball

Recreational Activities

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

For more information, visit our website at http://www.accd.edu/pac/studact/Intramurals.htm.

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

For more information, visit the Student Activities Office website at http://www.accd.edu/pac/studact/Main1.htm.

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. 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. Students are 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 D.C., 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. 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 athletics program began in 1995. The college is a member of 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. Palo Alto has won three national championships – one in Men’s Cross Country and two in Men’s Swimming

The college will host the NJCAA swimming championships in 2006, and the U.S. Open for the third time in December 2004.

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. 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 Hours		Quality Points		Grade 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
Total =		**15**				**44**

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 dishonestly 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; and
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 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.

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 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.

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.

An annual Honors Convocation recognizes students who have achieved President's List and Dean's List.

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.

Advanced Placement (AP) Credit: The Advanced Placement Program® is a cooperative educational endeavor between secondary schools and colleges and universities. The Program provides motivated high school students with the opportunity to take college-level courses in a high school setting. Palo Alto College accepts Advanced Placement credit in a variety of disciplines. Up to 32 hours of credit may be awarded for specific subject exams with appropriate minimum grades. Please check with the Palo Alto Assessment Center for a list of disciplines.

The College's Assessment Center schedules and administers the CLEP Subject Examinations. The Assessment 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 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.

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-TSI exempt students must meet the state's determination of readiness to perform freshman-level academic coursework prior to graduation.

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.

Palo Alto College Core Curriculum

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.

1.	**Communication**		**9**
	Composition	ENGL 1301	3
		ENGL 1302	3
	Speech	SPCH 1311, 1318, 1321 or 2341	3
2.	**Mathematics**		**3**
		MATH 1314 or Higher	3
3.	**Natural Sciences**		**7-8**
		Natural Lab Science	4
		Second Natural Science	3
		BIOL, CHEM, ENVR, GEOL or PHYS	
4.	**Humanities & Visual and Performing Arts**		**9**
	Humanities	ENGL, HUMA, IDST, PHIL or SPAN	6
	Visual and Performing Arts	ARTS, DRAM or MUSI	3
5.	**Social and Behavioral Sciences**		**15**
	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
6.	**Computer Literacy**		**3**
		COSC 1300, COSC 1301	3
7.	**Kinesiology/Physical Education**		**1-2**
		PHED or KINE	1-2
		TOTAL	**48**

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, 1405, 1407
ENVR 1401
GEOL 1401, 1402, 1403, 1404
PHYS 1401, 1402, 1405, 1407

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
SOCI 1301, 1306, 2301

Degree Options and Graduation Requirements

Associate of Arts Degree

Associate of Science 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
- Art
- Communications
- Criminal Justice
- Drama
- Economics
- Education
- English
- Foreign Languages
  - French
  - German
  - Spanish
- Geography
- Government
- History
- Humanities
- Interdisciplinary Studies
- Kinesiology
- Music
- Philosophy
- Physical Education
- Psychology
- Social Work
- Sociology
- Speech

Areas of Concentration – Science

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

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

Associate of Arts or Science College/University Transfer Degree

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.

9 Continuing Education & Customized Training

Mission Statement

Palo Alto Continuing Education, a non-profit entity, is dedicated to providing a variety of quality, relevant and essential traditional and non-traditional educational programs to individuals, businesses, and the community at large to help fulfill employer training needs, as well as the career and/or personal training aspirations of our students.

Palo Alto Continuing Education:

- supports employer training needs
- provides a wide range of incumbent worker development programs for adult learners to help facilitate career advancement
- helps prepare learners for college matriculation
- provides wholesome recreation alternatives and meaningful community programs designed to enhance our community's everyday quality of life.

Customized Training

The Continuing Education and Customized Training Department has an important role to play in helping local employers with their workforce development needs. The department has delivered contracted instruction to local employers, professional associations, and governmental agencies in and around San Antonio. We do this by carefully analyzing the needs of the employer and workforce to determine the appropriate material and methods needed to successfully meet their training requirements. Training can be delivered at your facility or ours. Our goal is adult education for academic, occupational, professional, and cultural enhancement with contracted instructional programs and services for area employers that promote economic development.

For additional information please contact the Department of Continuing Education and Customized Training at (210) 921-5330 or visit our website at www.accd.edu/pac/ce.

Certificates of Completion

Certificates of completion are issued for all classes and Continuing Education Units (CEU's) or Continuing Professional Education (CPE units) are awarded accordingly.

- The CEU is a nationally recognized standard of measurement defined as one (1) CEU for ten contact hours.
- The CPE is a standard of measurement recognized by the Texas State Board of Education Certificate as one (1) CPE for each contact hour.

Palo Alto College is approved by the State Board for Educator Certification to provide CPE activities to Educators for certificate renewal purposes. All Texas Educators who hold a Standard Certificate must renew it every five (5) years. As a condition of renewal, superintendents and principals will be required to complete 200 clock hours of CPE, and all other educators must complete 150 hours.

Programs

Continuing Education offers the following programs that lead to a certificate of completion applicable for professional development and workforce training and/or a state agency certification and/or license.

Continuing Education courses are offered in the form of contact hours rather than semester credit hours. Contact hours are the number of clock hours that a student will participate in a program.

Health Science Programs

Certified Nurses Associate

Course	Ct. Hours	Course Title and Description(s)
NURA 1001	115	Certified Nurses Associate
NURA 1060*	30	Clinical: Nurse/Nursing Asst. /Aide & Patient Care Assistant

*Exit exam required

NURA 1001 Certified Nurses Associate
This course prepares entry-level nursing assistants to achieve a level of knowledge and skills, essential to provide basic care to residents of long-term care facilities. Topics include resident's rights, communication, safety, observation, reporting and assisting residents in maintaining basic comfort and safety, with emphasis on effective interaction with members of the health care team. Licensing Agency: Texas Department of Human Services. Book required.

NURA 1060 Clinical: Nurse/Nursing Asst. /Aide & Patient Care Asst.
Prerequisite: NURA 1001
A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by a clinical professional. Course includes TDHS test. Licensing Agency: Texas Department of Human Services.

Courtesy of Americana Ambulance Inc.

Emergency Medical Technician

Course	Ct. Hours	Course Title and Description(s)
EMSP 1001	160	Emergency Medical Technician
EMSP 1013*	104	Clinical: Emergency Medical Technician

*Exit exam required

EMSP 1001 Emergency Medical Technician
This program will include all the skills necessary to provide emergency medical care at a basic life support level with an ambulance service or other specialized services. Curriculum is based on the Department of Transportation National Standard Curriculum

EMSP 1013 Clinical: Emergency Medical Technician
This course is a continuation of EMSP 1001. This course will include skill development to meet the Department of Transportation Emergency Medical Technician - basic guidelines in all aspects of pre-hospital emergency care and hazardous material awareness will be taught. Licensure/Certification Agency: Texas Department of Health and/or the National Registry of EMT's.

Phlebotomy

Course	Ct. Hours	Course Title and Description(s)
PLAB 1023	72	Phlebotomy
PLAB 1060*	48	Clinical: Phlebotomy

*Exit exam required

PLAB 1023 Phlebotomy
This course covers skill development in the performance of a variety of blood collection methods using proper techniques and universal precautions. Curriculum includes vacuum collection devices, syringes, capillary skin puncture, butterfly needles and blood culture, and specimen collection on adults, children, and infants. Emphasis is on infection prevention, proper patient identification, labeling of specimens and quality assurance, specimen handling, processing, and accessioning. Book required.

PLAB 1060 Phlebotomy Clinical
Prerequisite: PLAB 1023
A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. The college and the clinical site develop and document an individualized plan for the student. The plan relates phlebotomist workplace training and experiences to the student's general and technical course of study.

Allied Health

The following courses are a few of the professional development and/or personal enhancement courses that we are currently offering in Continuing Education. Please visit our website at www.accd.edu/pac/ce for a complete listing of courses offered.

Course		Ct. Hours	Course Title and Description(s)
MDCA	1013	48	Medical Terminology (English/Spanish)
MDCA	1043	72	Medical Insurance/Coding
MRMT	1003	48	Medical Office Procedures

MDCA 1013 Medical Terminology

This course entails the practical application of a medical vocabulary system. Topics include structure; recognition; analysis; definitions; spelling; pronunciation; and combination of medical terms from prefixes, suffixes, roots, and combining forms. Students will define terms and abbreviations which apply to the structural organization of the body; recognize and analyze terms and their components from a list including prefixes, suffixes, roots, and combining forms. Book required.

MDCA 1043 Medical Insurance/Coding

Prerequisite: Medical Terminology.

This course is a survey of medical insurance including the life cycle of various claim forms, terminology, litigation, patient relations, and ethical issues. Topics include: medical records coding, ICD-9-CM and CPT-4, billing and bookkeeping, fee collection, insurance terminology, benefit coverage, insurance claims including workman's compensation, Medicare and Medicaid. Book required.

MRMT 1003 Medical Office Procedures

This course is an introduction to basic medical office skills including telephone techniques, filing and indexing, mail handling, appointment scheduling, travel arrangements, correspondence and business transactions, and office machines with emphasis on developing human relation and customer service skills. Students will learn professional and medical ethics; exhibit initiative and responsibility; schedule and monitor patient appointments; operate business machines; and arrange meetings, conferences, and travel accommodations. Book required.

ISO 9000 In the Medical Environment

QCTC 1091 Quality Mgt. Systems Fundamentals and Vocabulary

This course is the introduction to the concept of ISO 9000 Quality Management Systems. This course will cover the fundamentals of the Quality Management System and will specify the terminology for a compliant Quality Management System.

QCTC 1091 Quality Mgt. System – Requirements with Aspects of Medical Devices and Services

A practical application of the ISO 9001:2000 Requirements Standard. This course promotes the adoption of a process approach when designing and implementing a Quality System, taking into account the mission, product, processes and size of the organization. 24 hours.

QCTC 1091 Quality Mgt. Systems Auditing

This course will conduct internal audits on the ISO 9001:2000 Quality Management System to assure compliance to industry standard. This course uses practical methods of identifying non-compliances and documenting corrective actions. Audits are an integral part of the ISO 9001:2000 Standard. 24 hours

Hazardous Materials in the Medical Environment

EPCT 1052 Hazardous Materials

The course places emphasis on identification and proper handling of hazardous materials; Occupational Safety and Health Administration (OSHA) regulations; emergency situations; notification procedures in emergency response plans, spill containment; and proper use of protective eqipment. 24 hours.

Teacher Education Programs

The Teacher Education Programs are designed to assist individuals currently in education or individuals seeking a new career path with the adequate training for the education workforce.

CDEC 1032 Special Education Law
This course is designed to provide students with an extensive overview of the law concerning special education. Topics will include IEP regulations, discipline and classroom management issues, updates to IDEA and case law. Administrators, teachers, instructional assistants, community leaders and parents will find this extensive overview of special education law beneficial.

EDTC 1002 Substitute Teacher Certification
The role of the substitute teacher, student need identification, behavior modification, classroom management, school personnel relations, skill development in the principles of human growth, and development as related to childhood and adolescence are the topics that will be covered in this class.

Alternative Teacher Certification

Texas has many critical shortage areas. The Alternative Teacher Certification program is a non-traditional route to becoming a certified teacher. The program consists of an internship and an academic strand. The internship strand is satisfied while working one year in the classroom as a teacher-of-record. The academic strand consists of two sections: (a) Content and (b) Pedagogy and Professional Responsibilities (PPR). The program may be completed in one year or two. If the internship and academic strands are completed concurrently, the program may be completed in one year. For a two year format, the academic strand must be completed first, and the internship strand may be completed the following year.

For a complete listing of the approved certificate areas, please visit our website at www.accd.edu/pac/ce .

Educator's Institute

These institutes are designed for teachers to strengthen their skills and knowledge in applying multiple intelligence theory to create different pathways to learning. Educators can develop their creative learning and problem solving skills, using the arts, social studies and the natural sciences to create classroom investigations. Staffed by a multi-disciplinary team of creative learning specialists, these courses link classrooms to community enrichment resources with area environmental and cultural organizations. Each course includes materials and hands-on activities for classrooms and enrichment programs and stresses theme-based integrated program planning linked to TEKS/ TAKS objectives across the curriculum. Please visit our website at www.accd.edu/pac/ce for a complete listing of these education courses. Some of the courses offered are as follows:

- Making History
- Science Education – Body Wise!
- Science Education – Studying Natural Systems
- Field Study – Regional Ecology
- Field Study – Child Growth and Development
- Field Study – Special Topics in Child Development
- Field Study – Expanding Literacy in the Classroom

Online Courses for Teaching Professionals

Education 2 Go courses are online courses that are comprehensive/self-contained courses that are offered every six weeks. Featured courses include: Solving Classroom Discipline Problems, The Classroom Computer, Using the Internet in the Classroom, Understanding and Managing Stress, Understanding Adolescents, Enhancing Language Development in Childhood, etc. For a listing of all the different courses available to teaching professionals, please visit our website at www.ed2go.com/pac.

Environmental Technology Programs

The Environmental coursework is designed to offer individuals the opportunity to learn the regulations, policies and procedures of technology Occupational Safety and Health Administration (OSHA) required by certain occupations. Our coursework include the laws, requirements and codes necessary for disposing, mixing of chemicals, and handling of hazardous substances in the workforce. These programs will satisfy OSHA requirements for Hazardous Waste Management, Emergency Response, Hazardous Materials Safety, Blood Borne Pathogens Awareness, Hazardous Materials Transportation, Hazard Communication, Emergency Preparedness, MSDS Program, and more.

Occupational Safety and Health Administration (OSHA)

Course	Ct. Hours	Course Title and Description(s)
EPCT 1023	9	Hazardous Waste Materials Safety
EPCT 1053	48	40-Hour Hazwoper
EPCT 1059	32	24-Hour Hazwoper
EPCT 1059	8	8-Hour Hazwoper Refresher Course
EPCT 1091	24	Contracting & Disposing of Hazardous Materials
OSHT 1005	48	OSHA Regulations – Construction Industry
OSHT 2001	64	OSHA Regulations – General Industry

EPCT 1023 Hazardous Waste Material Safety

"Hazard Awareness in Today's World" – This is a nine-hour course, presented in three sessions and examines the chemical, biological, and nuclear hazards facing everyone in today's world. People live, work, and play with these hazards every day. Even as we enter a new era of potential terrorism, the majority of people exposed to these hazards know far too little of the dangers they represent. This course will describe the protective measures and emergency preparedness procedures available to the general population.

EPCT 1023 8-Hour Hazwoper Refresher

This course is designed to satisfy the minimum regulatory requirements of 29 CFR 1910.120(e)(8) by providing the annual refresher training necessary for all workers at hazardous waste/hazardous materials sites or emergency response personnel who encounter hazardous or potentially hazardous work conditions, as defined by the OSHA hazardous waste operations and emergency response (HAZWOPER) guidelines.

EPCT 1053 40-Hour Hazwoper (48-Hour Class)

This course is designed to satisfy the minimum regulatory requirements of 29 CFR 1910.120(e)(3)(i) by providing the initial training necessary for general site workers at hazardous waste/hazardous materials sites or emergency response personnel who expect to encounter hazardous or potentially hazardous work conditions, including situations that require respiratory protection as defined by the OSHA hazardous waste operations and emergency response (HAZWOPER) guidelines.

EPCT 1059 24-Hour Hazwoper (32-Hour Class)
This course is designed to satisfy the minimum regulatory requirements of 29 CFR 1910.120(e)(3)(ii-iii) by providing the initial training necessary for regular/occasional workers at hazardous waste/hazardous materials sites or emergency response personnel who expect to encounter hazardous or potentially hazardous work conditions but do not encounter conditions or situations that require respiratory protection as defined by the OSHA hazardous waste operations and emergency response (HAZWOPER) guidelines.

EPCT 1091 Contracting and Disposing of Hazardous Materials
When dealing with Hazardous Materials Disposal, your first mistake might just be your last. This course will provide the student with guidelines on the subject of protecting your organizations from potential liability and fault for improper disposal. The student will have a firm idea of the importance and risks of hazardous materials and of methods used to properly dispose of them. The student will be able to identify hazardous materials, use a MSDS sheet, and know the proper administrative procedures for the MSDS.

OSHT 1005 OSHA Regulations – Construction Industry
This course is a study of Occupational Safety and Health Administration (OSHA) regulations pertinent to the construction industry. Students will identify the OSHA regulations which apply to the construction industry and exhibit proficiency in retrieving specific information from Title 29 C.F.R. Part 1926 regulations.

OSHT 2001 OSHA Regulations – General Industry
This course is a study of Occupational Safety and Health Administration (OSHA) regulations pertinent to general industry. Students will identify the OSHA regulations which apply to general industry and exhibit proficiency in retrieving specific information from Title 29 C.F.R. Part 1910 regulations.

Geographical Information Systems (GIS)

Course	Ct. Hours	Course Title and Description(s)
ITSW 2001	16	Geographical Information Systems

ITSW 2001 Geographical Information Systems (GIS)
This dynamic Geographic Information System (GIS) Software Course provides fundamental training on planning and problem-solving, using the latest 8.3 version of GIS ArcView software. Students will learn to identify and use basic GIS concepts and terminology, how to collect and analyze spatial data, solve problems, produce maps, charts, tables, reports, design and create macros, and much more with the assistance of this software.

Business Programs

The Business Programs are designed to offer individuals information that will help upgrade, improve, or enhance communication, grammar, vocabulary, and technical skills. The business classes include topics relevant to business employers, business owners, or business employees. With the growth in business, our programs entail the key components that employee/employer should know in the workforce. Courses will feature business, small business, and general office.

Business

The following courses are a few of the professional development and/or personal enhancement courses that are currently offered in Continuing Education. Please visit our website at www.accd.edu/pac/ce for a complete listing of courses offered.

Course		Ct. Hours	Course Title and Description(s)
ACNT	1010*	24	QuickBooks
BMGT	1012	24	Principles of Management
HRPO	1041	24	Personnel Management
MRKG	1001	24	Customer Relations
POFT	1004	24	Business Writing
POFT	1021	48	Business Math
POFT	1045	48	Introduction to Shorthand

*Exit exam required

ACNT 1010 QuickBooks
QuickBooks is the most popular accounting software used by small business owners. This is an introduction to QuickBooks geared to new and existing small business owners. Its main objective is to introduce students to the basic features in QuickBooks and provide the opportunity for hands-on practice. Students will learn about the types of information needed to track a business and how to enter the information and track it in QuickBooks.

BMGT 1012 Principles of Management
This course is an overview of management theories; decision-making processes; planning, organizing, leading and controlling. Recognize and describe essential concepts and theories in the areas of planning, organizing, leading, and controlling; solve problems according to contemporary management processes.

HRPO 1041 Personnel Management
This course is an overview of the principles and methods of human resources management including employment; placement; personnel planning/guiding/development; compensation/benefits; health, safety, and security; and employee/labor relations. This course will explain the development of human resource management, discuss procedures and processes used in personnel planning and development; and identify factors relevant to compensation/benefits and employee/labor relations.

MRKG 1001 Customer Relations
This course will address general principles of customer service including skills, knowledge, attitudes, and behaviors including customer interaction and communication. Students will learn the importance of teamwork in an organization; explain internal and external customer relationships; communicate in a clear and professional manner; and discuss how to diffuse conflict.

POFT 1004 Business Writing
This class studies the basic elements of composition; skill development in comparing paragraphs, expressing clear and correct sentences, and using the rules of grammar are a few of the topics covered. Students will exhibit a mastery of the basic elements of grammar; demonstrate the ability to write clear and correct sentences; and write effective paragraphs.

POFT 1021 Business Math
This course will introduce the fundamentals of business mathematics including analytical and problem-solving skills for clerical thinking in business applications. Students will practice basic math skills; use basic math skills to solve business application problems; and calculate various business problems.

POFT 1045 Introduction to Shorthand
This course is an introduction to shorthand principles. Students will practice in accurate reading and writing of notes to produce mailable documents from dictation. Students will learn to read notes at an acceptable minimum speed; take dictation at a minimum speed of 50 words per minute on new material; transcribe notes with 95 percent accuracy; and produce mailable documents from dictation.

Small Business

Palo Alto College Continuing Education is proud to offer a Small Business Institute for individuals interested in the facts and initiatives of starting small businesses. This institute is designed to offer individuals within the community information on how to begin a small business or add growth to an existing business. The following classes will feature pertinent details of how to manage, finance, prepare, legalize, and operate a small business. These classes will be bilingual.

El Colegió de Palo Alto departamento de Educación Continuación presenta cursos designados para la comunidad que obtiene o desea obtener un negocio. En estos cursos, alumnos tendrán la oportunidad de aprender todos los dátales sobre las reglas, conocimiento, financiamiento, preparación y operación en un negocio propio. El ofrecimiento de estos cursos será bilingüe. Para más información sobre este Institución Para Sus Propio Negocio, por favor de llamar (210) 921-5330.

The courses offered through the Small Business Institute are bilingual.

Course	Ct. Hours	Course Title and Description(s)
ACNT 1010	24	QuickBooks
BUSG 1008	24	How to Manage a Small Business
BUSG 1020	32	Record Keeping for Small Business
BUSG 1021	24	Tax Information for Small Business
BUSG 1023	48	Small Business Survival Skills
BUSG 1024	32	How to Prepare for a Small Business
BUSG 1026	32	Legal Considerations in Small Business Start-Up
BUSG 1027	32	How to Fund a Small Business

ACNT 1010 QuickBooks
QuickBooks is the most popular accounting software used by small business owners. This is an introduction to QuickBooks geared to new and existing small business owners. Its main objective is to introduce students to the basic features in QuickBooks and provide the opportunity for hands-on practice. Students will learn about the types of information needed to track a business and how to enter the information and track it in QuickBooks.

BUSG 1008 How to Manage a Small Business
This course will identify the concepts and skills necessary for starting and operating a small business, including planning, organizing, staffing, managing, financing, marketing, and accounting functions that support small businesses.

BUSG 1020 Record Keeping for Small Business
This course will entail an overview of the financial records needed for an effective record keeping system and information necessary for controlling and processing cash receipts.

BUSG 1021 Tax Information for Small Business
This course will cover the identification, preparation, and maintenance of proper records and forms needed for small business to comply with tax reporting requirements.

BUSG 1023 Small Business Survival Skills
This course will encourage the creation of new business ventures that will be less likely to fail. This course includes entrepreneurial characteristics, managerial skills, and an evaluation of a business idea – planning your business, resources, business definition, marketing, and creating new jobs.

BUSG 1024 How to Prepare for a Small Business
This course will describe how to develop a business plan for a small business start-up or expansion that can be submitted to a financial institution or used for implementation. Topics discussed in this class will emphasize the importance of the plan, components, format, and consideration for a small business.

BUSG 1026 Legal Considerations in Small Business Start-Up
This course will help determine the type of organization to form; distinguish among the types of contracts; discuss the law of torts; describe the legal issues related to land and lease matters; and demonstrate a working knowledge of the information necessary for protecting intellectual property.

BUSG 1027 How to Fund a Small Business
This course will detail information on how to distinguish among different finances such as equity and debt capital and fixed and current assets; interpret a business balance sheet; and estimate funds required to start up a new business, purchase an existing business, or expand an existing business.

Information Technology Programs

CISCO

This certification meets employment standard for the Network Industry. Cisco Networking classes provide a broad range of skills from basic to advance Network concepts. The courses are hybrid courses (web-based instruction with hands-on training in computer labs). Students learn conceptual and technical skills to design, install and operate, and maintain state-of-the-art computer networks. In the labs, students will build local and wide area networks that will comply to real world settings. CCNA certified professionals can install, configure, and operate LAN, WAN, and dial access services for small networks.

Course	Ct. Hours	Course Title and Description(s)
ITSC 1002*	80	CCNA 1: Local Area Networks Design & Protocols
ITSC 1006*	80	CCNA 2: Basic Router Configuration
ITSC 1042*	80	CCNA 3: Local Area Management (LAN)
ITSC 1046*	80	CCNA 4: Wide Area Management (WAN)

*Exit exam required

(This program can be converted to 12 semester credit hours toward a Network Administration certificate through the Palo Alto College Information Technology Department, leading to the Computer Information Systems Degree.)

ITSC 1002 CCNA 1: Local Area Networks Design and Protocols
This course covers cabling, wiring closets, management devices, selection, and Installation of network devices, protocols, and subnetting. The student will identify the seven layers of the OSI model and describe the functions of each layer. Student will select the proper network cabling, network computers, and devices. This course will entail the 5 steps of data encapsulation.

ITSC 1006 CCNA 2: Basic Router Configuration
This course is an introduction to CISCO basic router configuration for local area Networks. Topics include initial router configuration for TCP/IP, management of Configuration, backup router configuration files, routing packets and use of security features. The student will configure and manage routers and subnets utilizing TCP/IP and router Protocol RIP.

ITSC 1042 CCNA 3: Local Area Management (LAN)
This course covers cabling, writing closets, management devices, selection, and Installation of network devices, protocols, and subnetting. The student will identify the seven layers of the OSI model and describe the functions of each layer. Students will select the proper network cabling, network computers, and devices. This course will entail the 5 steps of data encapsulation.

ITSC 1046 CCNA 4: Wide Area Management (WAN)
This course is an introduction to the wide area networking (WAN) services and management. The student will describe, differentiate and select wide area network (WAN) services; configure and monitor wide area network (WAN) services; encapsulate wide area Network (WAN) data; and identify the use of ISDN and HDLC.

Network (Homeland) Security

Course	Ct. Hours	Course Title and Description(s)
ITNW 1040*	40	i-Net+
ITNW 2017*	40	Security+
ITMC 1019*	40	Sever+
ITNW 2026*	40	Linux+

*Exit exam required

ITNW 1040 i-Net+
The i-Net+ certification is recognized as a baseline knowledge specifically designed to certify entry-level internet and e-commerce technical professionals. Those holding i-Net+ certification demonstrate knowledge and competency in internet basics and clients, development, networking, Internet security and business concepts.

ITNW 2017 Security+
Theft and destruction of intellectual property takes place despite the presence of firewalls, encryption and corporate edicts. Neither technologies nor policies alone offer effective information security. The IT industry must have a well-trained work force to effectively combat hackers and decrease financial losses.

ITMC 1019 Server+
The Server+ certification credential validates advanced-level technical competency of serve issues and technology, including installation, configuration, upgrading, maintenance, troubleshooting and disaster recovery. This certification is geared toward mid to upper-level technicians.

ITNW 2026 Linux+

The Linux+ certification validates technical competency and provides a broad awareness of Linux operating systems. Those holding Linux+ certification demonstrates critical knowledge of installation, operation, administration and troubleshooting services.

Computer Training

The following courses are a few of the professional development and/or personal enhancement courses that we are currently offering in Continuing Education. Please visit our website at www.accd.edu/pac/ce for a complete listing of courses offered.

Course	Ct. Hours	Course Title and Description(s)
HMSY 1011	16	Computer Ethics and Security
ITSC 1042	24	Computer Literacy
ITSW 1001	32	Microsoft Word
ITSW 1017	32	Data Entry
ITSW 1045	32	Microsoft Excel
ITSW 1054	32	Microsoft Access
ITSW 2052	32	Microsoft PowerPoint

HMSY 1011 Computer Ethics and Security

This course will study identify theft which is the fastest growing crime a year approaching 1 billion dollars in theft annually, computer security, privacy and enacted laws. The course will cover blocking ports and securing your computer against attacks. Topics will include firewalls, wireless network protection for home and office, intrusion detection systems and how to protect your identity and PC from hackers and thieves.

ITSC 1042 Computer Literacy

This course is an instruction in computer development and terminology; hardware requirements, components, and functions; software systems versus application; the impact of computers and their capabilities and potential uses; application of packaged software in business and industry; and comparing and selecting computers for specific needs. This course identifies the major components of a computer system and effectively uses common-application software and the operating system.

ITSW 1001 Microsoft Word

This course offers the introduction to word processing terminology and basic word processing concepts. Study the production techniques including search and replace functions, headers and footers, spelling checker, mail merge, file functions, printer set-up, merging documents, and inserting graphics editing techniques.

ITSW 1017 Data Entry

Students will develop speed and accuracy of data entry. Students will learn standard data processing terms and input data using various entry screens; perform data file maintenance activities and verify data for accuracy; and improve data entry techniques to match industry standards.

ITSW 1045 Microsoft Excel

This course is an introduction in theory/uses of electronic spreadsheets, including applications, fundamental formula creation, model design and modification, formatting features, display characteristics, editing, moving and copying, sorting, mathematical, statistical and financial functions, report generation, and other features. Students will understand basic concepts of spreadsheet functions; create formulas, charts, and graphs; and generate reports.

ITSW 1054 Microsoft Access

This course will entail terminology, developing a plan for organizing data, designing files, records and fields, entering data, record selection/queries, indexing, report generation, program parameters, data dictionary, optional field characteristics, data manipulation, browsing, table revisions, table merging, mailing labels, report arithmetic, and data and file transfer.

ITSW 2052 Microsoft PowerPoint

This course entails advanced concepts in business graphics. Topics address hardware considerations; monitor resolution; input devices including digitizer, mouse interface, cursor control, light pen activated; printer and plotter output; entering/editing data and text; line, scatter, bar, and three dimensional graphs; pie charts; curve smoothing/fitting; legends/titles; scaling; editing; and special applications.

Web-Multimedia

The Web-Multimedia Program is designed for individuals who already work as an Internet Professional or who want to pursue a technical career. The Web-Multimedia Designer certification program provides a multitude of software training that will teach the cutting-edge of technology in web designing. As technology opens new doors for businesses to communicate with their customers, so do career opportunities and choices for employees to be on the cutting edge in an exciting and growing career field, to enhance current work skills, to be employed by the leading organizations in Web-Multimedia, and to gain up-to-date skills, valuable to many different businesses or to develop one's own web page consulting business.

Students will learn the skills necessary to become part of the team that prepares designs, promotes, and maintains employer's web page/site and special presentations to achieve business goals.

Course		Ct. Hours	Course Title and Description(s)
ARTC	1059	32	Quark Express 5.0 -(Beginning to Advanced)
ARTC	1091	48	Flash 5.0 - Drawing Animations for the Web (Beginning to Advanced)
ITNW	1091	48	Web Builders - FrontPage, Dreamweaver 4.0, MX (Beginning to Advanced)

ARTC 1091 Flash 5.0 – Drawing Animations for the Web

Flash 5.0 to MX Professional 2004. Student learn how work timelines, between objects and create animations. Flash is used heavily for web design and animation. Students will video projects in Flash on any language should install this update.

ARTC 1059 Quark Express 5.0

Students learn advanced publishing solutions and superior products to help you meet these challenges and to give you the critical business advantage in your marketplace.

ITNW 1091 Web Builders – FrontPage, Dreamweaver 4.0 MX

This course covers planning, website development, creating check boxes, e-mail accounts, cascading style sheets, linking web sheets and sites together and incorporating flash animation and graphics into a website. This program covers Photoshop and illustrator for graphics.

Occupational Training Programs

The Occupational Training Programs are designed to assist individuals with the adequate skills necessary for job entry in certain career paths. The following programs are designed to assist individuals to learn new occupations in child care, food handling, or legal practices. These courses will prepare students in the areas of vocabulary, communication, regulations, policies and procedures necessary to work in the following program areas.

Child Care

Course		Ct. Hours	Course Title and Description(s)
CDEC	1016*	120	Child Development Associate
CDEC	1094	48	Director Training for Child Care Centers
CDEC	1051	45	CDA Renewal

CDEC 1016 Child Development Associate (CDA)
This program is tailored to instruct students on the necessary skills needed to successfully become a certified CDA associate. Students will learn practical skills based on curriculum needed to ensure success as a CDA. Students are required to maintain current First Aid/ CPR certification. Course Cost includes: CDA Packet and four hours of observation. Book required: Essentials, located in the Palo Alto College Bookstore. Upon completion of the program, students are eligible for certification by the Council for Early Childhood Professional Recognition after paying an assessment fee to the Council.

CDEC 1051 CDA Renewal
A renewal study of the principles of normal child growth and development from conception to adolescence. Focus on physical, cognitive, social and emotional domains of development. (Assessment fee included.)

CDEC 1094 Director Training for Child Care Centers
Students will develop the necessary skills needed to be an effective Director such as goal setting, problem solving, interpersonal communication, time management, stress management, scheduling, cost effectiveness, and principles of management and organizational behavior.

Food Management and Supervision

Course		Ct. Hours	Course Title and Description(s)
RSTO	1041*	15	Certification Course (Food Service Manager Certification)
RSTO	2041*	7	Recertification Course (Food Protection Mgt. Program)

*Exit exam required

RSTO 1041 Certification Course (Food Service Manager Certification)
All establishments in Bexar County that serve food to the public must have a certified food service employee on staff. Successful completion of the 15-hour course at Palo Alto College prepares you to take the required exams to meet the Texas Department of Health, Division of Food and Drug and the City of San Antonio ordinance for food service employees and members. Recertification is required every five years. This program includes methods of proper food storage, techniques for sanitary food service preparation, employee sanitation, pest control, accident prevention, housekeeping management, sanitation regulations and standards, and facility conditions, which contribute to outbreaks of food borne disease. Costs include test fees and study guide.

RSTO 2041 Recertification Course (Food Protection Mgt. Program)
To take the 7-hour class, the 15-hour certification must have been completed within the past 3 years. Costs include test fees and study guide.

Paralegal Certification Program

The program in partnership with the Center for Legal Studies of Golden, Colo., is designed primarily for people interested in moving into the paralegal or legal assistant fields, but it will also interest those who want extended study in various aspects of the law.

Course	Ct. Hours	Course Title and Description(s)
LGLA 1091*	84	Paralegal Certification Program

*Exit exam required

LGLA 1091 Paralegal Certification Program
Participants will learn practical skills, including how to assist trial attorneys, interview witnesses, investigate fact patterns, interpret legal documents and help attorneys prepare cases for courtroom litigation. Participants who have successfully finished all assignments and received passing grades on tests will receive a certificate from Palo Alto College, Continuing Education, and indicating completion of the 84-hour course.

Quality Management Programs

Palo Alto Continuing Education offers courses in Quality Management Training to meet the needs of our business and industry and to address the professional growth of students wanting to enter the area where an industry of quality management approach is required.

ISO 9001:2000 Quality Management Systems

The ISO 9001:2000 Quality Management System is a series of individual but related international standards developed to effectively document the elements to be implemented in order to maintain an efficient quality system in a company. The Department of Continuing Education & Customized Training offers the following courses targeted for ISO 9001:2000 training.

Course	Ct. Hours	Course Title and Description(s)
QCTC 1091*	16	Quality Mgt Systems Fundamentals and Vocabulary
QCTC 1091*	24	Quality Mgt. Systems Requirements
QCTC 1091*	24	Quality Mgt. Systems Auditing

*Exit exam required

QCTC 1091 Quality Mgt. Systems Fundamentals and Vocabulary
This course is the introduction to the concept of ISO 9000 Quality Management Systems. This course will cover the fundamentals of the Quality Management System and will specify the terminology for a compliant Quality Management System.

QCTC 1091 Quality Mgt. Systems Requirements
This course will introduce the practical application of the ISO 9001:2000 Requirement Standard. This course promotes the adoption of a process approach when designing and implementing a Quality Management System, taking into account the mission, product, processes and size of the organization

QCTC 1091 Quality Mgt. Systems Auditing
This course will conduct internal audits on the ISO 9001:2000 Quality Management System to assure compliance to industry standard. This course uses practical methods of identifying non-compliances and documenting corrective actions. Audits are an integral part of the ISO 9001:2000 Standard.

Six Sigma Fundamentals

Course		Ct. Hours	Course Title and Description(s)
QCTC	1091	24	Six Sigma Fundamentals

QCTC 1091 Six Sigma Fundamentals
Six Sigma Fundamentals will describe the necessary skills and culture for continuous improvement by setting consistent goals and establishing effective metrics through a company. The student will learn to identify the key processes in a company and effectively execute both minor adjustments and major shifts that a successful future demands.

Quality Specialist/Technician Certificate

Course		Ct. Hours	Course Title and Description(s)
QCTC	1001	48	Total Quality Management
QCTC	1003	48	Quality Control
QCTC	1005	48	Teaming
QCTC	1043	48	Quality Assurance
QCTC	1091	48	ISO 9001:2000 Quality Management Systems

(This certificate can be converted to a 15-semester credit hour local certificate in Quality Technician offered through the Business Management Degree Program.)

QCTC 1001 Total Quality Management
This course will describe the history and philosophy of management systems by identifying the tools of total quality management. This course will explain customer and supplier relationships, demonstrate team building skills, and view work as a process of continuous improvement.

QCTC 1003 Quality Control
This course will describe the benefits and applications of quality control. Curriculum includes the demonstration of working knowledge of quality control tools and techniques, planning and organizing a quality control system and analyzing the cost of poor quality.

QCTC 1005 Teaming
This course will be a study of team building, consensus decision making, active listening skills, win-win resolution, confrontation skills, creativity and brainstorming. Students will demonstrate and perform team building skills and practice appropriate decision making techniques.

QCTC 1043 Quality Assurance
This course will include the benefits and application of quality assurance. Featured topics include: proficiency in the use of the tools of quality assurance and applying sampling techniques. Students will learn how to evaluate quality assurance standards, perform system audits, and implement corrective and preventive action plan.

QCTC 1091 ISO 9001:2000 Quality Management Systems
This course will introduce students to the concept of ISO 9001:2000 Quality Management Systems. This course will cover the fundamentals, address the process approach when designing and implementing a Quality Management System, as well as conduct internal audits on the ISO 9001:2000 Quality Management System to assure compliance to industry standard.

Quality Manager

Course		Ct. Hours	Course Title and Description(s)
BMGT	1007	48	High Performance Work Teams
BMGT	1012	48	Principles of Management
QCTC	1001	48	Total Quality Management
QCTC	1003	48	Quality Control
QCTC	1005	48	Teaming
QCTC	1043	48	Quality Assurance
QCTC	1091	48	ISO 9001:2000 Quality Management Systems

(This certificate can be converted to a level one 21-semester credit hour certificate in Quality Manager offered through the Business Management Degree Program.)

BMGT 1007 High Performance Work Teams
This course is a study of basic principles of building and sustaining teams in organizations, including team dynamics and process improvement. Students will analyze the process of team building, integrate interpersonal skills, group dynamics and leadership in the working of a team.

BMGT 1012 Principles of Management
This course is an introduction to business management functions, principles, concepts, and practices related to the operation of organization. This course will identify the leadership skills related to the business objectives and policies.

QCTC 1001 Total Quality Management
This course will describe the history and philosophy of management systems by identifying the tools of total quality management. This course will explain customer and supplier relationships, demonstrate team building skills, and view work as a process of continuous improvement.

