Degrees & Certificates
Offered at Palo Alto College

Administrative Computer Technology (AAS)
- General Office Certificate
- Secretarial Assistant Certificate
- Administrative Assistant Certificate
- Business Communications Certificate
- Customer Services Representative Certificate
- Data Entry Technician Certificate
- Skills Upgrade Certificate
- Bill & Account Collector Certificate
- Accounting Payroll Clerk Certificate
- Data Entry Clerk Certificate
- Customer Service Clerk Certificate
- Office Clerk Certificate

Agriculture (AS)
- Anthropology (AA)
- Art (AA)
- Aviation Management (AAS)
- Aviation Security (AAS)
- Professional Pilot (AAS)
- Private Pilot Certificate
- Multi-Engine Pilot Certificate
- Instrument Pilot Certificate
- Commercial Pilot Certificate

Business Administration (AS)
- Business Management (AAS)
- Administration Certificate
- Entrepreneurship Certificate
- Entry-Level Supervision Certificate
- International Business Certificate
- Leadership Certificate
- Marketing Certificate
- Telecomm Technology Certificate

Chemistry (AS)
- Communications (AA)

Computer Information Systems (AS & AAS)
- Personal Computer Skills Certificate
- Network Administration Certificate
- Web Publishing Skills Certificate
- Advanced Web Programming Certificate
- CISCO Certification Preparation Certificate
- Certified Systems Technician Preparation Certificate
- Certified Network Systems Technician Preparation Certificate
- Microsoft® Certified Systems Administrator Certificate
- Information Technology & Security Academy Security Certificate

Computer Science (AS)
- Criminal Justice (AA)
- Dance (AA)
- Digital Art (AA)
- Digital Art Certificate
- Digital Photography Certificate
- Drama (AA)
- Economics (AA)

Education Aide (AAS)
- Engineering Aide Certificate
- Engineering – Civil, Electrical, Mechanical (AS)
- Engineering Technology
- Civil & Construction Engineering Technology (AS)
- Electrical & Electronics Engineering Technology (AS)
- Manufacturing & Mechanical Engineering Technology (AS)

English (AA)
- Environmental Studies (AS)
- Foreign Languages – Spanish, French, German (AA)
- Geology (AS)
- Government (AA)
- Health (AS)
- History (AA)
- Humanities (AA)
- Industrial Automation Technology (AAS)
- Industrial Automation Helper Certificate
- Industrial Automation Associate Certificate
- Industrial Automation Assistant Certificate
- International Relations (AA)

International Studies (AA) & Certificate
- Kinesiology (AA & AS)

- Physical Fitness Specialist Certificates
- Landscape & Horticultural Science (AAS)
- Landscape & Horticultural Science Certificate
- Turf & Landscape Irrigation Certificate
- Basic Nursery & Landscape Operations Certificate
- Liberal Studies (AA)

- Library Technology (AS)

- Library Technician Certificate
- Logistics & Supply Chain Management (AAS)
- Logistics Management Certificate
- Warehouse Management Certificate
- Manufacturing Management Certificate
- Transportation Management Certificate

International Logistics Management Certificate
- Mathematics (AS)
- Mexican-American Studies (AA)

- Music (AA)

- Music Business Certificate
- Conjunto Performance Certificate
- Jazz Performance Certificate
- Mariachi Performance Certificate
- Philosophy (AA)
- Physics (AS)
- Pre-Dentistry (AS)
- Pre-Medicine (AS)
- Pre-Nursing (AS)
- Pre-Pharmacy (AS)
- Pre-Veterinary (AS)
- Psychology (AA)
- Social Work (AA)
- Sociology (AA)

Speech Communication (AA)
- Teaching (AAT)

Turfgrass & Golf Course Management (AAS)
- Turfgrass & Golf Course Management Certificate
- Veterinary Technology (AAS)

Animal Health Assistant Certificate
Palo Alto College, one of the Alamo Community Colleges, 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.

This catalog contains policies, regulations, procedures, and course content effective at the beginning of the Fall Semester 2008. 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 website contains updated information and changes.

The Alamo Community Colleges do 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: Associate Vice Chancellor of Employee Services, 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 Support Services at (210) 486-3020.

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www.accd.edu/pac

Cover photos by Mario Ramirez and Joan Snow. Cover Design by Laura Olson.
Welcome from the President

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

Spurred by a desire to provide higher education to Southside residents in San Antonio, community leaders decided to create a place where everyone would have greater access to 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 Enrollment Center to guide you through admissions, financial aid and registration processes and a new user-friendly online 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 is able to provide you with more individualized attention.

Palo Alto 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 natorium, 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 the “economic engine” for growth and vitality on the Southside.

Welcome!

Dr. Ana M. “Cha” Guzmán  
President
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Fall 2008 Regular Semester
April 21 - Aug. 23 Registration
Aug. 18 Monday. Faculty Convocation. Semester begins.
Aug. 30 - Sept. 1 Saturday-Monday. Labor Day Holiday. Weekend classes will not meet.
Sept. 6 Saturday. Weekend classes begin.
Sept. 10 Wednesday. Census Date.
Nov. 14 Friday. Last day to withdraw.
Nov. 27-30 Thursday-Sunday. Thanksgiving. Weekend classes will not meet.
Dec. 7 Sunday. Last day of classes.
Dec. 14 Sunday. End of Fall Semester.
April 13, 2009 Last day to complete Fall incomplete (I) grades.

Fall Flex Session I 2008 (first eight weeks)
Aug. 30 - Sept. 1 Saturday-Monday. Labor Day Holiday. Weekend classes will not meet.
Sept. 2 Tuesday. Census Date.
Oct. 3 Friday. Last day to withdraw.
Oct. 14 Tuesday. Last day of classes.
Oct. 16 Thursday. End of Fall Flex Session I.
Feb. 13, 2009 Last day to complete Fall Flex Session I incomplete (I) grades.
Fall Flex Session II 2008 (second eight weeks)

Oct. 27  Monday. Census Date.
Nov. 24  Monday. Last day to withdraw.
Nov. 27-30  Thursday-Sunday. Thanksgiving. Weekend classes will not meet.
Dec. 7  Sunday. Last day of classes.
Dec. 14  Sunday. End of Fall Flex Session II.
April 13, 2009  Last day to complete Fall Flex Session II incomplete (I) grades.

Spring 2009 Regular Semester

Nov. 10 - Jan. 10  Spring Registration (Tentative)
Jan. 5  Monday. College opens. Faculty report.
Jan. 17  Saturday. Weekend Classes begin.
Jan. 28  Wednesday. Census Date.
Feb. 19  Thursday. Employee Development Day. College closed. Evening classes will meet after 5:00 p.m.
March 9-15  Monday-Sunday. Spring Break. (All administrative offices will be closed Thursday-Sunday.)
April 10-12  Friday-Sunday. Easter Holiday. College closed.
April 13  Monday. Last day to withdraw.
April 24  Friday. Fiesta Holiday. College closed. Weekend classes will meet.
May 3  Sunday. Last day of classes.
May 4-10  Monday-Sunday. Final Examinations.
May 10  Sunday. End of semester
Sept. 8, 2009  Last day to complete Spring incomplete (I) grades.

Spring Flex Session I 2009 (first eight weeks)

Jan. 20  Tuesday. Census Date.
Feb. 19  Thursday. Employee Development Day. College closed. Evening classes will meet after 5:00 p.m.
Feb. 20  Friday. Last day to withdraw.
March 3  Tuesday. Last day of classes.
March 4-5  Wednesday-Thursday. Final Examinations.
March 5  Thursday. End of Spring Flex Session I.
July 2, 2009  Last day to complete Spring Flex I Session incomplete (I) grades.
Spring Flex Session II 2009 (second eight weeks)

March 9-15  Monday-Sunday. Spring Break. (All administrative offices will be closed Thursday-Sunday.)
March 16  Monday. Classes begin.
March 23  Monday. Census Date.
April 10-12  Friday-Sunday. Easter Holiday. College closed.
April 21  Tuesday. Last day to withdraw.
April 24  Friday. Fiesta Holiday. College closed. Weekend classes will meet.
May 3  Sunday. Last day of classes.
May 4-10  Monday-Sunday. Final Examinations.
May 10  Sunday. End of Spring Flex Session II.
Sept. 8, 2009  Last day to complete Spring Flex II Session incomplete (I) grades.

Maymester Session 2009

April 13-May 8  Registration (Tentative)
May 11  Monday. Classes begin.
May 12  Tuesday. Census Date.
May 21  Thursday. Last day to withdraw.
May 28  Thursday. Last day of classes and Final Examinations.
May 29  End of Maymester.
Sept. 28, 2009  Last day to complete Maymester Session incomplete (I) grades.

First Summer Session — Day 2009 (six weeks)

April 13 - May 29  First Session Registration (Tentative)
June 8  Monday. Classes begin.
June 11  Thursday. Census Date.
July 2  Thursday. Last day to withdraw.
July 3-5  Friday-Sunday. Independence Day Holiday. College closed.
July 8  Wednesday. Last day of classes.
July 9  Thursday. Final Examinations.
Nov. 4, 2009  Last day to complete First Summer Day Session incomplete (I) grades.

Second Summer Session — Day 2009 (six weeks)

April 13 - May 29  First Session Registration (Tentative)
July 13  Monday. Classes begin.
July 16  Thursday. Census Date.
Aug. 5  Wednesday. Last day to withdraw.
Aug. 13  Thursday. Last day of classes.
Aug. 13-14  Thursday-Friday. Final Examinations.
Aug. 14  Friday. End of Summer Session II.
Dec. 11, 2009  Last day to complete Second Summer Day Session incomplete (I) grades.
Eight Week Summer Session 2009

April 13 - May 29  First Summer Session Registration (Tentative)
June 8         Monday. Classes begin.
June 15        Monday. Census Date.
July 3-5       Friday-Sunday. Independence Day Holiday. College closed.
July 16        Thursday. Last day to withdraw.
July 29        Wednesday. Last evening of classes.
July 30        Thursday. Final Examinations.
July 31        Friday. End of 8-week Summer Session.
Nov. 25, 2009  Last day to complete Eight Week Summer Session incomplete (I) grades.