QCTC 1003 Quality Control
This course will describe the benefits and applications of quality control. Curriculum includes the demonstration of working knowledge of quality control tools and techniques, planning and organizing a quality control system and analyzing the cost of poor quality.

QCTC 1005 Teaming
This course will be a study of team building, consensus decision making, active listening skills, win-win resolution, confrontation skills, creativity and brainstorming. Students will demonstrate and perform team building skills and practice appropriate decision making techniques.

QCTC 1043 Quality Assurance
This course will include the benefits and application of quality assurance. Featured topics include: proficiency in the use of the tools of quality assurance and applying sampling techniques. Students will learn how to evaluate quality assurance standards, perform system audits, and implement corrective and preventive action plan.

QCTC 1091 ISO 9001:2000 Quality Management Systems
This course will introduce students to the concept of ISO 9001:2000 Quality Management Systems. This course will cover the fundamentals, address the process approach when designing and implementing a Quality Management System, as well as conduct internal audits on the ISO 9001:2000 Quality Management System to assure compliance to industry standard.

Kids' College

The Kids' College summer program is designed to render quality service to local communities seeking summer activities and involvements with a higher education institution. Our department's focal point is to extend our services that offer educational and exciting community initiatives designed for youth, ages 7 to 14, a challenging, enriching, and fun learning experience beyond their ordinary school environment. The Kids College curriculum has been developed to offer courses for introduction, enhancement, and fun, rather than for in-depth study.

Co-Listing

A co-listed course means that CE students have the opportunity to attend a credit course for non-credit and participate accordingly. There are no prerequisites, no credit hours are issued, students pay a set fee plus any departmental fees, and a Continuing Education Certificate is issued upon successful completion. Continuing Education partners with college credit departments for courses in various academic disciplines, allowing CE students the opportunity to enhance skills for the workforce.

Palo Alto College is located conveniently on the north side of I-410 at the intersection with Hwy 16 South. The large T-shaped building on the left is the Natatorium/Gymnasium Complex. The building in the center is the Ozuna Learning Resources & Academic Computing Center. Most classes are held in the cluster of buildings on the right.

10 Special Programs

Alternative Teacher Certification

Texas has many critical shortage areas. The Alternative Teacher Certification program is a non-traditional route to becoming a certified teacher. The program consists of an internship and an academic strand. The internship strand is satisfied while working one year in the classroom as a teacher-of-record. The academic strand consists of two sections: (a) Content and (b) Pedagogy and Professional Responsibilities (PPR). The program may be completed in one year or two. If the internship and academic strands are completed concurrently, the program may be completed in one year. For a two-year format, the academic strand must be completed first, and the internship strand may be completed the following year. For more information, see the Continuing Education section of this publication or visit the Palo Alto College Continuing Education website at www.accd.edu/pac/ce.

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

Palo Alto College is one of only a few 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 Welcome/Advising 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.

English for Speakers of Other Languages (ESOL)

The ESOL program of study at Palo Alto College is designed to: 1) prepare students for academic success at Palo Alto College; 2) empower students to become productive in their communities; and 3) assist students in reaching their professional and personal goals. Students may take the classes as credit or non-credit students. All students must have a high school diploma (from the United States OR their country of origin) or a GED certificate (in English or *en español*). Assessment for placement into appropriate ESOL classes is mandatory for all students. Students must demonstrate proficiency in English before transitioning to the Bridge Program or college-level classes.

The ESOL program consists of an **Intensive English Program** for full-time students who can attend classes Monday through Friday, an **Evening ESOL Program** for part-time students, and a new **Bridge Program** offered through the English Department for students who first language is not English (see course listings for English 0346 and English 0347).

Intensive English Program (IEP): The Intensive English Program (IEP) uses the Focal Skills Approach to enable students to learn English as quickly as possible. IEP courses include Listening, Reading, Writing, Immersion and electives such as Grammar, Pronunciation, and Conversation.

All students are given a set of language assessment exams and then placed in classes according to their scores. Each student attends four hours of class daily, Monday through

Friday, for up to four four-week sessions per semester. Students test every four weeks and move to different skill modules based on their scores.

After meeting the requirements for Listening, Reading, and Writing, students go to Immersion where they synthesize all the language skills in class activities which include research, group discussions, speech giving, interviewing, writing research papers, guest speaker visits, and exploration of community resources.

Evening ESOL Program: The Evening ESOL Program includes classes in writing, grammar, speaking, and reading/vocabulary development. ESOL faculty use various learner-centered teaching strategies, including cooperative learning activities. Reading and writing courses enhance critical thinking skills and are based on themes; conversational courses include small group interaction; and grammar courses are self-paced and based on mastery-learning. Additionally, students have access to computer technology to do writing assignments, use computer software to improve editing skills, and do grammar exercises on the Internet. Upon completion of the evening program, students transition to the new Bridge Program.

Bridge Program: The Bridge Program assists recent high school graduates as well as community residents whose first language is not English to transition to college-level classes. Bridge classes, which are offered in the day and in the evening, are designed for part-time students who are also working.

Military Science Program/Army Reserve Officer Training

To obtain a commission in the U.S. Army, students must complete the basic and advanced courses in military science and receive a baccalaureate degree. The basic course of Army ROTC (military science) is offered at Palo Alto College to prepare students to transfer to a four-year school to complete the advanced course portion of the military science course work. Upon completion of the advanced courses and receipt of their baccalaureate degree, students will be commissioned in the U.S. Army. Palo Alto College students may enroll in military science courses, with no military obligation, to develop and enhance their leadership and management skills. These courses are considered electives. Credits may transfer to four-year institutions for credit toward that specific institution's military science requirement.

Palo Alto College offers the four military science courses listed below. Course descriptions can be found in the Course Description section of this catalog under the course prefix of MSCI.

The Army maintains a senior division of the ROTC at St. Mary's University. Palo Alto College has partnered with St. Mary's University to provide four of the first classes in this program for students wishing to pursue a military career. These classes will lead to a local certificate with Palo Alto College and will transfer to St. Mary's University.

MSCI	1101	Fundamentals of Leadership and Management I
MSCI	1102	Fundamentals of Leadership and Management II
MSCI	2201	Applied Leadership & Management I
MSCI	2202	Applied Leadership and Management II

Laboratory hours in each course provide the opportunity to acquire leadership skills and hands-on experience to enhance each student's ability to perform as an Army officer.

Although students taking military science courses at Palo Alto College incur no military obligation, all students enrolled in Army ROTC clases will be required to participate in physical fitness training and take the Army physical fitness test each semester. Students will be furnished, free of charge, complete uniforms, physical fitness tests, and necessary equipment.

For additional information about the military science courses offered at Palo Alto College or the Army Resource Officer Training Program, contact John Supry Nowicz in Administration Building Room 159 or call 921-5326.

11 Curricular Offerings

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.

The number in parentheses after the name of the degree or certificate is the Major Code, which is required on some documentation and forms you will complete.

Those pending Texas Higher Education Coordinating Board Approval (THECB) are noted. Please contact the department for an update on approval status.

Associate of Arts (AA) and Associate of Science (AS) Degrees

These degrees are designed as the equivalent of the first half of a baccalaureate degree. Both are general plans and may or may not satisfy the requirements of a specific transfer university. Students desiring to transfer should seek one of these degrees after consultation with the college's Counseling Office. In keeping with Texas State law, students who complete the 48 semester credit hours of the Palo Alto College core curriculum are assured that the core will transfer to any Texas public college or university; in such instances, the Palo Alto College core will be substituted for the core requirements of the receiving institution. Care should be taken in the selection of the math and science courses to ensure that those courses also meet requirements of the proposed major at the transfer institution.

Associate of Applied Science (AAS) Degree

This degree is designed to teach specific professional/technical skills. The requirements for each major in the Associate of Applied Science (AAS) Degree are clearly shown in the curriculum offerings in this bulletin. Students seeking such a degree should become familiar with the specific required courses in the appropriate curriculum. The AAS Degree may transfer all or in part to senior colleges and universities. Contact Transfer Services in the Welcome/Advising Center or the department advisor for specific transfer information.

Certificates

Numerous certificates are part of Palo Alto College's Professional and Technical Education offerings. Some certificate programs do not require the student to meet Texas Higher Education Assessment (THEA) requirements. When the student seeks a THEA waiver based upon participation in one of these certificate programs, the student may not enroll in any course other than those required for completing the certificate program requirements. If other coursework is attempted, the THEA-waived status will end and the student must meet the THEA testing and/or remediation requirements that apply to students not enrolled in a THEA-waived certificate program. Students are encouraged to check with the respective departments or the Assessment Office regarding the THEA requirements of each certificate prior to enrolling. The certificates offered are:

Level I Certificate – This certificate consists of 15 to 42 semester hours of prescribed course work. Included in these hours must be a capstone course. For information on the capstone course, contact the respective chairperson or program coordinator. At least 25% of the required semester hours must be completed at Palo Alto College.

Level II Certificate – This certificate consists of 43 to 59 semester hours of prescribed course work. Included in these hours must be a capstone course. For information on the capstone course, contact the respective chairperson or program coordinator. At least 25% of the required semester hours must be completed at Palo Alto College.

Marketable Skills Certificate – This certificate consists of 9 to 14 semester hours of prescribed course work making a student eligible for immediate employment or adds to the student's marketability to employers. Included in these hours must be a capstone course. For information on the capstone course, contact the respective chairperson or program coordinator. At least 50% of the hours must be completed at Palo Alto College.

Local Certificate – This certificate consists of 6 to 14 semester hours of prescribed course work representing achievement of identifiable skill proficiency. Included in these hours must be a capstone course. For information on the capstone course, contact the respective chairperson or program coordinator. At least 50% of the hours must be completed at Palo Alto College.

Tech Prep

Tech Prep is a way to start a college technical major while still in high school. In a Tech Prep program, a student begins a course of study in high school and continues in a community or technical college. The result is a certificate or associate degree in a career field. Tech Prep programs combine the academic courses needed for success in college AND technical courses that begin to prepare a student for a career.

Palo Alto is working on Tech Prep Articulation Agreements with the surrounding high schools in order to better serve our students. If a student has Tech Prep credit to articulate, see a program advisor to have the credit transcripted with Palo Alto College.

Palo Alto accepts Advanced Technical Credit through the Statewide Tech Prep Articulation Program. Ask an advisor for details if Advanced Technical Credit courses were completed at a Texas high school.

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.

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 Welcome/Advising Center (Palomino Center Room 126) for copies of the existing agreements or course transfer equivalency tables.**

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.

Keyboarding competency of 20 words a minute with five or less errors is a must before entering the Associate degree or certificate plans. Please talk to an ACT advisor in the Applied Science Building if you have questions or concerns.

Advisory Committee

Erin L. Carr, Phi Beta Lambda
Art Castro, Frost National Bank
Alan MacCabe, Frost National Bank
Leo Pacheco, Bexar County
Cynthia Silva, City of San Antonio
Michael Thomas, Thomas & Associates, L.L.C.

Associate of Applied Science in Administrative Computer Technology (3555)

First Year

		First Semester – 16 Hours	
POFT	1301	Business English	3
POFT	1319	Records and Information Management I	3
POFT	1331	Business Machines Applications	3
POFT	1429	Keyboarding and Document Formatting	4
HRPO	1311	Human Relations	3
		Second Semester – 16 Hours	
ENGL	1301	Freshman Composition	3
POFI	1301	Computer Applications I	3
POFT	2301	Document Formatting and Skillbuilding	3
POFT	1309	Administrative Office Procedures I	3
POFT	1313	Professional Development for Office Personnel	3
PHED/KINE		Kinesiology/Physical Education	1
		Summer Session – 6 Hours	
HUMA	1301	Introduction to Humanities	3
	or		
HUMA	1302	World Cultures and Global Issues	
	or		
ARTS	1301	Art Appreciation	
SPCH	1311	Fundamentals of Speech	3
	or		
SPCH	1321	Business and Professional Speech	

Second Year

First Semester – 15 Hours

ACNT	1303	Introduction to Accounting	3
POFI	2301	Word Processing	3
POFT	2312	Business Correspondence and Communication	3
POFT	2321	Machine Transcription	3
MATH	1332	Math for Liberal Arts	3
	or		
MATH	1314	College Algebra	
	or		
BIOL	2306	Environmental Biology	

Second Semester – 15 Hours

ACCT	2301	Principles of Accounting I	3
POFT	2333	Advanced Document Formatting and Skillbuilding	3
POFT	2380*	Cooperative Education – Administrative Asst/Secretarial Science, General	3
ACCT	2302	Principles of Accounting II	3
	or		
HIST	1302	History of the United States, Part II	
	or		
GOVT	2306	State Government	
	or		
ECON	2302	Microeconomics	
ECON	2301	Macroeconomics	3
	or		
HIST	1301	History of the United States, Part I	
	or		
PSYC	2301	Introduction to Psychology	
	or		
GOVT	2305	National Government	

*Capstone for this degree.

Total Hours **68**

ACT graduates participate in Commencement Ceremony.

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 of 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.

Keyboarding competency of 20 words a minute with five or less errors is a must before entering the Associate degree or certificate plans. Please talk to an ACT advisor in the Applied Science Building if you have questions or concerns.

Demonstrated keyboard proficiency 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

General Office Certificate-Level I (3524)

HRPO	1311	Human Relations	3
POFT	1301	Business English	3
POFT	1319	Records and Information Management I	3
POFT	1331	Business Machine Applications	3
POFT	1429	Keyboarding & Document Formatting	4

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

Total Hours **16**

Secretarial Assistant Level I Certificate (3525)

First Semester – 16 Hours

HRPO	1311	Human Relations	3
POFT	1301	Business English	3
POFT	1319	Records and Information Management I	3
POFT	1331	Business Machine Applications	3
POFT	1429	Keyboarding and Document Formatting	4

Second Semester – 15 Hours

ENGL	1301	Freshman Composition I	3
POFI	1301	Computer Applications I	3
POFT	1309	Administrative Procedures I	3
POFT	1313	Professional Development for Office Personnel	3
POFT	2301	Document Formatting and Skillbuilding	3

Capstone for Certificate: Keyboarding Proficiency of 45 words per minute

Total Hours **31**

Administrative Assistant Level II Certificate (3526)

First Year

First Semester – 16 Hours

HRPO	1311	Human Relations	3
POFT	1301	Business English	3
POFT	1319	Records and Information Management I	3
POFT	1331	Business Machine Applications	3
POFT	1429	Keyboarding and Document Formatting	4

Second Semester – 15 Hours

ENGL	1301	Freshman Composition I	3
POFI	1301	Computer Applications I	3
POFT	1309	Administrative Office Procedures I	3
POFT	1313	Professional Development for Office Personnel	3
POFT	2301	Document Formatting and Skillbuilding	3

Second Year

First Semester – 15 Hours

ACNT	1303	Introduction to Accounting I	3
POFI	2301	Word Processing	3
POFT	2312	Business Correspondence and Communications	3
POFT	2321	Machine Transcription	3
SPCH	1311	Fundamentals of Speech	3
	or		
SPCH	1321	Business & Professional Speech	

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

Total Hours **46**

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 Level I Certificate (3560)

POFT	1301	Business English	3
HRPO	1311	Human Relations	3
	or		
POFT	1313	Professional Development for Office Personnel	
POFT	1329*	Keyboarding and Document Formatting (Non-Majors)	3
POFT	2312	Business Correspondence & Communications	3
Directed Elective		(see list following Certificates)	3

*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	3
POFT	1319	Records and Information Management I	3
POFT	2301*	Document Formatting and Skillbuilding	3

Customer Services Representative Level I Certificate (3520)

First Semester – 18 Hours

COSC	1300	Computer Literacy	3
HRPO	1311	Human Relations	3
POFT	1301	Business English	3
POFT	1329	Keyboarding and Document Formatting (Non-majors)	3
POFT	1331	Business Machine Applications	3
SPCH	1342	Voice and Articulation	3

Second Semester – 15 Hours

ACNT	1303	Introduction to Accounting I	3
POFT	1313	Professional Development for Office Personnel	3
POFT	2312	Business Correspondence & Communications	3
POFT	2380**	Cooperative Education – AdministrativeAssistant/Secretarial Science, General	3
SPCH	1318	Interpersonal Communication	3

**Capstone course for Certificate

Total Hours **33**

Data Entry Technician Level I Certificate (3561)

HRPO	1311	Human Relations	3
ITSC	1301	Introduction to Computers	3
POFI	1301	Computer Applications I	3
	or		
ITSC	1309	Integrated Software Applications I	
POFT	1329*	Keyboarding and Document Formatting (Non-Majors)	3
POFT	1331	Business Machine Applications	3

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

Total Hours **15**

Skills Upgrade Level I Certificate* (3562)

(Designed for the student seeking job promotions)

HRPO	1311	Human Relations	3
	or		
POFT	1313	Professional Development for Office Personnel	
POFT	1301	Business English	3
	or		
POFT	2312	Business Correspondence & Communications	
POFT	2301	Document Formatting and Skillbuilding	3
ACT		Directed Elective	3
POFT	2321	Machine Transcription	3
		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**

Bill and Account Collector Level I Certificate (3623)

(Pending THECB Approval)

First Semester – 18 Hours

HRPO	1311	Human Relations	3
ITSW	1304	Introduction to Spreadsheets	3
POFI	1301	Introduction to Computers	3
POFL	1305	Legal Terminology	3
	or		
POFM	1313	Medical Terminology I	
POFT	1329	Keyboarding and Document Formatting I	3
	or		
POFT	2303	Speed and Accuracy Building	
POFT	1331	Business Machine Applications	3

Second Semester – 15 Hours

ACNT	1303	Introduction to Accounting	3
POFI	1349	Spreadsheets	3
POFT	1313	Professional Development for Office Personnel	3
POFT	2380	Cooperative Education	3
SPCH	1318	Interpersonal Communication	3

Total Hours **33**

Data Entry ClerkMarketable Skills Certificate

HRPO	1311	Human Relations	3
POFT	1307	Proofreading and Editing	3
POFT	1329	Keyboarding and Document Formatting	3

Total Hours **3**

Customer Service Clerk Marketable Skills Certificate

HRPO	1311	Human Relations	3
POFT	1301	Business English	3
POFT	1329	Keyboarding and Document Formatting	3
SPCH	1342	Voice and Articulation	3

Total Hours **12**

Office Clerk Marketable Skills Certificate

HRPO	1311	Human Relations	3
POFT	1319	Records & Information Management I	3
POFT	1329	Keyboarding and Document Formatting	3

Total Hours **9**

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

AGRICULTURE

The Associate of Science degree in Agriculture provides a solid academic background coupled with introductory courses in the various areas of the dynamic agricultural and the renewable natural resources industry. Jobs are available in several areas of agriculture including production, supply, processing and marketing, planning and managing renewable natural resources, and providing technical assistance to the agricultural industry.

The Associate of Science in Agriculture is designed to maximize the transfer hours to a four-year university; however the student must check with four-year university for specific course transferability.

Associate of Science in Agriculture (3040)

First Year

First Semester – 14 Hours

AGRI	1131	Introduction to Agriculture	1
AGRI	1307	Agronomy	3
	or		
AGRI	1315	Horticulture	
COSC	1300	Computer Literacy	3
ENGL	1301	Freshman Composition I	3
MATH	1314	College Algebra	3
KINE/PHED		Course	1

Second Semester – 16 Hours

AGRI	1319	Animal Science	3
	or		
AGRI	2313	Plant Protection	
BIOL	1406	General Biology I	4
	or		
BIOL	1411	General Botany	
	or		
CHEM	1311 & 1111	General Chemistry I	
	or		
GEOL	1403	Physical Geology	
ENGL	1302	Freshman Composition II	3
HIST	1301	History of the United States, Part I	3
SPCH	1311	Fundamentals of Speech	3
	or		
SPCH	1321	Business and Professional Speech	

Second Year

First Semester – 16 Hours

AGRI	2330	Wildlife Conservation and Management	3
	or		
AGRI	2321	Livestock Evaluation I	
BIOL	1407	General Biology II	4
	or		
BIOL	1413	General Zoology	
	or		
CHEM	1312 & 1112	General Chemistry II	
	or		
GEOL	1404	Historical Geology	
GOVT	2305	National Government	3
HIST	1302	History of the United States, Part II	3
Course		Social and Behavioral Science	3

Second Semester – 16 Hours

AGRI	1325	Marketing of Agricultural Products	3
	or		
AGRI	2317	Introduction to Agricultural Economics	
ENGL	2311	Technical Writing	3
GOVT	2306	State Government	3
Course		KINE/PHED	1
Course		Visual and Performing Arts	3
Course		Humanities	3
Total Hours			**62**

Agriculture Instructor Kirk Williams, left, was honored for his dedication and persistence by the National Institute for Staff and Organizational Development (NISOD).

ANTHROPOLOGY

Anthropology is the study of humans, from a holistic perspective; that is, anthropologists study humans as biological, cultural, language-using animals in constantly changing, dynamic relation to each other.

Anthropology, then, is necessarily broad-based, incorporating diverse areas of study, research and analysis. Physical anthropologists focus on the biological development of Homo sapiens, over time and under evolutionary influences. Cultural anthropologists primarily examine contemporary folk societies, viewing humans as culture-bearing animals. Attention is paid to the function of major cultural institutions, including subsistence and economy, technology, marriage patterns, family and kinship forms, social class and status, ownership and inheritance, law and social control, religion, magic and myth, ritual and the life cycle. Archaeologists, as anthropologists, attempt to reconstruct the behaviors and past cultures of prehistoric human populations based on the archaeological record.

The study of anthropology helps you to understand your own cultural and social background and how to relate to other people in everyday life.

An anthropologist is well equipped for any job requiring the ability to interact with people from diverse backgrounds and to serve culturally varied communities.

Associate of Arts in Anthropology (3045)

1.	**Communication**		**9**
	Composition	ENGL 1301	3
		ENGL 1302	3
	Speech	SPCH 1311, 1318, 1321 or 2341	3
2.	**Mathematics**		**3**
		MATH 1314 or higher	3
3.	**Natural Sciences**		**7 or 8**
		Natural Lab Science	4
		Second Natural Science	3 or 4
		BIOL, CHEM, ENVR, GEOL or PHYS	
4.	**Humanities & Visual and Performing Arts**		**9**
	Humanities	HUMA or PHIL	3
		IDST	3
	Visual and Performing Arts	ARTS, DRAM or MUSI	3
5.	**Social and Behavioral Sciences**		**15**
	History	HIST 1301	3
		HIST 1302	3
	Government	GOVT 2305	3
		GOVT 2306	3
	Social/Behavioral Sciences	ECON, GEOG, HIST or PSYC	3
6.	**Computer Literacy**		**3**
		COSC 1300	3
7.	**Kinesiology/Physical Education**		**1 or 2**
		KINE or PHED	1 or 2
			47-49
8.	**Area of Concentration**		**12**
		Course 1: SOCI 1301	3
		Course 2: ANTH 2346	3
		Course 3: SOCI 2301 or HUMA 1302	3
		Course 4: IDST 2372 or 2373	3
Total Hours			**60**

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.

Associate of Arts in Art (3002)

1.	**Communication**		**9**
	Composition	ENGL 1301	3
		ENGL 1302	3
	Speech	SPCH 1311or 1321	3
2.	**Mathematics**		**3**
		MATH 1332	3
3.	**Natural Sciences**		**7-8**
		Natural Lab Science	4
		Second Natural Science	3
		BIOL, CHEM, ENVR, GEOL or PHYS	
4.	**Humanities & Visual and Performing Arts**		**9**
	Humanities	ENGL, SPAN, FREN, GERM, HUMA, IDST or PHIL	6
	Visual and Performing Arts	ARTS 1301	3
5.	**Social and Behavioral Sciences**		**15**
	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
6.	**Computer Literacy**		**3**
		COSC 1300	3
7.	**Kinesiology/Physical Education**		**1-2**
		KINE or PHED	1-2
			48
8.	**Area of Concentration**		**12**
		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
	Total Hours		**60**

AVIATION TECHNOLOGY

The Aviation Technology degree program has three options:

- Aviation Management
- Professional Pilot
- Aviation Security

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

David Crowe, Captain, American Airlines
Richard Crowe, Retired, Designated Pilot Examiner
Chris Halloran, CFI/II, MEI
Janet Pallottelli, Retired, North American Airlines

Associate of Applied Science in Aviation Management (3521)

First Year

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

Second Year

		First Semester – 15 Hours	
ACCT	2301	Principles of Accounting I	3
AVIM	1301*	Intro. to Aviation Management	3
AVIM	2337	Aviation Law	3
ECON	2302	Principles of Microeconomics	3
Elective		Humanities/Fine Arts	3
		Second Semester – 16 Hours	
ACCT	2302	Principles of Accounting II	3
AVIM	2331	Airline Management	3
AVIM	2335*	Airport Management	3
MATH	1442	Elements of Statistics	4
Elective		Directed Elective	3

*Capstone Course

Total Hours **64**

Associate of Applied Science in Aviation Security (3625)

(Pending THECB Approval)

This degree is designed to meet the immediate need of the airline and related industries affected by the events on September 11, 2001. The program was prompted by the Aviation and Transportation Security Act, and addresses the requirements for training of security personnel. Employment for graduating students may be available in almost any area of safety – transportation and facility security. Positions may include but are not limited to supervision, management, inspection and program development/design.

First Year

		First Semester – 16 Hours	
AIRP	1313	Introduction to Aviation	3
AIRP	1447	Human Factors in Aviation designed for Aviation Security	4
ENGL	1301	Freshman Composition I	3
GOVT	2305	National Government	3
HMSY	1337	Introduction to Homeland Security	3
		Second Semester – 16 Hours	
AIRP	1445	Aviation Safety designed for Aviation Security	4
HMSY	1342	Understanding & Combatting Terrorism	3
ITSC	1309	Integrated Software Applications I	3
MATH	1314	College Algebra	3
	or		
MATH	1332	Math for Liberal Arts	
SPCH	1311	Fundamentals of Speech	3
		Summer Session – 6 Hours	
AVIM	1341	Transportation, Traffic, and Air Cargo	3
AVIM	1380	Cooperative Education – Aviation Management	3

Second Year

		First Semester – 15 Hours	
AVIM	2337	Aviation Law	3
HMSY	1340	Homeland Security Intelligence Operations	3
HMSY	1341	Critical Infrastructure Protection	3
HMSY	1343	Weapons of Mass Destruction	3
AIRP/AVIM		Aviation Directed Elective	3
		Second Semester – 15 Hours	
AVIM	2335	Airport Management	3
HMSY	1338	Homeland Security Emergency Communications Management	3
HMSY	1339	Homeland Security Emergency Contingency Planning	3
HMSY	2337	Managing a Unified Incident Command	3
Elective		Humanities/Fine Arts	3
Total Hours			**68**

Flight Attendant Level I Certificate (3624)

(Pending THECB Approval)

The Flight Attendant Program at Palo Alto College will teach students the fundamentals in providing personal services to ensure the safety and comfort of airline passengers during flight. Students will be taught the proper way to greet passengers, explain use of safety equipment, and serve food and beverages. Safety and security measures will be emphsized in all courses.

First Year

First Semester – 12 Hours

BMGT	1301	Supervision	3
ENGL	1301	Freshman Composition I	3
KINE	1306	First Aid	3
MRKG	1301	Customer Relations	3

Second Semester – 12 Hours

AVIM	2337	Aviation Law	3
PSYC	2301	Introduction to Psychology	3
SPCH	1342	Voice and Articulation	3
FREN	2311	Intermediate French I	3
	or		
GERM	2311	Intermediate German I	
	or		
SPAN	2311	Intermediate Spanish I	

Second Year

First Semester – 12 Hours

AVIM	1391*	Special Topics: Flight Attendant	3
MRKG	1313	Public Relations	3
TRVM	1300	Introduction to Travel and Tourism	3
FREN	2312	Intermediate French II	3
	or		
GERM	2312	Intermediate German II	
	or		
SPAN	2312	Intermediate Spanish II	

*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 the Humanities
PHIL	1301	Introduction to Philosophy
PHIL	2303	Logic
PHIL	2306	Ethics
SPAN	1411	Elementary Spanish I

Directed Electives:

AIRP	2380	Cooperative Work Experience
ENGL	2311	Technical Writing

Associate of Applied Science in Professional Pilot (3522)

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.**

First Year

First Semester – 15 Hours

ENGL	1301	Freshman Composition I	3
PSYC	2301	Introduction to Psychology	3
AIRP	1313	Introduction to Aviation	3
AIRP	1317	Private Pilot Ground School	3
AIRP	1315	Private Pilot Flight	3

Second Semester – 16 Hours

ENGL	1302	Freshman Composition II	3
SPCH	1311	Fundamentals of Speech	3
ITSC	1309	Integrated Software Applications I	3
MATH	1314	College Algebra	3
AIRP	1345	Aviation Safety	3
Activity Course		KINE or PHED	1

Summer Session – 6 Hours

AIRP	1351	Instrument Ground School	3
AIRP	1355	Intermediate Flight	3

Second Year

First Semester – 16 Hours

AIRP	2337	Commercial Ground School	3
AIRP	2350	Instrument Flight	3
AVIM	2337	Aviation Law	3
AVIM	1301	Introduction to Aviation Management	3
Course		Humanities/Fine Arts Course	3
Activity Course		KINE or PHED	1

Second Semester – 15 Hours

AIRP	1191	Special Topics in Aircraft Pilot & Navigator (Professional)	1
AIRP	1307	Aviation Meteorology	3
AIRP	2251*	Multi-engine Flight	2
AVIM	2331	Airline Management	3
AIRP	2333	Aircraft Systems	3
AIRP	2339	Commercial Flight	3

*Capstone Course

Total Hours **68**

Private Pilot Level I Certificate (3578)

AIRP	1307	Aviation Meteorology	3
AIRP	1313	Introduction to Aviation	3
AIRP	1315*	Private Pilot Flight	3
AIRP	1317	Private Pilot Ground School	3
AIRP	1345	Aviation Safety	3

*Capstone Course

Total Hours **15**

Multi-Engine Pilot Level I Certificate (3577)

First Year

First Semester – 15 Hours

AIRP	1307	Aviation Meteorology	3
AIRP	1313	Introduction to Aviation	3
AIRP	1315	Private Pilot Flight	3
AIRP	1317	Private Pilot Ground School	3
AIRP	1345	Aviation Safety	3

Second Semester – 6 Hours

AIRP	1191	Multi-Engine Ground School	1
AIRP	2251*	Multi-Engine Flight	2
AIRP	2333	Aircraft Systems	3

*Capstone Course

Total Hours **21**

Instrument Pilot Level I Certificate (3580)

First Year

First Semester – 15 Hours

AIRP	1307	Aviation Meteorology	3
AIRP	1313	Introduction to Aviation	3
AIRP	1315	Private Pilot Flight	3
AIRP	1317	Private Pilot Ground School	3
AIRP	1345	Aviation Safety	3

Second Semester – 9 Hours

AIRP	1351	Instrument Ground School	3
AIRP	1355	Intermediate Flight	3
AIRP	2350*	Instrument Flight	3

*Capstone Course

Total Hours **24**

Commercial Pilot Level I Certificate (3576)

First Year

First Semester – 15 Hours

AIRP	1307	Aviation Meteorology	3
AIRP	1313	Introduction to Aviation	3
AIRP	1315	Private Pilot Flight	3
AIRP	1317	Private Pilot Ground School	3
AIRP	1345	Aviation Safety	3

Second Semester – 9 Hours

AIRP	1351	Instrument Ground School	3
AIRP	1355	Intermediate Flight	3
AIRP	2350	Instrument Flight	3

First Summer Session – 6 Hours

AIRP	2337	Commercial Ground School	3
AIRP	2339*	Commercial Flight	3

*Capstone Course

Total Hours **30**

Certified Flight Instructor Level I Preparation Certificate (3575)

First Year

		First Semester – 15 Hours	
AIRP	1307	Aviation Meteorology	3
AIRP	1313	Introduction to Aviation	3
AIRP	1315	Private Pilot Flight	3
AIRP	1317	Private Pilot Ground School	3
AIRP	1345	Aviation Safety	3
		Second Semester – 9 Hours	
AIRP	1351	Instrument Ground School	3
AIRP	1355	Intermediate Flight	3
AIRP	2350	Instrument Flight	3
		First Summer Session – 6 Hours	
AIRP	2337	Commercial Ground School	3
AIRP	2339	Commercial Flight	3

Second Year

		First Semester – 9 Hours	
AIRP	2331	Airline Management	3
AIRP	2336*	Certified Flight Instructor Flight	3
AIRP	2349	Certified Flight Instructor Ground School	3

*Capstone Course

Total Hours **39**

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.

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.

Associate of Science in Biology (3003)

First Year

		First Semester – 17 Hours	
BIOL	1406**	General Biology I	4
	or		
BIOL	1411**	General Botany	
COSC	1300	Computer Literacy	3
or equivalent			
ENGL	1301	Freshman Composition I	3
HIST	1301	History of the United States, Part I	3
MATH	1314*	College Algebra	3
Course		KINE or PHED	1
		Second Semester – 17 Hours	
BIOL	1407**	General Biology II	4
	or		
BIOL	1413**	General Zoology	
ENGL	1302	Freshman Composition II	3
HIST	1302	History of the United States, Part II	3
MATH	1442*	Elements of Statistics	4
	or		
MATH	2412*	Precalculus	
Elective		ANTH, CRIJ, ECON, GEOG, GOVT, HIST, PSYC, SOCI, or IDST	3

Second Year

		First Semester – 14 Hours	
BIOL	2421	General Microbiology	4
CHEM	1111 & 1311***	General Chemistry I	4
GOVT	2305	National Government	3
Elective		HUMA, PHIL, ENGL, or Foreign Languages	3
		Second Semester – 17 Hours	
BIOL	2416	Genetics	4
CHEM	1112 & 1312***	General Chemistry	4
GOVT	2306	State Government	3
SPCH	1311	Fundamentals of Speech	3
	or		
SPCH	1318	Interpersonal Communication	
	or		
SPCH	1321	Business and Professional Speech	
Elective		ARTS, DRAM, or MUSI	3

Total Hours **65**

* Math 1314 and a second higher MATH course are required for an Associate of Science. It is recommended that students also take Calculus I.

**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 5-10 hours of Organic Chemistry (i.e., CHEM 2323/2223 and CHEM 2325/2225) and 8 hours of General Physics (i.e., PHYS 1401/1402) as required for science majors.

BUSINESS ADMINISTRATION

(For students majoring in Accounting)

Knowledgeable, caring business faculty and a contemporary curriculum serve as the foundation for success in the Business Department. New and innovative programs addressing globalization and technology help Palo Alto students to stay current with changes in the workplace.

Business students are encouraged to participate in extracurricular activities. Future Business Leaders of America-Phi Beta Lambda is a nonprofit education association of students preparing for careers in business and business-related fields. Students can join the organization and network with other business students in the Business Department.

Whether you are an undergraduate student looking for a degree in business or a business professional wanting to expand your horizons, the Business Department has the perfect program to fit your needs. This AS follows the 2+2 plan with UTSA. Please see your academic advisor for other 2+2 plans with area colleges and universities.

Associate of Science in Business Administration (3004)

1.	**Communication**		**9**
	Composition	ENGL 1301	3
		ENGL 1302	3
	Speech	SPCH 1321	3
2.	**Mathematics**		**3**
		MATH 1325	3
3.	**Natural Sciences**		**7**
		BIOL 2306	3
		BIOL 1408, 1409, 1411, 1413, 2401, 2402; CHEM 1311/1111, 1312/1112; ENVR 1401, 1402; GEOL 1401, 1402, 1403, 1404; PHYS 1401, 1402	4
4.	**Humanities & Visual and Performing Arts**		**9**
	Humanities (two)	ENGL 2322, 2323, 2327, 2328, 2332, 2333; FREN 2311, 2312, SPAN 2311, 2312; GERM 2311, 2312; HUMA 1301; PHIL 1301, 1304, 2303, 2306	6
	Visual and Performing Arts	ARTS 1301, 1303, 1304; DRAM 1310; MUSI 1306	3
5.	**Social and Behavioral Sciences**		**15**
	History	HIST 1301	3
		HIST 1302	3
	Government	GOVT 2305	3
		GOVT 2306	3
	Social/Behavioral Sciences	ECON 2301	3
6.	**Computer Literacy**		**3**
		COSC 1300	3
7.	**Kinesiology/Physical Education**		**1**
		KINE or PHED	1
			47
8.	**Area of Concentration**		**19**
		Course 1: ACCT 2301	3
		Course 2: ACCT 2302	3
		Course 3: BCIS 1305	3
		Course 4: ECON 2302	3
		Electives (nonbusiness courses)	7
Total Hours			**66**

BUSINESS ADMINISTRATION

(For students majoring in General Business)

Knowledgeable, caring business faculty and a contemporary curriculum serve as the foundation for success in the Business Department. New and innovative programs addressing globalization and technology help Palo Alto students to stay current with changes in the workplace.

Business students are encouraged to participate in extracurricular activities. Future Business Leaders of America-Phi Beta Lambda is a nonprofit education association of students preparing for careers in business and business-related fields. Students can join the organization and network with other business students in the Business Department.

Whether you are an undergraduate student looking for a degree in business or a business professional wanting to expand your horizons, the Business Department has the perfect program to fit your needs. This AS follows the 2+2 plan with UTSA. Please see your academic advisor for other 2+2 plans with area colleges and universities.

Associate of Science in Business Administration (3135)

1.	**Communication**		**9**
	Composition	ENGL 1301	3
		ENGL 1302	3
	Speech	SPCH 1321	3
2.	**Mathematics**		**3**
		MATH 1325	3
3.	**Natural Sciences**		**7**
		BIOL 2306	3
		BIOL 1408, 1409, 1411, 1413, 2401, 2402; CHEM 1311/1111, 1312/1112; ENVR 1401, 1402; GEOL 1401, 1402, 1403, 1404; PHYS 1401, 1402	4
4.	**Humanities & Visual and Performing Arts**		**9**
	Humanities (two)	ENGL 2322, 2323, 2327, 2328, 2332, 2333; FREN 2311, 2312, SPAN 2311, 2312; GERM 2311, 2312; HUMA 1301; PHIL 1301, 1304, 2303, 2306	6
	Visual and Performing Arts	ARTS 1301, 1303, 1304; DRAM 1310; MUSI 1306	3
5.	**Social and Behavioral Sciences**		**15**
	History	HIST 1301	3
		HIST 1302	3
	Government	GOVT 2305	3
		GOVT 2306	3
	Social/Behavioral Sciences	ECON 2301	3
6.	**Computer Literacy**		**3**
		COSC 1300	3
7.	**Kinesiology/Physical Education**		**1**
		KINE or PHED	1
			47
8.	**Area of Concentration**		**19**
		Course 1: ACCT 2301	3
		Course 2: ACCT 2302	3
		Course 3: BCIS 1305	3
		Course 4: ECON 2302	3
		Course 5: ENGL 2311	3
		Electives (nonbusiness courses)	4
Total Hours			**66**

BUSINESS ADMINISTRATION

(For students majoring in Information Systems)

Knowledgeable, caring business faculty and a contemporary curriculum serve as the foundation for success in the Business Department. New and innovative programs addressing globalization and technology help Palo Alto students to stay current with changes in the workplace.