“It’s a small campus so you will recognize faces. Faculty and staff recognize you and say, ‘Hi.’ That makes you feel welcome and that you have a place here.”

Scarlett Cerna
Sophomore Anthropology major
VISION & MISSION OF THE ALAMO COMMUNITY COLLEGES

Vision: The Alamo Community Colleges will be the best in the nation.
Mission: Empowering our diverse communities for success.

PALO ALTO COLLEGE PURPOSE STATEMENT

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

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

Major Functions: Palo Alto College fulfills its mission by offering the following:
- General, transfer, and technical education;
- Basic skills development and comprehensive literacy programs;
- Continuing education and community outreach;
- Student success and support programs;
- Instructional technologies and distance education;
- Library information resources; and
- Institutional research, planning, development and evaluation
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. Enrollment reached a high of 8,038 students in Fall 2006.

Over the years, the College has developed programs based on community needs. Throughout its 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: Quality Instruction, Student Success, 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 Highway 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.

A 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. The City of San Antonio is financially contributing to construction of the first internationally sized professional soccer field on the Southside. In Fall 2005, a 4,000-square-foot addition to the Student Center was completed, and a campus parking expansion is also underway.

Founded on the belief that education is the central element for 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 occupational-technical 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 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. Beginning in Fall 2000, PAC and the University of Northern Iowa (UNI) started an innovative partnership — the “Bridge Scholars Program.” The program is designed to deliver undergraduate PAC students with academic credentials and financial need into an undergraduate program at UNI. Tuition and housing costs are benefits of the program. The UNI/PAC Recruitment Initiative is a nationally recognized model for effectiveness and has expanded to include all the Alamo Community Colleges. Since its inception, the program has had a 90 percent graduation rate.

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 in Fall 2000. 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 1,500 full-time students.
Through its Gateway to College Program, a national model developed by Portland Community College, Palo Alto College offers many young adults the opportunity to attend college and acquire college credits toward college continuation at a four-year college or university, acquiring a two-year associate degree, or toward a program certification. Youth who left school without earning a high school diploma now have the opportunity to gain a high school diploma while earning college credit at Palo Alto College free of charge. The program currently serves six Southside area school districts – Edgewood, Harlandale, San Antonio, South San Antonio, Southwest and Southside.

The community is welcome to enjoy a festive time at PACfest, an official Fiesta event held on the Thursday before the Battle of Flowers Parade. Originally begun as a fundraiser for student organizations, the event was opened to the community as a Fiesta event in 2003 and features live entertainment, food and crafts booths, and a children’s area.

From its roots as the only higher education institution on the Southside, Palo Alto College is embarking on its 25th anniversary of helping students visualize a clear path to graduation by creating for them a roadmap which will guide them to an understanding of their options as early in their academic marathon as possible. PAC’s strategy is to broaden its community’s vision of success to fuel achievement, and to create a desire among everyone it touches to learn for a lifetime. The destiny of future generations will be significantly improved as PAC instills hope, strengthens students’ self-image, and provides the Southside community with tomorrow’s leaders. Palo Alto College is proud to claim, “We are the Future.”

ACCREDITATIONS & AFFILIATIONS

Palo Alto College, one of the Alamo Community Colleges, 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.
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: $500 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.

PAC Presidential Scholarship: Presidential Scholarship Application is required. Department: Committee. Education Majors. Criteria & Description: 3.0 GPA; at least 9 hours of enrollment. Deadline: July 15. Award: $500-$1,000 per academic year.

Ryan Smith Guzman Scholarship: Established by Dr. Ana “Cha” Guzmán in loving memory of her son. A portable transfer scholarship for students transferring from Palo Alto College to a four-year Texas Higher Learning Institution. ACCD Application is required. Major: All majors. Criteria & Description: Previously enrolled in development courses; Completed 40 minimum credit hours at Palo Alto College; Minimum GPA of 2.5; Provide an academic degree plan; Provide a counselor certification for transferring in the semester following the semester during which the application is submitted. Deadline: Fall and/or Spring semesters. Award: Varies.

Diane Greene Memorial Scholarship: Department: English. Major: Arts, Humanities, or Social Sciences. Criteria & Description: Minimum 3.0 GPA with demonstrated community and/or campus service; Financial need not required. Deadline: Fall semester.

Gambrinus Scholarship: ACCD Scholarship Application is required. Major: All majors. Criteria & Description: High School graduate with at least a C grade average; Fulltime enrollment; Pursuing an ACCD 2+2 Transfer Program or the ACCD Joint Admissions Program, Demonstrated financial need. Deadline: August. Award: Varies.
Oppenheimer Scholarship: ACCD Scholarship Application is required. Major: All majors. Criteria & Description: High School Graduate with a 3.0 on a 4.0 scale; Minimum 3.0 GPA on college courses for second year renewal; Fulltime enrollment; Pursuing an Associate Degree; Not eligible for federal financial aid. Deadline: August. Award: $1,500 per semester.

KellyUSA Scholarship: Major: All majors. Criteria & Description: Preference to students residing in Kelly Zip Codes area whose parents work at KellyUSA: U.S. citizen or permanent resident; Minimum GPA of 3.2; Full-time or Part-time enrollment; Demonstrated financial need. Deadline: August. Award: $500 per semester if demonstrating academic progress.

Club de Sembradores Scholarship: ACCD and Club de Sembradores Application required. Major: All majors. Criteria & Description: Mexican American; U.S. Citizen or permanent resident; Lives in San Antonio area; Completed 30 academic credits, Cumulative 3.0 GPA; Fulltime enrolled; Demonstrates financial need but not receiving federal or state financial aid. Deadline: July 31. Award: $500 per semester.

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.


Jane Hope Memorial Scholarship: Jane Hope Scholarship Application is required. Department: Committee. Education Major. Criteria & Description: 3.0 GPA; demonstrate community service. Deadline: Varies. Award: $300 per academic year.
Kendra Ann Ward Music Scholarship: ACCD Scholarship Application and Cover Sheet required. Major: Music Associate Degree Program with a Transfer Agreement. Criteria & Description: Minimum GPA of 4.0 or high school seniors with a 2.75 GPA; Demonstrated financial need; Community service. Deadline: May 1. Award: $1,500 per 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.

Conjunto Music Scholarship: Department: Fine and Performing Arts/Speech Communication. Conjunto Music Scholarship Application is required. Major: Open. Criteria & Description: Full-time student, at least 12 hours that include Conjunto Ensemble (MUEN 1155). Must be proficient on one or more conjunto instruments, or as a vocalist. Audition and good academic standing required. Deadline: Open. Amount: Varies.

Valerio Longoria Memorial Scholarship: Department: Fine and Performing Arts/Speech Communication. Conjunto Music Scholarship Application is required. Major: Open. Criteria & Description: Full-time student, at least 12 hours that include Conjunto Ensemble (MUEN 1155). Must be proficient on one or more conjunto instruments, or as a vocalist. Audition and good academic standing required. Deadline: Open. Amount: 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: Contact high school counselor for deadlines. Amount: $175 per semester, up to four semesters.

For more information about these and other scholarships, access www.accd.edu/pac/htm/Prospective/FinancialAid/scholarships.htm or contact Scholarship Support Services or Student Financial Services at 486-3600.
COLLEGE ORGANIZATION

In support of the mission of the Alamo Community Colleges, 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.

Corporate and Community Education offers adult literacy education, workforce development courses, personal development courses, and courses for community service. Students gain or improve skills for employment and enhance their personal and professional lives. These 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:

- Child Care
- Counseling Center
- Early Alert/Early Intervention Programs
- Health Center
- International Student Services
- PASSkey Program (TRIO grant)
- Recreational Activities & Sports
- Records & Registration
- Scholarship Services
- Special Populations (Disability Support Services)
- Student Activities
- Student Financial Services
- Testing Center
- Upward Bound Program (TRIO grant)
- Veterans Affairs
- Welcome Enrollment 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, audiovisual 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 online search capability through the Online Catalog and LRC web pages also greatly enhance the faculty’s 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 non-print collection. Student seating and informal study areas are spread throughout the library. Microform reading/printing and copy machines are available. All bookshelves are open for students and other library users.

The library faculty have the same credentials and support the college in all the
same areas as do the faculty in the academic departments. They 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 inter-library loans.

Additionally, the library faculty offer the Library Technology degree and certificate program for those wishing to become paraprofessionals in libraries or to upgrade their skills and credentials. The degree is fully transferable.

The Learning Resources Center of Palo Alto College reinforces the concept of life-long learning through electronic, personal one-on-one professional assistance, and conventional library services and instruction, and through artistic, cultural and educational programs.

**Adult Education**
The Adult Education Office provides low-cost instruction in General Educational Development (GED) and non-credit English as a Second Language (ESL) classes on-campus and in the community. For more information on literacy services, call (210) 486-3405.

**Distance, Extended Education and Community Outreach**
The Office of Distance, Extended Education and Community Outreach provides support services to students, staff and faculty. The Office is comprised of Distance Education, off-campus sites, the Instructional Innovation Center and the Recruitment Center. Pre-College initiatives and transitional programs – to include dual credit and the Senior Summer program – assist students in the transition from high school to college and are also supported by Distance, Extended Education and Community Outreach.

Distance Education courses are a convenient way for students who work or have other commitments to continue their education. Palo Alto College began its distance education program more than ten years ago and currently offers courses via the Internet, Interactive Video Conferencing and Telecourses (Videotapes/Broadcast). Palo Alto College currently offers 221 online courses that can be applied toward an Associate degree or Certificate. Students may also choose to enroll in one of Palo Alto College’s seven online degrees: AAS in Computer Information Systems Network, AA in Criminal Justice, AA in Government, AA in History, AA in Liberal Studies, AS in Health and an AS in Kinesiology. The online distance education orientation will assist students in navigating through PALS and WebCT. Students interested in attending Palo Alto College or enrolling in distance education courses should contact the Recruitment Office at (210) 486-3300.
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 Instructional Innovation Center is located in the Ozuna Learning Resources Center, Room 104. Staff can be contacted at (210) 486-3030.

The Recruitment and Community Outreach 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 1,200 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) 486-3300.

Additional information about this office and programs can be viewed online at www.accd.edu/pac or by calling the Office of Distance, Extended Education and Community Outreach at (210) 486-3964.

**Gateway to College**

The Gateway to College Program is designed to assist 16- to 20-year-old students who have left high school return to education and gain a diploma while concurrently earning college credit toward a certificate or degree program at Palo Alto College. Gateway to College students learn how to succeed in an educational setting under the guidance of a caring team of faculty and student support specialists. In their first term, students enroll in a cohort and take a Developmental English, Math and Reading course together. The cohort learning community provides Gateway students with a strong support system that strengthens their academic and personal skills. Gateway students will also work with tutors and mentors, and receive other support services throughout their enrollment that facilitates a successful transition to college, work, the community and beyond.

Students must be enrolled in one of the six participating school districts: East Central ISD, Edgewood ISD, Harlandale ISD, Poteet ISD, South San Antonio ISD, Southside ISD, Southwest ISD, and San Antonio ISD and are referred by their respective high school counselors.

To obtain more information, please call (210) 486-3170 or stop by the Gateway Office in the Ozuna Center, Room 126.
Upward Bound Program
The Upward Bound Program (TRIO), funded by the U.S. Department of Education, provides support to students from participating high schools. The program serves low-income, first generation college students in rural communities by developing and promoting educational and cultural opportunities and by providing support in the form of supplemental instruction, mentoring and leadership in order to create long-term student success.

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
Since Fall 2000, Palo Alto College has been 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. In Fall 2007, the System Center moved to a new location at 1450 Gillette, just half a mile from the Palo Alto campus.
Established to address an educational need in South San Antonio, the Center currently offers upper-division college classes. 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. Secondary teaching certification is available in most of these areas.

- Accounting
- Biology
- Communications (Journalism)
- Computer Information Systems
- Criminology
- Interdisciplinary Studies (Elementary Education)
- English
- Finance
- History
- Kinesiology
- Management
- Marketing
- Mathematics
- Political Science
- Psychology
- Sociology

A graduate-level Alternative Teacher Certification program allows students with Bachelor’s degrees to gain hours toward a Master’s degree in Education while becoming certified to teach in an elementary or secondary school.

The Center offers graduate degrees in two other areas: Master of Science in Educational Administration and a Master of Science in Counseling and Guidance.

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, 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. A permanent site has been selected south of Loop 410 between Zarzamora and Pleasanton roads.

Through joint admission agreements, first-time freshmen who enter any of the four Alamo Community Colleges and meet eligibility conditions will be automatically accepted for admission to the System Center when they complete their two-year degrees at Northwest Vista College, Palo Alto College, San Antonio College or
St. Philip’s College. When Northeast Lakeview College receives accreditation, the System will consider entering into an agreement with the newest Alamo Community College.

To contact the System Center, located in the System Center Complex at 1450 Gillette, call (210) 932-6201 or visit the website at www.tamuk.edu/sanantonio.

CAMPUS SERVICES & RESOURCE CENTERS

The Welcome Enrollment Center – ‘We Get You Where You Need to Be’

The Welcome Enrollment Center is the first stop in your journey to success. The staff is trained to help new students negotiate the maze of admissions, financial aid, assessment, and advising. Services and programs offered for new students include:

- “Getting Started” with admissions, testing and financial aid information
- Access for completion of “ApplyTexas” admission form online
- International Student admissions
- Guidance through the Advising process, including Academic Advising for new students through Group Advising Sessions
- Assistance with online Fall/Spring/Summer registration
- Guidance with completing FAFSA application online
- Computer Lab to view or print unofficial transcripts, class schedules and tuition bills.
- Early Alert Program
- Referrals to Community Resources
- Scholarship information and assistance

Come by or call the Welcome Enrollment Center at (210) 486-3100 if you need assistance or information. The Center is temporarily located in the Applied Technology Building, Room 220. We will get you where you need to be!

Class Schedules – News You Need to Know

Each semester, schedules for the subsequent semester and summer sessions are printed and available in the Welcome Enrollment Center and online. The Schedule of Classes is your source book for classes, days, times, locations and instructors. The schedules also contain a wealth of information regarding all aspects of the admissions, advisement, registration and payment process. Refer to the schedules for the latest news on classes, programs, and campus resources. Don’t miss the payment deadlines and other important advisement dates. Changes in the printed schedule are updated on the Academic Schedules page of the PAC website.
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.

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. Flexible schedules and fees are available; limited financial assistance may be available to eligible PAC students. Please visit the REFC website to learn more about the program’s philosophy, curriculum, and schedule: www.accd.edu/pac/REFC.

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 (210) 486-3500 or by email at refcinfo@accd.edu.

Disability Support Services (Special Populations)
PAC is committed to ensuring that all programs, services, and facilities are accessible to and provide equal opportunities for education to all students.

The Disability Support Services (DSS) Office coordinates accommodations for PAC students with permanent and temporary disabilities as defined by the Americans with Disabilities Act (ADA) of 1990. The ADA prohibits discrimination in the recruitment, admission or treatment of students. 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.”
Guidelines to Establish Accommodations:

- Students self-disclose and request accommodations through the DSS office
- Provide current documentation to include a specific diagnosis with a link to the requested accommodations and the Functional limitations of the individual. Initial request for accommodations requires 7-10 business days to process once the student’s documentation is complete
- DSS will schedule an intake interview to discuss reasonable accommodations
- Confidential Letters of Accommodation are issued to and delivered by the student to the instructor(s)
- A Renewal of Services Form is required each semester the student seeks accommodations

Accommodations to students may include:
  - Peer Volunteer Note-taking
  - Extended Test Time
  - Readers, Scribes
  - Sign Language Interpreter Services
  - Adaptive Equipment
  - Assistive Technology
  - Priority Scheduling
  - Tape Recorders for Classroom Use
  - Reading Material in Alternate Format
  - In-Class Accommodations

However, DSS does not provide tutoring, personal attendants, disabled parking permits, personal counseling, etc.

**Disabled Parking**

Students of the Alamo Community Colleges 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 the Disability Support Services (DSS) Center at (210) 486-3020, TTY 486-3022 or stop by the office at the Applied Technology Building, Room 206.
Health Center and Wellness

The Campus Health Center provides basic health services that focus on primary prevention care, health education and wellness, emergency care, and referral to community health agencies. In addition, the Campus Health Center regularly hosts community health activities including college health fairs, immunizations, blood drives and other health awareness programs. Brochures, pamphlets and other health information are available to the campus community at no cost. Accidents incurred on campus should immediately be reported to the Campus Health Center. Student insurance questions can be addressed by the College Health Center Coordinator.

It is the policy of the Campus Health Center to keep information confidential. For more information on health services, please visit the website at www.accd.edu/pac/htm/Current/services/health_center/health_center.htm or call (210) 486-3222.

Student Health Insurance

The Alamo Community Colleges sponsor student accident insurance that provides coverage for students registered in college credit courses. Coverage is provided 24 hours a day for expenses incurred as a result of accidental injury both on and off campus. Supplemental medical insurance plans are available for an additional cost. To obtain more information on limits of insurance coverage visit the Campus Health Center located in the Campus Student Center, Room 129, or by call (210) 486-3222.

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.

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, ACCD Department of Public Safety, automatic teller machine, copy machine, lockers and vending machines are located in the Student Center and are accessible for student use.

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 activities, education, entertainment, game and hobbies, food classes, 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;
- Assistance in event planning;
- Responsible for on-campus posting;
- Issues lockers in the Student Center;
- Issues discount bus cards; and
- Coordinates Student Activity Fee.

For more information, call (210) 486-3125 or visit the Student Activities website at http://www.accd.edu/pac/htm/Current/student_activities/default.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. The program also 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
- Volleyball

**Recreational Activities**
- Sports & Outdoor Activities

For more information, call (210) 486-3135 or stop by the office, GYM 101C
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 486-3125 or stop by the office in the Student Center, Room 100.

For more information, visit the Student Activities Office website at www.accd.edu/pac/htm/Current/student_activities/default.htm.

Student Government Association (SGA)
The Student Government Association (SGA) consists of Palo Alto College students elected by the student body to promote beneficial understanding among the students, faculty, and the administration. The SGA insures representation of students in the college governance structure and assists with the dissemination of information to the student body. SGA also is responsible for appointing student members to the Student Services Fees Advisory Committee (SSFAC). Students interested in finding out more about SGA should call 486-3129 or visit the SGA Office in the Student Center.

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 leadership training. This yearlong commitment provides instruction 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 community. Students selected to participate in the ACCD SLI receive scholarships and have opportunities to travel to Washington D.C., utilizing the skills and knowledge acquired throughout the year in meetings and presentations with officials from private, non-profit, and government. 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.

Testing Services
The Palo Alto Testing Center offers a variety of testing programs to assist students with state test requirements and academic placement. 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 Corporate & Community Education or pursuing certain technical certificates are required to have test scores for academic advisement and TSI purposes. Scores must be less than three years old. Tests accepted at Palo Alto include:
   - ACCUPLACER
   - ASSET
   - SAT
   - ACT
   - THEA/QUICK THEA/TASP – only passing scores may be used for placement; additional placement testing may be required for placement into some college-level courses

2. College-Level Examination Program (CLEP)
   Only specific CLEP Subject Examinations are administered and accepted. A list is available online or at the Testing Center.

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 Testing 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 Testing Center for dates and procedures.