Business students are encouraged to participate in extracurricular activities. Future Business Leaders of America-Phi Beta Lambda is a nonprofit education association of students preparing for careers in business and business-related fields. Students can join the organization and network with other business students in the Business Department.

Whether you are an undergraduate student looking for a degree in business or a business professional wanting to expand your horizons, the Business Department has the perfect program to fit your needs. This AS follows the 2+2 plan with UTSA. Please see your academic advisor for other 2+2 plans with area colleges and universities.

Associate of Science in Business Administration (3100)

1.	**Communication**		**9**
	Composition	ENGL 1301	3
		ENGL 1302	3
	Speech	SPCH 1321	3
2.	**Mathematics**		**3**
		MATH 1325	3
3.	**Natural Sciences**		**7**
		BIOL 2306	3
		BIOL 1408, 1409, 1411, 1413, 2401, 2402; CHEM 1311/1111, 1312/1112; ENVR 1401, 1402; GEOL 1401, 1402, 1403, 1404; PHYS 1401, 1402	4
4.	**Humanities & Visual and Performing Arts**		**9**
	Humanities (two)	ENGL 2322, 2323, 2327, 2328, 2332, 2333; FREN 2311, 2312, SPAN 2311, 2312; GERM 2311, 2312; HUMA 1301; PHIL 1301, 1304, 2303, 2306	6
	Visual and Performing Arts	ARTS 1301, 1303, 1304; DRAM 1310; MUSI 1306	3
5.	**Social and Behavioral Sciences**		**15**
	History	HIST 1301	3
		HIST 1302	3
	Government	GOVT 2305	3
		GOVT 2306	3
	Social/Behavioral Sciences	ECON 2301	3
6.	**Computer Literacy**		**3**
		COSC 1300	3
7.	**Kinesiology/Physical Education**		**1**
		KINE or PHED	1
			47
8.	**Area of Concentration**		**18**
		Course 1: ACCT 2301	3
		Course 2: ACCT 2302	3
		Course 3: BCIS 1305	3
		Course 4: ECON 2302	3
		Course 5: ITSE 1318	3
		Course 6: ITSE 2351	3
Total Hours			**65**

BUSINESS ADMINISTRATION

(For students majoring in Management)

Knowledgeable, caring business faculty and a contemporary curriculum serve as the foundation for success in the Business Department. New and innovative programs addressing globalization and technology help Palo Alto students to stay current with changes in the workplace.

Business students are encouraged to participate in extracurricular activities. Future Business Leaders of America-Phi Beta Lambda is a nonprofit education association of students preparing for careers in business and business-related fields. Students can join the organization and network with other business students in the Business Department.

Whether you are an undergraduate student looking for a degree in business or a business professional wanting to expand your horizons, the Business Department has the perfect program to fit your needs. This AS follows the 2+2 plan with UTSA. Please see your academic advisor for other 2+2 plans with area colleges and universities.

Associate of Science in Business Administration (3105)

1.	**Communication**		**9**
	Composition	ENGL 1301	3
		ENGL 1302	3
	Speech	SPCH 1321	3
2.	**Mathematics**		**3**
		MATH 1325	3
3.	**Natural Sciences**		**7**
		BIOL 2306	3
		BIOL 1408, 1409, 1411, 1413, 2401, 2402; CHEM 1311/1111, 1312/1112; ENVR 1401, 1402; GEOL 1401, 1402, 1403, 1404; PHYS 1401, 1402	4
4.	**Humanities & Visual and Performing Arts**		**9**
	Humanities (two)	ENGL 2322, 2323, 2327, 2328, 2332, 2333; FREN 2311, 2312, SPAN 2311, 2312; GERM 2311, 2312; HUMA 1301; PHIL 1301, 1304, 2303, 2306	6
	Visual and Performing Arts	ARTS 1301, 1303, 1304; DRAM 1310; MUSI 1306	3
5.	**Social and Behavioral Sciences**		**15**
	History	HIST 1301	3
		HIST 1302	3
	Government	GOVT 2305	3
		GOVT 2306	3
	Social/Behavioral Sciences	ECON 2301	3
6.	**Computer Literacy**		**3**
		COSC 1300	3
7.	**Kinesiology/Physical Education**		**1**
		KINE or PHED	1
			47
8.	**Area of Concentration**		**15**
		Course 1: ACCT 2301	3
		Course 2: ACCT 2302	3
		Course 3: BCIS 1305	3
		Course 4: ECON 2302	3
		Course 5: PHIL 2371	3
Total Hours			**62**

BUSINESS ADMINISTRATION

(For students majoring in Marketing)

Knowledgeable, caring business faculty and a contemporary curriculum serve as the foundation for success in the Business Department. New and innovative programs addressing globalization and technology help Palo Alto students to stay current with changes in the workplace.

Business students are encouraged to participate in extracurricular activities. Future Business Leaders of America-Phi Beta Lambda is a nonprofit education association of students preparing for careers in business and business-related fields. Students can join the organization and network with other business students in the Business Department.

Whether you are an undergraduate student looking for a degree in business or a business professional wanting to expand your horizons, the Business Department has the perfect program to fit your needs. This AS follows the 2+2 plan with UTSA. Please see your academic advisor for other 2+2 plans with area colleges and universities.

Associate of Science in Business Administration (3108)

1.	**Communication**		**9**
	Composition	ENGL 1301	3
		ENGL 1302	3
	Speech	SPCH 1321	3
2.	**Mathematics**		**3**
		MATH 1325	3
3.	**Natural Sciences**		**7**
		BIOL 2306	3
		BIOL 1408, 1409, 1411, 1413, 2401, 2402; CHEM 1311/1111, 1312/1112; ENVR 1401, 1402; GEOL 1401, 1402, 1403, 1404; PHYS 1401, 1402	4
4.	**Humanities & Visual and Performing Arts**		**9**
	Humanities (two)	ENGL 2322, 2323, 2327, 2328, 2332, 2333; FREN 2311, 2312, SPAN 2311, 2312; GERM 2311, 2312; HUMA 1301; PHIL 1301, 1304, 2303, 2306	6
	Visual and Performing Arts	ARTS 1301, 1303, 1304; DRAM 1310; MUSI 1306	3
5.	**Social and Behavioral Sciences**		**15**
	History	HIST 1301	3
		HIST 1302	3
	Government	GOVT 2305	3
		GOVT 2306	3
	Social/Behavioral Sciences	ECON 2301	3
6.	**Computer Literacy**		**3**
		COSC 1300	3
7.	**Kinesiology/Physical Education**		**1**
		KINE or PHED	1
			47
8.	**Area of Concentration**		**19**
		Course 1: ACCT 2301	3
		Course 2: ACCT 2302	3
		Course 3: BCIS 1305	3
		Course 4: ECON 2302	3
		Course 5: PHIL 2371	3
		Electives (nonbusiness courses)	4
Total Hours			**66**

BUSINESS MANAGEMENT

The primary focus of the Business 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

Associate of Applied Science in Business Management (3581)

First Year

First Semester – 15 Hours

ENGL	1301	Freshman Composition I	3
MATH	1314	College Algebra	3
ITSC	1309	Integrated Software Applications I	3
BUSI	1301	Introduction to Business	3
	or		
IBUS	1305	Introduction to International Business & Trade	
BMGT	1301	Supervision	3

Second Semester – 18 Hours

BMGT	1303	Principles of Management	3
SPCH	1321	Business & Professional Speech	3
MRKG	1311	Principles of Marketing	3
	or		
IBUS	1354	International Marketing Management	
HRPO	2301	Human Resources Management	3
MRKG	1301	Customer Relations	3
	or		
BUSG	2309	Small Business Management	
	or		
SPAN	1411	Elementary Spanish I	
COMM	1307	Intro to Mass Communications	3
	or		
IBUS	2345	Import Customs Regulations	
	or		
IBUS	1301	Principles of Imports-Exports I	

Second Year

First Semester – 15 Hours

ACCT	2301	Principles of Accounting I	3
BMGT	2303	Problem Solving and Decision Making	3
BUSI	2301	Business Law	3
PHIL	2371	Business Ethics	3
	or		
HUMA	1302	World Cultures and Global Issues	
	or		
HUMA	1301	Intro to the Humanities	
	or		
ARTS	1301	Art Appreciation	

COMM	2324	Practicum in Electronic Media	3
	or		
SPAN	1412	Elementary Spanish II	
	or		
SPNL	1342	Business Spanish	
		Second Semester – 15 Hours	
BMGT	2382*	Cooperative Education - Business Administration & Management, General	3
BMGT	2309	Leadership	3
ECON	2301	Principles of Macroeconomics	3
	or		
ECON	2302	Principles of Microeconomics	
QCTC	1305	Teaming	3
HRPO	2307	Organizational Behavior	3

* Capstone course

Total Hours **63**

Administration Level I Certificate (3613)

The Administration Certificate is a general entry-level certificate for beginning business students.

BUSI	1301	Introduction to Business	3
ITSC	1309	Integrated Software Applications I	3
MRKG	1311*	Principles of Marketing	3
MRKG	1301	Customer Relations	3
COMM	1307	Intro to Mass Communications	3

* Capstone course for Administration Certificate

Total Hours **15**

The Student Center is being expanded and is scheduled to be completed in 2005.

Entrepreneurship Level I Certificate (3614)

The Entrepreneurship Certificate provides basic skills for the potential and current small business owner.

		First Semester – 15 Hours	
ENGL	1301	Freshman Composition I	3
	or		
POFT	1301	Business English	
BUSI	1301	Intro to Business	3
ITSC	1309	Integrated Software Applications I	3
MRKG	1311	Principles of Marketing	3
	or		
COMM	1307	Intro to Mass Communications	
MRKG	1301	Customer Relations	3
		Second Semester – 15 Hours	
BMGT	2303	Problem Solving and Decision Making	3
COMM	2324	Practicum in Electronic Media	3
ACCT	2301	Principles of Accounting I	3
	or		
ACNT	1303	Introduction to Accounting I	
BUSI	2301	Business Law	3
BUSG	2309*	Small Business Management	3
* Capstone course			
Total Hours			**30**

Entry-Level Supervision Level I Certificate (3549)

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	3
ENGL	1301	Freshman Composition I	3
BMGT	1303	Principles of Management	3
SPCH	1311	Fundamentals of Speech	3
		Second Semester – 9 Hours	
PSYC	2301	Introduction to Psychology	3
BMGT	1301	Supervision	3
BMGT	2382*	Cooperative Education, Business Administration & Management, General	3
*Capstone course			
Total Hours			**21**

International Business Level I Certificate (3102)

The International Business Certificate examines cross-cultural business practices in today's global society.

		First Semester – 16 Hours	
ENGL	1301	Freshman Composition I	3
	or		
POFT	1301	Business English	
IBUS	1305	Intro to International Business & Trade	3
ITSC	1309	Integrated Software Applications I	3
BMGT	1301	Supervision	3
SPAN	1411	Elementary Spanish I	4
	or		
SPAN	2316	Career Spanish I	
	or		
GERM	1411	Elementary German I	
	or		
FREN	1411	Elementary French I	
		Second Semester – 15 Hours	
IBUS	2345	Import Customs Regulation	3
	or		
IBUS	1301	Principles of Imports-Exports I	
SPNL	1342	Business Spanish	3
	or		
SPAN	2317	Career Spanish II	
	or		
SPAN	1412	Elementary Spanish II	
	or		
GERM	1412	Elementary German II	
IBUS	1354	International Marketing Management	3
IBUS	2380*	Cooperative Education-International Business	3
ACCT	2301	Principles of Accounting I	3
	or		
ACNT	1303	Introduction to Accounting I	
* Capstone course			
Total Hours			**31**

Leadership Level I Certificate (3601)

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.

		First Semester – 12 Hours	
BMGT	1301	Supervision	3
QCTC	1305	Teaming	3
MRKG	1301	Customer Relations	3
PSYT	1303	Dynamics of Human Relations	3
		Second Semester – 15 Hours	
BMGT	2309	Leadership	3
BMGT	2347	Critical Thinking and Problem Solving	3
	or		
IBUS	2341	International Comparative Management	
	or		
POFT	1328	Business and Professional Presentations	
BMGT	2303	Problem Solving and Decision Making	3
HRPO	2307	Organizational Behavior	3
BMGT	2341*	Strategic Management	3
* Capstone Course			
Total Hours			**27**

Marketing Level I Certificate (3617)

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	3
ITSC	1309	Integrated Software Applications I	3
MRKG	1311	Principles of Marketing	3
MRKG	1301	Customer Relations	3
COMM	1307	Intro to Mass Communications	3
		Second Semester – 12 Hours	
BMGT	1301	Supervision	3
COMM	2324	Practicum in Electronic Media	3
SPCH	1321	Business & Professional Speech	3
MRKG	2380*	Cooperative Education – Business Marketing and Marketing Management	3
* Capstone course			
Total Hours			**27**

Telecomm Technology Level I Certificate (3574)

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.

		First Semester – 15 Hours	
HRPO	1311	Human Relations	3
SPCH	1318	Interpersonal Communications	3
EECT	1303	Introduction to Telecommunications	3
POFT	1329	Keyboarding and Document Formatting	3
BUSI	1301	Introduction to Business	3
		Second Semester – 15 Hours	
MRKG	1301	Customer Relations	3
BUSI	1311	Principles of Salesmanship	3
EECT	1391*	Special Topics in Electrical, Electronic and Communication Engineering Technology	3
RTVB	1317	Survey of Electronic Media	3
EECT	2337	Wireless Telephony Systems	3
* Capstone Course			
Total Hours			**30**

The community gathers to break ground for the Applied Science & Technology Building, to open in Spring 2005.

QUALITY MANAGEMENT PROGRAM

Every organization measures the quality of its products, services, and personnel. As part of the quality training, Palo Alto focuses on the ISO standards. ISO standards contribute to making the development, manufacturing and supply of products and services more efficient, safer and cleaner. These awards incorporate the techniques in Total Quality Management, Statistical Process Control, Cause and Effect, and Teambuilding. Quality provides governments with a technical base for health, safety and environmental legislation. Quality standards aid in transferring technology to developing countries. Quality programs also serve to safeguard consumers, and users in general, of products and services – as well as to make their lives simpler. The following certificates address the necessary skills needed by students to assure quality in various fields of employment.

Quality Technician Level I Certificate (3626)

(Pending THECB Approval)

QCTC	1301	Total Quality Management	3
QCTC	1303	Quality Control	3
QCTC	1305	Teaming	3
QCTC	1343	Quality Assurance	3
QCTC	1391*	Special Topics: ISO 9001	3

* Capstone course

Total Hours **15**

Quality Management Level I Certificate (3553)

(Pending THECB Approval)

BMGT	1303	Principles of Management	3
BMGT	1307*	High Performance Work Teams	3
QCTC	1301	Total Quality Management	3
QCTC	1303	Quality Control	3
QCTC	1305	Teaming	3
QCTC	1343	Quality Assurance	3
QCTC	1391*	Special Topics: ISO 9001	3

* Capstone course

Total Hours **21**

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.

Associate of Science in Chemistry (3005)

1.	**Communication**		**9**
	Composition	ENGL 1301	3
		ENGL 1302	3
	Speech	SPCH 1311, 1318, 1321 OR 2341	3
2.	**Mathematics**		**8**
		MATH 2413	4
		MATH 2414	4
3.	**Science**		**8**
		CHEM 1311/1111	4
		CHEM 1312/1112	4
4.	**Humanities & Visual and Performing Arts**		**6**
	Humanities	ENGL, FREN, GERM, HUMA, IDST or PHIL	3
	Visual and Performing Arts	ARTS, DRAM or MUSI	3
5.	**Social and Behavioral Sciences**		**15**
	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
6.	**Computer Literacy**		**3**
		COSC 1300	3
7.	**Kinesiology/Physical Education**		**1-2**
		KINE or PHED	1-2
			51
8.	**Area of Concentration**		**10**
		CHEM 2323/2223	5
		CHEM 2325/2225	5
Total Hours			**61**
9.	**Other Required Math Course**		
		MATH 2415	4
10.	**Other Required Math Courses**		
		PHYS 1401/1402 or PHYS 2425/2426	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.

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.

Associate of Arts in Communications (3031)

1.	**Communication**		**9**
	Composition	ENGL 1301	3
		ENGL 1302	3
	Speech	SPCH 1311	3
2.	**Mathematics**		**3**
		MATH 1332	3
3.	**Natural Sciences**		**7-8**
		Natural Lab Science	4
		Second Natural Science	3
		BIOL, CHEM, ENVR, GEOL or PHYS	
4.	**Humanities & Visual and Performing Arts**		**9**
	Humanities	HUMA 1301	3
		PHIL 2306	3
	Visual and Performing Arts	ARTS 1301	3
5.	**Social and Behavioral Sciences**		**15**
	History	HIST 1301	3
		HIST 1302	3
	Government	GOVT 2305	3
		GOVT 2306	3
	Social/Behavioral Sciences	COMM 1307	3
6.	**Computer Literacy**		**3**
		COSC 1300	3
7.	**Kinesiology/Physical Education**		**1-2**
		KINE or PHED	1-2
			48
8.	**Area of Concentration**		**12**
		Course 1: COMM 2311	3
		Course 2: COMM 2305	3
		Course 3: COMM 2324	3
		Course 4: ENGL 2311 or ARTS 2348	3
Total Hours			**60**

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.

Associate of Science in Computer Information Systems (3053)

1.	**Communication**		**9**
	Composition	ENGL 1301	3
		ENGL 1302	3
	Speech	SPCH 1311, 1318, 1321 or 2341	3
2.	**Mathematics**		**3**
		MATH 1314	3
3.	**Natural Sciences**		**8**
		Two sequential lab courses from BIOL 1406, BIOl 1407, BIOL 1408, BIOL 1409, BIOL 2401, BIOL 2402, CHEM 1311/1111, CHEM 1312/1112, GEOL 1401, GEOL 1402, PHYS 1401, PHYS 1402	
4.	**Humanities & Visual and Performing Arts**		**9**
	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
5.	**Social and Behavioral Sciences**		**15**
	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, PSYC 2306, PSYC 2308, PSYC 2314, PSYC 2316, PSYC 2317, PSYC 2370, SOCI 1301, SOCI 1306, or SOCI 2301	3
6.	**Computer Literacy**		**3**
		COSC 1301	3
7.	**Kinesiology/Physical Education**		**1**
		KINE or PHED	1
			48
	8. Area of Concentration		**12**
		ITSC 1309	3
		ITSE 1318	3
		ITSE 2351	3
		ITSE 1331 or COSC 1315	3
Total Hours			**60**

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.

Associate of Science in Computer Science (3047)

1.	**Communication**		**9**
	Composition	ENGL 1301	3
		ENGL 1302	3
	Speech	SPCH 1311, 1318, 1321 or 2341	3
2.	**Mathematics**		**7**
		MATH 1314	3
		MATH 2412	4
3.	**Natural Sciences**		**8**
		Two sequential lab courses from BIOL 1406, BIOl 1407, BIOL 1408, BIOL 1409, BIOL 2401, BIOL 2402, CHEM 1311/1111, CHEM 1312/1112, GEOL 1401, GEOL 1402, PHYS 1401, PHYS 1402	
4.	**Humanities & Visual and Performing Arts**		**9**
	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
5.	**Social and Behavioral Sciences**		**15**
	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, PSYC 2306, PSYC 2308, PSYC 2314, PSYC 2316, PSYC 2317, PSYC 2370, SOCI 1301, SOCI 1306, or SOCI 2301	3

6.	**Computer Literacy**		**3**
		COSC 1301	3
7.	**Kinesiology/Physical Education**		**2**
		KINE or PHED	2
8.	**Area of Concentration**		**9**
		COSC 1318	3
		COSC 2315	3
		COSC 2330	3
Total Hours			**62**

The two-story General Education Building in the center of the main campus houses classrooms and faculty offices.

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

Associate of Applied Science in Computer Information Systems (3503)

First Year

First Semester – 15 Hours

BUSI	1301	Introduction to Business	3
ENGL	1301	Freshman Composition I	3
ITSC	1301	Introduction to Computers	3
ITSC	1309	Integrated Software Applications I	3
SPCH	1311	Fundamentals of Speech	3

Second Semester – 15 Hours

ECON	2302	Principles of Microeconomics	3
ITSW	2334	Advanced Spreadsheets	3
ITSW	1310	Introduction to Presentation Graphics Software	3
ITSC	1313	Internet/Web Page Development	3
PSYC	2301	Introduction to Psychology	3
	or		
SOCI	1301	Introduction to Sociology	

Summer Session – 3 Hours

ITSW	2337	Advanced Database	3

Second Year

First Semester – 15 Hours

ARTS	1301	Art Appreciation	3
	or		
ARTS	2348	Digital Art I	
	or		
HUMA	1301	Introduction to the Humanities	
ITSC	1305	Introduction to PC Operating Systems	3
ITSE	1350	Systems Analysis and Design	3
MATH	1314	College Algebra	3
Elective		Any other computer course (beyond the introductory level)	3

Second Semester – 14 Hours

ITNW	1321	Introduction to Networking	3
ITSC	1325	Personal Computer Hardware	3
ITSC	2586*	Internship – Computer Information Systems	5
ACCT	2301	Principles of Accounting I	3

*Capstone Course

Total Hours **62**

COMPUTER INFORMATION SYSTEMS CERTIFICATE PROGRAMS

Personal Computer Skills Level I Certificate (3518)

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	3
ITSC	1309	Integrated Software Applications I	3
		Second Semester – 9 Hours	
ITSW	1310	Introduction to Presentation Graphics Software	3
ITSW	2334	Advanced Spreadsheets	3
ITSW	2337*	Advanced Database	3

* Capstone Course

Total Hours **15**

Network Administration Level I Certificate (3627)

(Pending THECB Approval)

This certificate will prepare students for immediate and continuing employment opportunities as Network Administrators both in business and non-profit settings. With the addition of the CISCO certificate, students will also have the additional benefit of CISCO Certified Network Associate. The program centers on project-based learning in which students learn to manage a network using a variety of operating systems. Technical competencies include the design, configuration, implementation, and the administration of networked systems.

The CISCO certificate is a recommended prerequisite for this program.

		First Semester – 12 Hours	
ITNW	1325	Fundamentals of Networking Technology	3
ITSC	1307	UNIX Operating System I	3
ITSC	1325	Personal Computer Hardware	3
ITSY	2300	Operating System Security	3
		Second Semester – 9 Hours	
ITNW	2301	Administering Servers	3
ITSC	2337	UNIX Operating System II	3
ITSY	2301	Firewalls and Network Security	3

Total Hours **21**

Web Publishing Skills Level I Certificate (3523)

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	3
ITSC	1309	Integrated Software Applications I	3
ITSC	1313	Internet/Web Page Development	3
		Second Semester – 9 Hours	
ARTS	2348	Digital Art I	3
COMM	2324	Practicum in Electronic Media	3
ITSE	2313*	Web Authoring	3

* Capstone Course

Total Hours **18**

Advanced Web Programming Level I Certificate (3582)

(Pending THECB Approval)

The objective of the Advanced Web Design Certificate is to provide students with advance knowledge and skills for operating in the cyber marketplace. With the constant changes taking place in web design and the introduction of more hypertext languages, web designers are in continual need of skills upgrading and avenues for learning the new software created for use in this volatile industry.

First Year

		First Semester – 12 Hours	
ITSC	1301	Introduction to Computers	3
ITSC	1309	Integrated Software Applications I	3
ITSC	1313	Internet/Web Page Development	3
ARTS	2348	Digital Art I	3
		Second Semester – 12 Hours	
ITSE	2317	JAVA Programming	3
ITMC	1345	Enterprise Development Using Microsoft Visual Basic.NET	3
COMM	2324	Practicum in Electronic Media	3
ITSE	2313	Web Authoring	3

Second Year

		First Semester – 12 Hours	
INEW	2334	Advanced Web Page Programming	3
ITNW	1321	Introduction to Networking	3
ITSE	2302	Intermediate Web Programming	3
ITSW	1391	Special Topics: Current Web Design Software	3

Total Hours **36**

CISCO Certification Preparation Certificate
(Marketable Skills Certificate)

This certification meets employment standard for the Network Industry. Cisco Networking classes provide a broad range of skills from basic to advance Network concepts. The courses are hybrid courses (web-based instruction with hands-on training in computer labs). Students learn conceptual and technical skills to design, install and operate, and maintain state-of-the-art computer networks. In the labs, students will build local and wide area networks that will comply to real world settings. CCNA certified professionals can install, configure, and operate LAN, WAN, and dial access services for small networks.

		First Semester	
ITCC	1302	CCNA 1: Networking Basic	3
		Second Semester	
ITCC	1306	CCNA 2: Router and Routing Basics	3
		Summer Session	
ITCC	1342	CCNA 3: Switching Basic and Intermediate Routing	3
		Third Semester	
ITCC	1346	CCNA 4: WAN Technologies	3
Total Hours			**12**

Certified Systems Technician Preparation (CST) Level I Certificate (3567)

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	Introduction to Computers	3
ITSC	1305	PC Operating Systems	3
ITSC	1325*	Personal Computer Hardware	3
ITNW	1680	Co-Op	6
*Capstone Course			
Total Hours			**15**

Certified Network Systems Technician Preparation (CNST) Level I Certificate (3568)

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 Technologies	3
ITNW	1333	Microsoft Networking Essentials	3
ITNW	1354*	Implementation and Supporting Servers	3
ITNW	1164	Practicum	1
ITSC	1301	Introduction to Computers	3
ITSC	1305	PC Operating Systems	3
ITSC	1325	Personal Computer Hardware	3

*Capstone Course

Total Hours **19**

Microsoft Certified Systems Engineer (MCSE) Preparation Level I Certificate (3569)

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 Network & OS Essentials	3
ITMC	1341	Implementing MS Windows Professional and Server	3
ITMC	1342	Implementing a MS Windows Network Infrastructure	3
ITMC	1343*	Implementing & Administering MS Directory Services	3
ITMC	1419	Installing and Administering MS Windows Server OS	4
ITNW	1325	Fundamentals of Networking Technologies	3
ITNW	1333	Microsoft Networking Essentials	3
ITNW	1354	Implementation and Supporting Servers	3
ITNW	1164	Practicum	1
ITSC	1301	Introduction to Computers	3
ITSC	1305	PC Operating Systems	3
ITSC	1325	Personal Computer Hardware	3

*Capstone Course

Total Hours **35**

Microsoft® Certified Systems Administrator (MCSA) Level I Certificate (3620)

(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.**

ITSC	1301	Introduction to Computers	3
ITSC	1305	PC Operating Systems	3
ITSC	1325	Personal Computer Hardware	3
ITNW	1325	Fundamentals of Networking Technologies	3
ITNW	1333	Microsoft Networking Essentials	3
ITNW	1354	Implementation and Supporting Servers	3
ITNW	1164	Practicum	1
ITMC	1341	Implementing Microsoft Windows Professional and Server	3
ITMC	2332	Designing a Microsoft Windows Networking Services Infrastructure	3
ITMC	2333	Designing a Secure Microsoft Windows Network	3
ITNW	2165*	Practicum – Business Systems Networking and Telecommunications	1

*Capstone Course

Total Hours **29**

Information Technology Security Academy

The Information Technology and Security Academy (ITSA) is a San Antonio Community Partnership that provides high school juniors and seniors with advanced education, work experience, and job opportunities in the high growth information technology and network security industries. These Certificates can be incorporated into the Associate of Applied Science Degree in Computer Information Systems at Palo Alto College.

ITSA Security Level I Certificate (3579)

First Year

First Semester – 6 Hours

ITSC	1301	Introduction to Computers	3
ITSC	1325	Personal Computer Hardware	3

Second Semester – 7 Hours

ITNW	1421	Introduction to Networking	4
ITSC	1305	Introduction to PC Operating Systems	3

Second Year

First Semester – 7 Hours

ITSE	1402	Computer Programming	4
ITSY	1300	Fundamentals of Information Security	3

Second Semester – 7 Hours

ITNW	2321	Networking with TCP/IP	3
ITSY	1442	Information Technology Security	4

Total Hours **27**

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.

Associate of Arts in Criminal Justice (3051)

1.	**Communication**		**9**
	Composition	ENGL 1301	3
		ENGL 1302	3
	Speech	SPCH 1311, 1321	3
2.	**Mathematics**		**3**
		MATH 1314 or higher	3
3.	**Natural Sciences**		**7-8**
		Natural Lab Science	4
		Second Natural Science	3
		BIOL, CHEM, ENVR, GEOL or PHYS	
4.	**Humanities & Visual and Performing Arts**		**9**
	Humanities	ENGL, FREN, GERM, HUMA, IDST or PHIL	6
	Visual and Performing Arts	ARTS, DRAM or MUSI	3
5.	**Social and Behavioral Sciences**		**15**
	History	HIST 1301	3
		HIST 1302	3
	Government	GOVT 2305	3
		GOVT 2306	3
	Social/Behavioral Sciences	CRIJ 1301	3
6.	**Computer Literacy**		**3**
		COSC 1300	3
7.	**Kinesiology/Physical Education**		**1**
		KINE or PHED	1
			47-48
8.	**Major Field of Study**		**18**
		CRIJ 1306	3
		CRIJ 1307	3
		CRIJ 1310	3
		CRIJ 2313	3
		CRIJ 2328	3
		CRIJ 2314 or 1313	3
Total Hours			**65-66**

CRIMINAL JUSTICE
WITH A CONCENTRATION IN FORENSIC SCIENCE

Forensic Science is the application of science to those criminal and civil laws that are enforced by the police agencies in a criminal justice system. Students with this concentration will be required to complete the 48-hour Core Curriculum, including two Chemistry courses with labs. In addition, students will be required to complete 12 hours of criminal justice courses and two forensic science courses with labs. The emphasis of the forensic science courses will be on crime scene investigation and analysis of crime scene evidence.

Associate of Arts in Criminal Justice (3051)

1.	**Communication**		**9**
	Composition	ENGL 1301	3
		ENGL 1302	3
	Speech	SPCH 1311 or 1321	3
2.	**Mathematics**		**3**
		MATH 1314 or higher	3
3.	**Natural Sciences**		**8**
		CHEM 1311 & 1111	4
		CHEM 1312 & 1112	4
4.	**Humanities & Visual and Performing Arts**		**9**
	Humanities	ENGL, FREN, GERM, HUMA, IDST or PHIL	6
	Visual and Performing Arts	ARTS, DRAM or MUSI	3
5.	**Social and Behavioral Sciences**		**15**
	History	HIST 1301	3
		HIST 1302	3
	Government	GOVT 2305	3
		GOVT 2306	3
	Social/Behavioral Sciences	CRIJ 1301	3
6.	**Computer Literacy**		**3**
		COSC 1300	3
7.	**Kinesiology/Physical Education**		**1**
		KINE or PHED	1
			48
8.	**Major Field of Study**		**17**
		CRIJ 1307	3
		CRIJ 1306 or 1310	3
		CRIJ 2328	3
		FORS 2440*	4
		FORS 2450*	4

* Pending THECB approval

Total Hours **65**

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.

Associate of Arts in Drama (3041)

1.	**Communication**		**9**
	Composition	ENGL 1301	3
		ENGL 1302	3
	Speech	SPCH 1311 or SPCH 2341	3
2.	**Mathematics**		**3**
		MATH 1332	3
3.	**Natural Sciences**		**7-8**
		Natural Lab Science	4
		Second Natural Science	3
		BIOL, CHEM, ENVR, GEOL or PHYS	3
4.	**Humanities & Visual and Performing Arts**		**9**
	Humanities	ENGL, SPAN, FREN, GERM, HUMA, IDST or PHIL	6
	Visual and Performing Arts	DRAM 1310	3
5.	**Social and Behavioral Sciences**		**15**
	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
6.	**Computer Literacy**		**3**
		COSC 1300	3
7.	**Kinesiology/Physical Education**		**1-2**
		KINE or PHED	1-2
			47-49
8.	**Area of Concentration**		**16**
		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)	
Total Hours			**63-65**

ECONOMICS

The Associate of Arts degree in Economics is designed to acquaint students with the economy in which they live and to relate these courses to all other social sciences. The analytical approach in the economics courses provides the students with the tools of analysis necessary to solve problems and make decisions in the pubic and private sector. This program is designed to transfer. See your advisor for specifics concerning required courses by specific universities.

Associate of Arts in Economics (3007)

1.	**Communication**		**9**
	Composition	ENGL 1301	3
		ENGL 1302	3
	Speech	SPCH 1311	3
2.	**Mathematics**		**3**
		MATH 1314	3
3.	**Natural Sciences**		**7**
		Natural Lab Science	4
		Second Natural Science	3
4.	**Humanities & Visual and Performing Arts**		**9**
	Humanities	ENGL, SPAN, FREN, GERM, HUMA, IDST or PHIL	6
	Visual and Performing Arts	ARTS, DRAM, MUSI	3
5.	**Social and Behavioral Sciences**		**15**
	History	HIST 1301	3
		HIST 1302	3
	Government	GOVT 2305	3
		GOVT 2306	3
	Social/Behavioral Sciences	ANTH, COMM, CRIJ, GEOG, HIST, IDST, PSYC or SOCI	3
6.	**Computer Literacy**		**3**
		COSC 1300, COSC 1301	3
7.	**Kinesiology/Physical Education**		**2**
		KINE or PHED	2
			48
8.	**Area of Concentration**		**15**
		Course 1: ECON 1301	3
		Course 2: ECON 1303	3
		Course 3: ECON 2301	3
		Course 4: ECON 2302	3
		Course 5: ECON 2311	3
Total Hours			**63**

EDUCATION: GENERAL

Transfer in Education (Interdisciplinary Studies) is highly complicated. The two largest transfer institutions for Palo Alto College are the University of Texas at San Antonio (UTSA) and Texas A&M University-Kingsville System Center-San Antonio (TAMUK-SA).

Transfer opportunities in Early Childhood (General); Special Education; Bilingual Education; Social Studies (4-8); English/Language Arts/Reading (4-8); English/Language Arts/Reading/Social Studies (4-8); and, Math and Science (4-8) are available with TAMUK-SA.

Transfer opportunities in Early Childhood (Pre-K – 4); Early Childhood – Bilingual; Grades 4-8 Generalist; and, Grades 4-8 Bilingual are available with UTSA. In addition to variations between universities, transfer students may also find slight variations among the areas of specialization at the university.

Associate of Arts in Education (3025)

1.	**Communication**		
	Composition	ENGL 1301	3
		ENGL 1302	3
	Speech	SPCH 1311	3
2.	**Mathematics***		
		MATH 1314	3
		and/or MATH 1350/1351	6
3.	**Natural Sciences***		
	Natural Sciences requirements vary widely in Schools of Education at local universities. Please check your transfer plan.		
4.	**Humanities & Visual and Performing Arts***		
	Humanities & Visual and Performing Arts requirements in Schools of Education vary widely at local universities. Please check your transfer plan.		
5.	**Social and Behavioral Sciences**		
		HIST 1301	3
		HIST 1302	3
		GOVT 2305	3
		GOVT 2306	3
		IDST 2371 (UTSA only)	3
		GEOG 1303 (TAMUK-SA only)	3
6.	**Computer Literacy**		
		COSC 1300, COSC 1301	3
7.	**Kinesiology/Physical Education**		
		KINE or PHED	1-2
8.	**Area of Concentration**		
		Course 1: IDST 1301	3
		Course 2: IDST 2370	3
		Course 3: IDST 2371	3
		Course 4: IDST 2377 (TAMUK only)	3
		Course 5: IDST 2373 (UTSA only)	3

*Students are strongly urged to check with the transfer institution as well as the 2+2 plan on file in the Palo Alto College Welcome/Advising Center.

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

Associate of Applied Science in Education Aide (3573)

First Year

		First Semester – 15 Hours	
CDEC	1359	Children with Special Needs	3
CDEC	1356	Emergent Literacy for Early Childhood	3
	or		
EDTC	1307	Teaching Reading in the Elementary School	
EDTC	1313	Introduction to Educational Software and Technology	3
	or		
ITSC	1301	Introduction to Computers	
EDTC	1311	Instructional Practices – Effective Learning Environments	3
EDTC	1301	Instructional Practices – Educational Processes	3
	or		
EDTC	1325	Principles and Practices of Multicultural Education	
		Second Semester – 15 Hours	
CDEC	1354	Child Growth and Development	3
CDEC	1313	Curriculum Resources for EC Programs	3
	or		
EDTC	1321	Bilingual Education	
EDTC	1305	Reading Problems	3
ENGL	1301	Freshman Composition I	3
SPCH	1311	Fundamentals of Speech	3
	or		
SPCH	1318	Interpersonal Communication	
		Summer Session I & II – 6 Hours	
ENGL	1302	Freshman Composition II	3
Elective		Social Science	3

Second Year

		First Semester– 15 Hours	
CDEC	1311	Introduction to Early Childhood Education	3
	or		
PSYC	2307	Adolescent Psychology I	
CDEC	1357	Math and Sciences for Early Childhood	3
EDTC	1317	Developing Positive Student Behavior	3
HUMA	1301	Introduction to the Humanities	3
	or		
HUMA	1302	World Cultures and Global Issues	

MATH	1314	College Algebra	3
	or		
MATH	1322	Math for Liberal Arts	
	or		
BIOL	2306	Environmental Biology	
		Second Semester – 13 Hours	
SPAN	1411	Elementary Spanish I	4
	or		
SPAN	1412	Elementary Spanish II	
CDEC	2341	The School Age Child	3
ENGL	2375	Children and Adolescent's Literature	3
	or		
SGNL	1304	American Sign Language	
EDTC	1364*	Practicum (Field Experience) Teacher's Assistant	3

* Capstone Course for AAS degree

Total Hours **64**

Education Aide Level I Certificate (3573)

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.