6. ESOL Testing – for placement into PAC’s ESOL program.

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 Testing Center for more information.
Learning Resources
The Learning Resources Center is an instructional component of Palo Alto College. It is composed of a progressive teaching library, technology facilities and services, and a self-contained Children’s Library. The LRC selects, acquires and maintains library resources in print, electronic, and media formats. The LRC provides point of need, introductory, academic and certificate instruction for individuals and groups, and also offers a free series of classes on research (Information Research Certificates I and II – a total of eleven classes) as well as an academic degree and certificate program in Library Technology. The LRC also provides periodic Café events for students to get together and interact informally.

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 to the Welcome Enrollment Center located in Applied Technology Building, Room 218, or call (210) 486-3100.

Transfer Services
Located in the Center for Academic Transitions in the Student Center, Transfer Services provides the educational road map for successful transfer from Palo Alto College to the four-year university.

Our services include:

1. Recruiter Visitation Schedules with dates when university representatives visit to answer questions and provide admissions information;
2. Annual Fall Semester Transfer Fair when up to 60 universities provide admissions information;
3. Education Express field trip visits to four-year universities;
4. Transfer-themed workshops providing insights for a successful transfer;
5. Transfer Guides/2+2 Transfer Plans providing information on courses to complete prior to transfer to the university. Some of the university Transfer Plans include:
   - Our Lady of the Lake University
   - St. Mary’s University
   - Sam Houston State University
   - Texas A&M University at College Station
   - Texas A&M University-Kingsville System Center-San Antonio
   - Texas State University-San Marcos
University of Texas at Austin
University of Texas at San Antonio
University of Texas Health Science Center at San Antonio
University of Northern Iowa
University of the Incarnate Word

6. University applications and catalogs with specific information on admissions deadlines and academic program descriptions;
7. Transfer scholarship information for the four-year universities.

Career Services
Located in the Center for Academic Transitions in the Student Center, Career Services provides assistance in the areas of career exploration and job placement. Some services include:

1. One-on-One Career Services, including assessment, are available to assist students in matching career goals with academic majors. Other individual services include helping students conduct online job search and job search skills (i.e., resume writing, mock interview, contacting employers, etc.)
2. Job 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. 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.

Counseling Services
The Counseling Services Center provides all students with comprehensive services designed to enhance their ability to define and attain academic, career and personal goals. Students are encouraged to speak with a counselor to develop strategies that will promote academic success and personal success.

When enrolling in College for the first time, students meet with counselors or advisors for academic advisement and registration. Thereafter, counseling services are available to assist students in various phases of academic, career 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 study skills, or advising students placed on Academic Probation or Academic Withdrawal.
Personal Counseling – Counselors can assist students in individual counseling with issues such as depression, domestic violence, academic problems, relationships, mental health and other personal matters that may affect educational goals. In addition, counselors provide referrals to professionals, community agencies, and resources not available at PAC, when necessary.

Career Counseling – 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 – Crisis intervention services are available to assist with psychologically based urgent situations. Such interventions may include involvement with other agencies, health care professionals, and law enforcement personnel.

Student Development Courses (SDEV 0170, 0171, 0172, 0370) – Counselors teach Student Development (SDEV) 0170 and SDEV 0370 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. Special interest sections of SDEV 0170 such as Business, Education, Learning Strategies, and STEM (Science, Technology, Engineering, and Math) are also offered. All students entering Palo Alto College with fewer than 15 college-level semester credit hours are required to enroll in either SDEV 0170 or SDEV 0370. A benefit of the traditional classroom and Internet formats is the ongoing access of students to a counselor who offers guidance and support throughout the semester. One of the functions of the course is to provide academic advisement for the subsequent semester.

Counselors also teach SDEV 0171: Enhancing Academic Success, for students placed on academic probation, continued academic probation, and/or financial aid suspension and SDEV 0172: Career and Life Planning, for students who are undecided or need more information in selecting a program of study. Counselors can be reached by visiting the Counseling Center, calling 486-3333 or visiting the website at http://www.accd.edu/pac/htm/Current/services/counseling/about/faculty.htm.

Early Alert Program
Early Alert is designed to Promote Student Success and Retention by serving as a resource tool to faculty in efforts to enhance academic success. The primary objective of the program is to identify academic difficulties within the first 6-8 weeks of a semester that may negatively impact overall student success. The Early Alert program is initiated 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 F-1 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.

PASSkey Program (TRIO Student Support Services Program)

PASSkey, located in the General Education Building, Room 139, 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.

PASSkey participants must meet the established federal criteria of academic under-preparation, 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. PASSkey’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
- Registration assistance
- Academic advisement and registration assistance
- Access to cultural events and activities
- University Education Express trips
- Laptop, Graphing Calculator 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.
- 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

**Tutoring Services**

**English Learning Center (ELC)**

The English Learning Center (ELC) 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, education, 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 Arts, Humanities & Social Sciences Writing Lab, AS 110. Writing videotapes may be viewed in the ELC or checked out from the Learning Resources Center.

**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, Educational Laboratories Building (EL) Room 111. A variety of instructional software for reading is also available.

**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 105.

Other learning assistance, such as computer-aided instructional software and advanced mathematics software (DERIVE), is available in EL 105. Math videotapes may be checked out from the Math Learning Center and taken home overnight or viewed in EL 109. They may also be 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 Educational Laboratories Building (EL). For more information, call (210) 486-3281.

SPECIAL PROGRAMS

Educator Preparation Program
Texas has many critical shortage areas. The Educator Preparation 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 Corporate & Community Education section of this publication or visit the Palo Alto College Corporate & Community Education website at www.accd.edu/pac/ce.

Areas of Certification:
- Science, Grades 4-8, 8-12 and 6-12
- Early Childhood Education through 4th Generalist (available online)
- English Language Arts and Reading, Grades 4-8 and 8-12 (available online)
- Career and Technology Education: Family & Consumer Science, Agricultural Science, Industrial Technology

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 Center for Academic Transitions in the Student Center.

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 whose 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.

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.

BUILDING LOCATIONS

**Applied Science Building** – Located near the two-story General Education Building among the main cluster of buildings, this building was designed for the occupational-technical programs, but they have expanded beyond this building. You will still find classrooms and large laboratories here. Some faculty also have offices here.

**Applied Technology Building** – Located next to the Ray Ellison Family Center on the main route into campus, the At Building opened in Spring 2005 with state-of-the-art laboratories for new programs. Labs support Industrial Automation programs and a variety of Engineering programs. The second-floor level temporarily houses student services including Counseling, Disability Support Services, Testing, Welcome Enrollment Center, Student Financial Services, Records and Registration, and the Vice President for Student Affairs.

**Business Building** – Business and management classes are held in the Business Building, which has lecture-style classrooms, some computer labs, and some adjunct faculty offices. It is located on the northwest corner of the main cluster of buildings, which was the original campus opened in 1987.

**Convocation Center** – The 46,000-square-foot Convocation Center will provide a much-needed cultural venue for the Southside. Located with easy access to Loop 410, it will featured a 40-seat theater available for community use, speech classrooms, a dance studio, a recording studio, recital hall, computer lab, drama classroom and a scene shop. It will open in 2009.

**Counseling & Support Services Center** – Counselors are temporarily located on the second floor of the Applied Technology Building.

**Executive Offices** - Faces I-410 and has a flagpole in front. This building houses key administrative offices, including the President, Vice President of Academic Affairs, Vice President of College Services, Public Relations, Corporate & Continuing Education, Recruiters, Institutional Advancement, Institutional Effectiveness & Research. It is the model for the College’s logo, shaped like the front of the building.

**Faculty Office Building** – This building, located near the entrance to the two-story General Education Building, is totally dedicated to faculty offices, mainly for English, Foreign Language and Mathematics.

**Fine Arts** – Located on the southern half of the main campus and next to the Performing Arts Building, the Fine Arts Building houses faculty offices and classrooms.
for the Fine & Performing Arts/Speech Communication faculty. It also has studios for producing ceramics and other art projects.

**General Education Building** – This two-story building doubled the number of classrooms when it opened in 1991 as the first additional building to the original campus. It houses department offices for the Sciences, Aviation Technology, Protective Services, and Behavioral Sciences. A variety of disciplines have classes here because it has lecture-style classrooms as well as science labs and an aviation simulator.

**Green House** – Horticulture and Landscape students use the Green House for laboratory work. The structure is located on the far southeast corner of the campus beside the Performing Arts Building.

**Gymnasium/Natatorium** – Opened in 1992 as a joint venture with the City of San Antonio, this is a world-class facility designed to meet national championship standards. The Olympic-size stretch pool is open to the community for swim sessions and lessons; youngsters from area elementary schools take swimming lessons during the school year. It has hosted such major events as the U.S. Olympic Festival in 1993, NJCAA swimming championships, and U.S. Open swimming and diving events. The Gymnasium is used for physical education classes, large campus events, and recreational activities such as basketball and volleyball for students. The building houses the Kinesiology and Health Department and has a weight room and multi-purpose room for dancing and aerobic classes.

**Learning Laboratories** – This building is located near the entrance to the General Education Building and offers several Learning Centers, which provide tutoring in English, Math, Reading and Science. Services are free to students and full-time skills specialists are available.

**Math & Science Building** – Located on the far northeast corner of the campus, this building has lecture classrooms and science labs. Agriculture faculty and other technical faculty maintain offices here.

**Ozuna Learning & Academic Center** – This library is a huge building in the center of the entire 100-acre campus and is accessible from Villaret Blvd. In the library section, Internet access and a variety of other research technologies are available to students as well as the public. The lower floor of the east side of the building has computer classrooms, offices for instructional computer faculty, and a hub for computer technicians who serve the entire campus.

**Palomino Center** – Located along Villaret Boulevard near the large parking lot, the building is a one-stop center for prospective students to receive guidance and to ease the registration process. It houses the Vice President of Student Affairs, Welcome Enrollment Center, Student Financial Services, Records & Registration, the Testing Center, and other student services offices. Class schedules and cata-
Performing Arts Building – Located on the far southeast corner of the campus, this building has two rooms with theater-style seating that can be used as lecture halls or opened to reveal one large state. It also houses the Band Hall for instrumental practices, a piano lab classroom, individual practice rooms, and an office area for the music faculty.

Portable Classroom Buildings – Located along Villaret Blvd. in front of the Ozuna LRC, these are 8 portable classroom buildings originally used by the Texas A&M-San Antonio campus.

Ray Ellison Family Center – Located between the main campus and the Ozuna Learning Resources Center, this building opened in 2001 and is evident by its playground. It is named for the late homebuilder, who provided partial funding for the child care center. Services are available for children of students, employees and the public.

Student Center – Located strategically along the main driving entrance to the campus and centrally among the main cluster of original buildings, the Student Center houses the Cafeteria, Bookstore, Student Activities and organization offices, Bursar, DPS, Veterans Affairs, and the Health Center.

Science & Workforce Center – This building, scheduled to open in 2009, is designed to increase the available space for teaching workforce programs that are critical to the success of future generations. Positioned next to the Applied Technology Building, where many training programs already are taught, the building will provide space for Biology, Physics and Geology class classrooms; computer labs and dedicated areas for Healthcare Training, Emergency Medical Technician, and Hazwoper instruction.

Social Sciences – Located between the Student Center and the Business Building, this facility houses classrooms, computer labs, and offices for faculty who teach Government, History and Economics.

Tennis Courts – These courts, used for kinesiology classes, are located next to the Natatorium/Gymnasium on the west side of the campus along Highway 16.

Veterinary Technology Building – Opened in 2008, the Vet Tech Building is home to the only Vet Tech program in the region. It is on the west side between the Library and the portable buildings and has surgical rooms, a dog kennel and outside exercise area, clinical pathology and parasitology labs, classrooms, a pharmacy and X-ray room.
Mitraan Statement
The Corporate and Community Education Division, 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.

Corporate and Community Education Division:
- 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; and
- provides wholesome recreation alternatives and meaningful community programs designed to enhance our community’s everyday quality of life.

Customized Training
Corporate and Community Education Division offers programs that lead to a certificate of completion applicable for professional development and workforce training and/or a state agency certification and/or license. This division has delivered contracted instruction to local employers, professional associations, and governmental agencies in and around San Antonio. Customized Training is assessed by 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.

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 (10) contact hours.

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.
- The CPE is a standard of measurement recognized by the Texas State Board of Education Certificate as one (1) CPE for each contact hour.
Co-Listed Course
A co-listed course means that Corporate & Community Education (CCE) 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 Corporate & Community Education Certificate is issued upon successful completion. Corporate & Community Education partners with college credit departments for courses in various academic disciplines, allowing CCE students the opportunity to enhance skills for the workforce.

Credit Hours
Continuing Education hours in various training programs can be transferred to credit hours that will lead to a college degree. To be eligible, the student must already have six hours of college credit, be in good standing and must have consulted with a faculty advisor. A processing service fee per credit hour will apply.

For additional information please contact the Corporate and Community Education Division at (210) 486-3400 or visit our website at www.accd.edu/pac/ce.

Adult Education

English as a Second Language (ESL)
E 0001 English as a Second Language (ESL) 42 Hours
These courses are for non-native speakers of English who have limited or no English language skills and who are 17 years or older. Course includes communication skills in the areas of basic grammar, speaking, listening, reading and writing. Assessment assures placement in the appropriate level. Course levels include Pre-Basic, Beginning, Intermediate and High Intermediate.

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<th>Hours</th>
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<tbody>
<tr>
<td>E 0001</td>
<td>42</td>
<td>English as a Second Language (ESL)</td>
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</table>

General Educational Development (GED)
Students will be prepared to take your GED exam by enrolling in this class that is designed to review all five subject areas: Math, Writing, Science, Social Studies and Reading Skills. The course also offers time management skills, study tips, testing center locations and practice tests. Must be 17 years or older. Spanish version is also available.

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<td>G 0004</td>
<td>60</td>
<td>General Educational Development</td>
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Healthcare Training
In less than a year, you can create your future in the health care industry. Health-related occupations provide guaranteed employment across the globe. As the population ages and more and more people seek health care, the need for all levels of health care workers increases.

Certified Nurses Aide Course
This is a two-part course. Both courses are required for certification. 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.

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<td>60</td>
<td>Certified Nurses Aide</td>
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<tr>
<td>NURA 1060</td>
<td>40</td>
<td>Clinical: Nurse/Aide &amp; Patient Care Assistant</td>
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**NURA 1001  Certified Nurses Aide (CNA)  60 Hours**
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 (TDHS).

**NURA 1060  Clinical: Nurse/Aide & Patient Care Asst.  40 Hours**
*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.

Medication Aide Program
This program is designed to maintain and enhance the competency of Medication Aides to administer medications as specified at the Health and Safety Code, Chapter 242 Subchapter F and 40 TAC Chapter 95.

This program gives advanced instruction in preparation and administration of designated medications by Certified Nurse Aides working under the guidance of a licensed nurse. Student must be employed on the first day of class in a Medicare Skilled Nursing/Medicaid Facility, licensed Mental Health Mental Retardation
(MHMR) facility, or have a minimum of 90 days employment providing patient care in a licensed assisted living facility. Students must have a high school diploma or GED equivalent. Licensure: The Texas Department of Human Services.

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<th>Hours</th>
<th>Course Title and Description(s)</th>
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<tbody>
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<td>Medication Aide</td>
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</table>

**NURA 1013 Medication Administration for Nurse Aides 144 Hours**

This course gives advanced instruction in preparation and administration of designated medications by Certified Nurse Aides working under the guidance of a licensed nurse. Student must be employed on the first day of class in a Medicare Skilled Nursing/Medicaid Facility, licensed MHMR facility, or have a minimum of 90 days employment providing patient care in a licensed assisted living facility. Students must have a high school diploma or GED equivalent.

**Nursing**

Nursing combines the art of caring with the science of health care for one of the most in-demand, high-growth career tracks in the industry. For licensed nurses whose skills are not current and/or whose license has expired, the online course is for you.

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<tr>
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<tbody>
<tr>
<td>RNSG 1006</td>
<td>128</td>
<td>Re-Entry Nursing Update</td>
</tr>
</tbody>
</table>

**Re-Entry Nursing Program**

Prerequisite: Hep B Shot series, current immunizations and Background Check (www.precheck.com)

Current nursing practice as related to the clinical areas of medical-surgical, maternal-child, psychiatric-mental health, community health, and emergency nursing care. This course is designed for inactive nurses returning to active practice. This course will summarize the Nursing Practice Act of Texas; differentiate and support holistic nursing care for clients and families utilizing appropriate nursing knowledge, experience, and legal/ethical standards of care; compare and contrast the different roles of professional nurses and their contributions to the profession; and utilize critical thinking principles to develop a holistic plan of care for clients with health care needs.

**Emergency Medical Technician (EMT) Basic**

This course includes all the knowledge and skills necessary to provide emergency medical care at a basic life support level with an ambulance or fire service or other specialized services.
EMSP 1001  Emergency Medical Technician (EMT) Basic  176 Hours
Learn the basic skills of saving lives by becoming an EMT – one who is normally first on the scene of accidents or major medical emergencies. This course includes all the knowledge and skills necessary to provide emergency medical care at a basic life support level with an ambulance or fire service or other specialized services.

Students will be able to demonstrate a working knowledge of clinical information and related topics relevant to the practice of pre-hospital emergency medical care of the EMT-Basic level; demonstrate the ability to competently perform all applicable skills; and exhibit attitudes and behavior consistent with the ethics and professionalism expected of the EMT-Basic. Curriculum based on Department of Transportation National Standard Curriculum.

Additionally, 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. Students will display a working knowledge of clinical information and related topics relevant to the practice of pre-hospital emergency medical care at the EMT - Basic level; demonstrate the ability to competently perform all applicable skills; and exhibit attitudes and behavior consistent with the ethics and professionalism expected of the EMT – Basic. Licensure/Certification Agency: Texas Department of Health and/or the National Registry of EMT’s.

EMSP 1013  Clinical: Emergency Medical Technician  88 Hours
This course is a continuation of EMSP 1001. This course will include skill development to meet the Department of Transportation - 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.

Emergency Medical Technician – Intermediate
This course includes all the knowledge and skills necessary to provide emergency medical care at the next level.
EMSP 1041  Emergency Medical Technician (EMT) Intermediate  144 Hours
Students will be able to demonstrate a working knowledge of clinical information and related topics relevant to the practice of pre-hospital emergency medical care of the EMT-Intermediate level; demonstrate the ability to competently perform all applicable skills; and exhibit attitudes and behavior consistent with the ethics and professionalism expected of the EMT-Intermediate.

Curriculum is based on 1985 Department of Transportation National Standard Curriculum. Texas contracts with National Registry to test at the 1985 level. Additionally, skill development to meet the Department of Transportation Emergency Medical Technician Intermediate guidelines in all aspects of pre-hospital emergency care will be taught. Students will display a working knowledge of clinical information and related topics relevant to the practice of pre-hospital emergency medical care at the EMT - Intermediate level; demonstrate the ability to competently perform all applicable skills; and exhibit attitudes and behavior consistent with the ethics and professionalism expected of the EMT Intermediate.

Students will present current EMT Basic certification on or before the first night of class. Students must adhere to the ACCD criminal background investigation. A current CPR card with an expiration date to include six months after the end of class will be required.

Students will make three tuition payments: The first payment is due three days before the start of class; the second, approximately two months later, and the final payment due at start of clinicals. Department of State Health Services and National Registry test fees are not included in the tuition. Current shot records and CPR cards will be discussed the first night of classes. Please call (210) 921-5336 for advisement prior to enrollment.

EMSP 1013  Clinical: EMT I  120 Hours
This program also includes a health-related work-based learning experience in a clinical setting that enables the student to apply specialized occupational theory, skills, and concepts they learn. Direct supervision is provided by the clinical professional.