		First Semester – 15 Hours	
EDTC	1325	Principles and Practices of Multicultural Education	3
	or		
EDTC	1301	Instructional Practices - Educational Processes	
EDTC	1307	Teaching Reading in the Elementary School	3
	or		
CDEC	1356	Emergent Literacy for Early Childhood	
ITSC	1301	Introduction to Computers	3
CDEC	1354	Child Growth and Development	3
ENGL	1301	Freshman Composition I	3
		Second Semester – 16 Hours	
CDEC	1359	Children with Special Needs	3
ENGL	1302	Freshman Composition II	3
EDTC	1305	Reading Problems	3
EDTC	1321	Bilingual Education	3
	or		
CDEC	1313	Curriculum Resources for EC Programs	
SPAN	1411	Elementary Spanish I	4
	or		
SPAN	1412	Elementary Spanish II	
		Summer Session I or II – 6 Hours	
EDTC	1311*	Instructional Practices – Effective Learning Environments	3
SPCH	1311	Fundamentals of Speech	3
	or		
SPCH	1318	Interpersonal Communication	

* Capstone course for 37-hour certificate

Total Hours **37**

ASSOCIATE OF APPLIED SCIENCE IN ELECTRO-MECHANICAL TECHNOLOGY (3570)

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, Sopatkco 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

		First Semester – 18 Hours	
CETT	1303	DC Circuits	3
CETT	1305	AC Circuits	3
CETT	1321	Electronic Fabrication	3
CETT	1333	Introduction to Computer & CAD Operations	3
EEIR	1301	Math for Electronic Technicians	3
ENTC	1347	Safety and Ergonomics	3
		Second Semester – 15 Hours	
CETT	1325	Digital Fundamentals	3
ELMT	1301	Programmable Logic Controllers	3
ELMT	1305	Basic Fluid Power	3
INTC	1357	AC/DC Motor Control	3
RBTC	1305	Robotic Fundamentals	3
		Summer Session – 6 Hours	
SPCH	1321	Business and Professional Speech	3
Course		ARTS/DANC/DRAM/HUMA/MUSI	3

Second Year

		First Semester – 16 Hours	
ELMT	2341	Electromechanical Systems	3
ELMT	2339	Advanced Programmable Logic Controllers	3
ENGL	1301	Freshman Composition I	3
ENTC	1349	Reliability and Maintainability	3
PHYS	1405	Introduction to Physics I	4
		Second Semester – 12 Hours	
ENGL	2311	Technical Writing	3
ELMT	2333	Industrial Electronics	3
INCR	1302	Physics of Instrumentation	3
Course		ECON/GOVT/HIST/PHIL/PSYC/SOCI	3
		Summer Session – 3 Hours	
ELMT	2337	Electronic Troubleshooting, Service, & Repair	3
Total Hours			**70**

Basic Electro-Mechanical Technology Level I Certificate (3602)

CETT	1303	DC Circuits	3
CETT	1305	AC Circuits	3
CETT	1321	Electronic Fabrication	3
CETT	1333	Introduction to Computer & CAD Operations	3
EEIR	1301	Math for Electronic Technicians	3
ENTC	1347	Safety and Ergonomics	3
Total Hours			**18**

Electro-Mechanical Assistant Level I Certificate (3603)

First Semester – 18 Hours

CETT	1303	DC Circuits	3
CETT	1305	AC Circuits	3
CETT	1321	Electronic Fabrication	3
CETT	1333	Introduction to Computer & CAD Operations	3
EEIR	1301	Math for Electronic Technicians	3
ENTC	1347	Safety and Ergonomics	3

Second Semester – 15 Hours

CETT	1325	Digital Fundamentals	3
ELMT	1305	Basic Fluid Power	3
ELMT	1301	Programmable Logic Controllers	3
INTC	1357	AC/DC Motor Control	3
RBTC	1305	Robotic Fundamentals	3
Total Hours			**33**

Electro-Mechanical Technician Level 2 Certificate (3604)

First Year

First Semester – 18 Hours

CETT	1303	DC Circuits	3
CETT	1305	AC Circuits	3
CETT	1321	Electronic Fabrication	3
CETT	1333	Introduction to Computer & CAD Operations	3
EEIR	1301	Math for Electronic Technicians	3
ENTC	1347	Safety and Ergonomics	3

Second Semester – 15 Hours

CETT	1325	Digital Fundamentals	3
ELMT	1301	Programmable Logic Controllers	3
ELMT	1305	Basic Fluid Power	3
INTC	1357	AC/DC Motor Control	3
RBTC	1305	Robotic Fundamentals	3

Second Year

First Semester – 16 Hours

ELMT	2339	Advanced Programmable Logic Controllers	3
ELMT	2341	Electromechanical Systems	3
ENGL	1301	Freshman Composition I	3
ENTC	1349	Reliability and Maintainability	3
PHYS	1405	Introduction to Physics I	4
Total Hours			**49**

ENGINEERING

The Field of Study in Engineering degree plans prepare 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, or 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.

Associate of Science in Civil Engineering (3119)

First Year

		First Semester – 16 Hours	
CHEM	1311	General Chemistry I	3
CHEM	1111	General Chemistry Laboratory I	1
ENGL	1301	Freshman Composition I	3
ENGR	1201	Introduction to Engineering	2
GOVT	2305	National Government	3
MATH	2413	Calculus I	4
		Second Semester – 17 Hours	
ENGL	1302	Freshman Composition II	3
ENGR	1304	Engineering Graphics	3
ENGR	2303	Statics/Dynamics	3
GOVT	2306	State Government	3
MATH	2414	Calculus II	4
Course		KINE or PHED	1

Second Year

		First Semester – 16 Hours	
ECON	2302	Principles of Microeconomics	3
ENGL	2311	Technical Writing	3
HIST	1301	History of the United States, Part I	3
PHYS	2425	University Physics I	4
SPCH	1321	Business and Professional Speech	3
		Second Semester – 16 Hours	
ARTS	1303	Art History Survey I	3
ENGR	2304*	Computer Programming for Engineering	3
ENGR	2332	Mechanics of Solids	3
HIST	1302	History of the United States, Part II	3
PHYS	2426	University Physics II	4

* ENGR 2304 or COSC 1300

Total Hours **65**

Associate of Science in Electrical Engineering (3120)

First Year

		First Semester – 16 Hours	
CHEM	1311	General Chemistry I	3
CHEM	1111	General Chemistry Laboratory I	1
ENGL	1301	Freshman Composition I	3
ENGR	1201	Introduction to Engineering	2
GOVT	2305	National Government	3
MATH	2413	Calculus I	4

Second Semester – 17 Hours

ENGL	1302	Freshman Composition II	3
ENGR	1304	Engineering Graphics	3
ENGR	2303	Statics/Dynamics	3
GOVT	2306	State Government	3
MATH	2414	Calculus II	4
Course		KINE or PHED	1

Second Year

First Semester – 16 Hours

ECON	2302	Principles of Microeconomics	3
ENGL	2311	Technical Writing	3
HIST	1301	History of the United States, Part I	3
PHYS	2425	University Physics I	4
SPCH	1321	Business and Professional Speech	3

Second Semester – 16 Hours

ARTS	1303	Art History Survey I	3
ENGR	2304*	Computer Programming for Engineering	3
ENGR	2305	Circuits I for Electrical Engineering	3
HIST	1302	History of the United States, Part II	3
PHYS	2426	University Physics II	4

* ENGR 2304 or COSC 1300

Total Hours **65**

Associate of Science in Mechanical Engineering (3121)

First Year

First Semester – 16 Hours

CHEM	1311	General Chemistry I	3
CHEM	1111	General Chemistry Laboratory I	1
ENGL	1301	Freshman Composition I	3
ENGR	1201	Introduction to Engineering	2
GOVT	2305	National Government	3
MATH	2413	Calculus I	4

Second Semester – 17 Hours

ENGL	1302	Freshman Composition II	3
ENGR	1304	Engineering Graphics	3
ENGR	2303	Statics/Dynamics	3
GOVT	2306	State Government	3
MATH	2414	Calculus II	4
Course		KINE/PHED	1

Second Year

First Semester – 16 Hours

ECON	2302	Principles of Microeconomics	3
ENGR	2304*	Computer Programming for Engineering	3
HIST	1301	History of the United States, Part I	3
PHYS	2425	University Physics I	4
SPCH	1321	Business and Professional Speech	3

Second Semester – 16 Hours

ARTS	1303	Art History Survey I	3
ENGR	2302	Dynamics	3
ENGR	2332	Mechanics of Solids	3
HIST	1302	History of the United States, Part II	3
PHYS	2426	University Physics II	4

* ENGR 2304 or COSC 1300

Total Hours **65**

Associate of Science in Civil and Construction Engineering Technology (3200)

First Year

First Semester – 17 Hours

CHEM	1311	General Chemistry I	3
CHEM	1111	General Chemistry Laboratory I	1
ENGL	1301	Freshman Composition I	3
ENGR	1304	Engineering Graphics	3
HIST	1301	History of the United States, Part I	3
MATH	2413	Calculus I	4

Second Semester – 17 Hours

ENGL	1302	Freshman Composition II	3
ENGR	1407	Surveying	4
GOVT	2305	National Government	3
HIST	1302	History of the United States, Part II	3
MATH	2414	Calculus II	4

Second Year

First Semester – 15 Hours

GOVT	2306	State Government	3
ENGR	2304*	Computer Programming	3
ENGT	1409	AC/DC Circuits	4
PHYS	2425	University Physics I	4
Course		KINE or PHED	1

Second Semester – 16 Hours

ARTS	1301	Art Appreciation	3
ECON	2301	Principles of Macroeconomics	3
ENGL	2311	Technical Writing	3
ENGT	2304	Materials and Methods	3
PHYS	2426	University Physics II	4

* ENGR 2304 or COSC 1300

Total Hours **65**

Associate of Science in Electrical and Electronics Engineering Technology (3201)

First Year

First Semester – 17 Hours

CHEM	1311	General Chemistry I	3
CHEM	1111	General Chemistry Laboratory I	1
ENGL	1301	Freshman Composition I	3
ENGR	1304	Engineering Graphics	3
HIST	1301	History of the United States, Part I	3
MATH	2413	Calculus I	4

Second Semester – 16 Hours

ARTS	1301	Art Appreciation	3
ENGL	1302	Freshman Composition II	3
HIST	1302	History of the United States, Part II	3
GOVT	2305	National Government	3
MATH	2414	Calculus II	4

Second Year

First Semester – 15 Hours

ENGL	2311	Technical Writing	3
ENGR	2304*	Computer Programming for Engineering	3
ENGT	1401	Circuits I	4
PHYS	2425	University Physics I	4
Course		KINE or PHED	1

Second Semester – 18 Hours

ECON	2301	Principles of Macroeconomics	3
ENGT	1402	Circuits II	4
ENGT	1407	Digital Fundamentals	4
GOVT	2306	State Government	3
PHYS	2426	University Physics II	4

* ENGR 2304 or COSC 1300

Total Hours **66**

Associate of Science in Manufacturing and Mechanical Engineering Technology (3202)

First Year

		First Semester – 14 Hours	
CHEM	1311	General Chemistry I	3
CHEM	1111	General Chemistry Laboratory I	1
ENGL	1301	Freshman Composition I	3
ENGR	1304	Engineering Graphics	3
MATH	2413	Calculus I	4
		Second Semester – 16 Hours	
ENGL	1302	Freshman Composition II	3
ENGT	2310	Introduction to Manufacturing Processes I	3
HIST	1302	History of the United States, Part II	3
GOVT	2305	National Government	3
MATH	2414	Calculus II	4

Second Year

		First Semester – 14 Hours	
ENGL	2311	Technical Writing	3
ENGR	2304*	Computer Programming for Engineering	3
HIST	1301	History of the United States, Part I	3
PHYS	2425	University Physics I	4
Course		KINE or PHED	1
		Second Semester – 16 Hours	
ARTS	1301	Art Appreciation	3
ECON	2301	Principles of Macroeconomics	3
ENGT	2307	Engineering Materials I	3
GOVT	2306	State Government	3
PHYS	2426	University Physics II	4

* ENGR 2304 or COSC 1300

Total Hours **60**

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.

Associate of Arts in English (3009)

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

ENVIRONMENTAL STUDIES

Environmental science allows technicians to perform laboratory and field tests to monitor environmental resources and determine the contaminants and sources of pollution. They may collect samples for testing or be involved in abating, controlling, or remediating sources of environmental pollutants. Some are responsible for waste management operations, control and management of hazardous materials inventory, or general activities involving regulatory compliance. This course of study will assist the student in pursuing a bachelor's degree in the Environmental Sciences.

Associate of Science in Environmental Studies (3204)

1.	**Communication**		**9**
	Composition	ENGL 1301	3
		ENGL 1302	3
	Speech	SPCH 1311, 1318, 1321 OR 2341	3
2.	**Mathematics**		**8**
		MATH 2413	4
		MATH 2414	4
3.	**Science**		**8**
		CHEM 1311/1111	4
		CHEM 1312/1112 or PHYS 1401/1402	4
4.	**Humanities & Visual and Performing Arts**		**6**
	Humanities	ENGL, FREN, GERM, HUMA, IDST or PHIL	3
	Visual and Performing Arts		
		ARTS, DRAM or MUSI	3
5.	**Social and Behavioral Sciences**		**15**
	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
6.	**Computer Literacy**		**3**
		COSC 1300	3
7.	**Kinesiology/Physical Education**		**1-2**
		KINE or PHED	1-2
			50
8.	**Area of Concentration**		**14**
		ENVR 1301	3
		ENVR 1101	1
		ENVR 1302	3
		ENVR 1102	1
		GEOG 1301	3
		GEOL 1305	3
Total Hours			**64**

FOREIGN LANGUAGES (3010)

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 (3140), French (3138), and German (3139).

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.

Associate of Arts in Spanish** (3140)

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

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

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.

Associate of Science in Geology (3011)

1.	**Communication**		**9**
	Composition	ENGL 1301	3
		ENGL 1302	3
	Speech	SPCH 1311, 1318, 1321 OR 2341	3
2.	**Mathematics**		**8**
		MATH 2413	4
		MATH 2414	4
3.	**Science**		**8**
		CHEM 1311/1111	4
		CHEM 1312/1112 or PHYS 1401/1402	4
4.	**Humanities & Visual and Performing Arts**		**6**
	Humanities	ENGL, FREN, GERM, HUMA, IDST or PHIL	3
	Visual and Performing Arts	ARTS, DRAM or MUSI	3
5.	**Social and Behavioral Sciences**		**15**
	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
6.	**Computer Literacy**		**3**
		COSC 1300	3
7.	**Kinesiology/Physical Education**		**1**
		KINE or PHED	1
			50
8.	**Area of Concentration**		**16**
		GEOL 1403	4
		GEOL 1404	4
		GEOL 1445	4
		GEOL 1446	4
Total Hours			**66**

HEALTH

The Department of Kinesiology, Health, and Dance – formerly the Department of Physical Education – 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.

Associate of Science in Health (3124)

1.	**Communication**		**9**
	Composition	ENGL 1301	3
		ENGL 1302	3
	Speech	SPCH 1311, 1318, 1321 OR 2341	3
2.	**Mathematics**		**7**
		MATH 1314	3
		MATH 1442	4
3.	**Natural Sciences**		**8**
		BIOL 1406 or BIOL 2401	4
		BIOL 1407 or BIOL 2402	4
4.	**Humanities & Visual and Performing Arts**		**6**
	Humanities	ENGL, FREN, GERM, HUMA, IDST or PHIL	3
	Visual and Performing Arts	ARTS, DRAM or MUSI	3
5.	**Social and Behavioral Sciences**		**15**
	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
6.	**Computer Literacy**		**3**
		COSC 1300	3
7.	**Kinesiology/Physical Education**		**2**
		Any KINE or PHED	1
		Any KINE or PHED	1
			50
8.	**Area of Concentration**		**12**
		KINE/PHED 1304	3
		KINE/PHED 1305	3
		KINE/PHED 1306	3
		KINE/PHED 1346	3
Total Hours			**62**

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.

Associate of Arts in History (3013)

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

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

HUMANITIES

The Humanities are classes which focus on the value of human existence. It is often said that the humanities help us make a life that is worth living. Classes in the Humanities emphasize critical thinking, values clarification, a global perspective and an appreciation of diversity. Courses in the Humanities are central to a well-rounded, well-considered educational program. The Humanities seeks to deepen wisdom by viewing knowledge as a whole rather than compartmentalized. It is the goal of the humanities to create and sustain lives that are personally satisfying and supportive of healthy communities.

Palo Alto College offers two courses in the Humanities: HUMA 1301 – An Introduction to the Humanities and HUMA 1302 – World Cultures and Global Issues. Students planning to pursue a baccalaureate degree in Humanities should base all course selections on the degree plan from the institution to which they plan to transfer. Students who intend to major in Humanities and have not yet decided on the senior college that they will attend should follow Palo Alto College's generic degree plan for Humanities.

Associate of Arts in Humanities (3110)

1.	**Communication**		**9**
	Composition	ENGL 1301	3
		ENGL 1302	3
	Speech	SPCH 1311, 1318, 1321 or 2341	3
2.	**Mathematics**		**3**
		MATH 1314 or higher	3
3.	**Natural Sciences**		**7**
		GEOL 1401, 1402, 1403 or 1404	4
		BIOL 2306	3
4.	**Humanities & Visual and Performing Arts**		**9**
	Humanities	ENGL, FREN, GERM, or SPAN	3
		PHIL	3
	Visual and Performing Arts	ARTS, DRAM or MUSI	3
5.	**Social and Behavioral Sciences**		**15**
	History	HIST 1301	3
		HIST 1302	3
	Government	GOVT 2305	3
		GOVT 2306	3
	Social/Behavioral Sciences	ANTH, COMM, PSYC or SOCI	3
6.	**Computer Literacy**		**3**
		COSC 1300	3
7.	**Kinesiology/Physical Education**		**1-2**
		KINE or PHED	1-2
			48
8.	**Area of Concentration***		
		Course 1: HUMA 1301	3
		Course 2: HUMA 1302	3
		Course 3: PHIL 1304 or 2306	3
		Course 4: IDST 2372 or 2373	3
			12
Total Hours			**60**

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

INTERNATIONAL STUDIES CERTIFICATE

The International Studies Certificate is designed to support the basic Palo Alto College Core Curriculum with consideration of the following guidelines.

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)

ANTH	2346	Intro. to Anthropology	3
ARTS	1301	Art Appreciation	3
ARTS	1303	Art History I	3
ARTS	1304	Art History II	3
ENGL	2332	World Literature I	3
ENGL	2333	Modern World Literature	3
FREN	1411	Elementary French I	4
FREN	1412	Elementary French II	4
FREN	2311	Intermediate French I	3
FREN	2312	Intermediate French II	3
GEOG	1303	World Geography	3
GERM	1411	Elementary German I	4
IBUS	1301	Principles of Imports/Exports	3
IBUS	1305	International Business and Trade	3
IBUS	1354	International Marketing Management	3
IBUS	2341	International Comparative Management	3
IBUS	2345	Import Customs Regulations	3
IBUS	2380	Cooperative Education International Business	3
IDST	2372	World Civilization I	3
IDST	2373	World Civilization II	3
LMGT	2330	International Logistics Mgt.	3
MUSI	1306	Music Appreciation	3
PHIL	1304	World Religions	3
SPAN	1411	Elementary Spanish I	4
SPAN	1412	Elementary Spanish II	4
SPAN	2311	Intermediate Spanish I	3
SPAN	2312	Intermediate Spanish II	3
SPNL	1342:	Business Spanish	3

3 hrs International Component Courses (Student must choose a minimum of one course taught by the professor specified). The faculty identified with each course have "internationalized" the curricula for their sections.

BIOL 1322	Nutrition – Eleanor Skelley	3
BIOL 2306	Environmental Science – Ed Hagen	3
BMGT 1303	Principles of Business Management – Elsa Zambrano	3
BMGT 2331	Principles of Quality Management – Elsa Zambrano	3
BUSI 1301	Introduction to Business – Elsa Zambrano	3
COMM 1307	Introduction to Mass Communication – Denise Barkis Richter	3
COMM 2311	News Gathering and Writing I – Denise Barkis Richter	3
ECON 2301	Macroeconomics – Jonathan Fink or Joan Osborne	3
ENGL 1302	Freshman Composition II – Ellen Shull	3
ENGL 2373	American Multi-cultural Literature – Ellen Shull	3
GEOL 1401	Earth Sciences I – Glen Tanck	4
GEOL 1402	Earth Sciences II – Glen Tanck	4
GEOL 1403	Physical Geology – Glen Tanck	4
GEOL 1404	Historical Geology – Glen Tanck	4
GOVT 2305	National Government – Sandra Gieseler or Gabriel Ume	3
HIST 1301	History of the United States, Part I – Peter Myers/ Irene Scharf	3
HIST 1302	History of the United States, Part II – Peter Myers/ Irene Scharf	3
HUMA 1301	Intro to Humanities – Mariana Ornelas	3
IDST 2371	Society & Social Issues – Mariana Ornelas or Mary-Ellen Jacobs	3
LMGT 1319	Introduction to Business Logistics – Bill Daugherty	3
LMGT 1323	Domestic & International Transportation Management – Daugherty	3
LMGT 1325	Warehouse & Distribution Center Management – Bill Daugherty	3
LMGT 1393	Special Topic (Warehouse Issues) – Bill Daugherty	3
LMGT 1393	Special Topic (Logistics Issues) – Bill Daugherty	3
LMGT 2334	Principles of Traffic Management – Bill Daugherty	3
MRKG 1311	Principles of Marketing – Elsa Zambrano	3
PHED 1321	Coaching/Sports/Athletics – Vinnie Bradford	3
SPCH 1318	Interpersonal Communication – Ann Turner	3
SPCH 1321	Business and Professional Speech – Ken Harris	3

Total Hours for Certificate Plus Portfolio Project 12

The campus gathers annually for a September 11th observance.

KINESIOLOGY

The Department of Kinesiology, Health, and Dance – formerly the Department of Physical Education – 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.

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 Kinesiology (3020)

1.	**Communication**		**9**
	Composition	ENGL 1301	3
		ENGL 1302	3
	Speech	SPCH 1311, 1318, 1321 OR 2341	3
2.	**Mathematics**		**7**
		MATH 1314	3
		MATH 1442	4
3.	**Natural Sciences**		**8**
		BIOL 1406 or BIOL 2401	4
		BIOL 1407 or BIOL 2402	4
4.	**Humanities & Visual and Performing Arts**		**6**
	Humanities	ENGL, FREN, GERM, HUMA, IDST or PHIL	3
	Visual and Performing Arts	ARTS, DRAM or MUSI	3
5.	**Social and Behavioral Sciences**		**15**
	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
6.	**Computer Literacy**		**3**
		COSC 1300	3
7.	**Kinesiology/Physical Education**		**2**
		Any KINE or PHED	1
		Any KINE or PHED	1
			50
8.	**Area of Concentration**		**11**
		Course 1: KINE/PHED 1238	2
		Course 2: KINE/PHED 1301	3
		Course 3: KINE/PHED 1304	3
		Course 4: KINE/PHED 1306	3
Total Hours			**61**

Health and Wellness Specialist Certificate (Local)

KINE/PHED	1304	Personal/Community Health I	3
KINE/PHED	1305	Personal/Community Health II	3
KINE/PHED	1306	First Aid	3
KINE/PHED	1346	Substance Abuse	3
Total Hours			**12**

Physical Fitness Specialist Certificate (Local)

KINE/PHED	1238	Physical Fitness	2
KINE/PHED	1304	Personal/Community Health I	3
KINE/PHED	1306	First Aid	3
KINE/PHED	1346	Substance Abuse	3
KINE/PHED	2101	Skill Analysis – Individual Activity	1
Total Hours			**12**

Diego Torres is an adjunct kinesiology instructor who was honored for his teaching excellence.

KINESIOLOGY
WITH COACHING CERTIFICATION EMPHASIS (3020)

The Palo Alto Coaching Academy (through the Department of Kinesiology, Health and Dance) offers an Associate of Science Degree with Level Three Coaching Certification. The certification curriculum is based on the National Standards for Athletic Coaches. A Level Three Coaching Certificate coupled with Teacher Certification qualifies a student as an entry level high school coach.

Advisory Committee

Susan Blackwood, San Antonio Sports Foundation
Les Bleamaster, San Antonio College
George Block, Northside ISD
Mike Daniels, Texas A&M University-Kingsville
Diana Everett, Texas Association for Health, Physical Education Recreation and Dance
Gil Garza, San Antonio ISD
Mike Gonzaba, San Antonio Parks & Recreation Department
Bill Hickey, UTSA
Pat Holmes, Texas A&M University-Kingsville
Wendell Kubik, U.S. Fencing Coaching Association
Louis Lopez, Southwestern Bell YMCA
Dr. Paul Saenz, Orthopedic Surgery Associates of San Antonio
Cathy Sellers, United States Olympic Committee
Harrison Thrist, Southside ISD
Denny Ryther, Athletic Director and Natatorium Manager, Palo Alto College

Associate of Science in Kinesiology (3020)

1.	**Communication**		**9**
	Composition	ENGL 1301	3
		ENGL 1302	3
	Speech	SPCH 1311, 1318, 1321 or 2341	3
2.	**Mathematics**		**7**
		MATH 1314	3
		MATH 1442	4
3.	**Natural Sciences**		**8**
		BIOL 2401	4
		BIOL 2402	4
4.	**Humanities & Visual and Performing Arts**		**6**
	Humanities	PHIL 2306 preferred or ENGL, FREN, GERM, HUMA or IDST	3
	Visual and Performing Arts	DANC 2303 preferred or ARTS, DRAM or MUSI	3
5.	**Social and Behavioral Sciences**		**15**
	History	HIST 1301	3
		HIST 1302	3
	Government	GOVT 2305	3
		GOVT 2306	3
	Social/Behavioral Sciences	PSYC 2301 preferred or ANTH, COMM, CRIJ, ECON, GEOG, HIST, IDST or SOCI	3
6.	**Computer Literacy**		**3**
		COSC 1300	3

7. Coaching Courses		**18**
	KINE/PHED beginning or sport specific competency	1
	KINE/PHED intermediate or advanced sport or sport specific competency	1
	KINE/PHED 1306	3
	KINE/PHED 1308	3
	KINE/PHED 1321	3
	KINE/PHED 1322	3
	KINE/PHED 2101, 2102 or 2103	1
	KINE/PHED 2356	3
Total Hours		**66**

Coaching Certification (Local)

Level One and Level Two coaching certification are available without earning an Associate Degree.

Level One Coaching Certification		**7**
	KINE/PHED beginning or sport specific competency	1
	KINE/PHED 1306	3
	KINE/PHED 1321	3
Level Two Coaching Certification		**7**
	KINE/PHED 2101, 2102 or 2103	1
	PHED 1308	3
	PHED 1322	3
Level Three Coaching Certification		**63**
Students must earn an Associate of Science plus courses for coaching Levels One and Two plus:		
	KINE/PHED 1238	2
	KINE/PHED 2356	3

Palo Alto's world-class Natatorium is available for student recreation.

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

Associate of Applied Science in Landscape and Horticultural Science (3571)

First Year

		First Semester – 15 Hours	
HALT	1301	Principles of Horticulture	3
BMGT	1303	Principles of Management	3
ITSC	1309	Integrated Software Applications I	3
HALT	1303	Herbaceous Plants	3
ENGL	1301	Freshman Composition I	3
		Second Semester – 15/16 Hours	
HALT	1338	Irrigation Water Management & Conservation	3
BIOL	1411	General Botany	4
HALT	1331	Woody Plant Materials	3
HALT	1333	Landscape Irrigation	3
MATH	1314	College Algebra	3
	or		
MATH	1332	Math for Liberal Arts	
	or		
CHEM	1405	Introductory Chemistry I	
		Summer Session – 3 Hours	
Course		ARTS/DANC/DRAM/HUMA/MUSI	3

Second Year

		First Semester – 15 Hours	
HALT	2318	Soil Fertility and Fertilizers	3
HALT	2323	Horticultural Pest Control	3
HALT	1324	Turfgrass Science & Management	3
HALT	1319	Landscape Construction	3
SOCI	1301	Introduction to Sociology	3
	or		
PSYC	2301	Introduction to Psychology	

Second Semester – 15 Hours

SPCH	1311	Fundamentals of Speech	3
	or		
SPCH	1321	Business and Professional Speech	
HALT	1351	Landscape Business Operations	3
HALT	2331	Advanced Landscape Design	3
	or		
HALT	2301	Arboriculture	
	or		
HALT	2320	Nursery Production & Management	
HALT	1322	Landscape Design	3
HALT	2314	Plant Propagation	3

Summer Session – 3 Hours

HALT	2386*	Internship—Horticultural Service Operations & Management, General	3

* Capstone Course

Total Hours **66/67**

Landscape and Horticultural Science Level I Certificate (3571)

First Year

First Semester – 12 Hours

HALT	1301	Principles of Horticulture	3
ITSC	1309	Integrated Software Applications I	3
HALT	1324	Turfgrass Science & Management	3
HALT	1303	Herbaceous Plants	3

Second Semester – 12 Hours

BMGT	1303	Principles of Management	3
HALT	1333	Landscape Irrigation	3
HALT	1331	Woody Plant Materials	3
HALT	1322	Landscape Design	3
	or		
HALT	1319	Landscape Construction	
	or		
HALT	2314*	Plant Propagation	

* Capstone Course

Second Year

First Semester – 15 Hours

HALT	2318	Soil Fertility and Fertilizers	3
HALT	2323	Horticultural Pest Control	3
HALT	1351	Landscape Business Operations	3
HALT	1398	Special Topics in Horticulture	3
HALT	2331	Advanced Landscape Design	3
	or		
HALT	2301	Arboriculture	
	or		
HALT	2320	Nursery Production & Management	

Total Hours **39**

Turf and Landscape Irrigation Level I Certificate (3606)

First Semester – 12 Hours

HALT	1301	Principles of Horticulture	3
INTC	1357	AC/DC Motor Control	3
HALT	1324	Turfgrass Science & Management	3
HALT	1303	Herbaceous Plants	3

Second Semester – 12 Hours

HALT	1319	Landscape Construction	3
HALT	1333	Landscape Irrigation	3
HALT	1331*	Woody Plant Materials	3
HALT	1398	Special Topics in Horticulture	3

* Capstone Course

Total Hours **24**

Basic Nursery and Landscape Operations Level I Certificate (3566)

First Semester – 12 Hours

HALT	1301	Principles of Horticulture	3
HALT	1324	Turfgrass Science & Management	3
HALT	2318	Soil Fertility and Fertilizers	3
HALT	1303	Herbaceous Plants	3

Second Semester – 9 Hours

HALT	1331	Woody Plant Materials	3
HALT	1333	Landscape Irrigation	3
HALT	1322*	Landscape Design	3
	or		
HALT	1319*	Landscape Construction	
	or		
HALT	2314 *	Plant Propagation	

*Capstone course

Total Hours **21**

South Texas offers many jobs in the horticulture industry.

LIBRARY TECHNOLOGY

The Library Technology Assistant Program provides graduates with technical and practical skills for career opportunities in libraries of all kinds, but especially in school libraries. Students will progress from theory to hands-on practice in the four major service areas of libraries to practice and discussion of skills required on the job. The five courses listed under "Area of Concentration" constitute a 14-hour Certificate program which is cross-listed as Continuing Education. A student can earn a certificate or degree to help get a job or promotion, upgrade job skills, and/or meet school district continuing education requirements under the No Child Left Behind legislation.

Associate of Science in Library Technology (3203)

1.	**Communication**		**9**
	Composition	ENGL 1301	3
		ENGL 1302	3
	Speech	SPCH 1311 or SPCH 1321	3
2.	**Mathematics**		**3**
		MATH 1314 or MATH 1332	3
3.	**Natural Sciences**		**7**
		Natural Lab Science	4
		Second Natural Science	3
		BIOL, CHEM, ENVR, GEOL, or PHYS	
4.	**Humanities & Visual and Performing Arts**		**9**
	Humanities (two)	ENGL, HUMA, IDST, PHIL, or SPAN	6
	Visual and Performing Arts	ARTS, DRAM, or MUSI	3
5.	**Social and Behavioral Sciences**		**15**
	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
6.	**Computer Literacy**		**3**
		COSC 1300, COSC 1301	3
7.	**Kinesiology/Physical Education**		**1**
		KINE or PHED	1
			47
8.	**Area of Concentration**		**14**
		Course 1: BMGT 1345 (Intro)	3
		Course 2: LBRA 1391 (Cataloging)	3
		Course 3: LBRA 1391 (Access Svcs.)	3
		Course 4: LBRA 1391 (Info. Svcs.)	3
		Course 5: COMM 2289 (Seminar)	2
Total Hours			**61**

Library Technician Certificate (Local)

BMGT	1345	Communications Skills for Managers (Library Specific)	3
COMM	2289	Practicum in Communication (Library Specific)	2
LBRA	1391	Special Topics in Library Assistant: Introduction to Libraries and Information Industry	3
LBRA	1391	Special Topics in Library Assistant: Acquisition and Cataloging Processes	3
LBRA	1391	Special Topics in Library Assistant: Public Services Circulation Services Processes	3
Total Hours			**14**

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

Carlos Cruz, Menlo Logistics
Tom Delgado, Fiesta Warehousing & Distribution
Tom Dial, USAA
Scott Erickson, Metropolitan Planning Organization
Bob Hand, Ryder, Inc.
K. Blake Hastings, Free Trade Alliance San Antonio
William Johnson, Boral Material Technologies
John Maldonado, Clarke American
Sarah Sanchez, Free Trade Alliance San Antonio
Rick Staller, Bee Trucking Inc.

Associate of Applied Science in Logistics Management (3550)

First Year

		First Semester – 15 Hours	
MATH	1314	College Algebra	3
ENGL	1301	Freshman Composition I	3
ITSC	1309	Integrated Software Apps. I	3
BMGT	1301	Supervision	3
LMGT	1319	Intro to Business Logistics Management	3
		Second Semester – 15 Hours	
Elective		Social/Behavioral Science	3
BMGT	1303	Principles of Management	3
LMGT	1325	Warehouse & Distribution Center Management	3
SPCH	1321	Business & Professional Speech	3
Elective		Logistics Course	3

Second Year

		First Semester – 18 Hours	
Elective		Humanities/Fine Arts	3
SPAN	1411/2311	Elementary or Intermediate Spanish I	3 or 4
Elective		Logistics Course	3
MRKG	1311	Principles of Marketing	3
LMGT	1323	Domestic & Int'l Trans. Management	3
BMGT	1331	Production & Operations Management	3
		Second Semester – 15 Hours	
SPAN	1412/2312	Elementary or Intermediate Span II	3 or 4
BUSI	2301	Business Law I	3
ACCT	2301	Principles of Accounting I	3
ECON	2302	Principles of Microeconomics	3
BMGT	1313	Principles of Purchasing	3

Third Semester – 3 Hours

BMGT	2388*	Internship – Business Administration and Management General (Logistics)	3

*Capstone course

Total Hours **66**

Logistics Management Level I Certificate (3551)

First Semester – 15 Hours

BMGT	1301	Supervision	3
ENGL	1301	Freshman Composition I	3
ITSC	1309	Integrated Software Applications I	3
LMGT	1319	Introduction to Business Logistics	3
MATH	1314	College Algebra	3

Second Semester – 15 Hours

BMGT	1303	Principles of Management	3
ECON	2302	Principles of Microeconomics	3
LMGT	1325	Warehouse & Distribution Center Management	3
LMGT	1323*	Domestic & International Transportation Mgt.	3
Elective		Logistics Course	3

* Capstone course

Total Hours **30**

Warehouse Management Level I Certificate (3552)

BMGT	1301	Supervision	3
ITSC	1309	Integrated Software Applications I	3
LMGT	1319	Introduction to Business Logistics	3
LMGT	1325*	Warehouse & Distribution Center Management	3
Elective		Logistics Course	3

* Capstone course

Total Hours **15**

Manufacturing Management Level I Certificate (3608)

BMGT	1301	Supervision	3
BMGT	1313	Purchasing Management	3
BMGT	1331*	Production and Operations Management	3
BMGT	2331	Principles of Quality Management	3
ITSC	1309	Integrated Software Applications I	3
LMGT	1319	Introduction to Business Logistics	3
MATH	1314	College Algebra	3

*Capstone course

Total Hours **21**

Transportation Management Level I Certificate (3607)

BMGT	1301	Supervision	3
ITSC	1309	Integrated Software Applications I	3
LMGT	1319	Introduction to Business Logistics	3
LMGT	1323	Domestic & International Transportation Mgt.	3
LMGT	1393	Special Topics: Transportation Issues	3
LMGT	2334*	Principles of Traffic Management	3

*Capstone course

Total Hours **18**

International Logistics Management Level I Certificate (3554)

BMGT	1301	Supervision	3
IBUS	2345	Import Customs Regulations	3
ITSC	1309	Integrated Software Applications I	3
LMGT	1319	Introduction to Business Logistics	3
LMGT	1323	Domestic & International Transportation Mgt	3
LMGT	2330*	International Logistics Management	3
SPNL	1342	Business Spanish (Logistics)	3

*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.

BMGT	2331	Principles of Quality Management	3
IBUS	2345	Import Customs Regulations	3
LMGT	1393	Special Topics – Warehouse Issues	3
LMGT	1393	Special Topics – Transportation Issues	3
LMGT	1393	Special Topics – Logistics Issues	3
LMGT	2330	International Logistics Management	3
LMGT	2334	Principles of Traffic Management	3
SPNL	1342	Business Spanish (Logistics)	3

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

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.

Associate of Science in Mathematics (3017)

1.	**Communication**		**9**
	Composition	ENGL 1301	3
		ENGL 1302	3
	Speech	SPCH 1311, 1318, 1321 OR 2341	3
2.	**Mathematics**		**8**
		MATH 2413	4
		MATH 2414	4
3.	**Natural Sciences**		**7-8**
		BIOL, CHEM, ENVR, GEOL or PHYS	7-8
4.	**Humanities & Visual and Performing Arts**		**6**
	Humanities	ENGL, FREN, GERM, HUMA, IDST or PHIL	3
	Visual and Performing Arts	ARTS, DRAM or MUSI	3
5.	**Social and Behavioral Sciences**		**15**
	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
6.	**Computer Literacy**		**3**
		COSC 1300	3
7.	**Kinesiology/Physical Education**		**1-2**
		KINE or PHED	1-2
			50
8.	**Area of Concentration**		**10**
		MATH 2415	4
		MATH 2318 and/or	3
		MATH 2320	3
Total Hours			**60**

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.