Phlebotomy Program
This program prepares for skill development in the performance of a variety of blood collection methods, using proper techniques and universal precautions.
### Course Title and Description(s)

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
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</tr>
</thead>
<tbody>
<tr>
<td>PLAB 1023</td>
<td>42</td>
<td>Phlebotomy</td>
</tr>
<tr>
<td>PLAB 1060*</td>
<td>120</td>
<td>Clinical: Phlebotomy</td>
</tr>
<tr>
<td></td>
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<td>*Prerequisite PLAB 1023; Exit exam required</td>
</tr>
</tbody>
</table>

**PLAB 1023 Phlebotomy 42 Hours**

This course prepares for skill development in the performance of a variety of blood collection methods, using proper techniques and universal precautions. Includes vacuum collection devices, syringes, capillary skin puncture, butterfly needles and blood culture, and specimen collection on adults, children and infants. Emphasis on infection prevention, proper patient identification, labeling of specimens and quality assurance, specimen handling, processing, and accessioning. Topics include professionalism, ethics, and medical terminology. Demonstrate knowledge of infection control and safety; demonstrate understanding of quality assurance and the importance of specimen collection in the overall patient care system; and demonstrate knowledge of collection equipment, various types of additives used, special precautions necessary, and substances that can interfere in clinical analysis of blood constituents. Demonstrate proper techniques to perform venipuncture and capillary puncture on adults, children, and infants; and demonstrate the knowledge of requisitioning specimen transport and specimen processing.

**PLAB 1060 Phlebotomy Clinical 120 Hours**

*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.

### General Health Courses

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

<table>
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<tr>
<th>Course</th>
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</tr>
</thead>
<tbody>
<tr>
<td>HITT 1005</td>
<td>48</td>
<td>Medical Terminology (English/Spanish)</td>
</tr>
<tr>
<td>POFM 1000*</td>
<td>96</td>
<td>Medical Insurance/Coding</td>
</tr>
<tr>
<td></td>
<td></td>
<td>*Prerequisite HITT 1005 Medical Terminology</td>
</tr>
</tbody>
</table>

**HITT 1005 Medical Terminology 48 Hours**

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; and recognize and analyze terms and their components from a list including prefixes, suffixes, roots, and combining forms.

POFM 1000 Medical Insurance/Coding 96 Hours
*Prerequisite HITT 1005
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.

Community Programs
Child Care Program
Students interested in working with young children in a child care setting will learn the necessary skills to properly care for young children and to acquire and maintain licensure with the national association of child care workers, the Council for Early Childhood Professional Recognition.

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<tr>
<th>Course</th>
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<tbody>
<tr>
<td>CDEC 1016</td>
<td>120</td>
<td>Child Development Associate</td>
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</tbody>
</table>

CDEC 1016 Child Development Associate (CDA) 120 Hours
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.

Food Management and Supervision
All establishments in and around Bexar County that serve food to the public must have a certified food service employee on staff 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.

<table>
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<tr>
<th>Course</th>
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<tbody>
<tr>
<td>RSTO 1041</td>
<td>15</td>
<td>Food Service Manager Certification</td>
</tr>
</tbody>
</table>

RSTO 1041 Food Service Manager Certification 15 Hours
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. Recertification is required every two years.

Substitute Teacher Training
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.

<table>
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<tr>
<th>Course</th>
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<tbody>
<tr>
<td>EDTC 1002</td>
<td>16</td>
<td>Substitute Teacher Training</td>
</tr>
</tbody>
</table>

Visual and Performing Arts Institute
The visual and performing arts function as a vital part of any community by exploring traditional and experimental avenues of expression and study in order to promote greater cultural awareness and dialogue. Palo Alto College offers courses in visual arts, dance and music to both college students and community members to encourage participation from all levels of interest and skill and to foster increased benefits to the greater community. Partnerships that are affiliated with this institute are Southwest School of Art and Craft and the Guadalupe Cultural Arts Center. Listed below are disciplines offered in this institute, but not limited to.

<table>
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<tr>
<th>Course</th>
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<td>C0040</td>
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<td>Ceramics</td>
</tr>
<tr>
<td>D0031</td>
<td>96</td>
<td>Foundations of Digital Art</td>
</tr>
<tr>
<td>D0033</td>
<td>96</td>
<td>Digital Photography I</td>
</tr>
<tr>
<td>D0034</td>
<td>96</td>
<td>Digital Arts II: Digital Video</td>
</tr>
<tr>
<td>D0040</td>
<td>96</td>
<td>Drawing I</td>
</tr>
<tr>
<td>D0050</td>
<td>48</td>
<td>Modern Dance I</td>
</tr>
<tr>
<td>D0051</td>
<td>48</td>
<td>Capoeira I</td>
</tr>
<tr>
<td>D0054</td>
<td>48</td>
<td>Social Dance I</td>
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<tr>
<td>D0057</td>
<td>48</td>
<td>Social Dance II</td>
</tr>
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<td>D0058</td>
<td>48</td>
<td>Jazz Dance</td>
</tr>
<tr>
<td>D0052</td>
<td>48</td>
<td>Ballet I</td>
</tr>
</tbody>
</table>
Art

C0040 Ceramics 96 Hours
* No prerequisites
A beginning ceramics class for students with little or no experience. Students will explore a variety of hard building techniques as well as the pottery wheel, to create their own work. Instructor will provide a list of needed materials for course to students on first day of class. Students with ceramic experience are also welcome; instructor will work with students according to their level of experience. (Course materials are separate from lab fees).

D0033 Digital Arts II: Digital Video 96 Hours
The student will be introduced to digital video, principle styles of video work, use of digital video cameras and editing of footage on Final Cut Pro. Some experience on Mac computers is helpful but not required.

D0031 Foundations of Digital Art 96 Hours
This course is an introduction to basic digital media used to create artworks using the computer. The student will be introduced to basic design ideas while also learning to operate Mac computers and to create digital images on programs such as Illustrator CS and Photoshop CS. No computer experience is needed to take this course.

D0033 Digital Photography I 96 Hours
This course is a beginning course for Digital Photography. The student will be introduced to using a digital camera, downloading and manipulating images in Photoshop CS. The student will be introduced to basic design ideas while also learning to operate Mac computers and to manage photographic images. Experience with digital cameras and Photoshop is helpful but is not needed to take this course. Students are responsible for providing their own camera.

D0035 Digital Photography II 96 Hours
This course is an advanced course for Digital Photography. The student should have taken Digital Photo I or have extended experience with Photoshop. Students will provide their own camera.
D0040  Drawing I  96 Hours  
* No prerequisites
A beginning drawing class for students with little or no experience. Instructor will provide a list of needed course materials to students on first day of class. All aspects of drawing and media will be explored.

S0030  Sculpture  96 Hours  
* No prerequisites
A beginning Sculpture class in which students will work with a variety of materials and techniques to create their own work. Materials may include wood, metal, clay and plaster. Little or no experience is necessary. Instructor will provide a list of needed course materials to students on first day of class. All tools will be provided by the College. (Course materials are separate from lab fees).

Dance
D0052  Ballet I  48 Hours
Students are introduced to the fundamentals of ballet technique barre, center work, and beginning combinations with an emphasis on alignment and vocabulary.

D0053  Ballet II  48 Hours
Continued instruction and participation in basic ballet technique. Students will build on classical ballet techniques learned in Ballet I including barre, center, combinations with an emphasis on alignment.

D0055  Ballet Folklorico I  48 Hours
Instruction and participation in Ballet Folklorico dance technique. This class introduces students to footwork techniques emphasizing fundamentals of body placement, vocabulary, and regional Mexican Folklorico dances. Students will develop dance combinations to enhance technical skills, memory and performance skills.

D0059  Ballet Folklorico II  48 Hours
Prerequisite: Ballet Folklorico I or permission of the instructor. Continued and more advanced instruction and participation in Ballet Folklorico dance technique. Students will review and refine Mexican Folklorico dance skills and their understanding of composition and aesthetics.

D0058  Capoeira I  48 Hours
Students will learn to identify and perform the basic movements of Capoeira as well as an understanding of the history, culture, and philosophy associated with this Afro-Brazilian art-form.

D0058  Jazz Dance  48 Hours
Students will learn how to do jazz dance warm-up and cool-down and movement combinations with a focus on alignment, ensemble work, and musicality.
D0050  Modern Dance I 48 Hours
Students in this course will explore dance as a creative art form that develops mental and physical integrations and expressive skills. Students will practice and understand the fundamental elements of movement, structured improvisation and basic dance combination.

D0056  Modern Dance II 48 Hours
Students in this course will continue to explore dance as a creative art form that develops mental and physical integration, and aesthetic expression. Critical response skills will also be developed.

D0054  Social Dance I 48 Hours
This course will introduce the student to a variety of popular, social, and traditional social dance including Latin dances, swing, jitterbug, hip-hop and country western.

D0057  Social Dance II 48 Hours
This course will build on dance rhythms and basic forms learned in Social Dance I: popular, social, and traditional social dance including Latin dances, swing, jitterbug, hip-hop and country western with an increased emphasis on placement, partnering, rhythmic analysis and variations.

Music
MUSP 2006  Choir Ensemble 48 Hours
The Palo Alto College Choir performs a variety of vocal music from all historical periods both on and off campus. The ensemble is open to all interested; weekly rehearsals required.

MUSP 2059  Conjunto Ensemble 48 Hours
Wanted: Tejano/Conjunto musicians, male and female, who are proficient in the button accordion, bajo sexto, bass, drums, or as vocalists. People proficient in other instruments will be considered. Conjunto Ensemble is a course that is designed to develop a performing Conjunto ensemble. A majority of the class time will be devoted to developing a Conjunto repertoire, rehearsing arrangements, performing, and possibly recording. Other aspects of Conjunto music, including its historical development, as well as its social, cultural, and symbolic significance,
will be addressed.

**MUSP 1001  Introduction to Mariachi  48 Hours**
Learn about the origin and history of mariachi. Learn to play and sing the music of mariachi. Choose from: guitar, vihuela, guitarron, violin, and trumpet.