Associate of Arts in Music (3019)

1.	**Communication**		**9**
	Composition	ENGL 1301	3
		ENGL 1302	3
	Speech	SPCH 1311, SPCH 1318, SPCH 1321 or SPCH 2341	3
2.	**Mathematics**		**3**
		MATH 1332	3
3.	**Natural Sciences**		**7-8**
	Natural Lab Science		4
	Second Natural Science		3
		BIOL, CHEM, ENVR, GEOL or PHYS	
4.	**Humanities & Visual and Performing Arts**		**9**
	Humanities	ENGL, SPAN, FREN, GERM, HUMA, IDST or PHIL	6
	Visual and Performing Arts	MUSI 1306	3
5.	**Social and Behavioral Sciences**		**15**
	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
6.	**Computer Literacy**		**3**
		COSC 1300	3
7.	**Kinesiology/Physical Education**		**1-2**
		KINE or PHED	1-2
			48
8.	**Area of Concentration**		**14**
		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	1
Total Hours			**62**

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.

Associate of Arts in Philosophy (3114)

1.	**Communication**		**9**
	Composition	ENGL 1301	3
		ENGL 1302	3
	Speech	SPCH 1311, 1318, 1321 or 2341	3
2.	**Mathematics**		**3**
		MATH 1314 or higher	3
3.	**Natural Sciences**		**7-8**
	Natural Lab Science		4
	Second Natural Science		3
		BIOL, CHEM, ENVR, GEOL or PHYS	
4.	**Humanities & Visual and Performing Arts**		**9**
	Humanities	ENGL, FREN, GERM, HUMA, or IDST	6
	Visual and Performing Arts	ARTS, DRAM or MUSI	3
5.	**Social and Behavioral Sciences**		**15**
	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
6.	**Computer Literacy**		**3**
		COSC 1300	3
7.	**Kinesiology/Physical Education**		**1-2**
		KINE or PHED	1-2
			48
8.	**Area of Concentration**		**12**
		PHIL 1301	3
		PHIL 1304	3
		PHIL 2303	3
		PHIL 2306 or 2371	3
Total Hours			**60**

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.

Associate of Science in Physics (3021)

1.	**Communication**		**9**
	Composition	ENGL 1301	3
		ENGL 1302	3
	Speech	SPCH 1311, 1318, 1321 OR 2341	3
2.	**Mathematics**		**8**
		MATH 2413	4
		MATH 2414	4
3.	**Science**		**8**
		CHEM 1311/1111	4
		CHEM 1312/1112	4
4.	**Humanities & Visual and Performing Arts**		**6**
	Humanities	ENGL, FREN, GERM, HUMA, IDST or PHIL	3
	Visual and Performing Arts	ARTS, DRAM or MUSI	3
5.	**Social and Behavioral Sciences**		**15**
	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
6.	**Computer Literacy**		**3**
		COSC 1300	3
7.	**Physical Education**		**1-2**
		PHED OR KINE	1-2
			50
8.	**Area of Concentration**		**8**
		PHYS 2425	4
		PHYS 2426	4
9.	**Other Required Math Course**		**4**
		MATH 2415	4
Total Hours			**62**

PRE-DENTISTRY

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.

Associate of Science in Pre-Dentistry (3006)

First Year

		First Semester – 17 Hours	
BIOL	1406**	General Biology I	4
	or		
BIOL	1411**	General Botany	
COSC	1300	Computer Literacy	3
	or equivalent		
ENGL	1301	Freshman Composition I	3
HIST	1301	History of the United States, Part I	3
Course		KINE or PHED	1
MATH	1314*	College Algebra	3
		Second Semester – 17 Hours	
BIOL	1407**	General Biology I	4
	or		
BIOL	1413**	General Zoology	
ENGL	1302	Freshman Composition II	3
HIST	1302	History of the United States, Part II	3
MATH	1442*	Elements of Statistics	4
	or		
MATH	2412*	Precalculus	
Course		ANTH, CRIJ, ECON, GEOG, GOVT, HIST, IDST, PSYC, SOCI	3

Second Year

		First Semester – 14 Hours	
BIOL	2421	General Microbiology	4
CHEM	1111/1311***	General Chemistry I	4
GOVT	2305	National Government	3
Course		ENGL, HUMA, PHIL or Foreign Languages	3
		Second Semester – 17 Hours	
BIOL	2416	Genetics	4
CHEM	1112/1312***	General Chemistry II	4
GOVT	2306	State Government	3
SPCH	1311	Fundamentals of Speech	3
	or		
SPCH	1318	Interpersonal Communication	
	or		
SPCH	1321	Business and Professional Speech	
Course		ARTS, DRAM or MUSI	3
Total Hours			**65**

* MATH 1314 and a second higher MATH course are required for an Associate of Science. It is recommended that students also take Calculus I.

** Some baccalaureate degree granting institutions will only accept BIOL 1406/1407 while others will only accept BIOL 1411/1413.

*** Students may have to complete both Chemistry and Physics. Most schools will require 5-10 hours of Organic Chemistry (i.e., CHEM 2323/2223 and CHEM 2325/2225) and 8 hours of General Physics (i.e., PHYS 1401/1402) as required for science majors.

Courtesy Nix Health Care System

PRE-MEDICINE

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.

Associate of Science in Pre-Medicine (3042)

First Year

		First Semester – 17 Hours	
BIOL	1406**	General Biology I	4
	or		
BIOL	1411**	General Botany	
COSC	1300	Computer Literacy	3
	or equivalent		
ENGL	1301	Freshman Composition I	3
HIST	1301	History of the United States, Part I	3
Course		KINE or PHED	1
MATH	1314*	College Algebra	3
		Second Semester – 17 Hours	
BIOL	1407**	General Biology I	4
	or		
BIOL	1413**	General Zoology	
ENGL	1302	Freshman Composition II	3
HIST	1302	History of the United States, Part II	3
MATH	1442*	Elements of Statistics	4
	or		
MATH	2412*	Precalculus	
Course		ANTH, CRIJ, ECON, GEOG, GOVT, HIST, IDST, PSYC, SOCI	3

Second Year

		First Semester – 14 Hours	
BIOL	2421	General Microbiology	4
CHEM	1111/1311***	General Chemistry I	4
GOVT	2305	National Government	3
Course		ENGL, HUMA, PHIL or Foreign Languages	3
		Second Semester – 17 Hours	
BIOL	2416	Genetics	4
CHEM	1112/1312***	General Chemistry II	4
GOVT	2306	State Government	3
SPCH	1311	Fundamentals of Speech	3
	or		
SPCH	1318	Interpersonal Communication	
	or		
SPCH	1321	Business and Professional Speech	
Course		ARTS, DRAM or MUSI	3
Total Hours			**65**

* MATH 1314 and a second higher MATH course are required for an Associate of Science. It is recommended that students also take Calculus I.

** Some baccalaureate degree granting institutions will only accept BIOL 1406/1407 while others will only accept BIOL 1411/1413.

*** Students may have to complete both Chemistry and Physics. Most schools will require 5-10 hours of Organic Chemistry (i.e., CHEM 2323/2223 and CHEM 2325/2225) and 8 hours of General Physics (i.e., PHYS 1401/1402) as required for science majors.

PRE-NURSING

The nursing profession positively affects the delivery of health care in a variety of settings. The mission of the pre-nursing degree curriculum 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. Requirements vary depending on the nursing program institution and can change from one year to the next. Students planning to apply and transfer to certified nursing programs should consult with their faculty advisor for further information concerning the specific requirements.

Completing the following 66 hours will earn a student an Associate of Science Degree from Palo Alto College and includes the additional course prerequisites for application to the University of Texas Health Science Center at San Antonio (UTHSC-SA) BSN Nursing Program.

Associate of Science with Pre-Nursing Concentration (3033)

1.	**Communication**		**9**
	Composition	ENGL 1301	3
		ENGL 1302	3
	Speech	SPCH 1311	3
2.	**Mathematics**		**7**
		MATH 1314	3
		MATH 1442	4
3.	**Natural Sciences**		**19**
	Natural Sciences	BIOL 2401	4
		BIOL 2402	4
		BIOL 2420	4
		CHEM 1405	4
	Nutrition	BIOL 1322	3
4.	**Humanities & Visual and Performing Arts**		**6**
	Humanities	PHIL 1301	3
	Visual and Performing Arts	ARTS, DANC, DRAM or MUSI	3
5.	**Social and Behavioral Sciences**		**18**
	History	HIST 1301	3
		HIST 1302	3
	Government	GOVT 2305	3
		GOVT 2306	3
	Social/Behavioral Sciences	PSYC 2301	3
		PSYC 2314	3
6.	**Computer Literacy**		**3**
		COSC 1300 or 1301	3
7.	**Kinesiology/Physical Education**		**1**
		KINE or PHED	1
			63
8.	**Elective**		**3**
		PHIL, PSYC or SOCI	3
Total Hours			**66**

Prerequisites for Other Area Nursing Schools

The University of the Incarnate Word (UIW) offers a BSN Program that, in addition to the courses listed above, specifically requires the following:

ENGL 2332 World Literature
PSYC 2308 Developmental Psychology: Conception through Childhood
3 hours of Religious Studies
6 hours of Foreign Language

San Antonio College (SAC) offers an ADN Program (Associate of Applied Science, Major: Nursing). The following are needed:

ENGL 1301 Freshman Composition I
ENGL 1302 Freshman Composition II
BIOL 2401 Human Anatomy and Physiology I
BIOL 2402 Human Anatomy and Physiology II
BIOL 2420 Microbiology and Pathology
CHEM 1405 Introductory Chemistry I
PSYC 2301 Introduction to Psychology
PSYC 2314 Developmental Psychology: Life Span
PHIL 2306 Ethics

The Baptist School of Nursing offers a Certificate of Professional Nursing (RN) that requires:

ENGL 1301 Freshman Composition I
BIOL 2401 Human Anatomy and Physiology I
BIOL 2402 Human Anatomy and Physiology II
BIOL 2420 Microbiology and Pathology
CHEM 1405 Introductory Chemistry I
PSYC 2301 Intro to Psychology
PSYC 2314 Developmental Psychology: Life Span
PHIL 2306 Ethics

Requirements vary depending on the nursing program institution and can change from one year to the next. Students planning to apply and transfer to certified nursing programs should consult with their faculty advisor for further information concerning the specific requirements.

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.

Associate of Science in Pre-Pharmacy (3050)

1.	**Communication**		**9**
	Composition	ENGL 1301	3
		ENGL 1302	3
	Speech	SPCH 1311, 1318, 1321 OR 2341	3
2.	**Mathematics**		**6-8**
		MATH XXXX	
		MATH XXXX	
3.	**Science**		**8**
		PHYS 1401/1402	4
		PHYS 2425/2426	4
4.	**Humanities & Visual and Performing Arts**		**6**
	Humanities	ENGL, FREN, GERM, HUMA, IDST or PHIL	3
	Visual and Performing Arts	ARTS, DRAM or MUSI	3
5.	**Social and Behavioral Sciences**		**15**
	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
6.	**Computer Literacy**		**3**
		COSC 1300	3
7.	**Kinesiology/Physical Education**		**1-2**
		KINE or PHED	1-2
			48
8.	**Area of Concentration**		**18**
		CHEM 1311/1111	4
		CHEM 1312/1112	4
		CHEM 2323/2325	6
		CHEM 2223/2225	4
Total Hours			**65**

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.

Associate of Science in Pre-Veterinary (3048)

First Year

		First Semester – 17 Hours	
BIOL	1406**	General Biology I	4
	or		
BIOL	1411**	General Botany	
COSC	1300	Computer Literacy	3
	or equivalent		
ENGL	1301	Freshman Composition I	3
HIST	1301	History of the United States, Part I	3
Course		KINE or PHED	1
MATH	1314*	College Algebra	3
		Second Semester – 17 Hours	
BIOL	1407**	General Biology I	4
	or		
BIOL	1413**	General Zoology	
ENGL	1302	Freshman Composition II	3
HIST	1302	History of the United States, Part II	3
MATH	1442*	Elements of Statistics	4
	or		
MATH	2412*	Precalculus	
Course		ANTH, CRIJ, ECON, GEOG, GOVT, HIST, IDST, PSYC, SOCI	3

Second Year

		First Semester – 14 Hours	
BIOL	2421	General Microbiology	4
CHEM	1111/1311***	General Chemistry I	4
GOVT	2305	National Government	3
Course		ENGL, HUMA, PHIL or Foreign Languages	3
		Second Semester – 17 Hours	
BIOL	2416	Genetics	4
CHEM	1112/1312***	General Chemistry II	4
GOVT	2306	State Government	3
SPCH	1311	Fundamentals of Speech	3
	or		
SPCH	1318	Interpersonal Communication	
	or		
SPCH	1321	Business and Professional Speech	
Course		ARTS, DRAM or MUSI	3
Total Hours			**65**

* MATH 1314 and a second higher MATH course are required for an Associate of Science. It is recommended that students also take Calculus I.

** Some baccalaureate degree granting institutions will only accept BIOL 1406/1407 while others will only accept BIOL 1411/1413.

*** Students may have to complete both Chemistry and Physics. Most schools will require 5-10 hours of Organic Chemistry (i.e., CHEM 2323/2223 and CHEM 2325/2225) and 8 hours of General Physics (i.e., PHYS 1401/1402) as required for science majors.

Faculty and staff advisors are available to guide students in their course selections.

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 atend should meet with their Palo Alto advisor and follow Palo Alto's generic degree plan for Psychology.

Associate of Arts in Psychology (3022)

1.	**Communication**		**9**
	Composition	ENGL 1301	3
		ENGL 1302	3
	Speech	SPCH 1311, 1318, 1321 or 2341	3
2.	**Mathematics**		**3**
		MATH 1314 or higher	3
3.	**Natural Sciences**		**7-8**
	Natural Lab Science		4
	Second Natural Science		3
		BIOL, CHEM, ENVR, GEOL or PHYS	
4.	**Humanities & Visual and Performing Arts**		**9**
	Humanities	ENGL, FREN, GERM, HUMA, or IDST	6
	Visual and Performing Arts	ARTS, DRAM or MUSI	3
5.	**Social and Behavioral Sciences**		**15**
	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
6.	**Computer Literacy**		**3**
		COSC 1300	3
7.	**Kinesiology/Physical Education**		**1-2**
		KINE or PHED	1-2
			48
8.	**Area of Concentration**		**12**
		PSYC 2301	3
		Students may select any 3 of the following Psychology Courses: 2316, 2317, 2314, 2370, 2308, 2306 and 2303	9
Total Hours			**60**

SOCIAL WORK

Social work is the professional activity of helping individuals, groups, and communities enhance or restore their capacity for social functioning.

The profession promotes social change, problem solving in human relationships, and the empowerment of people to increase their well-being. The practice of social work requires knowledge of human development and behavior; of social, economic, and cultural institutions; and of the interactions of all these factors. Principles of human rights and social justice are a fundamental to this profession. Social workers are employed in such fields as child and family service agencies, drug treatment centers, hospitals and hospices, public health departments, social welfare agencies, probation programs, counseling centers, and child care centers.

Associate of Arts in Social Work (3046)

1.	**Communication**		**9**
	Composition	ENGL 1301	3
		ENGL 1302	3
	Speech	SPCH 1311, 1318, 1321 or 2341	3
2.	**Mathematics**		**3**
		MATH 1314 or higher	3
3.	**Natural Sciences**	BIOL, CHEM, ENVR, GEOL or PHYS	**7-8**
	Natural Lab Science		4
	Second Natural Science		3-4
4.	**Humanities & Visual and Performing Arts**		**9**
	Humanities	HUMA, or PHIL	3
		IDST	3
	Visual and Performing Arts	ARTS, DRAM or MUSI	3
5.	**Social and Behavioral Sciences**		**15**
	History	HIST 1301	3
		HIST 1302	3
	Government	GOVT 2305	3
		GOVT 2306	3
	Social/Behavioral Sciences	CRIJ, ECON, PSYC or SOCI	3
6.	**Computer Literacy**		**3**
		COSC 1300	3
7.	**Kinesiology/Physical Education**		**3**
		KINE 1346 or PHED 1346	3
			49-50
8.	**Area of Concentration**		**12**
		Course 1: SOCI 1301	3
		Course 2: SOCI 2301 or CRIJ 2313	3
		Course 3: SOCW 2361	3
		Course 4: IDST 2370 or 2371	3
Total Hours			**62**

SOCIOLOGY

Sociology is the scientific study of social interaction. Its subject matter is broad in scope, ranging from intimate family life to large social movements, from criminal behavior to religious activity, from unique characteristics of specific ethnic groups to the shared norms of an entire culture, from analysis of occupations to that of leisure.

Employers look for people with the research and analysis skills that an undergraduate education in sociology provides.

With its intrinsically interesting subject matter, sociology offers valuable preparation for careers in journalism, politics, public relations, business, or public administration or other fields that involve investigative skills and working with diverse groups.

Associate of Arts in Sociology (3023)

1.	**Communication**		**9**
	Composition	ENGL 1301	3
		ENGL 1302	3
	Speech	SPCH 1311, 1318, 1321 or 2341	3
2.	**Mathematics**		**3**
		MATH 1314 or higher	3
3.	**Natural Sciences**	BIOL, CHEM, ENVR, GEOL or PHYS	**7-8**
	Natural Lab Science		4
	Second Natural Science		3-4
4.	**Humanities & Visual and Performing Arts**		**9**
	Humanities	HUMA, or PHIL	3
		IDST	3
	Visual and Performing Arts	ARTS, DRAM or MUSI	3
5.	**Social and Behavioral Sciences**		**15**
	History	HIST 1301	3
		HIST 1302	3
	Government	GOVT 2305	3
		GOVT 2306	3
	Social/Behavioral Sciences	COMM, CRIJ, ECON, GEOG or PSYC	3
6.	**Computer Literacy**		**3**
		COSC 1300	3
7.	**Kinesiology/Physical Education**		**1-2**
		KINE or PHED	1-2
			48
8.	**Area of Concentration**		**12**
		Course 1: SOCI 1301	3
		Course 2: SOCI 2301 or CRIJ 2313	3
		Course 3: SOCW 2361	3
		Course 4: IDST 2370 or 2371	3
Total Hours			**60**

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.

Associate of Arts in Speech (3024)

1.	**Communication**		**9**
	Composition	ENGL 1301	3
		ENGL 1302	3
	Speech	SPCH 1311	3
2.	**Mathematics**		**3**
		MATH 1314 or 1332	3
3.	**Natural Sciences**	BIOL, CHEM, ENVR, GEOL or PHYS	**7-8**
		Natural Lab Science	4
		Second Natural Science	3
4.	**Humanities & Visual and Performing Arts**		**9**
	Humanities	ENGL, SPAN, FREN, GERM, HUMA, IDST or PHIL	6
	Visual and Performing Arts	ARTS 1301 or DRAM 1310 or MUSI 1306	3
5.	**Social and Behavioral Sciences**		**15**
	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
6.	**Computer Literacy**		**3**
		COSC 1300	3
7.	**Kinesiology/Physical Education**		**1-2**
		KINE or PHED	1-2
			48
8.	**Area of Concentration**		**12**
		Course 1: SPCH 1318	3
		Course 2: SPCH 1321	3
		Course 3: SPCH 1342	3
		Course 4: SPCH 2341	3
Total Hours			**60**

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
Brad Hines, La Cantera Golf Course
Jimmy Thomas, Hyatt Regency Hill Country Resort
Don Thompson, Turfgrass America

Associate of Applied Science in Turfgrass and Golf Course Management (3572)

First Year

		First Semester – 15 Hours	
HALT	1301	Principles of Horticulture	3
HALT	1324	Turfgrass Science & Management	3
ITSC	1309	Integrated Software Applications I	3
HALT	1303	Herbaceous Plants	3
ENGL	1301	Freshman Composition I	3
		Second Semester – 16 Hours	
BMGT	1303	Principles of Management	3
HALT	2312	Turfgrass Maintenance	3
HALT	1331	Woody Plant Materials	3
HALT	1333	Landscape Irrigation	3
BIOL	1411	General Botany	4

Second Year

		First Semester – 15/16 Hours	
HALT	2318	Soil Fertility and Fertilizers	3
HALT	2323	Horticultural Pest Control	3
HALT	1345	Golf/Sport Field/Park Management	3
HALT	1346	Specialized Turfgrass Management	3
MATH	1314	College Algebra	3
	or		
MATH	1332	Math for Liberal Arts	
	or		
CHEM	1405	Introductory Chemistry I	
		Second Semester – 15 Hours	
SPCH	1311	Fundamentals of Speech	3
	or		
SPCH	1321	Business and Professional Speech	
HALT	1397	Special Topics in Turf Management	3
HALT	1322	Landscape Design	3
Course		Humanities/Fine Arts	3
SOCI	1301	Introduction to Sociology	3
	or		
PSYC	2301	Introduction to Psychology	

Summer Session - 3 Hours

HALT	2383*	Cooperative Education—Turf Management	3

* Capstone Course

Total Hours **64/65**

Turfgrass and Golf Course Management Level I Certificate (3572)

First Year

First Semester – 12 Hours

HALT	1301	Principles of Horticulture	3
HALT	1324	Turfgrass Science & Management	3
ITSC	1309	Integrated Software Applications I	3
HALT	1303	Herbaceous Plants	3

Second Semester – 12 Hours

BMGT	1303	Principles of Management	3
HALT	2312	Turfgrass Maintenance	3
HALT	1331	Woody Plant Materials	3
HALT	1333	Landscape Irrigation	3

Second Year

First Semester – 12 Hours

HALT	2318	Soil Fertility and Fertilizers	3
HALT	2323	Horticulture Pest Control	3
HALT	1345	Golf/Sport Field/Park Management	3
HALT	1346*	Specialized Turfgrass Management	3

* Capstone Course

Total Hours **36**

Humanities/Fine Arts Courses

ARTS	1301	Art Appreciation	3
DRAM	1310	Theater Appreciation	3
HUMA	1301	Introduction to the Humanities	3
MUSI	1306	Music Appreciation	3

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 TSI, 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: www.accd.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

Associate of Applied Science in Veterinary Technology (3540)

First Year

		Summer I Session – 6 Hours	
ITSC ***		Computer Course	3
SPCH**		Speech Course	3
		Summer II Session – 7 Hours	
BIOL	1408	General Biology I	4
	or		
BIOL	1413	General Zoology	
ENGL	1301	Freshman Composition I	3
		Fall Semester – 15 Hours	
VTHT	1203	Canine & Feline Care and Husbandry	2
VTHT	1205	Veterinary Medical Terminology	2
VTHT	1209	Veterinary Nutrition	2
VTHT	1291	Math for Veterinary Technicians	2
VTHT	1301	Introduction to Veterinary Technology	3
VTHT	1413	Veterinary Anatomy and Physiology	4

Spring Semester – 15 Hours

VTHT	1349	Veterinary Pharmacology	3
VTHT	2301	Canine & Feline Clinical Management	3
VTHT	2313	Laboratory Animal Clinical Management	3
VTHT	2321	Veterinary Parasitology	3
VTHT	2323	Veterinary Clinical Pathology I	3

Summer Session – 3 Hours

VTHT	2366*	Practicum	3

Second Year

Fall Semester – 14 Hours

PSYC	2301	Introduction to Psychology	3
VTHT	1341	Anesthesia and Surgical Assistance	3
VTHT	2305	Equine Clinical Management	3
VTHT	2217	Exotic Animal Clinical Management	2
VTHT	2331	Veterinary Clinical Pathology II	3

Spring Semester – 12 Hours

VTHT	1125	Pharmacological Calculations	1
VTHT	1317	Veterinary Office Management	3
VTHT	1345	Veterinary Radiology	3
VTHT	2209	Food Animal Clinical Management	2
Elective		Humanities / Fine Arts Elective	3

* 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

Vet Tech students perform surgical procedures.

Animal Health Assistant Level II Certificate (3539)

First Year

		Summer I Session – 6 Hours	
ITSC	1309	Integrated Software Applications I	3
SPCH	1318	Interpersonal Communication	3
		Summer II Session – 7 Hours	
BIOL	1413	General Zoology	4
ENGL	1301	Freshman Composition I	3
		Fall Semester – 13 Hours	
VTHT	1203	Canine & Feline Care & Husbandry	2
VTHT	1205	Medical Terminology	2
VTHT	1291	Math for Veterinary Technology	2
VTHT	1301	Introduction to Veterinary Technology	3
VTHT	1413	Animal Anatomy and Physiology	4
		Spring Semester – 12 Hours	
VTHT	1349	Veterinary Pharmacology	3
VTHT	2301	Canine and Feline Clinical Management	3
VTHT	2313	Laboratory Animal Clinical Management	3
VTHT	2321	Veterinary Parasitology	3

Second Year

		Fall Semester – 8 Hours	
VTHT	1317*	Veterinary Office Management	3
VTHT	2217	Exotic Animal Clinical Management	2
VTHT	2325	Large Animal Assisting Techniques	3

*Capstone course for Animal Health Assistant Certificate

Total Hours **46**

Counselor Cynthia Mendiola-Perez recently earned her doctorate.

12 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: (3-2-1) indicates the course has three semester hours credit value, meets for two hours of lecture per week and one laboratory hour 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.

Basic academic levels in English, Reading, and Mathematics have been established by Palo Alto College instructional department faculty to ensure that students have the skills to perform effectively in a course. Current Basic Skill Levels are updated in the Schedule of Classes published prior to registration for Fall and Spring semesters. To register for a course at the College, a student must meet the Basic Skill Levels as well as completion of all prerequisite courses identified in this Catalog.

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.

English Instructor Jennifer Scheidt has been honored for her student-centered teaching. Students work in small groups called "learning communities" while she provides individual attention.

Course Prefix List

ACCT	Accounting
ACNT	Accounting
AGRI	Agriculture
AIRP	Professional Pilot
ANTH	Anthropology
ARTC	Commercial and Advertising Art
ARTS	Art
AUMT	Automotive Technology
AVIM	Aviation
BCIS	Computer Info Systems
BIOL	Biology
BMGT	Business Management/Logistics Management
BUSG	Business, General
BUSI	Business Administration
CDEC	Education Aide
CETT	Electro-Mechanical Technology
CHEM	Chemistry
COMM	Communications
COSC	Computer Science
CRIJ	Criminal Justice
DANC	Dance
DFTG	Drafting
DRAM	Drama
ECON	Economics
EDTC	Education Aide
EECT	Telecomm Technology
EEIR	Electro-Mechanical Technology
ELMT	Electro-Mechanical Technology
ENGL	English
ENGR	Engineering
ENGT	Engineering Technology
ENTC	Engineering Technology
ENVR	Environmental Science
ESOL	English as a Second Language
FORS	Forensic Science
FREN	French
GEOG	Geography
GEOL	Geology
GERM	German
GOVT	Politcal Science
HALT	Landscape & Hort Science/ Turfgrass & Golf Course Mgt.
HIST	History
HMSY	Homeland Security
HRPO	Human Resources Management
HUMA	Humanities
HUMD	Human Development
IBUS	International Business
IDST	Interdisciplinary Studies
IEIR	Industrial Electronics
INCR	Electro-Mechanical Technology
INEW	Internetworking (CIS)
INFO	Library & Information Studies
INTC	Electro-Mechanical Technology
ITCC	CISCO
ITMC	Computer Information Systems
ITNW	Computer Info Systems
ITSC	Computer Info Systems
ITSE	Computer Info Systems
ITSW	Computer Info Systems
ITSY	Information Security
KINE	Kinesiology
LBRA	Library Assistant
LMGT	Business Mgt./Logistics Mgt.
MATH	Mathematics
MRKG	Marketing/Business Management
MSCI	Military Science
MUAP	Music – Individual Instruction
MUEN	Music – Small Ensemble
MUSI	Music
PHED	Physical Education
PHTC	Commerical Photography
PHIL	Philosophy
PHYS	Physics
POFI	Admin Computer Tech
POFL	Admin Computer Tech
POFM	Admin Computer Tech
POFT	Admin Computer Tech
PSYC	Psychology
PSYT	Industrial & Organ. Psychology
QCTC	Quality Control Technology
RBTC	Robotics Tech
READ	Reading
RTVB	Radio and Television Broadcasting
SDEV	Student Success
SGNL	Sign Language
SLNG	Sign Language
SOCI	Sociology
SOCW	Social Work
SPAN	Spanish
SPCH	Speech
SPNL	Spanish Language & Literature
TRVM	Travel & Tourism
VTHT	Veterinary Technology

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.

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 on understanding the complete accounting cycle and preparing financial statements, bank reconciliations, and payroll.

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 Federal Aviation Administration 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 certificate. **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 1445 Aviation Safety designed for Aviation Security
(4-3-3)

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.

AIRP 1447 Human Factors in Aviation designed for Aviation Security
(4-3-3)

Instruction in flight physiology, the decision-making process, pilot health maintenance, psychological aspects of flight, human behavior as related to the aircraft flight deck, and aeromedical information of significance to flight crews.

AIRP 2251 Multiengine Flight (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 multiengine 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 2336 Certified Flight Instructor – Airplane (Lab)
(3-2-2)
Prerequisite: 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 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 Federal Aviation Administration Commercial Airplane written test. Review of aerodynamics, theory of flight, and Federal Aviation Regulations.

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 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 flight 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. **Special Fees Apply.**

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.

ARTC 1302 Digital Imaging I
(3-3-0)

A studio course which explores drawing and painting through digital imaging. Course will build on the student’s experience in Digital Art I with an emphasis on using raster image editing and vector-based image creation software to explore the expressive and conceptual aspects of image making.

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 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 2348 Digital Art I
(3-3-3)

A studio art course that explores the potential of the computer hardware and software medium for its visual, conceptual, and practical uses in the visual arts.

ARTS 2349 Digital Art II
(3-3-3)

A studio art course that further explores the potential of the computer hardware and software medium for its visual, conceptual, and practical uses in the visual arts. The specific topic may vary by semester. The course can be repeated once for credit provided that a different topic is being offered.

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 1341 Transportation, Traffic and Air Cargo
(3-3-0)

A study of the interaction of transportation modes to provide efficient transport of passengers and cargo. Emphasis on managerial definition and solution of problems involved at transition/transfer terminals where compatibly scheduled traffic movement is critical.

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 1391 Special Topics: Flight Attendant
(3-3-0)

Prepares the students with strategies for the interview process with the airlines. Also familiarizes the student with common equipment used on airliners. The course also reviews the duties and responsibilities of the flight attendant post 9/11. Exposes the students to the flight environment.

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.

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.

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)
Prerequisite: One semester of BIOL 1406, 1413 or 2401 and one semester of CHEM 1311 or CHEM 1405

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)
Prerequisite: BIOL 1406 and CHEM 1311

This course includes a comprehensive microbiological survey of the Monerans, Protistans, 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 Principles of Purchasing
(3-3-0)
Prerequisite: LMGT 1319 or Departmental Approval

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 and Operations Management
(3-3-0)
Prerequisite: LMGT 1319 or Departmental Approval and MATH 1314

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 1345 Communication Skills for Managers: Introduction to Libraries
(3-3-0)

Comprehensive study of advanced communications skills for managers in business and industry, including advanced techniques in reading, writing, listening, and speaking. Emphasis on clear, concise written and spoken communication in terms of business letters, memos, and reports, as well as oral presentations; techniques for time management; prioritizing reading materials, and comprehending the main ideas and salient details of technical materials, including journals and reports, and other work-related materials. Covers types of information organizations and employers, role of the LTA, automation, history of the book, tools and terminology, basic library philosophy, seeking a job, library vendors, conflict resolution, and dealing with change.

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)
Prerequisite: 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)
Prerequisite: 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 2388 Internship – Business Administration and Management, General (Logistics Management)
(3-0-18)
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 1311 Introduction to Early Childhood Education
(3-3-0)

An introduction to the profession of early childhood education, focusing on developmentally appropriate practices, types of programs, historical perspectives, ethics, and current issues.

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 a play-based integrated curriculum.

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 an overview of development, appropriate environments, materials, activities, and teaching/ guidance techniques.

CETT 1303 DC Circuits
(3-2-4)

A study of the fundamentals of direct current including Ohm's law, Kirchhoff's laws and circuit analysis techniques. Emphasis on circuit analysis of resistive networks and DC measurements.

CETT 1305 AC Circuits
(3-2-4)

Demonstrate appropriate use of test equipment; identify various sources of electricity in AC circuits; analyze AC circuits using appropriate mathematical formulas; troubleshoot various AC circuits using schematic diagrams; and apply and interpret basic principles of magnetism.

CETT 1321 Electronic Fabrication
(3-2-4)

A study of electronic circuit fabrication techniques including printed circuit boards, wire wrapping, bread boarding, and various soldering techniques.

CETT 1325 Digital Fundamentals
(3-2-4)

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.

CETT 1333 Introduction to Computers and CAD Operations
(3-2-4)

An introduction to the fundamental operation of software application packages such as word processing, spreadsheets, and presentation software. Topics include electronic storage, data creation, and retrieval of documentation and data used in technical fields and software applications.

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 1405 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 1405 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 2289 Practicum in Communication (Library Specific)
(2-0-7)

An instructional program designed to integrate on-campus study with practical hands-on work experience. Carefully planned and closely supervised field work in one or more libraries or media centers in addition to the coursework completed in the classroom. A variety of learning experiences will be included. Group discussion and evaluation of each learning opportunity and an introduction to supervisory techniques and other employer-employee relationships will be the focus of the seminar meetings.

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 multidisciplinary 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.

DANC 1141 Ballet I
(1-1-2)

Students will learn how to do a ballet warm-up and cool-down and dance combinations. As an activity class, each student should be prepared to participate to the best of his/her ability fully in each class session.

DANC 1142 Ballet II
(1-1-2)
Prerequisite: DANC 1141 or permission of the department.

Continued instruction and participation in ballet technique. Students will build on classical ballet techniques learned in Ballet I including barre, allegro, adagio, center floor combinations.

DANC 1145 Modern Dance I
(1-1-2)

Instruction and participation in Modern Dance. Students in this course will explore movement as an art form that develops grace, poise, and self-expression. Fundamental movement patterns and dance composition will be part of course content.

DANC 1146 Modern Dance II
(1-1-2)
Prerequisite: DANC 1145 or permission of the department.

Continued instruction and participation in Modern Dance. 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.

DANC 1149 Ballet Folklorico I
(1-1-2)

Instruction and participation in Ballet Folklorico dance technique. This class introduces students to footwork techniques emphasizing fundamentals of body placement, vocabulary, and regions in Mexico Folklorico Dance. Students will develop dance combination to enhance technical skills, memory and performance qualities.

DANC 1150 Ballet Folklorico II
(1-1-2)
Prerequisite: DANC 1149 or permission of the department.

Continued and more advance instruction and participation in Ballet Folklorico dance technique. Students will review and refine Mexican Folklorico dance skills and their understanding of composition and aesthetics.

DANC 2303 Dance Appreciation
(1-1-2)

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 cultural context.

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 enclosures, 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 1301 Introduction to Economics
(3-3-0)

A study of consumer problems of the individual and of the family in the American economy. Areas of study may include: money and credit management, saving and personal investment, estate planning, wills, buying food and clothing, home ownership or rental, transportation, insurance, taxes, and consumer protection.

ECON 1303 Consumer Economics
(3-3-0)

A study of consumer problems of the individual and of the family in the American economy. Areas of study may include: money and credit management, saving and personal investment, estate planning, wills, buying food and clothing, home ownership or rental, transportation, insurance, taxes, and consumer protection.

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.

ECON 2311 Economic Geography
(3-3-0)

Analytical study of the historical development of particular economic distributions as they relate to social, cultural, political, and physical factors. Includes critical inquiry into the reasons for location of various types of economic activity, production, and marketing. (International component)

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-attach 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 1313 Introduction to Educational Software and Technology
(3-3-1)

Introduction to the use of computer hardware and software in the educational setting including opportunities for guided instruction with several software applications.

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)

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

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 1340 Telecommunications Transmission Media (Cabling)
(3-3-1)

Fundamentals of telecommunications media, including installation, maintenance, and troubleshooting. Topics address media characteristics and connectorization. Students will learn twisted pair, CAT5 and other cabling methods.

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.

EEIR 1301 Math for Electronic Technicians
(3-3-0)

An applied mathematics course with emphasis on the numbering systems, calculations and problem solving skills needed to solve for electronic circuit parameters. Schematic diagrams and electronic terminology are introduced.

ELMT 1301 Programmable Logic Controllers
(3-2-4)

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 1305 Basic Fluid Power
(3-2-4)

Basic fluid power course covering vacuum systems, pneumatic and hydraulic systems, fluid power symbols, operating theory, components, and basic electrical and manual controls.

ELMT 2333 Industrial Electronics
(3-2-4)

A study of devices, circuits, and systems primarily used in automated manufacturing and/or process control including computer controls and interfacing between mechanical, electrical, electronic, and computer equipment. Presentation of programming schemes.

ELMT 2337 Electronic Troubleshooting, Service, and Repair
(3-2-4)

In-depth coverage of electronic systems, maintenance, troubleshooting, and repair. Topics include symptom identification, proper repair procedures, repair checkout, and preventative maintenance. Emphasis on safety and proper use of test equipment. May be offered as a capstone course.

ELMT 2339 Advanced Programmable Logic Controllers
(3-2-4)

Advanced applications of programmable logic controllers as used in industrial environments including concepts of programming, industrial applications, troubleshooting ladder logic, and interfacing to equipment.

ELMT 2341 Electromechanical Systems
(3-2-4)

Covers the application of electromechanical systems, including linear and rotational positioning systems, and their associated control systems, and the methods employed to operate them. Students will devise open and closed loop control solutions for a variety of positioning and power transformation problems. Emphasis is placed on programmable control devices and solid state systems.

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)

The first of two *bridge* courses to assist non-native speakers of English to transition to college-level classes. The course is for students who need to (1) review basic skills in capitalization, punctuation and spelling; (2) improve sentence and paragraph development; (3) practice basic grammar exercises; (4) increase vocabulary, and (5) learn the differences between spoken and written English. The course meets 5 hours per week with the same instructor, 3 hours in class and 2 hours in the computer laboratory for individualized instruction. Upon completion of the requirements of English 0346, students may enroll in English 0347.

ENGL 0347 Basic English for Non-Native Speakers of English II
(3-3-2)

The second of two *bridge* courses for non-native speakers of English to assist them to transition to college-level classes. The course is for students who need to (1) increase fluency in writing, (2) develop editing and proofreading skills, (3) improve grammar and (4) increase vocabulary. This class meets 5 hours per week with the same instructor, 3 hours in class and 2 hours in the computer laboratory for individualized instruction. Upon completion of the requirements of English 0347, students may enroll in college-level classes.

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. ENG 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)
Prerequisite: 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)
Prerequisite: 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)
Prerequisite: 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)
Prerequisite: 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)
Prerequisite: 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)
Prerequisite: 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)
Prerequisite: 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)
Prerequisite: 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)
Prerequisite: 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)

ENGL 2375 Literature for Children and Adolescents
(3-3-0)

A survey of the history, development and educational use of literature for children and adolescents. Emphasis is placed on the professional preparation of the elementary teacher, the teaching assistant, and/or the child care worker. A research paper or term project is required.

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 I
(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 1305 Engineering Graphics II
(3-2-4)
Prerequisite: ENGR 1034.

The course will examine the graphical symbols used in various engineering disciplines which describe and document processes, procedures, operations, facilities, and construction and installation details. AutoCAD will be used extensively to generate computer charts and graphs, computer-aided analysis and design, application of numerical techniques to the solution of engineering problems using high level programming language and numerical computing software will be covered in this course.

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 1407 Plane Surveying
(4-4-0)

Engineering principles and practices of plan surveying including leveling, traversing, error adjustments, earthwork and highway curves. Topics include record keeping, distance measurements, angles and elevations, elementary map making, transit methods of topographic map production and field problems related to highway surveying will be covered. Cost estimation will be covered.

ENGR 2301 Statics
(3-3-0)
Prerequisite: MATH 2413 or concurrent enrollment; PHYS 2425 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)
Prerequisite: ENGR 2301, MATH 2413 or concurrent enrollment; PHYS 2425.

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)
Prerequisite: PHYS 2425

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)
Prerequisite: MATH 2413

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 Circuits I for Electrical Engineering
(3-3-1)
Prerequisite: MATH 2413, Corequisite: MATH 2414

The course introduces the principles of electrical circuits and systems including circuit analysis techniques for DC, transient and AC circuits. Topics include series, parallel, series-parallel circuitry including Ohm's Law, Kirchoff's Laws, batteries, resistance, capacitance, inductance, magnetism, and electro-magnetism. Network analysis techniques include Node-voltage and Mesh-current; Thevenin's, Norton's, maximum power transfer, source transformation, and Superposition theorems applied to electrical circuits are discussed. Electrical test and measurements instruments and their implementation will be covered. Use of computer software PSPICE and MATLAB for circuit analysis will be introduced.

ENGR 2332 Mechanics of Solids
(3-3-0)
Prerequisite: ENGR 2301, MATH 2413 or concurrent enrollment;
PHYS 2426.

Internal forces and deformations in solids; stress, strain in elastic and plastic solids; applications to simple engineering problems.

ENGT 1401 Circuits I for Engineering Technology
(4-3-3)
Prerequisite: MATH 1314 or equivalent

Principles of direct current electricity and their application to series, parallel, series-parallel circuitry including Ohm's Law, Kirchoff's Laws, batteries, resistance, capacitance, inductance, magnetism, and electro-magnetism. Topics include Node-voltage and Mesh-current analysis; Thevenin's, Norton's, maximum power transfer, source transformation, and Superposition theorems applied to electrical circuits. Electrical test and measurements instruments and their implementation will be covered. Use of computer software PSPICE and MATLAB for circuit analysis will be introduced.

ENGT 1402 Circuits II for Engineering Technology
(4-3-3)
Prerequisite: ENGT 1401, MATH 2412 or MATH 1314 or equivalent

Principles of alternating current circuits and their application to series, parallel, series-parallel circuitry including Ohm's Law, Kirchoff's Laws, batteries, resistance, capacitance, inductance, and magnetism. Topics include Node-voltage and Mesh-current analysis; Thevenin's, Norton's, maximum power transfer, source transformation, and Superposition theorems applied to electrical circuits. Electrical test and measurements instruments and their implementation will be covered. Use of computer software PSPICE and MATLAB for circuit analysis will be introduced.

ENGT 1407 Digital Fundaments
(4-3-3)

Analysis, design and simulation of basic digital circuits and their application including basic gates, arithmetic circuits, counters, data-handling circuits, and memory devices. Topics include combinational and sequential logic circuits, Boolean algebra, and circuit reduction techniques. Programmable logic devices, integrated circuits and standard test equipment will be used in the design, analysis, and test of digital circuits and systems.

ENGT 1409 AC/DC Circuits for Engineering Technology
(4-3-2)

Principles of direct current electricity and their application to series, parallel, series-parallel circuitry including Ohm's Law, Kirchoff's Laws, batteries, resistance, capacitance, inductance, magnetism, and networks. Topics in circuit analysis techniques include Node-voltage and Mesh-current analysis as well as transformers, circuit resonance, and phasors will be discussed. Electrical test and measurements instruments will be covered. Use of computer software PSPICE and MATLAB for circuit analysis will be introduced.

ENGT 2304 Materials and Methods for Engineering Technology
(3-3-0)

Topics include the study of properties of building materials, methods and equipment used in the completion of construction projects. Building specifications, selection of materials, cost estimations, quality control, assembly operations, and planning and preparation of projects will be covered.

ENGT 2307 Engineering Materials for Engineering Technology
(3-3-1)

A study of structure and property relationships of materials, including metals, ceramics, and polymers. Topics include behavior of material with emphasis on the manufacturing process and non-destruct testing principles. Selection of metals and principles of hardening and machining will be discussed.

ENGT 2310 Introduction to Manufacturing Processes
(3-3-0)

The course will concentrate on manufacturing processes for metallic materials. Machines and technologies used for casting, forming, fabricating, welding, heat treating, process control, injection molding will be described and discussed.

ENTC 1347 Safety and Ergonomics
(3-2-3)

Occupational Safety and Health Administration (OSHA) safety guidelines including electrical, chemical, and hazardous material safety. Ergonomic considerations to include repetitive motion, plant layout, and machine design. Industrial safety awareness, accident cost and prevention, and workman's compensation issues.

ENTC 1349 Reliability and Maintainability
(3-2-4)

A study of equipment reliability and maintainability to improve the efficiency of operations including utilizing the latest equipment and techniques to implement effective prevention and predictive maintenance programs.

ENVR 1101 Environmental Science I Lab
(1-0-3)

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.

ENVR 1102 Environmental Science II Lab
(1-0-3)

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.

ENVR 1301 Environmental Science I
(3-3-0)

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.

ENVR 1302 Environmental Science II
(3-3-0)
Prerequisite: ENVR 1301

A continuation of ENVR 1301. 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.

ESOL Bridge Courses: See ENGL 0346 and ENGL 0347

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.

ESOL 0360 English Skills: Listening Comprehension
(3-3-2)

This course, one component of an immersion approach to English language learning for non-native speakers, provides practice in listening for information using contexts and themes which draw on students' prior experiences and knowledge. Placement into the course is based on assessment.

ESOL 0365 English Skills: Reading and Vocabulary
(3-3-2)

This course, one component of an immersion approach to English language learning for non-native speakers, enhances students' analytical and critical thinking skills by using contexts and themes which draw on their prior experiences and knowledge. A variety of readings provide students with opportunities for improving comprehension, building vocabulary, making inferences, finding the main idea, scanning, and summarizing. Placement into the course is based on assessment.

ESOL 0370 English Skills: Writing Grammar
(3-3-2)

In this course, one component of an immersion approach to English language learning for non-native speakers, students use contexts and themes which draw on their prior experiences and knowledge to learn to express themselves in written language. Students are introduced to the writing process and work on sentence structure, paragraph development, rhetorical organization and mechanical skills. Placement into the course is based on assessment.

ESOL 0375 English Skills: Integrated Writing
(3-3-2)

In this course, the capstone course in an immersion approach to English language learning for non-native speakers, students use contexts and themes which draw on their prior experiences and knowledge to learn to express themselves in written language. Oral communication skills and reading/vocabulary skills are integrated into the teaching of writing. Placement into the course is based on assessment.

ESOL Bridge Courses: See ENGL 0346 and ENGL 0347

FORS 2440 Forensic Science I
(4-3-4)
Prerequisite: CHEM 1311, 111, 1312 & 1112

This course provides an introduction to crime scene investigation, evidence gathering and analysis. Students will learn the methods, procedures, and techniques of gathering and preserving crime scene evidence; and the laboratory techniques about how to scientifically analyze the evidence. Basic analytical techniques learned in the lab include trace analysis of hair and fiber, stain analysis, epithelial cell analysis, latent fingerprint analysis, DNA sequencing and more. (Pending THECB approval.)

FORS 2450 Forensic Science II
(4-2-6)
Prerequisite: FORS 2440

This course is a continuation of FORS 2440 but will introduce other forensic sciences including forensic psychology with references to criminal profiling. At the conclusion of the semester, student forensic teams will be required to conduct a mock crime scene investigation and subsequent analysis of the evidence gathered at the crime scene utilizing the techniques learned in the classroom and the laboratory. (Pending THECB approval.)

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 1305 Environmental Geology
(3-3-3)
The earth as a habitat. Interrelationships between humans and the environment. Geologic factors in urban and regional land use planning.

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)
Prerequisite: GEOL 1403 or permission of instructor

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 include site preparation, use of common materials, landscape lighting, water features, 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 small business applications, troubleshooting, repair, and technological advances in irrigation systems.

HALT 1338 Irrigation Water Management and Conservation
(3-2-2)

Application of the science of soil-water plant relations and climatic conditions to develop effective scheduling and management of irrigation water systems for residential, commercial, industrial, park and golf courses. Water conservation issues, water policies and codes and other related matters will be discussed.

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 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
(3-0-21)

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.

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.

HMSY 1337 Introduction to Homeland Security
(3-3-1)

An overview of homeland security. Evaluation of the progression of homeland security issues throughout Texas and the United States. An examination of the roles undertaken and methods used by governmental agencies and individuals to respond to those issues.

HMSY 1338 Homeland Security Emergency Communications Management
(3-3-1)

A study of interagency communication systems. Includes mutual air associations/ LEPC, standardized communications systems, and centralized communications hubs. Also covers coordinating emergency traffic, maintaining communication infrastructure security, and establishing communication alert systems and backup communication systems. Topics include political and policy basis of emergency management, technology and emergency management, mitigation, disaster recovery, and hazardous materials awareness. Includes an overview of incident command systems, terrorism and emergency management, mitigation for emergency managers, debris management, and individual and community disaster education.

HMSY 1339 Homeland Security Emergency Contingency Planning
(3-2-4)

A study of establishing a process and structure for the systematic, coordinated, and effective delivery of emergency assistance to address the consequences of any major disaster or emergency occurring in any region of the U.S. or other countries. An Emergency Contingency Plan will be developed that outlines public and private agency responses, recovery, and mitigation available to augment local, state, and federal efforts to save lives and protect public health, safety, and property. Includes types of aid available to individuals and communities in the rebuilding after a disaster. Also covers interagency and intergovernmental emergency preparedness, planning, training, exercises, coordination, and information exchange leading to the development of supplemental plans and procedures to implement agency response activities to rapidly and efficiently recover from the disaster or emergency.

HMSY 1340 Homeland Security Intelligence Operations
(3-3-1)

A study of the intelligence community. Includes the role of intelligence and law enforcement. Topics include collection methods, cycle, management operations, classification, production and analysis, assessment of targets, and assessment of threat vulnerability. Source development and adjudication will be conducted.

HMSY 1341 Critical Infrastructure Protection
(3-2-3)

Identification and analysis of critical infrastructure systems including security and threat assessments. Includes mitigation of threats as well as evaluation and revision of security measures in order to protect critical infrastructures.

HMSY 1342 Understanding and Combating Terrorism
(3-3-1)

A study of terrorism as well as reasons why America is a terrorist target. Includes methods of terrorism, domestic and international terrorism, Islam and Radical Islam, terrorist operations, cyberterrorism, narcoterrorism, the mind of the terrorist, and organized crime's impact on terrorism.

HMSY 1343 Weapons of Mass Destruction
(3-3-1)

Topics include weapons of mass destruction as well as hazardous material incidents. Covers hazard and risk assessment, crime scene preservation, chemical agents, toxic industrial chemicals, biological agents, pathogens, radiological agents, explosive devices, detection-sampling and plume models, and decontamination methods. Includes an overview of incident command systems and personal protection equipment. The critical role of first responders in weapons of mass destruction, mitigation, and survival will also be presented. Discussion includes lessons learned from the Oklahoma City Bombing and events of September 11, 2001. Community mitigation plans will be researched in order to prepare for and defeat weapons of mass destruction.

HMSY 2337 Managing a Unified Incident Command
(3-2-4)

A study of the common set of procedures of the unified incident command system for organizing personnel, facilities, equipment, and communications to successfully coordinate situations such as natural disasters, fires, rescue operations, kidnappings, hazardous material spills, mass casualties, terrorism, and/or weapons of mass destruction. Includes the identification and application of key roles and functional responsibilities for professionally managing these types of incidents. Also covers one or more practical application exercises and/or scenarios.

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 Resources Management
(3-3-0)
Prerequisite: 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.

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)
Prerequisite: BMGT 2373 or Departmental Approval

Analysis of international marketing strategies using market trends, costs, forecasting, pricing, sourcing, and distribution factors. Development of an international export/import marketing 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 customhouse broker. Topics include processes for customs clearance including appraisement, 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)
Equivalent to HIST 2321
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)
Equivalent to HIST 2322
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.

INCR 1302 Physics of Instrumentation
(3-2-4)

An introduction to simple control loops. Introduction to pressure, temperature, level, and flow transmitters and the various transducers used in the detection of changes in process variables.

INEW 2334 Advanced Web Page Programming
(3-3-1)

Advanced applications for Web authoring. Topics may include Perl Scripts, Common Gateway Interface (CGI), Database Interaction, Active Server Pages, Java Applets, Javascripts, tables, HTML, and/or interactive elements.

INTC 1305 Introduction to Electronic Instrumentation
(3-2-2)

A survey of the instrumentation field and the professional requirements of the instrumentation technician, including an introduction to computer and calculator applications involved in basic electronic circuit analysis.

INTC 1312 Introduction to Instrumentation and Safety Technology
(3-3-0)

An overview of industries employing instrument technicians. Course also covers instrument safety techniques and practices as applied to the instrumentation field.

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.

ITCC 1302 CCNA 1: Networking Basics
(3-1-4)

A course introducing the basics of networking including network terminology, local area networks (LAN) and wide area networks (WAN). Topics include network protocols such as TCP/IP, Open System Interconnection (OSI) models, cabling and routers.

ITCC 1306 CCNA 2: Router and Routing Basics
(3-1-4)

An introduction to basic Cisco router configuration for local area networks. Topics include initial router configuration for TCP/IP, management of Cisco IOS and router configuration files, routing protocols, and access control lists.

ITCC 1342 CCNA 3: Switching Basic and Intermediate Routing
(3-1-4)

A course focusing on advanced topics including IP addressing techniques, intermediate routing protocols, CLI configuration of switches, Ethernet switching, VLANs, Spanning Tree Protocol, and VLAN Trunking Protocol.

ITCC 1346 CCNA 4: WAN Technologies
(3-1-4)

This course focuses on advanced IP addressing techniques (Network Address Translation [NAT], Port Address Translation [PAT], and DHCP), WAN technology and terminology, PPP, ISDN, DDR, Frame Relay, network management and introduction to optical networking. In addition, the student will prepare for the CCNA exam.

ITMC 1301 Microsoft Windows Network and Operating Systems Essentials
(3-3-0)
Prerequisite: 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 Microsoft Windows Professional and Server
(3-3-0)
Prerequisite: 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 Network Infrastructure (3-3-0)

Prerequisite: 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)

Prerequisite: 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 1345 Enterprise Development Using Microsoft Visual Basic.NET (3-3-1)

Visual Basic.NET (VB.NET) programming language for developing, distributing, and maintaining objects across distributed networks including the Internet. Includes using VB.NET to access data stored on a Microsoft Structured Query Language (SQL) server database and allows implementation as a middleware (business rules) application.

ITMC 1401 Microsoft Windows Network and Operating System Essentials (4-3-1)

Prerequisite: 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 Microsoft Windows Server Operating Systems (4-3-1)

Prerequisite: 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)

Prerequisite: 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)

Prerequisite: 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 Technologies
(3-3-0)
Prerequisite: 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)
Prerequisite: 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)
Prerequisite: 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 1421 Introduction to Networking
(4-3-2)

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 2165 Practicum (or Field Experience) - Business Systems Networking and Telecommunications
(1-0-10)
Prerequisite: 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.

ITNW 2301 Administering Servers
(3-3-1)

Post-installation and day-to-day administration tasks of various network operating system servers.

ITNW 2321 Networking with TCP/IP
(3-3-1)

Set up, configure, use, and support Transmission Control Protocol/Internet Protocol (TCP/IP) on networking operating systems.

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 1307 UNIX Operating System I
(3-3-1)

A study of the UNIX operating system including multi-user concepts, terminal emulation, use of system editor, basic UNIX commands, and writing script files. Topics include introductory systems management concepts.

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)
Prerequisite/Corequisite: 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 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 2337 UNIX Operating System II
(3-3-1)
Prerequisite: ITSC 1307

Continued study of the UNIX operating system commands. Includes additional scripting topics such as CGI or PERL.

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 1302 Computer Programming
(3-3-1)

Introduction to computer programming with emphasis on the fundamentals of structured design, development, testing, implementation, and documentation. Includes language syntax, data and file structures, input/output devices, and files.

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 1329 Programming Logic and Design
(3-3-1)

A disciplined approach to problem-solving with structured techniques and representation of algorithms using appropriate design tools. Discussion of methods for testing, evaluation, and documentation.

ITSE 1331 Introduction to Visual BASIC Programming
(3-3-1)
Prerequisite/Corequisite: 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)
Prerequisite: 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 1402 Computer Programming
(4-3-2)

Introduction to computer programming with emphasis on the fundamentals of structured design, development, testing, implementation, and documentation. Includes language syntax, data and file structures, input/output devices, and files.

ITSE 2302 Intermediate Web Programming
(3-3-1)

Intermediate applications for web authoring. Topics may include Server Side Include (SSI), Perl, HTML, JAva, Javascript, and/or ASP.

ITSE 2309 Database Programming
(3-3-1)
Prerequisite: 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 2317 JAVA Programming
(3-3-1)

Introduction to JAVA programming with object-orientation. Emphasis on the fundamental syntax and semantics of JAVA for applications and web applets.

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 1304 Introduction to Spreadsheets
(3-2-2)

Instruction in the concepts, procedures, and importance of electronic spreadsheets.

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: Current Web Design Software
(3-3-1)

Instruction and use in the most common Web design software applications used in today's business environment. Web design software applications such as Dream Weaver, Flash, Cold Fusion and others will be used. The student will be taught the software semantics for current applications and will demonstrate Web design competency in each.

ITSW 1391 Special Topics in Data Processing Technology/Technician
(3-3-1)
Prerequisite: 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.

ITSY 1300 Fundamentals of Information Security
(4-3-2)

Basic information security goals of availability, integrity, accuracy, and confidentiality. Vocabulary and terminology specific to the field of information security are discussed. Identification of exposures and vulnerabilities and appropriate countermeasures are addressed. The importance of appropriate planning and administrative controls is also discussed.

ITSY 1442 Information Technology Security
(4-3-2)

Instruction in security for network hardware, software, and data, including physical security; backup procedures; relevant tools; encryption; and protection from viruses.

ITSY 2300 Operating System Security
(3-3-1)

Safeguard computer operating systems by demonstrating server support skills and designing and implementing a security system. Identify security threats and monitor network security implementations. Use best practices to configure operating systems to industry security standards.

ITSY 2301 Firewalls and Network Security
(3-3-1)

Identify elements of firewall design, types of security threats and responses to security attacks. Use best practices to design, implement, and monitor a network security plan. Examine security incident postmortem reporting and ongoing network security activities.

Beginning in Spring 2005 The Physical Education Department will have a new name: Kinesiology, Health and Dance. All classes will have the prefix KINE instead of PHED.

KINE 1100 Adapted Physical Activity (formerly PHED 1102)
(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.

KINE 1104 Aerobics I (formerly PHED 1140)
(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.

KINE 1105 Aerobics II (formerly PHED 1141)
(1-1-2)
Prerequisite: KINE 1104 or permission of the department.

Many of the same activities utilized in Aerobics I 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.

KINE 1109 Aquatic Conditioning I (formerly PHED 1134)
(1-1-2)
Prerequisite: KINE 1173 or permission from department.

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.

KINE 1112 Ballet I (formerly PHED 1149)
(1-1-2)

Students will learn how to do a ballet warm-up and cool-down and dance combinations. As an activity class, each student should be prepared to participate to the best of his/her ability fully in each class session.

KINE 1113 Ballet II (formerly PHED 1160)
(1-1-2)
Prerequisite: KINE 1112 or permission from department.

Continued instruction and participation in ballet technique. Students will build on classical ballet techniques learned in Ballet I including barre, allegro, adagio, center floor combinations.

KINE 1114 Ballet Folklorico I (formerly PHED 1152)
(1-1-2)

Instruction and participation in Ballet Folklorico dance technique. This class introduces students to footwork techniques emphasizing fundamentals of body placement, vocabulary, and regions in Mexico Folklorico Dance. Students will develop dance combinations to enhance technical skills, memory and performance qualities.

KINE 1115 Ballet Folklorico II (formerly PHED 1139)
(1-1-2)
Prerequisite: KINE 1114 or permission of the department.

Continued and more advanced instruction and participation in Ballet Folklorico dance technique.

KINE 1116 Basketball I (formerly PHED 1113)
(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

KINE 1117 Basketball II (formerly PHED 1114)
(1-1-2)

Prerequisite: KINE 1116 or permission of the department.

This course is a continuation of KINE 1116 and will focus on the development of increased individual skills as well as introducing team strategies and techniques.

KINE 1122 Bowling I (formerly PHED 1108)
(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.

KINE 1124 Camping and Backpacking I (formerly PHED 1125)
(1-1-2)

Hiking, orienteering, packing, camping, and survival skills will be discussed and practiced. A weekend trip may be required.

KINE 1126 Cardio-Kickboxing I (formerly PHED 1142)
(1-1-2)

Freestyle self-defense techniques combined with high-energy aerobic moves/steps. Each session provides high/low fluctuation in the heart rate, which translates into an energetic workout. Self-defense moves include kicking, jabbing, punching, and blocking. There is no physical contact.

KINE 1127 Cardio-Kickboxing II (formerly PHED 1143)
(1-1-2)
Prerequisite: KINE 1126 or permission from department.

This course is designed to develop cardio respiratory fitness, muscular endurance, flexibility and body composition through the use of combined kickboxing and aerobic activity. Hand weights, 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.

KINE 1132 Fencing I (formerly PHED 1101)
(1-1-2)

Students will learn basic foil techniques and footwork. History, rules, scoring systems, and terminology will be learned.

KINE 1133 Fencing II (formerly PHED 1111)
(1-1-2)
Prerequisite: KINE 1132 or permission from department.

Provides advanced levels of fencing techniques and introduces basic fundamentals of directing and judging fencing.

KINE 1136 Flag Football I (formerly PHED 1170)
(1-1-2)

This course is designed to teach the basics of passing, catching and kicking as well as other basic fundamentals of football. Students will also study the rules and basic strategy and will be able to participate in games.

KINE 1140 Golfing I (formerly PHED 1105)
(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. This course is offered off campus.

KINE 1141 Golfing II (formerly PHED 1123)
(1-1-2)
Prerequisite: KINE 1140 or permission from department.

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.

KINE 1144 Jazz Dance I (formerly PHED 1147)
(1-1-2)

Students will learn how to do a 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.

KINE 1146 Jogging I (formerly PHED 1150)
(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.

KINE 1150 Life Guard Training I (formerly PHED 1132)
(1-1-2)

Students registered for this class should be able to demonstrate all the strokes taught in Swimming I and II, 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.

KINE 1152 Modern Dance I (formerly PHED 1145)
(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.

KINE 1153 Modern Dance II (formerly PHED 1146)
(1-1-2)
Prerequisite: KINE 1152 or permission from department.

This course is a continuation of KINE 1152. Intermediate levels of dance technique, composition, and repertoire are included.

KINE 1156 Physical Conditioning I (formerly PHED 1104)
(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.

KINE 1164 Scuba I (formerly PHED 1136)
(1-1-2)

Students will learn about selection, care, and use of equipment. Safety, underwater movements, and other topics will be learned and practiced.

KINE 1165 Soccer I (formerly PHED 1170)
(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.

KINE 1167 Social Dance I (formerly PHED 1144)
(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.

KINE 1168 Social Dance II (formerly PHED 1148)
(1-1-2)
Prerequisite: KINE 1167 or permission from department.

This course will build on dance rhythms and basic forms learned in Social Dance I with an increased emphasis on placement, partnering, rhythmic analysis, and variations.

KINE 1169 Softball I (formerly PHED 1103)
(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.

KINE 1171 Spin Bike I (formerly PHED 1109)
(1-1-2)

This course is a group exercise class designed to improve individualized cardiovascular fitness with the use of stationary bicycles.

KINE 1172 Spin Bike II (formerly PHED 1172)
(1-1-2)
Prerequisite: KINE 1171 or permission from department.

This course is an advanced cardiovascular conditioning class using stationary bicycles.

KINE 1173 Swimming I (formerly PHED 1129)
(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.

KINE 1174 Swimming II (formerly PHED 1131)
(1-1-2)

Prerequisite: KINE 1173 or permission from department.

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.

KINE 1183 Tennis I (formerly PHED 1115)
(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.

KINE 1184 Tennis II (formerly PHED 1116)
(1-1-2)

Prerequisite: KINE 1183 or permission from department.

This class is designed for students with credit for Tennis I or who have competitive experience. Stroke refinement, game strategies, and advanced drills will be included.

KINE 1187 Triathlon Training I (formerly PHED 1137)
(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.

KINE 1189 Varsity Athletics I (formerly PHED 1155)
(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.

KINE 1190 Volleyball I (formerly PHED 1117)
(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.

KINE 1191 Volleyball II (formerly PHED 1118)
(1-1-2)

Prerequisite: KINE 1190 or permission of the department.

This course is for students with credit for Volleyball I or pervious competitive experience. Basic skills will be reviewed and tested as well as spiking, blocking, team offense, and team defense strategies.

KINE 1192 Walking I (formerly PHED 1120)
(1-1-2)

Students will learn about health-related physical fitness, monitoring their effort and progress, building a personal fitness plan for walking.

KINE 1194 Water Aerobics I (formerly PHED 1135)
(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.

KINE 1195 Water Aerobics II (formerly PHED 1124)
(1-1-2)
Prerequisite: KINE 1194 or permission from department.

Additional exercises designed to increase cardiovascular fitness, flexibility, strength and muscular endurance.

KINE 1196 Weight Training I (formerly PHED 1106)
(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.

KINE 1197 Weight Training II (formerly PHED 1107)
(1-1-2)
Prerequisite: KINE 1196 or permission of the department.

This course is a continuation of KINE 1196. Students will learn and practice advanced concepts such as circuit training and sports-specific training.

KINE 1198 Yoga I (formerly PHED 1112)
(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.

KINE 1199 Yoga II (formerly PHED 1119)
(1-1-2)
Prerequisite: KINE 1198 or permission from department.

This course is a continuation of KINE 1198 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 KINE 1198.

KINE 1238 Physical Fitness (formerly PHED 1238)
(2-2-0)

This course introduces physical fitness concepts and the use of selected physiological variables of fitness. Suitable fitness programs will be explored.

KINE 1301 Introduction to Physical Education (formerly PHED 1301)
(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.

KINE 1304 Personal & Community Health (formerly PHED 1304)
(3-3-0)

This course will investigate relationships among infectious disease, chronic disease, and lifestyle factors in personal health. Special emphasis is placed on current public health issues.

KINE 1305 Personal & Community Health II (formerly PHED 1305)
(3-3-0)

Prerequisite: KINE 1304 or permission from department.

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.

KINE 1306 First Aid (formerly PHED 1306)
(3-3-0)

This course is designed to enable students to recognize and avoid hazards within his/her environment; to intelligently assist in case of an emergency or illness; to develop skills necessary for immediate and temporary care of a victim. First Aid and Adult, Child and Infant Certification will be offered.

KINE 1308 Intramurals and Officiating (formerly PHED 1308)
(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.

KINE 1321 Coaching/Sports/Athletics I (formerly PHED 1321)
(3-3-0)

This course examines in depth four of the eight domains of the National Standards for Athletic coaches: Injury Prevention, Care & Management; Risk Management; Growth, Development & Learning; and Professional Preparation and Development. Other domains are also introduced. This class will further explore the global role of sports and the Olympic movement and students will develop their philosophy of coaching.

KINE 1322 Coaching/Sports/Athletics II (formerly PHED 1322)
(3-3-0)

This course examines in depth four of the eight domains of the National Standards for Athletic Coaches: Training, Conditioning and Nutrition; Social/Psychological Aspects of Coaching; Skills, Tactics and Strategies; and Teaching and Administration. Other domains are also introduced. Students will also become familiar with the UIL and NCAA eligibility rules.

KINE 1331 Physical Education in the Elementary Grades (formerly PHED 1331)
(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.

KINE 1346 Substance Abuse (formerly PHED 1346)
(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.

KINE 2101 Skill Analysis-Individual Activity (formerly PHED 2101)
(1-1-2)

Specialized activity instruction involving skills, drills, rules, regulations, and skill performance in a variety of selected individual activities.

KINE 2102 Skill Analysis-Dual Activity (formerly PHED 2102)
(1-1-2)

Specialized activity instruction involving skills, drills, rules, regulations, and skill performance in a variety of selected dual activities.

KINE 2103 Skill Analysis-Team Sport (formerly PHED 2103)
(1-1-2)

Specialized activity instruction involving skills, drills, rules, regulations, and skill performance in a variety of selected team activities.

KINE 2116 Basketball III (formerly PHED 1121)
(1-1-2)

Prerequisite: KINE 1117 or permission of the department.

This course provides for further development of advanced basketball skills and strategies. Emphasis is placed on team offense and defense concepts and techniques.

KINE 2132 Fencing III (formerly PHED 1128)
(1-1-2)

Prerequisite: KINE 1133 or permission of the department

Provides advanced levels of fencing techniques and introduces basic fundamentals of directing and judging fencing.

KINE 2133 Fencing Private I (formerly PHED 1126)
(1-1-2)

Prerequisite: KINE 1132 or permission from department.

This course provides individual instruction in the basic fundamentals of movement and simple offence and defense with foil, as well as explanation of rules of foiling fencing.

LBRA 1391 Special Topics: Acquisitions and Cataloging
(3-3-0)

This course covers cataloging (Library of Congress and Dewey), the acquisitions process, tools used, bibliographic search tools, terminology, serials ordering, check-in and claim processes, and U.S. MARC coding.

LBRA 1391 Special Topics: Public Services
(3-3-0)

This course covers circulation desk, interlibrary loan functions, and a variety of other public service processes, including circulation policies, reserve collection policies and procedures, copyright issues, terminology, public relations, stacks maintenance, inventory, and keeping and reporting of statistics, and audiovisual services.

LBRA 1391 Special Topics: Information Sources and Services
(3-3-0)

This course covers reference philosophy, criteria to evaluate an information source, information sources available in all formats, the reference interview, search strategies, Boolean searching, and digital resources.

LMGT 1319 Introduction to Business Logistics
(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)

Prerequisite: 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)

Prerequisite: 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)

Prerequisite: 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)
Prerequisite: 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)
Prerequisite: 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)
Prerequisite: 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 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 THEA 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 E3, 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 prepackaged programs for the analysis of data.

MATH 2318 Linear Algebra
(3-3-0)
Prerequisite: MATH 2414 with a grade of "C" or better, or departmental approval.
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
(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)
Prerequisite: 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 marketing research.

MRKG 1313 Public Relations
(3-3-0)

Explain the basic process of public relations and prepare and present an activity using basic public relations principles.

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.

MSCI 1101 Fundamentals of Leadership and Management
(1-1-1)

Organization of the Army and ROTC, career opportunities for ROTC graduates, and the military as a profession. Customs and traditions of the service. Development of leadership potential, First Aid, and Introduction to Map Reading.

MSCI 1102 Fundamentals of Leadership and Management
(1-1-1)

Leadership studies of problems facing junior leaders in today's Army in non-combat situations. Effects of technological and sociological change on the military. Continuation of customs and traditions of the service. Development of leadership potential. Basic military skills training.

MSCI 2201 Applied Leadership and Management I
(2-2-1)

Learn/apply ethics-based leadership skills that develop individual abilities and contribute to the building of effective teams of people. Develop skills in oral presentations, writing concisely, planning of events, coordination of group efforts, advanced first aid, land navigation, and basic military tactics. Learn fundamentals of ROTC's Leadership Development Program. Two hours and a required leadership lab, plus required participation in two one-hour sessions for physical fitness. Participation in a weekend exercise is optional, but highly encouraged.

MSCI 2202 Applied Leadership and Management II
(2-2-1)

Military use of maps and terrain analysis with emphasis on practical experiences. Introduction to the leadership techniques required to conduct patrolling, offensive and defensive tactical missions.

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. Corequisite: MUEN 1121 Jazz Ensemble.
Technique will be developed through the studies of Mantia, Couillad, Rochut, Arbon and exercises in various articulations.

MUAP 1157 Percussion – Private
(1-1-1)
Prerequisite: High School Band. Corequisite: 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. Corequisite 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 Intermediate Mariachi Ensemble
(1-0-3)
A continuation of MUEN 1151. Develop further vocal and instrumental performance techniques.

MUEN 1153 Advanced 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 Ensemble 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. Corequisite: 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 1386 Composition I
(3-3-0)

Composing in small forms for simple media in both traditional styles and styles of the student's choice.

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.

Beginning in Spring 2005, all PHED classes will become KINE. The Physical Education Department will change its name to Kinesiology, Health and Dance.

PHED 1101 Fencing (See KINE 1132)
(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 (See KINE 1100)
(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 (See KINE 1169)
(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 (See KINE 1156)
(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 (See KINE 1140)
(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 (See KINE 1196)
(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 (See KINE 1197)
(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 (See KINE 1122)
(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 (See KINE 1171)
(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 (See KINE 1172)
(1-1-2)

This course is an advanced cardiovascular conditioning class using stationary bicycles.

PHED 1111 Intermediate Fencing (See KINE 1133)
(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 (See KINE 1198)
(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 (See KINE 1116)
(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 (See KINE 1117)
(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 (See KINE 1183)
(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 (See KINE 1184)
(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 (See KINE 1190)
(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 (See KINE 1191)
(1-1-2)

Prerequisite: PHED 1117 or permission of the instructor.

This course is for students with credit for Beginning Volleyball or pervious competitive experience. Basic skills will be reviewed and tested as well as spiking, blocking, team offense, and team defense strategies.

PHED 1119 Intermediate Yoga (See KINE 1199)
(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 (See KINE 1192)
(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 (See KINE 2116)
(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 1123 Intermediate Golf (See KINE 1141)
(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 (See KINE 1195)
(1-1-2)

Additional exercises designed to increase cardiovascular fitness, flexibility, strength and muscular endurance.

PHED 1125 Camping and Backpacking (See KINE 1124)
(1-1-2)

Hiking, orienteering, packing, camping, and survival skills will be discussed and practiced. A weekend trip may be required.

PHED 1126 Private – Fencing I (See KINE 2133)
(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 1128 Advanced Fencing (See KINE 2132)
(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 (See KINE 1173)
(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 (See KINE 1165)
(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 (See KINE 1174)
(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 (See KINE 1150)
(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 (See KINE 1109)
(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 (See KINE 1194)
(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 (See KINE 1164)
(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 (See KINE 1187)
(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 1139 Ballet Folklorico II (See KINE 1115)
(1-1-2)

Continued and more advanced instruction and participation in Ballet Folklorico dance technique.

PHED 1140 Beginning Aerobics (See KINE 1104)
(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 (See KINE 1105)
(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 (See KINE 1126)
(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 (See KINE 1127)
(1-1-2)

Prerequisite: PHED 1142 or permission from department

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 1144 Social Dance (See KINE 1167)
(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 Modern Dance I (See KINE 1152)
(1-1-2)

Introduction and participation in Modern Dance. 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 Modern Dance II (See KINE 1153)
(1-1-2)

Prerequisite: PHED 1145 or permission from department

Continued instruction and participation in Modern Dance. 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 (See KINE 1144)
(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 Ballet I (See KINE 1112)
(1-1-2)

Instruction and participation in Ballet. Students will learn how to do a ballet warm-up and cool down and dance combinations. As an activity class, each student should be prepared to participate to the best of his/her ability fully in each class session.

PHED 1150 Beginning Jogging (See KINE 1146)
(1-1-2)

Students will learn how to use aerobic running in a fitness plan. Heath-related fitness components, safety, injury prevention, and training system will be taught.

PHED 1152 Ballet Folklorico I (See KINE 1114)
(1-1-2)

Instruction and participation in Ballet Folklorico dance technique. This class introduces students to footwork techniques emphasizing fundamentals of body placement, vocabulary, and regions in Mexico Folklorico Dance. Students will develop dance combinations to enhance technical skills, memory and performance qualities.

PHED 1155 Varsity Athletics (See KINE 1189)
(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 1160 Ballet II (See KINE 1113)
(1-1-2)

Continued instruction and participation in ballet technique. Students will build on classical ballet techniques learned in ballet including barre, allegro, adagio, center floor combinations.

PHED 1170 Flag Football I (See KINE 1136)
(1-1-2)

This course is designed to teach the basics of passing, catching and kicking as well as other basic fundamentals of football. Students will also study the rules and basic strategy and will be able to participate in games.

PHED 1238 Physical Fitness (See KINE 1238)
(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 (See KINE 1301)
(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 (See KINE 1304)
(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 (See KINE 1305)
(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 (See KINE 1306)
(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 (See KINE 1308)
(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 (See KINE 1321)
(3-3-0)

Survey of the history, theories, philosophies, rules, and terminology of competitive sports. Includes developmentally appropriate coaching techniques and sports psychology.

PHED 1322 Coaching/Sports/Athletics II (See KINE 1322)
(3-3-0)

This course examines in depth four of the eight domains of the National Standards for Athletic Coaches: Training, Conditioning and Nutrition; Social/Psychological Aspects of Coaching; Skills, Tactics and Strategies; and Teaching and Administration. Other domains are also introduced. Students will also become familiar with UIL and NCAA eligibility rules.

PHED 1331 Physical Education in the Elementary Grades (See KINE 1331)
(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 (See KINE 1332)
(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 (See KINE 1346)
(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 (See KINE 2101)
(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 (See KINE 2102)
(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 (See KINE 2103)
(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 (See DANC 2303)
(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.

PHED 2356 Care and Prevention of Athletic Injuries (See KINE 2356)
(3-3-0)

Prevention and care of athletic injuries with emphasis on qualities of a good athletic trainer, avoiding accidents and injuries, recognizing signs and symptoms of specific sports injuries and conditions, immediate and long-term care of injuries, and administration procedures in athletic training.

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.