**MUSP 1045  Jazz Ensemble  48 Hours**
The Palo Alto College Jazz Ensemble performs standard jazz repertoire at local events and festivals on and off campus. Three hours per week of rehearsal is required. The ensemble is open to all interested musicians who play a jazz instrument. Some playing experience or permission of the instructor is required to join.

**Online Courses**
Virtual College of Texas courses are online courses offered throughout the school year. Featured courses are: Real Estate, Re-Entry Nursing Update; and many more. For a complete listing, visit our website at: www.vct.org.

**Real Estate**
If you are interested in selling real estate in the State of Texas you must complete six (6) real estate courses to include Principles I & II in that order. At the conclusion of each course, students are required to come to the campus to test.

<table>
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<tr>
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<tbody>
<tr>
<td>RELE 1002</td>
<td>32</td>
<td>Real Estate Principles I</td>
</tr>
<tr>
<td>RELE 1039</td>
<td>32</td>
<td>Real Estate Principles II</td>
</tr>
<tr>
<td>RELE 1008</td>
<td>32</td>
<td>Real Estate Investment</td>
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<tr>
<td>RELE 1012</td>
<td>30</td>
<td>Real Estate Contracts</td>
</tr>
<tr>
<td>RELE 1016</td>
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<td>Property Management</td>
</tr>
<tr>
<td>RELE 1022</td>
<td>30</td>
<td>Real Estate Marketing</td>
</tr>
<tr>
<td>RELE 2002</td>
<td>30</td>
<td>Law of Agency</td>
</tr>
<tr>
<td>RELE 2031</td>
<td>32</td>
<td>Real Estate Brokerage</td>
</tr>
<tr>
<td>RELE 1029</td>
<td>32</td>
<td>Real Estate: Fundamentals of Environmental Issues</td>
</tr>
</tbody>
</table>

**Real Estate Principles I**
An overview of licensing as a real estate broker and salesperson, ethics of practice, titles to and conveyance of real estate, legal descriptions, law of agency, deeds, encumbrances and liens, distinctions between personal and real property, contracts, appraisal, finance and regulations, closing procedures, and real estate mathematics. Also includes federal, state, and local laws relating to housing discrimination, housing credit discrimination, and community reinvestment.
Principles of Real Estate II – Texas Specific
An overview of licensing as a real estate broker and salesperson, ethics of practice, titles to and conveyance of real estate, legal descriptions, law of agency, deeds, encumbrances and liens, distinctions between personal and real property, contracts, appraisal, finance and regulations; closing procedures; real estate mathematics and federal, state, and local laws relating to housing discrimination, housing credit discrimination, and community reinvestment.

Real Estate Investment
This course studies the financing, evaluation, and management of real estate investment. Emphasis is on real estate investment characteristics, techniques of investment analysis, time-valued money, discounted investment criteria, leverage, and applications to property tax implications of owning real estate.

Real Estate Contracts
A review of real estate contracts required by Section 6A (3) of the Real Estate License Act with emphasis on general contract law requirements. Also covers the purpose, history, and working process of the Broker-Lawyer Committee. The course includes preparation of real estate contract forms with emphasis on the most commonly used forms.

Property Management
A study of the role of the property manager, landlord policies, operational guidelines, leases, lease negotiations, tenant relations, maintenance, reports, habitability laws, and the Fair Housing Act

Real Estate Marketing (Texas specific)
A study of real estate professionalism and ethics; characteristics of successful salespersons; time management; psychology of marketing; listing procedures; advertising; negotiating and closing financing; and the deceptive trade practice act, consumer protection act, and commercial code.

Law of Agency (Texas specific)
A study of law of agency including principal-agent and master-servant relationships, the authority of an agent, the termination of an agent’s authority, the fiduciary and other duties of an agent, employment law, deceptive trade practices, listing or buying procedures, and the disclosure of an agency.

Real Estate Brokerage
A study of law of agency, planning and organization, operational policies and procedures, recruiting, selection and training of personnel, records and control, and real estate firm analysis and expansion criteria.

Fundamentals of Environmental Issues
This course is a study of environmental issues affecting the real estate industry including hazardous substances, underground storage tanks, and wetlands.
Nursing
Nursing combines the art of caring with the science of health care for one of the most in-demand, high-growth career tracks in the industry. For licensed nurses whose skills are not current and/or whose license has expired, the online course is for you.

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Re-Entry Nursing Program
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Current nursing practice as related to the clinical areas of medical-surgical, maternal-child, psychiatric-mental health, community health, and emergency nursing care. This course is designed for inactive nurses returning to active practice. This course will summarize the Nursing Practice Act of Texas; differentiate and support holistic nursing care for clients and families utilizing appropriate nursing knowledge, experience, and legal/ethical standards of care; compare and contrast the different roles of professional nurses and their contributions to the profession; and utilize critical thinking principles to develop a holistic plan of care for clients with health care needs.

Business
Accounting Payroll Clerk Certificate
The Accounting Payroll Clerk Certificate is designed for individuals who want a new career, people who are self-employed, or people who want to upgrade current skills. This two-course module certificate offers 120 hours of intense accounting and payroll training. Upon successful completion, students will gain the experience and hands-on skills to prepare payroll. Individuals who wish to prepare payroll for a company, enterprise, and corporation or prepare payroll for a small business will benefit from this certificate. Modules must be completed in sequence in order to receive a full certificate of completion.

Financial aid is available for those who qualify. Students seeking financial assistance are encouraged to submit all paperwork promptly, as it takes 4-6 weeks to process (www.fafsa.ed.gov). Course modules are as follows:

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<tr>
<th>Course</th>
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</tr>
</thead>
<tbody>
<tr>
<td>ACNT 1013</td>
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<td>Computerized Accounting</td>
</tr>
<tr>
<td>ACNT 1029</td>
<td>64</td>
<td>Payroll Records &amp; Procedures</td>
</tr>
</tbody>
</table>

ACNT 1013  Computerized Accounting  56 Hours
This course is designed to teach students the software that is utilized in preparing
automated payroll. Students will be introduced to concepts, payroll tasks and journal entry for payroll, inventory, accounts payable, accounts receivable, employee records and payroll financial statements. Students will learn to create and input employee records, employee earnings and deductions and employer deductions. Computer literacy is not required for this course.

ACNT 1029   Payroll Records & Procedures   64 Hours
This course is designed to teach students the tax tables, laws and regulations of preparing payroll, federal and state tax reports and returns and the complete payroll register. Students will have the opportunity to train and learn what accountabilities are regulated on the employer and what accountabilities are regulated on employees. Upon successful completion of this course, the student will have a true understanding of all the legalities in standardized payroll accountability.

Business Computer Applications
The following course is designed to offer individuals the opportunity to receive hands-on training, upgrade computer skills, learn the special features that software packages offer, and increase speed and accuracy. In today’s workforce it is highly recommended that individuals be proficient with software applications that will be used daily to complete immediate job requirements. Our goal and focus is to grow individual proficiency within each software application and to increase skills, abilities, and productivity that will help establish new technical initiatives when completing projects, reports, and presentations. Students must attend 80 percent of the course successfully in order to receive a certificate of completion. Textbook required.

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<tr>
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</tr>
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<tbody>
<tr>
<td>ITSC 1022</td>
<td>40</td>
<td>Microsoft Office 2007 Essentials</td>
</tr>
</tbody>
</table>

ITSC 1012   Welcome to the World of Computers   20 Hours
Do you have a computer at home but don’t know how to use it or turn it on? Have you been out of the workforce and are ready to go back but feel you don’t have enough computer skills? With the fast growing pace in technology, we strive to offer our community a course that will teach people to use a computer and fully understand its functions and features. This course is ideal for individuals who want to learn how to operate a computer and how it is used in today’s business environment. Upon successful completion, students will gain the knowledge and hands-on training that can be applied to any job setting. Textbook required.

Customer Service
As businesses continue to experience growth and intriguing competition with other similar businesses, it is very important to offer the best customer service available to clients, associates, vendors, and customers. This training is customized to assist businesses and their employees to learn the concepts that will help increase a company’s image and reputation. Effective customer service results in growth of
sales. Individuals will learn the five C’s in customer service, the model to increase repeat customers, techniques to incorporate company policies and procedures with customer service, how to offer better internal customer service within departments and much more.

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<tr>
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<tbody>
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<td>BUSG 1005</td>
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<td>8</td>
<td>Customer Service</td>
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</tbody>
</table>

The Effective Employee Workshop

In today’s world it is important to learn to work well with all “walks of life” that may affect your job performance and/or productivity. Train and learn practical applications, principles, and concepts that can build stronger working relationships in the business and industrial environment. Students will identify different human relations that include diversity, attitudes, and self-esteem that help promote career success. Additionally, this course will focus on the causes and effects of stress in the workplace and will introduce the “better person” model. Upon completion, students will distinguish how to develop individual and group communication, listening and decision-making skills that will motivate others to work well and carry out their assigned responsibilities. Human behavior is the strongest impact in any job. Financial aid is available for those who qualify. Students seeking financial assistance are encouraged to submit all paperwork promptly, as it takes 4-6 weeks to process (www.fafsa.ed.gov).

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<tbody>
<tr>
<td>HRPO 1011</td>
<td>48</td>
<td>Effective Employee Workshop</td>
</tr>
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</table>

English for the Workplace

The English For the Workplace Program consists of four sessions. These sessions are designed to offer students the tools necessary in English reading, writing, vocabulary, grammar, listening and speaking skills for the workplace. Students are tested prior to the start of each course to learn the area of focus per student. All students are required to complete an additional eight hours of open entry-open exit lab per week. This training is ideal for individuals whose primary language is one other than English; and who would like to learn to speak conversational English in a short period of time. The goal is for students complete this training to become better English communicators in the workforce.