PHTC 1349 Photo Digital Imaging I
(3-3-0)

A studio course, which uses the computer as an electronic darkroom. The course builds on the student's experience with raster-based editing/manipulation software with a focus on using digital photography as a fine arts medium. Topics include color and gray scale images and image conversion and presentation.

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 1405 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.

PHYS 1407 Introductory Physics II
(3-3-0)
Prerequisite: PHYS 1405.

Topics to be covered include electricity and magnetism, light, and atomic nuclear physics. Laboratory experience is part of the course.

PHYS 2425 University Physics I
(4-3-3)

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 2426 University Physics II
(4-3-3)
Prerequisite: PHYS 2425

For pre-engineering and physics majors or minors. The principles and applications of electricity and magnetism, way 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)
Prerequisite: POFI 1301 or equivalent

Continued study of current computer terminology and technology. Advanced skill development in computer hardware, software applications, and procedures.

POFI 1349 Spreadsheets
(3-3-1)

In-depth coverage in the use of a spreadsheet software application.

POFI 2301 Word Processing
(3-2-3)
Prerequisite: 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.

POFL 1305 Legal Terminology
(3-3-0)

An introduction to legal terminology, including spelling, pronunciation, and definition of legal terms and an overview of the law and the professions.

POFM 1313 Medical Terminology I
(3-3-0)

Instruction in the practical application of a medical vocabulary system. Topics include structure; recognition; analysis; definitions; spelling; pronunciation; and combination of medical terms from prefixes, suffixes, roots, and combining forms.

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 1307 Proofreading and Editing
(3-3-0)

Instruction in proofreading and editing skills necessary to assure accuracy in business documents.

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 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 records 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)
Prerequisite: 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 1429 Keyboarding and Document Formatting (Majors)
(4-2-3)
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)
Prerequisite: 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)
Prerequisite: 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 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 2307 Adolescent Psychology I
(3-3-0)

Study of the relationship of the physical, emotional, social and mental factors of growth and development of children and throughout the lifespan.

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 2319 Social Psychology
(3-3-0)

Study of individual behavior within the social environment. May include topics such as the socio-psychological process, attitude formation and change, interpersonal relations, and group processes.

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 1301 Total Quality Management
(3-3-0)

The study of integrating work processes using team participation through employee empowerment and teamwork emphasizing the philosophy of customer service and satisfaction.

QCTC 1303 Quality Control
(3-3-0)

Information on quality control principles and applications. Designed to introduce the student to the quality control profession.

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.

QCTC 1343 Quality Assurance
(3-3-0)

Information on quality assurance principles and applications; designed to introduce the student to the quality assurance profession.

QCTC 1391 Special Topics: ISO 9001
(3-3-1)

This course is the introduction to the concept of ISO 9000 Quality Management Systems. This course will cover the fundamentals of the Quality Management System and will specify the terminology for a compliant Quality Management System. The practical application of the ISO 9001:2000 Requirement Standard. Promotes the adoption of a process approach when designing and implementing a Quality Management System, taking into account the mission, product, processes and size of the organization. Conduct internal audits on the ISO 9001:2000 Quality Management System to assure compliance to industry standard. Uses practical methods of identifying non-compliances and documenting corrective actions. Audits are an integral part of the ISO 9001:2000 Standard.

RBTC 1305 Robotic Fundamentals
(3-2-4)

An introduction to flexible automation. Topics include installation, repair, maintenance, and development of flexible robotic manufacturing systems.

READ 0300 Reading I
(3-3-2)

Designed for students reading between the 6th and 9th grade level and needing additional review, refinement and reinforcement of basic reading skills. Word recognition, vocabulary development, comprehension, fluency, and study skills are stressed. Three lecture hours per week plus weekly laboratory activities are required. **Students must earn a minimum grade of C in READ 0300 before being permitted to enroll in READ 0301.**

READ 0301 Reading II
(3-3-2)

Designed for students reading between the 9th and 12th grade level. Pertinent vocabulary, specific textbook comprehension, main idea, writer's intent, organization of ideas, and critical reasoning are stressed. Strong emphasis on study skills. Three lecture hours per week plus weekly laboratory activities are required. **Students must earn a minimum grade of C in READ 0301 before being permitted to enroll in courses requiring college-level reading skills.**

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.

SGNL 1301 Beginning Sign Language Basic I (formerly SPCH 1373)
(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.)

SGNL 1302 Beginning Sign Language Basic II (formerly SPCH 1374)
(3-3-0)
Prerequisite: SNGL 1301

A continuation of SGNL 1301. 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.)

SGNL 1304 American Sign Language (ASL): Beginning I
(3-3-1)

An introduction to the basic skills in production and comprehension of American Sign Language (ASL). Includes the manual alphabet and numbers. Develops conversational ability, culturally appropriate behaviors, and exposes students to ASL grammar.

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)
Prerequisite: 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 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: LMGT 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.

TRVM 1300 Introduction to Travel and Tourism
(3-3-0)

An overview of the travel and tourism indusry. Emphasis on travel careers and the impact of tourism on society.

VTHT 1125 Pharmacological Calculations
(1-1-0)
Prerequisite: VTHT 1341, VTHT 2217, VTHT 2305, VTHT 2331

Skill development in calculating oral and parenteral drug dosages.

VTHT 1203 Canine and Feline Care and Husbandry
(2-1-3)
Prerequisite: SPCH 1311, 1318 or 1321; ITSC 1301, 1309 or COSC 1301; ENGL 1301; BIOL 1408 or 1413

Survey of feeding, common management practices, and care of canines and felines in a clinical setting. Review of common diseases of canines and felines encountered in the practice of veterinary medicine.

VTHT 1205 Veterinary Medical Terminology
(2-2-0)
Prerequisite: SPCH 1311, 1318, or 1321; ITSC 1301, 1309, 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
(2-2-0)
Prerequisite: SPCH 1311, 1318, or 1321; ITSC 1301, 1309, or COSC 1301; ENGL 1301; BIOL 1408 or 1413

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: Math for Veterinary Technicians
(3-3-0)
Prerequisite: SPCH 1311, 1318, or 1321; ITSC 1301, 1309, or COSC 1301; ENGL 1301; BIOL 1408 or 1413

A review of mathematical functions used by veterinary technicians including fractions, decimals, proportions, perimeters, areas, volumes of geometric figures, and certain algebraic/trigonometric functions, as required by specific businesses and industries for successful on-the-job performance.

VTHT 1301 Introduction to Veterinary Technology
(3-3-0)
Prerequisite: SPCH 1311, 1318, or 1321; ITSC 1301, 1309, or COSC 1301; ENGL 1301; BIOL 1408 or 1413

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)
Prerequisite: VTHT 1341, VTHT 2217, VTHT 2305, VTHT 2331

Practical experience in management of the veterinary practice. 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)
Prerequisite: VTHT 1349, VTHT 2301, VTHT 2313, VTHT 2321, VTHT 2323

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 1341, VTHT 2217, VTHT 2305, VTHT 2331

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)
Prerequisite: VTHT 1203, VTHT 1205, VTHT 1209, VTHT 1291, VTHT 1301, VTHT 1413

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)
Prerequisite: SPCH 1311, 1318, or 1321; ITSC 1301, 1309, or COSC 1301; ENGL 1301; BIOL 1408 or 1413

Gross anatomy of domestic animals including physiological explanations of how each organ system functions.

VTHT 2209 Food Animal Clinical Management
(2-1-4)
Prerequisite: VTHT 1341, VTHT 2217, VTHT 2305, VTHT 2331

Survey of feeding, common management practices, and care of food producing animals in clinical setting. Review of common diseases of food producing animals encountered in the practice of veterinary medicine. **Professional Liability Required**.

VTHT 2217 Exotic Animal Clinical Management
(2-1-3)
Prerequisite: VTHT 1349, VTHT 2301, VTHT 2313, VTHT 2321, VTHT 2323, VTHT 2366

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.

VTHT 2301 Canine & Feline Clinical Management
(3-2-3)
Prerequisite: VTHT 1203, VTHT 1205, VTHT 1209, VTHT 1291, VTHT 1301, VTHT 1413

Survey of feeding, common management practices, and care of canines and felines in a clinical setting. Review of common diseases of canines and felines encountered in the practice of veterinary medicine. **Professional Liability Required**.

VTHT 2305 Equine Clinical Management
(3-2-3)
Prerequisites: VTHT 1349, VTHT 2301, VTHT 2313, VTHT 2321, VTHT 2323, VTHT 2366

Survey of feeding, common management practices, and care of equines in a clinical setting. Review of common diseases of equines encountered in the practice of veterinary medicine. Supplemental lectures via distance learning. **Professional Liability Required**.

VTHT 2313 Lab Animal Clinical Management
(3-2-3)
Prerequisite: VTHT 1203, VTHT 1205, VTHT 1209, VTHT 1291, VTHT 1301, VTHT 1413

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 2321 Veterinary Parasitology
(3-2-3)
Prerequisite: VTHT 1203, VTHT 1205, VTHT 1209, VTHT 1291, VTHT 1301, VTHT 1413

Study of parasites common to domestic animals including zoonotic diseases.

VTHT 2323 Veterinary Clinical Pathology I
(3-2-3)
Prerequisite: VTHT 1203, VTHT 1205, VTHT 1209, VTHT 1291, VTHT 1301, VTHT 1413

In-depth study of hematology and related chemistries with emphasis on lab procedures. **Professional Liability Required**.

VTHT 2331 Veterinary Clinical Pathology II
(3-2-3)
Prerequisite: VTHT 1349, VTHT 2301, VTHT 2313, VTHT 2321, VTHT 2323, VTHT 2366

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)
Prerequisite: SPCH 1311, 1318, or 1321; ITSC 1301, 1309, or COSC 1301; ENGL 1301; BIOL 1408 or 1413; VTHT 1301, VTHT 1203, VTHT 1205, VTHT 1209, VTHT 1349, VTHT 1413, VTHT 2301, VTHT 2313, VTHT 2321, VTHT 2323

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student. **Professional Liability Required**.

13 The People

Palo Alto College Administration

Ana M. "Cha" Guzmán, Ed.D. ..... President
Thomas Baynum, Ed.D. ..... Vice President of Academic Affairs
Adolfo R. Barrera, Ed.D. ..... Vice President of Student Affairs
R. Michael Flores, Ph.D. ..... Dean, Institutional Effectiveness & Community Development
..... 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
Patricia Bell, MS ..... Instructional Skills Specialist
Cynthia Blizzard, M.A. ..... Education Skills Specialist
Ginger Hall Carnes, M.S. ..... Coordinator of Publications
Graciela Carrizales, B.A. ..... Instructional Skills Specialist
Sharon Carson, M.B.A. ..... Coordinator of Workforce Education
Lydia Casas, B.A. ..... Math Instructional Skills Specialist
Rosie Castro, M.A. ..... Coordinator, HEP
Catherine Chapa, M.S.. ..... Coordinator of Measurement & Evaluation
Linda Cooke, B.S. ..... Assistant Director of Records
Eloisa Cordova, B.A. ..... Education Support Specialist
Darvis Cosper, B.S. ..... Instructional Skills 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. ..... Recreational Activities and Sports Coordinator
Nora Esparza, M.A. ..... Education Support Specialist
Susan Espinoza, B.S. ..... Coordinator of Assessment
Patricia Estrada, B.S. ..... Natatorium/Gymnasium Supervisor
Analisa Fernandez, B.A. ..... Educational Support Specialist, Upward Bound
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. ..... Coordinator, disABILITY Services
Larry D. Jackson, M.A. ..... Director, Continuing Education & Customized Training
Rosemarie Laguna, B.A. ..... Associate Director of Student Financial Services
Nicholas Lopez, B.A. ..... Educational Skills Specialist, Upward Bound
Cheryl Le Gras, M.S. ..... Student Activities Director
Rachel Marez, B.S. ..... Associate Director of Records
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
Angelica Melendez, B.A. ..... Recruiter/Advisor
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
Steven Ochoa, M.A. ..... Math Instructional Skills Specialist
Lydia Marie Ortega, M.A. ..... Senior Job Placement Specialist
Duncan Perez, A.A.S. ..... Multi-Media Specialist
Tracy Pomerinke, B.S., M.H.R. ..... Instructional Skills 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
Cynthia A. Sanchez, B.A. ..... Statistical Research Specialist
J. Gary Shelman, M.B.A. ..... Director, Information & Communication Technology
Esteban Sosa, A.A. ..... Senior Multi-Media Specialist
Jane Velasquez ..... Community Outreach Coordinator
Susan Woods, M.A. ..... Continuing Education Specialist
Dolores Zapata, B.E.E.S. ..... Senior Recruiter/Advisor

Alamo Community College District Administrative Staff

J. Terence Kelly, Ed.D. ..... Chancellor
Daniel Ralph Derrico, Ed.D. ..... Vice Chancellor for Administration
Federico Zaragoza, Ph.D. ..... Vice Chancellor of Professional, Technical & Workforce Education
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

ACCD Board of Trustees

Dr. Bernard K. Weiner, District 1 2010
Denver McClendon, District 2 2010
Jennifer V. Ramos, District 3, ... 2010
Marcelo Casillas, District 4 2008
Roberto Zarate, District 5 2006
Dr. Eugene Sprague, District 6 2006
Charles Conner, District 7 2008
Gary Beitzel, District 8 2008
James Rindfuss, District 9 2008

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. A fifth college is scheduled to open in the next five years in Northeast Bexar County.

Professor Emeritus

Margarita Fresquez, Professor Emeritus of Mathematics: B.S., University of Texas at El Paso; M.S., New Mexico State University

Full-Time Faculty

Javier Aguirre, Instructor of History: B.A., M.A., University of Texas at San Antonio

Alfredo Gil Alvarez, Jr., Assistant Professor of Mathematics: A.A.S., San Antonio College; B.S., M.S., Southwest Texas State University

Jennifer Andermatt, Instructor of English: B.S., Texas A&I University; M.A., Texas A&M University

Mary L. Apolinar, 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, Associate 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

Student Activities leaders enjoy PACfest 2004, an official Fiesta event.

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

Valerie Gomez-Chavez, Instructor of Reading: B.A., St. Mary's University; M.Ed., University of the Incarnate Word

Duane F. Conley, Associate Professor of Computer Information Systems and Computer Science: B.A., University of Texas at Austin; Ph.D., Yale University

Joe J. Corrales, Instructor of Computer Information Systems and Computer Science: B.S., Wayland Baptist University; M.A., Webster University

Frank J. Crayton, Associate Professor of Reading: B.S., M.S., Southwest Texas State University

Jose A. Cruz, Associate Professor of Mathematics: B.A., University of Puerto Rico; M.S., M.A., Texas A & M University Kingsville

Carolyn DeLecour, Instructor of Speech: B.S., Texas A&I University; M.A., University of Texas at Austin

Alba De Leon, Associate Professor of Art: B.A., Bennington College; M.F.A., University of Alabama at Tuscaloosa; M.A., University of Texas at San Antonio

Ismael Dovalina, Associate Professor of Psychology: B.A., Columbia University; M.A., University of Michigan

John B. Dunn, Instructor of Computer Information Systems and Computer Science: A.A.S., Community College of the Air Force; B.A.A.S., Southwest Texas State University; M.A., Webster University

Rex Field, Associate Professor of History: B.A., University of Texas at Arlington; M.A. University of Houston

Jonathan A. Fink, Instructor of Economics: B.A., University of Richmond; M.A., Boston University

Terrence Flannery, Instructor of English: B.A., Maryglade College; M.A., University of Texas at San Antonio

Camille Frances Fiorillo, Assistant Professor of Learning Resources: B.A., College of Staten Island; M.L.S., University of Oklahoma

Maria Antonieta Galvan, Associate Professor of Foreign Languages: B.S., M.A., Instituto Normal del Edo. de Puebla; M.A., Trinity University

Ruth Ann Gambino, Assistant Professor of English: B.A., Cornell University; M.A., Incarnate Word College

Theresa Garfield, Instructor of Interdisciplinary Studies and Teacher Education: B.A., M.A., Our Lady of the Lake University

Pradeep K. Ghimire, Instructor of Business & Management: B.E., M.A., College of Technology; M.B.A., University of Mississippi

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

Cecilia Gonzales, Professor of Biological Sciences: B.A., M.S., University of the Incarnate Word; Ed.D., Baylor University

Dorothy Haecker, Professor of Philosophy: B.A., University of Texas at Austin; M.Ph., Ph.D., University of Kansas

George E. Hagen, Professor of Agriculture: B.S., M.S., Texas A&I University at Kingsville

Kevin B. Hankinson, Instructor of Aviation Technology: A.A.S., St. Philip's College; B.A., University of Texas at San Antonio

Kenneth E. Harris, Assistant Professor of Speech: B.A., Western Kentucky University; M.A., Mid-American Baptist Seminary; Ph.D., Indiana University

John Gilbert Hernandez, Assistant Professor of Philosophy: B.A., University of Texas at San Antonio; M.A., University of Texas at Austin; Ph.D., Capella University

Faculty members volunteer at events that draw the community to campus.

Paul Hernandez, Assistant Professor of Mathematics: B.S., Southern Methodist University; M.A., University of Texas at Austin

Peter G. Hernandez, Professor of Biology: B.S., M.S., University of Texas at San Antonio

Ramon Hernandez, III, Instructor of Physical Education: B.S., University of Texas at San Antonio; M.Ed., Southwest Texas State University

Steven Hicks, Instructor of Computer Information Systems and Computer Science: B.S., Corpus Christi State University; M.A., Webster University

Robert Hines, Instructor of History: B.S., M.S., Illinois State University

Mark Hogensen; Associate Professor of Art: B.S., B.F.A., Oregon State University; M.F.A., University of Texas at San Antonio

Sandra Hood, Professor of Learning Resources: B.A., M.L.S., University of Oklahoma; M.A. University of Texas at San Antonio

David Hope, Professor of Mathematics: B.A., St. Mary's University; M.S., Purdue University

Mari Hopper, Associate Professor of Biology: B.S., Kansas State University; M.S., University of Texas at Austin; Ph.D., Kansas State University

Linda E. Ibarra-Gonzales, Assistant Professor of Biology: B.A., St. Mary's University, M.S., Incarnate Word College

Mary-Ellen Jacobs, Associate Professor of English: B.S., Marquette University; M.A., The University of California at Davis; Ph.D., The University of Maryland-College Park

John L. Jansma, Assistant Professor of Computer Science and Computer Information Systems: B.A., St. Cloud State University; M.S., University of Southern California; M.S., University of Southern Mississippi; M.A., Webster University

Brent Jolly, Instructor of Aviation Technology: B.A., University of Louisville; M.S., Embry-Riddle Aeronautical University

Oliver B. Jones, Assistant Professor of Government: B.A., Morris Brown College; M.A., Clark Atlanta University

Neven Jurkovic, Assistant Professor of Computer Science: B.S.E.E., University of Zagreb; M.S., Southwest Texas State University; Ph.D., University of Zagreb

Susan G. Kazen, Assistant Professor of Physical Education/Kinesiology: B.A. Texas Lutheran University; M.S., Colorado State University; M.P.H, University of Texas Health Science Center-Houston

Julie Kern, Assistant Professor of Mathematics: B.A., St. Mary's University; M.A., Texas Tech University

Helen C. Kirk, Associate Professor of Mathematics: B.A., Washington and Jefferson College; M.A., Pepperdine University; M.S., University of Texas at San Antonio

William P. Krant, Assistant Professor of Mathematics: B.A., Boston College; M.A., University of Michigan

Alice Lawson-Johnson, Assistant Professor of Mathematics: B.S., M.S., Prairie View A & M University

Patrick Lee, Instructor of Mathematics: B.S., Bradley University; M.S. University of Iowa

Diane Lerma, Instructor of Reading: A.A., San Antonio College; B.S.W., Our Lady of the Lake University; M.A., University of Texas at San Antonio

Larry Losoya, Assistant Professor of Government: B.B.A., University of the Incarnate Word; M.A., St. Mary's University

Rose Lozano, Associate Professor of Counseling: B.A., University of Texas at San Antonio; M.A., St. Mary's University

Karen Mahaffy, Instructor of Art: B.A., Hope College; M.F.A., University of Texas at San Antonio

Caroline Mains, Instructor of English: B.S., University of Florida; M.A., Southwest Texas State University

Herbert Mann, Assistant Professor of English: B.A., Brooklyn College; M.A., University of Wisconsin; Ph.D., State University of New York at Binghamton

Karen D. Marcotte, Professor of History, Humanities, Interdisciplinary Studies; B.A., M.A., George Peabody College

Steven Mardock, Assistant Professor of Criminal Justice: B.S., Southern Illinois University; M.S., Southwest Texas State University

Armin Marmolejo, Assistant Professor of Music: B.A., North Texas State University; M.M., Southwest Texas State University

Margarita McAuliffe, Instructor of English for Speakers of Other Languages: B.A., M.A., University of Illinois

SuEarl McReynolds, Instructor of Biology: B.A., McMurry University; M.S., Texas Tech University

Cynthia Mendiola-Perez, Assistant Professor of Counseling: B.A., Pan American University; M.A., St. Mary's University; Ed.D., Baylor University

Jeffrey Middlebrook, Instructor of Physical Education: B.S., M.Ed., Pan American University

Suzel Molina, Instructor of Physical Education: B.S., Abilene Christian University; M.A., University of Texas at San Antonio

Kelly Mumbower, Associate Professor of Mathematics: A.A., Rend Lake College; B.S., M.S., Southwestern Oklahoma State University

Peter Myers, Assistant Professor of History: B.A., Muhlenberg College; M.A., New York University

Diana Nystedt, Instructor of English: B.A., M.A., Texas A&M University

Mariana Ornelas, Associate Professor of Humanities and Interdisciplinary Studies: B.A., Marietta College; M.A., Tufts University; M.A., University of Texas at San Antonio

Juan Ortiz, Instructor of Music: Director of Campanas de América and Mariachi Palominos, Artist-in-Residence

Joan Q. Osborne, Instructor of Economics: B.A., M.S., University of Texas at El Paso

Brent Osner, Professor of Music: B.M.Ed., Abilene Christian University; M.M.Ed., Angelo State University

Therese H. Palacios, Assistant Professor of Administrative Computer Technology: B.S., Southwest Texas State University; M.A., University of the Incarnate Word

Patricia Parma, L.P.C., Associate Professor of Counseling and Student Success: B.S., Northern Arizona University; M.A., University of Texas at San Antonio

Laurie Pawelek, Instructor of Veterinary Technology: A.A.S., Texas State Technical College; RVT, Texas Veterinary Medical Association

Anthony Pierulla, Assistant Professor of Counseling and Student Success: B.S., University of Houston; M.A., University of Texas at San Antonio

Frank Quijano, L.C.S.E, Instructor of Electro-Mechanical Technology: A.S., San Antonio College

Yolanda Reyna, L.P.C., Assistant Professor of Counseling and Student Success: B.A., Incarnate Word College; M.S., Our Lady of the Lake University

Robert Richmond, Associate Professor of English: B.A., Cardinal Glennon College; M.A., St. Mary's University; M.A., University of Texas at San Antonio

Denise Barkis Richter, Assistant Professor of Mass Communications: B.A., Trinity University; M.A., University of the Incarnate Word; Ph.D., University of Texas at Austin

Weldon G. Riggs, Agriculture: B.S., M.Ed., Texas A&M University

Yvette Rios, Assistant Professor of Mathematics: B.S., M.S., University of Texas at San Antonio

James Riley, Associate Professor of Business Administration: B.B.A., Angelo State University; M.B.A., St. Mary's University

Dale Robinson, Assistant Professor of Chemistry: B.A., Incarnate Word College; M.A., University of Texas at Austin

Daniel Rodriguez, Associate Professor of Counseling and Student Success: B.A., M.Ed., Southwest Texas State University; Ed.D., Baylor University

Belinda Román, Instructor of Economics: B.A., M.A., Texas Christian University

Lee Ming Ross, Instructor of Computer Information Systems and Computer Science: B.A., National Taiwan University; M.S., Alabama A&M University

Theodora Ruffner, Instructor of Dance: B.A., Douglass College; M.A., New York University

Amanda J. Salinas, Assistant Professor of Administrative Computer Technology: B.B.A., Southwest Texas State University; M.B.A., Our Lady of the Lake University

Rosa S. Samelson, Associate Professor of Spanish: A.A., San Antonio College; B.A., M.A., University of Texas at San Antonio

Irma M. Sanchez, Instructor of Learning Resources: B.A., St. Mary's University; M.S.L.S., Our Lady of the Lake University

Irene F. Scharf, Associate Professor of Learning Resources: B.A., M.A., University of Texas at Austin; M.S.L.S., Our Lady of the Lake University

Jennifer Lynn Scheidt, Instructor of English: B.A., Rhodes College; M.A., University of Texas at San Antonio

Michael S. Seiferth, Associate Professor of English: B.A., Rutgers University; M.A., Appalachian State University

Michael Shanklin, Associate Professor of Chemistry: B.S., M.S., University of Arizona; Ph.D., Texas A &M University

Ellen Shull, Professor of English: B.A., Incarnate Word College; M.A., University of Texas at San Antonio

Eleanor Skelley, Professor of Biology & Chemistry: B.S., M.S., Ph.D., Ohio State University

Chuck Squier, Assistant Professor of Theatre and Speech: A.A., Kilgore Jr. College; B.F.A., M.A., Stephen F. Austin State University

James Stovall, Instructor of Anthropology and Sociology: B.S., Lamar State University; M.A., Trinity University

Virginia (Ginny) Stowitts, Associate Professor of Government: B.A., University of the Incarnate Word; M.A., St. Mary's University

Lisa M. Strain, Assistant Professor of Biology: B.S., M.S., University of Texas at San Antonio

Glen S. Tanck, Assistant Professor of Geology: B.A., M.S., University of Wisconsin; Ph.D. University of Arizona

Elizabeth Tanner, Instructor of Mathematics: B.S., M.S., University of Texas at San Antonio

Juan Tejeda, Instructor of Music: B.A., M.A., University of Texas at San Antonio

Jose Trevino, Assistant Professor of Physics: B.S., University of Texas at Austin; M.S., St. Mary's University

John Trilling, Instructor of English as a Second Language: B.S., The American University; M.Ed., The University of Arizona; M.A., University of Texas at San Antonio

Roy N. Tucker, Professor of Mathematics: B.A., Mercer University; M.Div., Southeastern Baptist Theological Seminary; M.S., Prairie View A&M University; M.Ed., Pan American University; Ph.D., Ohio Christian University; Ph.D., Baylor University

Faculty and staff work together to help students succeed.

Ann Turner, Professor of Theatre and Speech: B.A., Fresno State College; M.A., University of Texas at El Paso; M.F.A, Memphis State University

Dorothy J. Ulcak, L.P.C., Associate Professor of Counseling: B.A., Incarnate Word College; M.A., University of Texas at San Antonio

Gabriel Ume, Associate Professor of Government: B.B.A., Southwest Texas State University; M.A., St. Mary's University

Robert Valadez, Assistant Professor of Mathematics: B.A., Trinity University; M.S., University of Texas at San Antonio

William G. Vasquez, Professor of Psychology: B.A., M.A., St. Mary's University

Antonio Villanueva, Instructor of Psychology: B.A., M.A., St. Mary's University

Lloyd J. Walsh, Assistant Professor of Art: B.F.A., University of Texas at San Antonio; M.F.A., California College of Arts and Crafts

Kirk W. Williams, Instructor of Agribusiness Management & Horticulture: B.S., Texas Tech University; M.S., Oklahoma State University

Archie Wortham, Instructor of Speech: B.A., M.A., University of Tennessee-Knoxville

Elsa Zambrano, Assistant Professor of Business & Management: B.A., Texas A&M University; M.A., Our Lady of the Lake University.

Roberta Ziegler, Assistant Professor of Reading: B.A., English, Washburn University; M.S. Education, Kansas State University: M.A., English, Southwest Texas State University

Faculty and staff provide entertainment during the holiday season.

Adjunct Faculty

Russell Abbott, Physical Education: B.S., Southwest Texas State University; M.Ed., Our Lady of the Lake University

George C. Adams, English for Speakers of Other Languages: B.A., Macalester College; M.Ed., Temple University

Juan G. Aguilera, Physical Education: B.S., University of Texas at San Antonio

Clara Alaniz, Reading: B.S., M.S., Corpus Christi State University

Gabriel Alaniz, Biology: B.S., M.S., University of Texas at San Antonio

Kathyrne M. Albertson, Administrative Computer Technology: B.S., Southwest Texas State University

Rachel J. Alderman, Business Administration: B.S., Western Kentucky University; M.P.A., University of Texas at San Antonio

Matthew L. Alexander, Engineering: B.S. Trinity University; M.S., Georgia Institute of Technology; Ph.D., Purdue University

Farid Amerian, Mathematics: B.S., Huston-Tillotson College; M.A., St. Edward's University; M.Ed., University of Texas at Austin

Douglas Anderson, Business Administration: B.A., Trinity University; B.S., George Washington University

Tony L. Anderson, Speech: B.S., East Central State University; M.A., Oklahoma State University

Africa Archield, Reading: B.A., University of Texas at Austin; M.A., Southwest Texas State University

Richard W. Arcos, Government: B.A., M.A., University of Texas at San Antonio

John Arevalo, History: B.A., Texas A&M University; M.A., University of Texas at San Antonio

Joe Arispe, Mathematics: B.A., Park College; B.A., Saint Leo College

Margaret Urrabazo Arevalo, Mathematics: B.A., Our Lady of the Lake University, M.S., University of Texas at San Antonio

Dana Arnold, English: B.A., University of Texas at San Antonio; M.A., Central Washington University

Phyllis Arnold, Mathematics: B.A., Trinity University; M.A., Incarnate Word College

Laura Aten, Teacher Education: B.A., Texas A&M University; M.A. University of Houston; Ed.D., University of Texas at San Antonio

Edward W. Atwood, History: B.A., M.A., St. Mary's University

Jeanette Ball, Teacher Education: B.A., Schreiner University; M.A., University of Texas at San Antonio

Carlos Banda, Physical Education: B.S., University of Texas at San Antonio

Miguel P. Barbera Jr., Mathematics: B.S., M.S., Laredo State University

Charles Barbosa, English for Speakers of Other Languages: B.A., St. Mary's University, M.A., Ed.D., Columbia University

Adolfo R. Barrera, Psychology: B.A., Texas A&I University; M.S., Corpus Christi State Univesrity; Ed.D., Texas Tech University

Gilbert Barrera, Business Administration: B.B.A., M.P.A., University of Texas at San Antonio; J.D., St. Mary's University

Ricardo Bartra, Computer Information Systems: B.S., Airforce Academy; M.S., U.S. Navy Postgraduate School

Elvira Basco, Mathematics: B.S., M.A., Notre Dame Midsayap College

James Basey, Mathematics: B.B.A., University of Texas at El Paso; M.S., Texas A&M University-Kingsville

Lennine Bashiri, Biology: B.S., M.S., University of Texas at San Antonio

Thomas B. Baynum, English: B.A., M.A., Wayne State College; Ed.D., Baylor University

Dale Beard, Mathematics: B.S., M.A., Southwest Texas State University

Victoria L. Beckman-Wilson, History: B.A., California State University; M.A., University of Texas at San Antonio

Britt A. Benshetler, English: B.S., Baylor University; M.A., University of South Carolina

Reda M. Berry, Logistics Management: A.A., Community College of the Air Force; B.A., University of Maryland; M.A. Webster University

Martha Bock, Geography and History: B.S., Southwest Texas University; M.A., St. Mary's University; Ph.D., St. Louis University

Richard W. Bonnell Sr., Logistics Management: B.S., United States Air Force Academy; M.S., U.C.L.A.

Ann Bolton-Brownlee, Librarian: B.A., M.A., University of Dayton; M.L.S., University of Southern Mississippi

Andrew Borden, Mathematics: B.S., Fordham University; M.A., Kansas State University; M.S., Ohio State University

John D. Boswell, History: B.A., M.A., University of Texas at Austin

Ruth A. Bower, Mathematics: B.S., M.Ed., Southwest Texas State University

Sheryl Lynn Braswell, English: B.A., M.A., University of Southern Mississippi

Patrick T. Bray, Foreign Languages: B.A., Seminary of St. Pius X; M.A., University of Nebraska-Lincoln

Louis Broussard, Foreign Languages: B.A., Our Lady of the Lake University; M.A., University of Texas at San Antonio

William Buhrman, English: B.A., M.A., University of Texas at San Antonio

Dave R. Bruett, History: B.A., University of Nevada; M.A., Louisiana State University

Tammy Burggaaf, English as a Second Language: B.B.A., M.A., University of Texas at San Antonio

Robert E. Burke, History: B.A., M.A., St. Mary's University

William Burke, Computer Science and Computer Information Systems: B.A., M.S., Corpus Christi State University

Charles Burmeister, Computer Information Systems: B.A, M.A., Baylor University; Ph.D., University of Texas at Austin

Floyde Burnside, Business Administration: B.B.A., Texas A & I University; M.S., Texas Tech University

Maria Bustos, Teacher Education: B.S., Our Lady of the Lake University

Juan A. Cadena, Mathematics: B.S., Southwest Texas State University; M.S., University of Texas at San Antonio

Terry P. Caesar, English: B.A., University of Redlands; Ph.D., University of Washington

Warren J. Camarano, Management: B.S., Trinity University; M.S., Central Michigan University

Miriam Campos, Teacher Education: B.A., Our Lady of the Lake University; M.S., Texas A&M University-Kingsville

Richard Francis Carabetta, Turfgrass and Landscape Management: B.L.A., Texas A&M University

Jacinto Jesus Cardona, English: B.S., Texas A&I University at Kingsville

Peter Carey, Music: B.A., St. Mary's University; M.A., Southwest Texas State University

Thomas Carmichael, Aviation: B.A., Texas Lutheran College

Virginia (Ginger) Hall Carnes, Communications: B.S.J., M.S., Ohio University

Jason S. Caro, Government: B.A., University of Texas at San Antonio; M.A., University of California in Los Angeles; M.A., University of Chicago; Ph.D., University of California in Los Angeles

Sharon Carson, Administrative Computer Technology: B.B.A., Our Lady of Lake University; M.B.A., Southwest Texas State University

Ilda A. Casanova, Administrative Computer Technology: B.S.O.E., Wayland Baptist University

Cynthia Castillo, Music: B.A., University of Texas at Austin; M.M., Southwest Texas State University

Lowell Castleberry, Business Administration and Management: B.B.A., M.B.A., East Texas State University

Martha M. Cave, Biology: B.S., University of Corpus Christi; M.S., University of Texas at San Antonio

Richard W. Cavin, Computer Information Systems: B.S., University of Texas at Arlington; M.S., Southern Methodist University

Ernest Celaya, Criminal Justice: B.A., M.A., Southwest Texas State University

Robert Chaney, English: B.A., M.A., University of Texas at Austin

Frank R. Charles, History: B.A., M.A., University of Texas at San Antonio

Doroteo Chavarria, Mathematics: B.S.E.E., University of Texas at San Antonio; M.S., Trinity University

Ivan K. Chestnutt, Computer Information Systems: B.S., Angelo State University; M.A., Webster University

Roy C. Christian, History: B.S., M.A., West Texas A&M University

Joan Church, Mathematics: B.A., St. Mary's University; M.S., Texas A&M University-Kingsville

John E. Clifford, Speech: B.S.S., John Carroll University; M.A., St. Louis University; Ph.D., Michigan State University

Francesca M. Coley, English: B.A., M.A., Incarnate Word College; Ph.D., Oklahoma State University

Antonio Confresi, Environmental Technologies: A.A.S., Community College of the Air Force (CCAF); B.S., Southern Illinois University

Miguel R. Cortinas, Art: B.F.A., Texas A&I University; M.F.A., University of Texas at San Antonio

Joan Coughlin, Psychology: B.S., M.S., Portland State University; Psy.D., California Coast University

Paul William Cox, Turfgrass and Landscape Management: B.S., M.S., Stephen F. Austin State University

Kimberly A. Crawford, Biology: B.S., University of Texas at Austin; B.S., Texas A&M University - College Station; M.S., University of Texas Health Science Center; M.S., Texas A&M University - College Station

Nancy Crockett, History: B.A., University of St. Thomas at Houston; M.A., University of Texas at San Antonio; M.Ed., Trinity University

Susan Csaszar, Teacher Education: B.A., M.A., South Connecticut State University

Nan B. Cuba, English: B.S., University of Texas; M.F.A., Warren Wilson College

Bob Cullins, English: B.A., M.A., University of Texas at Austin

Karin C. Dalton, English: B.A., University of Texas at Austin; M.A., Texas A&I University

Jacqueline Dansby, Psychology: B.A., Incarnate Word College; M.A., University of Texas at San Antonio; Ph.D., Texas A&M University

Patrick M. Darcey, Foreign Languages: B.A., Trinity University, M.A., University of Texas at San Antonio

William F. Daugherty, Logistics Management: B.S., United States Military Academy; M.M.A. & S., Army Command and General Staff College; M.A., Middlebury College

Jeanette Davidson, Administrative Computer Technology: B.A.A.S., M.S., Southwest Texas State University

Rudy Davila, Mathematics: B.A., St. Mary's University

Roland DeLeon, Mathematics: B.S., University of Texas at San Antonio

Amie DeLeon, Teacher Education: B.A., University of the Incarnate Word; M.S., Texas A&M University-Kingsville

Gilbert Dominguez, Government: B.A., M.Ed., Southwest Texas State University

John Donnellan, Mathematics: B.S., Northrop Aeronautical Institute; M.S., United States Air Force Institute of Technology

Theresa Dougherty, Sociology and Social Work: B.A., M.S., Our Lady of the Lake University

Sheri Dye, Business Administration: B.A., Muhlenberg College; M.A., M.B.A., J.D., St. Mary's University

Adele Edisen, Biology & Chemistry: Ph.B., Ph.D., University of Chicago

Pat Edwards, Teacher Education: B.A., M.Ed., University of Houston

Loretta A. Ehrlund, Veterinary Technology: B.S., D.V.M., Texas A&M University -College Station

Olivia Eisenhauer, Psychology: B.A., University of Texas at Austin; M.A., St. Mary's University

John G. Elia, Logistics Management: A.A., B.S., University of Maryland; M.S., Texas A&M University

Janice H. Emery, Administrative Computer Technology: B.S., Southwest Texas State University

Thomas Enright, Geography: B.S., M.A., Chicago State University

Laura Erxleben, Teacher Education: B.A., University of West Florida; M.Ed., Southwest Texas State University

Joan B. Falkenburg, Environmental Technologies: A.S., San Antonio College; B.S., St. Mary's University; M.S., University of Texas at San Antonio

Edward O. Fallis, Criminal Justice: B.A., University of Louisville; J.D., St. Mary's University

Jean Elizabeth Farmer, Reading: B.A., M.A., University of Texas at San Antonio

Donald G. Farris, Aviation Technology: B.S., Louisiana Tech University; M.S., Embry-Riddle University

Elizabeth J. Fields, Mathematics: B.A., M.Ed., Southwest Texas State University

James L. Fischer, History: B.A., St. Mary's University; M.A., University of Texas at San Antonio

Amelia Flores, Foreign Languages: B.A., Trinity University; M.Ed., Stephen F. Austin State University

Enrique Flores, Engineering: B.S., M.E., Texas A&M University

Ruben Michael Flores, Government: B.A., University of Texas at San Antonio; M.S., Illinois State University; Ph.D., University of Texas at Austin

Jay T. Fort, Music: B.M., M.M., Southwest Texas State University

Rita S. Foudray, Librarian: B.A., Southern Methodist University; M.L.S., North Texas State Univeristy; Ph.D., University of North Texas

Margarita Fresquez, Mathematics: B.S., University of Texas at El Paso; M.S., New Mexico State University

Eva Fromme, Mathematics: B.S.Ed., Georgia Southern College; M.Ed., Southwest Texas State University

Gerry Frost, Art: B.F.A., Trinity University; M.F.A., Cranbrook Academy of Art

John Fulton, English: B.A., Washington State Universtiy; M.A., University of Washington

Mamdouh Gabriel, Mathematics: B.S., Alexandria University; M.A., PolyTechnic Institute of New York

Valentine Gallegos, Mathematics: B.S., St. Mary's University; M.S., University of Texas at San Antonio

Clark H. Galloway II, Computer Science and Computer Information Technology: A.A.S., Community College of the Air Force; B.S., University of Maryland; B.A., Wilmington College; M.A., Webster University

Mario Gamboa, Biology, B.A., Incarnate Word College; M.S., Texas A & M University

Marion Gamez, Mathematics: B.A., University of Texas at Austin; M.Ed.,
Southwest Texas State University

Leonor M. Garcia, Mathematics: B.S., Texas A&I University

Mary J. Garcia, English: B.A. Our Lady of the Lake University

Samuel A. Garcia, Chemistry: B.S., Trinity University; M.S., University of North Texas; J.D., St. Mary's Uinversity School of Law

Esther Garza, Interdisciplinary Studies, Teacher Education: B.S., Texas A&M University-College Station; M.A., University of Texas at San Antonio

Frances Garza, Administrative Computer Technology: B.A.A.S., M.S.I.S., Southwest Texas State University

Gloria Garza, History: B.S., Texas A & I University; M.A., St. Mary's University

Raul Garza, Jr., Foreign Languages: B.S., A&I at Laredo; M.A., Ph.D., University of Arizona

Edward Lee George, Mathematics: B.S., U.S. Military Academy; M.P.A., Golden Gate University; M.S., University of Texas at San Antonio

Nancy E. Gerhard, Teacher Education: B.A., M.A., University of Texas at Austin; M.Ed., Trinity University; Ph.D., University of Texas at Austin

Facilities staff members, who are key to providing a safe and beautiful campus, celebrate the start of another campus building.

Rahmatollah Ghana, Chemistry: B.S., University of Teacher Training; M.S., University of Texas at San Antonio

Nicholas J. Giardino, Biology: B.S., M.S., Sc.D., University of Pittsburg

Loran William Gierhart, Mathematics: B.S., U.S. Naval Academy; M.S., University of Michigan

Colby Glass, Philosophy: B.A., University of North Texas; M.L.I.S., University of Texas at Austin

Cecil A. Glover, Criminal Justice: B.S., Sam Houston State University; M.S., Southwest Texas State University

John E. Godoy, Music: B.M., Boston Conservatory; M.M., Julliard School

Michael Goeken, Business Administration: B.B.A., M.B.A., M.S., Texas A & M University

Louis P. Goldsmith, Mathematics: B.S., University of New York; M.S., Shenandoah College

Adalberto Gomez, Jr., Music: B.M., University of Texas at San Antonio; M.M., Southwest Texas State University

Alfred Gonzales, Psychology: B.A., M.A., St. Mary's University

Georgianna Gould, Biology: B.S., Cornell University; M.S., Texas A&M University; Ph.D., Syracuse University

Julie E. Groesch, English: B.A., St. Mary's University; M.A., Our Lady of the Lake University

Daniel L. Guerrero, Environmental Technologies: B.A., St. Mary's University; M.S., University of Texas at San Antonio

Dana L. Gunter, Avation Technology: B.S., University of Texas at Austin; M.S., Troy State University

Edwin Gunter, Avation Technology: B.S., United States Air Force Academy; M.S., Vanderbilt University (George Peabody College)

Sara Diana Guthrie, Librarian: B.A., Tarleton State University; M.L.I.S., University of Texas at Austin

Ana "Cha" Guzmán, Interdisciplinary Studies, Sociology, Teacher Education: B.S., Stout State University; M.A., Texas Southern University; Ed.D., University of Houston

William N. Haas, Environmental Technologies: B.S., Ohio State University; M.S., University of Texas at San Antonio

Rex Haddix, Computer Science& Computer Information Systems: B.S. Chapman College; M.S., Golden Gate University; M.S., Air Force Institute of Technology

Jenifer M. Hamilton, English: B.A., M.A., University of Texas at San Antonio

Susan Hammond, English: B.S., East Texas State University; M.L.M., Georgia State University

Melvin Harding, Computer Information Systems: B.A., M.A., Southwest Texas State University

Sidney Harle, Criminal Justice: B.A., University of Texas at Austin; J.D., St. Mary's University

Victoria Harmon, Computer Information Systems and Computer Science: M.A., Webster University

Elizabeth K. Haskins, Biology: B.S., New Mexico State University; M.S.T., University of Florida

Sheila Sanchez Hatch, English: B.A., University of Texas at San Antonio; M.A., Vermont College

Shaun Hedgepeth, Interdisciplinary Studies, Sociology: B.A., M.A., Our Lady of the Lake University

Rene Hefner, Geology: B.S., M.S., University of Texas at San Antonio

Beatrice Hernandez, Business Administration: B.A., Trinity University; M.B.A., St. Mary's University

Hector Hernandez, Biology: B.S., Texas A&M University; M.S., University of Texas at San Antonio

Olga Hernandez, Biology: B.A., Incarnate Word College; M.S., Oklahoma State University

Robert Hernandez, Teacher Education: B.A., St. Mary's Universit; M.S., Texas A&M University-Kingsville

Ira J. Hessel, Chemistry: B.S., City College New York; Ph.D., University of Texas at Austin

Susan Hilton, Social Work: B.A., M.A., Our Lady of the Lake University

Donna Hines, Administrative Computer Technology: B.V.E., M.A.V.E., California State University at San Bernardino; Ed.D., East Texas State University

Robert Hines, Interdisciplinary Studies: B.S., M.S., Illinois State University

Karen Hogensen, Art: B.S., University of Oregon; M.F.A., University of Texas at San Antonio

Betty Hogan, English: B.A., Trinity University; M.A., Texas A & I University

Patricia A. Holmes, Physical Education: B.S.E., Missouri Southern State; M.S., Pittsburg State University; Ph.D., Texas Women's University

SallyAnne Holtz, English and Communications: B.S., University of Rio Grande; M.S., Ohio University

Maike Hudson, English and Foreign Languages: M.A., Universitat Osnabruck/ Germany

Jean Hughes, Reading: B.A., M.S., Baylor University

Karen Hugie, Sociology: B.A., University of Texas at San Antonio; M.A., Incarnate Word College

Willis J. Humiston, English: B.A., St. Anselm's College; M.S., Webster University

James R. Hunt, Chemistry: B.S., University of Oregon; M.S., University of Washington

Richard George Hurd, Turfgrass and Landscape Management: B.A., University of Texas at Austin; M.A., Texas A&M University

Alva Ibarra, Physical Education: B.S.Ed., M.Ed., Southwest Texas State University

Salah Ibrahim, Mathematics: B.S., University of Nebraska

Andrew W. Ivins, Business Administration: B.B.A., University of Texas at Austin; J.D., St. Mary's University

Dominic Iyorlu, English: B.A., M.Ed., Southeastern Oklahoma State University

Elsy D. Jackson, Librarian: B.S., Universidad Nacional Autonoma de Honduras; M.L.I.S., University of Texas at Austin; Ph.D., Universidad Nacional Autonoma de Honduras

Barbara James, Management: B.A., Our Lady of the Lake University; M.A., Webster University

Richard Jenkins, English: B.A., Texas A & M University; M.A., University of Texas at San Antonio

David L. Johnson, Physical Education: B.S., Central Michigan University; M.S., University of Michigan

John G. Johnson, Government and History: B.A., University of Texas at San Antonio; M.A., City University of New York

Noel L. Johnson-Hodge, English: B.A., M.A., St. Mary's University

Shamar Johnson, Teacher Education, Reading: B.A., Our Lady of the Lake University; M.Ed., Concordia University-Austin

George Jones, Management: B.A.A.S., Southwest Texas State University; M.A., Webster University

Rhonda Jean Jones, English: B.A., Brigham Young University; M.A., University of Texas at San Antonio

Bruce Judisch, Computer Science & Computer Information Systems: B.A., University of Maryland; M.A., Webster University

Susan H. Kaufman, Art: B.A., Emory University; M.A., Vanderbilt University; Ph.D., University of Georgia

Joseph E. Kaufmann, History: B.S., University of Miami; M.A., University of Texas at San Antonio

Joseph A. Kazenas, Computer Information Systems: B.S., Boston College; M.B.A., North Eastern University

Marilyn A. Keene, English: B.A., M.A., Our Lady of the Lake University

Irene Keller, English and Education: B.A., M.A., University of Texas at San Antonio; M.A., Our Lady of the Lake University

Angelina Kiser, Business: B.S., M.B.A., Southwest Texas State University

Suja Kochat, Physics: B.S., M.S., University of Kerala; M.S., Ph.D., University at Baroda

Robert Laird, History: B.A., M.A., St. Mary's University

Richard Lares, Administrative Computer Technology: B.A., Our Lady of the Lake University

Thomas Lauffer, Mathematics: B.S., University of Texas at San Antonio

Gail Naomi Lay, English: B.A., Hardin-Simmons University; M.A., Texas A&M University-Kingsville

John Lee, English: B.F.A., Pittsburgh State University; M.A., St. Mary's University; M.S., Ed.D., Oklahoma State University

Edna Legaspy, Business Administration: B.B.A., M.A.C.C., University of Texas at El Paso

Stanley Lejarzar, Criminal Justice: A.A.S., San Antonio College; B.S., M.A., Southwest Texas State University

Mark Long, History and Interdisciplinary Studies: B.A., M.A., Baylor University

Felipa Lopez, Administrative Computer Technology: B.A., M.B.A., Our Lady of the Lake Unviersity

Shanna M. Lyssy, English: B.A., Incarnate Word College; M.A. University of Texas at San Antonio

Nathan Scott McClanahan, English and Reading: B.A., North Central College; M.A., St. Mary's University

Maureen McConnell, Biology: B.A., Saint Edward's University; M.S., University of Texas at San Antonio

Brian McDaniel, Computer Science & Computer Information Systems: A.A., State Fair Community College; A.S., Bellville Area College; B.S., Southern Illinois University; M.S., Oklahoma City University

Earl McDonald, English: B.A., St. Mary's University; M.A., Our Lady of the Lake University

Joan McMillian, Foreign Languages: B.A., Southwest Texas State University; M.A., University of Texas at San Antonio

Robert McWhorter, Business Administration: B.B.A., University of Texas at Austin; M.B.A., Southwest Texas State University

Billy G. McWilliams, Mathematics: B.S., Paul Quinn College; M.S., St. Mary's University

Willard D. Machen, Economics: B.B.A., M.A., Texas Tech University

Carlos Madrid Jr., Economics: B.B.A., M.A., St. Mary's University

Kenneth Jay Magee, History and Interdisciplinary Studies: B.A., Miami University; M.A., University of Houston

Lupe Magee, Teacher Education: B.A., University of Texas at San Antonio

Ricardo Maldonado, Mathematics: B.S., Texas A&I University; M.S., St. Mary's University

Courtney Martin, English: B.A., Incarnate Word College; M.F.A., California Institute of the Arts

Luis Martinez, Foreign Languages: B.A, Pan American University; M.A., University of Texas-Pan American

Gerardo A. Mechler, Reading: B.A., St. Mary's University; M.Ed., Pan American University

Lisa Mellinger, Art: B.A., Washington State University; M.F.A., University of Texas at San Antonio

Marlo D. Mellum, Aviation Technology: B.S., United States Air Force Academy

Luis Mercado, Communications: B.A., M.A., Incarnate Word College

Philip Meurer, Mathematics: B.S., United States Naval Academy; M.S., University of Rochester

Catherine L. Meurin, Biology: B.S., University of Texas at San Antonio; M.S., University of Texas Health Science Center at San Antonio

Eddie J. Miles, Government: B.S., North Carolina A&T State University; M.A, M.S., Oklahoma State University; M.S., Troy State University

Maryellen T. Mills, English: B.A., Campbell College; M.Ed., East Carolina University; M.A., George Mason University

Christine Moczygemba, Teacher Education: B.S., Ball State University; M.Ed., University of Houston

Barbara K. Moerchen, Reading: B.S., Stephen F. Austin State University; M.S., Ph.D., Ohio State University

Stephen Mokry, Management/Engineering: B.S., University of Texas at Austin; M.A., Webster University

Jose Molinda, Mathematics: B.S., Texas A&M University

Charles F. Monroe Jr., Government: B.S., M.Ed., Southwest Texas State University

Michelle Monseau, Art: B.F.A., Youngstown State University; M.F.A., University of Texas at San Antonio

Diana L. Montejano, English: B.A., Incarnate Word College; M.A., University of Texas at El Paso

Lucia Montemayor, Logistics Management: B.A., St. Mary's University; M.B.A., Texas A&M International University

Sarah Montez, Biology: B.A., Our Lady of the Lake University; M.A., Incarnate Word College

Samuel W. Morphew, Physics: B.S., Lamar University; M.S., University of North Texas; Ph.D., Auburn University

Nancy Mortensen, English: B.S., Southwest Texas State University; M.A., St. Mary's University

Peggy L. Mott, Sociology and Interdisciplinary Studies: B.A.A.S., M.A.T., Southwest Texas State University

Ellis K. Mullins, English: A.A., San Antonio College; B.A., M.A., St Mary's University;

Kevin Murray, Sociology: B.A., University of Texas at Austin; M.Ed., Southwest Texas State University

George D. Nash, English: B.A., St. Mary's University; M.A., University of Texas at Austin

Anthony C. Neidhart, Government: B.A., St. Mary's University; M.A., University of Oklahoma; Ph.D., University of Texas at Austin

Peggy Neal, English for Speakers of Other Languages: B.A., Oklahoma State Universtiy; M.A., Ph.D., University of Texas at San Antonio

Juan Nieves, Administrative Computer Technology: B.S.O.E., Wayland Baptist University

Connie B. Nixon, Biology: B.S., University of Texas at San Antonio; M.S. University of Texas Health Science Center at San Antonio

Kenneth Neumann, English: B.A., Texas Lutheran University; M.A., Southwest Texas State University

Guadalupe Nunez, Physical Education: B.S., M.Ed., University of Texas at San Antonio

Michael O'Brien, Management: B.C.S., Minot State University; M.A., Webster University

Rhonda O'Cana, Counseling: B.A., M.A., University of Texas at San Antonio

Todd O'Neill, Communications: B.A., William Paterson University; M.A., Brooklyn University

David Ochoa, English: B.S., Southwest Texas State University; M.A., University of Texas at San Antonio

Steve Ochoa, Mathematics: B.A., University of Texas at San Antonio; M.S., Incarnate Word College

Donna Ostaszewski, Computer Science & Computer Information Systems: M.A., Webster University

Isabel Pacheco, Teacher Education: B.A., Our Lady of the Lake University; M.S., Texas A&M University-Kingsville

Rosita Palacios, Reading: B.A., M.A., University of the Incarnate Word

Beverley S. Pecoraro, History: B.A., M.A., University of Texas at San Antonio

Luis R. Pena, Art: B.F.A., Texas A&M University; M.F.A., University of Texas at San Antonio

Edith Pequeno, Librarian: B.C.A., Dallas Baptist University; M.A., University of Texas-Arlington; M.S., University of North Texas

Donna M. Perese, English: B.A., M.A., University of the Incarnate Word

Mary Ester Perez, Administrative Computer Technology: B.A.A.S., Texas A&M University-Kingsville

Oscar Perez, Foreign Languages: B.A., M.A., University of Texas at San Antonio

Ronald G. Perez, Counseling: B.A., M.A., University of Texas at San Antonio

Velma Perez-Perry, Reading: B.S., M.S., Texas A&I University

Carmen R. Peterson, Mathematics: B.A., M.Ed., Our Lady of the Lake University

Katherine Pittman, Teacher Education: B.S., Southwest Texas State University; M.S., Texas A&M University-Kingsville

Kathleen Pittman, Art: B.A., University of North Carolina- Charlotte; M.S., Texas A&M University-Kingsville

Tony Lee Poncik, Turfgrass and Landscape Management: B.S., Texas A&M University

Richard J. Popps, Logistics Management: B.A., St. Edwards University

Jesus Posadas, English: B.A., St. Mary's University; M.A., Our Lady of the Lake University

Linda Pritchett, English: B.A., St. Mary's University; M.A., University of Texas at San Antonio

David Pryor, English: B.A., Loyola University; M.A., St. Mary's University

Lynne L. Puckett, Music: B.M., M.A., Trinity University

John L. Quinlan, Criminal Justice: B.B.A., L.L.B., J.D., St. Mary’s University

Tomas Ramos, Speech: B.A., M.A., University of Pan American

Janet Rangel, Counseling/Psychology: B.S., M.A., University of Houston-Victoria

Masoud Rasti, Logistics Management: A.A., St. Philip's College; B.S., University of Texas at Austin; M.A., Webster University

Erin P. Reat, Biology: B.S., Texas Tech University; M.S., Purdue University

Mary Eloise Reigrut, Administrative Computer Technology: B.S., Our Lady of the Lake University; M.S., Texas A&M University-Kingsville

Jacqueline L. Reynolds, English: B.A., M.A., University of Texas at San Antonio

Robert C. Rice, Physical Education: B.S., Ohio State University; M.A., Webster College

Yvonne E. Richardson, Reading: B.A., University of Houston; M.A., University of Texas at San Antonio

Deborah Roberts, Physical Education: B.S., University of Iowa; M.Ed., Texas Tech University

Karen L. Robinson, Administrative Computer Technology: B.B.A., University of Texas at San Antonio

Samuel Kreider Rock, Psychology: B.A., Washington & Jefferson College; M.S., Pennsylvania State University; Ph.D., University Park

Margarito Rodriguez, Reading: B.A., Texas A&I University; M.A., University of Texas at San Antonio

Sharon Rodriguez, Government: B.A., M.A., St Mary's University

Felix Rohler, Mathematics: B.A., M.A., Southwest Texas State University

Richard Rose, Interdisciplinary Studies: B.A., Marquette University; M.A., University of Michigan; Ph.D., Graduate Theological Union

Darcy E. Rudnick, English: B.A., University of Rochester; M.S., Central Connecticut State University

Dolores Ruffin, Government: B.A.S., Our Lady of the Lake University, M.A., St. Mary's University

Michael Russell, Economics: B.S., St. Louis University; M.A., University of Missouri

David Rutschman-Byler, English: B.A., University of Illinois; M.F.A., Warren Wilson College

Dennis P. Ryther, Physical Education: B.A., Olivet University

Alfred Saldana Jr., Mathematics: B.A., St. Mary's University

Alice G. Sanborn, Physical Education: B.A., M.A., University of Denver

Mario J. Santizo, Foreign Languages: B.A., M.A., Ph.D., St. Louis University

John Sarles, History: B.S., State University College of Brockport; M.A., Chapman College

Laura D. Schultz, English for Speakers of Other Languages: B.F.A., University of Texas at Austin; M.F.A., John F. Kennedy University

Gerald A. Schwab, Philosophy: B.A., Oklahoma City University; M.A., Northwestern University

Alexander R. Segura, English: B.A., St. Mary's University; M.A., University of Texas at San Antonio

Naida Seguira, Teacher Education: B.S., University of the Incarnate Word; M.A., St. Mary's University

James Gary Shelman, Business: B.A.S., Electronic Management, Troy State University; M.B.A., Wayland Baptist University

W.L. Michael Sheneman, Chemistry: B.S., M.S., Southwest Texas State Teachers College

Stanley Siaw, Business: B.S., M.B.A., Roosevelt University

Linda Silva, English for Speakers of Other Languages: B.A., University of Alberta; M.S., Georgia State University

Juan Silva, Mathematics: B.A., St. Mary's University; M.A., University of Texas at San Antonio

Karen Simon, Teacher Education: B.A., University of Texas at San Antonio

Carol Siskovic, English: B.A., Millsaps College; M.A., University of Mississippi

Jack Skinner, Aviation Technology: B.S., University of Colorado; M.B.A., Xavier University

Suzanne Skinner, Speech: B.S., M.A., University of Texas at Austin

Ronnie M. Slack, Government: B.S., Southwest Texas State University; M.S., St. Mary's University

Jane Ann Slater, Chemistry: B.A., Our Lady of the Lake University; Ph.D., University of Colorado

Elroy Smith, Mathematics: B.A., Huston-Tillotson College; M.Ed., Prairie View A&M University

Mary McGinty Smith, Reading: B.A., St Mary's University; M.A., Incarnate Word College

Thomas N. Smith, Environmental Technologies: B.A., M.S., University of Texas at Dallas

Lea E. Snapp, English: B.S., University of Corpus Christi; M.A., University of Texas at San Antonio; M.A., Northern Arizona University

Jeffrey W. Sorrell, Biology: B.S., M.S., University of Texas at San Antonio

Chaisleigh Southworth, Teacher Education: B.Ed., Christian Heritage College; M.Ed., University of Southern Queensland

John A. Stamatakos, Geology: B.A., Franklin and Marshall College; M.S., Ph.D., Lehigh University

Dondee Steves, English: B.A., University of Texas at Austin; M.A., University of Texas at San Antonio

Margaret Stovall, Foreign Languages: B.A., Texas Woman's University; M.A., University of Arizona

David Sutcliffe, English for Speakers of Other Languages: B.A., University of Redlands; M.A., University of Texas at Austin

Ruth H. Swan, Librarian: B.F.A., Northern Illinois University; M.L.I.S., Louisiana State University

Stephen Swellander, English: B.A., University of Texas at Austin; M.A., Trinity University

Rudy Tamez, Mathematics: B.S., St. Mary's University

Alfred Tavera, Criminal Justice: B.A., University of Notre Dame; J.D., University of Texas at Austin

Richard Taverna, Chemistry: B.A., San Francisco State College; Ph.D., University of Virginia

Allene R. Taylor, Reading: B.S., Texas Woman's University; M.Ed., Southwest Texas State University

Steven Theode, Business Administration: B.B.A., M.B.A., Southwest Texas State University

Lynda Ann Thompson, English: B.A., Oklahoma Baptist University; M.A., College of William & Mary

Sally Ann Thornton, Mathematics: B.S., M.A., Southwest Texas State University

Cynthia Toledo, Criminal Justice: B.A., Our Lady of the Lake University; M.S., M.P.A., Chaminade University

Terral Toma, Philosophy: B.A., Brown University; M.A., Ph.D., Northwestern University

Paul R. Toro, History: B.S., United States Air Force Academy; M.A., Vermont College of Norwich University

Katherine L. Totzke, English for Speakers of Other Languages and Reading: B.A., M.A., Michigan State University

Hector V. Torres, Mathematics: B.S., University of Texas at Austin; M.S., University of Texas at San Antonio

Walter Mae Torres, Management: B.A., Clark College; M.A., Webster University

Lorene Toscano, Mathematics: A.S., Palo Alto College; B.S., M.S., Texas A & M University-Kingsville

Michael Townsend, Mathematics: B.A.A.S., M.Ed., Southwest Texas State University

Walter R. Townsend, Computer Information Systems: M.A., Chaminade University

Diane Tracy, Administrative Computer Technology: B.B.A., Texas Tech University; M.A., University of the Incarnate Word

Harry Tracy, Biology: B.S., University of Southwestern Louisiana; M.S., University of New Mexico; Ph.D., University of Texas at San Antonio

Richard Travis, Mathematics: B.B.A., University of Texas at Austin; M.S., Texas A&M University

Loreto G. Trevino, Government: B.A., University of Texas at Pan American; M.A., St. Mary's University

Priscilla M. Truesdell, Computer Science & Computer Information Systems: M.A., Webster University

Sharon K. Turner, Biology: B.S., University of Houston; M.S., Oklahoma State University

Peter Van Dusen, Philosophy: B.S., U.S. Naval Academy; M.A., California State University, Long Beach

Eustolio J. Vega, Computer Information Systems: B.S., University of Texas at San Antonio; M.A., Webster University

Todd Velasco, History: B.A., M.A., Western Illinois University

Evangeline Velez-Cobb, Foreign Languages: B.A., St. Mary's University; M.A., University of Texas at San Antonio

Usha Venkat, Computer Science & Computer Information Systems: M.A., Webster University

Ted Villalon, History: B.A., M.A., St. Mary's University

Andrew A. Villarreal, Art: B.A., Corpus Christi State University; M.F.A., Arizona State University

Lisa Villarreal, Criminal Justice: B.A., University of Southern Colorado; M.S., Indiana State University

Judith L. Viviano, Economics: B.A., Louisiana State University; M.B.A., Midwestern University

Edward Wagner, Business: B.A., M.B.A., St. Mary's University

Becky M. Walker, Music: B.M., M.M., University of Texas at San Antonio

Bobbie Walker, English: B.A., Baylor University, M.A., Colorado University

Cynthia Wallace, Communications: B.A., University of Texas at San Antonio; M.A., Incarnate Word College

Benjamin Waller, III, Mathematics: B.S., U.S. Military Academy; M.A., Vanderbilt University

Mark A. Wanke, Turfgrass and Landscape Management: A.A.S., Nashville Auto Diesel College

Sarah Wasmund, Kinesiology: B.A., Texas Lutheran University; M.Ed., Southwest Texas State University

William M. Watts, History: B.A., M.A., Texas Tech University

Christopher A. Weigand, Philosophy: B.A., Trinity University; M.A., University of Minnesota

Billy Joe Weiss, American Sign Language: B.A., Gallaudet University

Mary Jo Welch, English: B.A., College of New Rochelle; M.A., St. Louis University; M.A., Providence College; M.A., St. Mary's University

John R. Welch, Physical Education: B.S., West Virginia University; M.S., Our Lady of the Lake University; M.S., Marshall University; Ph.D., Texas A&M University

Dawne R. Wenzel, English for Speakers of Other Languages: B.A., University of Illinois; M.A., University of San Francisco

Paul Wenzlaff, History: B.A., M.A., University of Texas at San Antonio

Andrea White, Teacher Education: B.A., M.A., University of Texas at San Antonio

Claudia M. Williams, Communications: B.A., University of Houston; M.A., St. Mary's University

Robert Williams, Chemistry: B.S., Gettysburg College; Ph.D., Emory University

Sheila K. Williams, English for Speakers of Other Languages: B.A., California State University; M.A., Monterey Institute of International Studies

Elmyra R. Willis, Government: B.S., M.A., Texas Woman's University

Paul W. Wilson, Government: B.A., Loyola University; M.A., University of Arizona

Vincent Wisely, Criminal Justice: University of Texas at Arlington; J.D., Texas Wesleyan University

Mark Austin Wood, Business Administration: B.B.A., University of Michigan; M.B.A., Michigan State University

Chengcheng (Charles) Wu, Librarian: M.A., University of Texas at Austin; M.A., Shanghai Teachers University

John P. Ybanez, Government: B.A., Texas A&I University; M.A., St. Mary's University

Mary Joyce Young, English: B.A., M.A., Southwest Texas State University

Tara Zarate, English: B.F.A., University of Texas at Austin; M.A., St. Mary's University

14 Index

A

B

C

D

E

F

G

H

I

K

L

M

N

O

P

Q

R

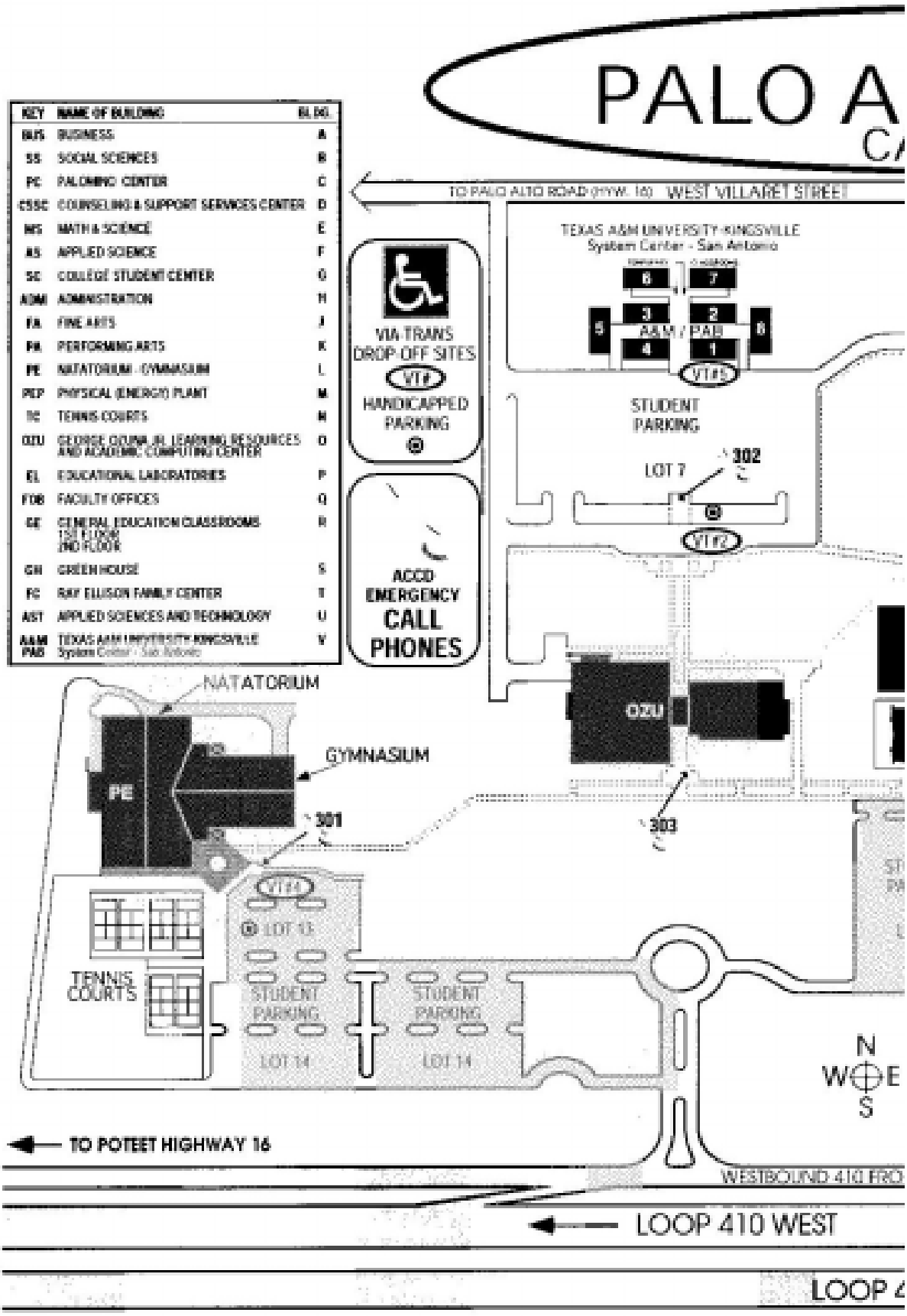
S

T

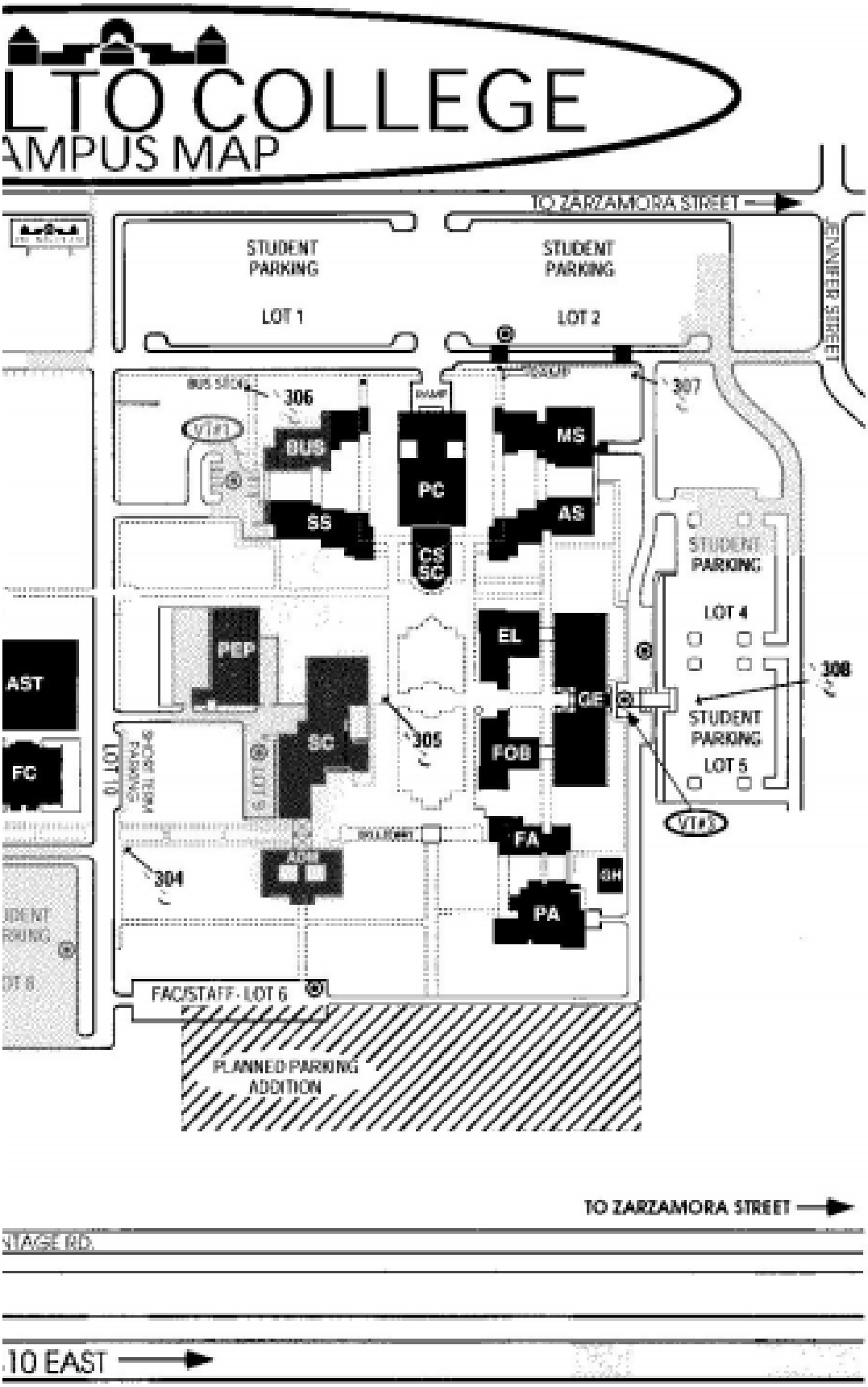
V

W

PALO ALTO COLLEGE
PALOMINOS
San Antonio



KEY	NAME OF BUILDING	BLDG.
BUS	BUSINESS	A
SS	SOCIAL SCIENCES	B
PC	PALOMINO CENTER	C
CSSC	COUNSELING & SUPPORT SERVICES CENTER	D
MS	MATH & SCIENCE	E
AS	APPLIED SCIENCE	F
SC	COLLEGE STUDENT CENTER	G
ADM	ADMINISTRATION	H
FA	FINE ARTS	J
PA	PERFORMING ARTS	K
PE	NATATORIUM - GYMNASIUM	L
PEP	PHYSICAL (ENERGY) PLANT	M
TC	TENNIS COURTS	N
O2U	GEORGE COUNA JR. LEARNING RESOURCES AND ACADEMIC COMPUTING CENTER	O
EL	EDUCATIONAL LABORATORIES	P
FOB	FACULTY OFFICES	Q
GE	GENERAL EDUCATION CLASSROOMS 1ST FLOOR 2ND FLOOR	R
GH	GREEN HOUSE	S
RC	RAY ELLISON FAMILY CENTER	T
AST	APPLIED SCIENCES AND TECHNOLOGY	U
A&M PAB	TEXAS A&M UNIVERSITY-KINGSVILLE System Center - San Antonio	V


LTO COLLEGE
AMPUS MAP
TO ZARZAMORA STREET
STUDENT PARKING
LOT 1
STUDENT PARKING
LOT 2
JENNIFER STREET
306
307
BUS
PC
MS
SS
AS
CS
SC
STUDENT PARKING
LOT 4
PEP
EL
308
AST
FC
SC
305
FOB
GE
STUDENT PARKING
LOT 5
LOT 10
LOT 9
FA
304
SH
PA
FAC/STAFF - LOT 6
PLANNED PARKING ADDITION
TO ZARZAMORA STREET
STAGE RD.
10 EAST

16 Helpful Telephone Numbers

PALO ALTO COLLEGE
1400 W. Villaret Blvd.
San Antonio, Texas 78224-2499
(210 Area Code)

General Information 921-5000

Main Fax Number 921-5005

Admissions and Records 921-5270
Arts, Humanities and Social Sciences/Dean 921-5543
Assessment Center 921-5251
Bookstore 921-5230
Career Services 921-5298
Continuing Education/Customized Training 921-5330
Counseling 921-5280
disABILITY Services 921-5287
Distance Education 921-5494
Early Alert/Early Intervention 921-5397
Evening/Weekend Operations 921-5306
Extended Education/Off-Campus Classes 921-5494
Health Center 921-5220
Institutional Advancement and Public Affairs 921-5269
Institutional Effectiveness and Community Development/Dean 921-5303
International Student Services 921-5242
Learning Resources/Dean 921-5100
Job Placement Services 921-5298
Learning Resources Center/Library 921-5080
Natatorium/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
Texas A&M University-Kingsville System Center-San Antonio 921-5488
Transfer Services 921-5170
Upward Bound 921-5384
Veterans Affairs 921-5315
Welcome Center ..... 921-5465 or 921-5170