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<tr>
<th>Course</th>
<th>Hours</th>
<th>Course Title and Description(s)</th>
</tr>
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<tbody>
<tr>
<td>COMG 1005</td>
<td>80</td>
<td>Intensive English</td>
</tr>
</tbody>
</table>

Office Support Assistant Certificate

This certificate is for individuals who desire to work in an office environment but need additional skills to succeed. This training will teach the preliminary skills required in most business offices and will offer the adequate amount of workforce
training that will help increase job productivity and establish proficiency. This certificate is designed to prepare individuals to work as office clerks, receptionists, in-take personnel, administrative assistants and entrepreneurs. This certificate is ideal for individuals who wish to manage their own business administratively. This certificate will offer students the opportunity to learn, train, and prepare for job entry. Students will study and succeed in the following featured areas of concentration:

- Business Communication
- Business Etiquette
- Business Math
- Critical Thinking
- Customer Service
- Keyboarding
- Microsoft Office 2007 Essentials
- Resume Writing
- Time Management
- The Art of Interviewing

Upon successful completion, students will earn a certificate of completion and will be able to work independently in most office environments with speed and accuracy.

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<th>Course</th>
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<tbody>
<tr>
<td>POFT 1093</td>
<td>90</td>
<td>Office Support Assistant Certificate</td>
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</table>

**Safety**

**Environmental, Occupational Health and Safety Programs**

This coursework is designed to offer individuals the opportunity to learn the regulations, policies and procedures of the Occupational Safety and Health Administration (OSHA) required by certain occupations. Our coursework includes the laws, requirements and codes necessary for the handling of hazardous substances in the workplace. We also provide safety coursework for general and construction industry that focuses on hazard identification, avoidance, control and prevention in the workplace.


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<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>EPCT1053</td>
<td>40</td>
<td>40-Hour HAZWOPER</td>
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<tr>
<td>EPCT1053</td>
<td>24</td>
<td>24-Hour HAZWOPER</td>
</tr>
<tr>
<td>EPCT1059</td>
<td>8</td>
<td>8-Hour HAZWOPER Refresher Course</td>
</tr>
<tr>
<td>EPCT1023</td>
<td>8</td>
<td>Hazardous Waste Management Update</td>
</tr>
<tr>
<td>EPCT2004</td>
<td>8</td>
<td>Hazardous Materials Transport</td>
</tr>
<tr>
<td>OSHT 1015</td>
<td>10-30</td>
<td>OSHA Regulations – Construction Industry</td>
</tr>
<tr>
<td>OSHT 1015</td>
<td>10-30</td>
<td>OSHA Regulations – General Industry</td>
</tr>
</tbody>
</table>
EPCT 1053 40-Hour HAZWOPER
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 1053 24-Hour HAZWOPER
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/occasion-al 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 1059 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 1023 Hazardous Management Waste Update
This course will provide current information concerning regulatory revisions and new technology applications in hazardous waste management. We will review the basic terms used in environmental compliance, soil-testing, water-testing, toxicology, and hazardous materials. This is a good course for professionals who are not familiar with these terms and their interpretations. Students who could benefit from this class are commercial and residential developers, excavators and builders.

EPCT 2004 Hazardous Materials Transport
A course in the transport of hazardous materials and dangerous goods to meet the requirements of the U.S. Department of Transportation Title 49 C.F.R, Sub Part H, Sections 172.700-172.704, commonly referred to as Docket HM-126F

OSHT 1015 OSHA Regulations – Construction Industry
This course emphasizes hazard identification, avoidance, control and prevention in the workplace. OSHA policies, procedures, and standards from Title 29 C.F.R. Part 1926 are covered as well as general industry safety and health principles. This coursework may be customized to a specific work site as needed. Upon completion of this course, a wallet card and certificate will be issued.
OSHT 1015  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 regulation information from Title 29 C.F.R. Part 1910. This course emphasizes hazard identification, avoidance, control and prevention in the workplace. OSHA policies, procedures, and standards are covered as well as general industry safety and health principles. Upon completion of this course, a wallet card and certificate will be issued.

Supervisors and Communication Workshop
As communication is one of the strongest components in the workplace, this training will offer a comprehensive study of intermediate and advanced communication skills for managers. Managers will learn the skills and tools that are important to communicate effectively with employees in written and spoken communication, which includes letters, memos, reports, email and speeches, and/or presentations. In addition, managers will be introduced to conflict resolution, team building, decision making and critical thinking strategies. Upon successful completion, managers will earn a certificate of completion and will be able to communicate effectively with all direct and indirect employees and/or coworkers.

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<th>Course</th>
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<tbody>
<tr>
<td>BMGT 1045</td>
<td>48</td>
<td>Supervisors and Communication Workshop</td>
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Industrial Automation Training
Automated Manufacturing Training Program
The Manufacturing & Industrial Technology program is a multi-disciplinary program designed to prepare students for technician-level positions and/or to increase knowledge base. Specialty areas allow students to choose an emphasis in industrial maintenance. Skills are acquired through lectures, demonstrations, hands-on experience and individual evaluations.

Lab activities include the use of modern equipment and techniques currently found in industry. Safety equipment and the safe use of tools and materials are integrated into each course in the curriculum. This training provides a foundation for any student to enter the workforce and continue skill enhancement.

Graduates are prepared to perform many functions including set-up, troubleshooting, processing and quality control. This requires proficiency in mathematics, practical problem solving and analysis.

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<tbody>
<tr>
<td>ELMT 1091</td>
<td>8</td>
<td>Introduction to Industrial Training</td>
</tr>
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</table>

Provides a sampling of applied mathematics, AC/DC circuits with basic motor control, intro to basic hydraulics/pneumatics and fundamental practical problem solv-
ing techniques. Emphasis is placed on direction of career path and suitability of the student to be a successful candidate in the industrial maintenance technology field.

**Industrial Technician Certification**

**EEIR 1001 Math for Electronic Technicians 48 Hours**
An applied mathematics course with emphasis on the numbering systems, calculations and problem solving skills needed to solve for electronic circuit parameters. Schematic and electronic terminologies are introduced.

**Math Fundamentals:** Reviews general math, basic algebra, and nominal trigonometry. Perform calculations involving whole numbers, fractions, exponents, logarithms, roots, percentages, radicals, and averages, basic trigonometry; demonstrate the ability to apply Ohm’s and Watt’s law.

**Metric Conversions:** Fundamentals, Length, Area, and Volume Conversions
Mass: Units and Conversions Time: Units and Conversions Temperature: Units and Conversions Pressure and Torque. Reviews the International System of Units (Metrics) and how to convert to other systems. This includes three dimensional units, mass, time, temperature, pressure, and torque.

**DFTG 1022 Technical Drawing – Basic Blueprint Reading 40 Hours**
Emphasis on accurate/efficient interpretation of symbols/graphic language required to produce working drawings. Gives basic instruction for creating electronics drawings. Begins with general topics such as electronics terms, electronics symbols, and component descriptions and reference designations. Students progress into specific applications, including wiring, cabling, harnesses and component enclosures. Gives a basic understanding of mechanical drawing practices so the student can properly interpret blueprints. This includes threads, gears, and surface texture notations view and sectioning conventions, dimensioning practices, tolerance as a method of control, related elements, interpreting special applications.

**CETT 1003 Electricity 1 - DC Circuits 64 Hours**
A study of the fundamentals of direct current including Ohm’s law, Kirchhoff’s laws and circuit analysis techniques. Emphasis is on circuit analysis of resistive networks and DC voltage measurements. Gives a foundation in Direct Current (DC) Circuits and how voltage, current, resistance, and power all relate in circuits. DC motors are also introduced in this course.

**CETT 1005 Electricity 2 - AC Circuits 64 Hours**
*Prerequisite: Electricity 1 - DC Circuits (CETT 1003)
A study of the fundamentals of alternating current including series and parallel AC circuits, phasors, capacitive and inductive networks, transformers, and resonance. Gives a foundation in Alternating Current (AC) Circuits to include capacitance, inductance, three phase power, diodes, filters, and AC motors.
ELMT 1005  Pneumatics/Hydraulics – Basic Fluid Power  80 Hours
Prerequisites: Math for Electronic Technicians (EEIR.1001)  
Recommended
Basic fluid power course covering vacuum systems, pneumatic and hydraulic systems, fluid power symbols, operating theory, components, and basic electrical and manual controls. Hydraulics – Introduces hydraulic concepts of mechanical control of cylinders, valves, etc., that are used in manufacturing. This control includes the physics and formulas necessary to troubleshoot these systems in industry. Pneumatics – Carries the hydraulic concepts further to include that of compressible fluids and how compressibility affects the mechanical systems.

Industrial/Troubleshooting Technician Certification

INTC 1057  Sequence Circuitry - AC/DC Motor control  80 Hours
The fundamental study of electric motors, characteristics with emphasis on starting, speed control, and braking systems. Introduces motor control devices common to a modern industrial environment, included, but not limited to, jogging (inching) circuits, braking circuits, electronic control circuits, reduced voltage starting systems and proximity switches.

CETT 1015  Electronic Equipment Controls - Digital Applications
Prerequisites: INTC Sequence Circuitry - AC/DC Motor Control
An entry-level course in digital electronics covering number systems, binary mathematics, digital codes, logic gates, Boolean algebra, Karnaugh maps, and combinational logic. Emphasis is placed on circuit logic analysis, circuit reductions, holding circuits, timing charts, sequential ladder logic, anti-repeat circuits, and discrete sensors and troubleshooting digital circuits.

ELMT 2037  Electronic Troubleshooting, Service, and Repair*
Prerequisites: INTC 1057 Sequence Circuitry - AC/DC Motor Control; CETT 1025 Electronic Equipment Controls - Digital Fundamentals
In-depth coverage of electronic systems, maintenance, troubleshooting, and repair. Topics include symptom identification, proper repair procedures, repair checkout, and preventative maintenance. Emphasis is placed on safety and proper use of test equipment. Utilizes all of the concepts and skills taught throughout the entire Industrial Technician training, and requires the student to work under similar situations that might be found in industry. It also introduces the practical problem techniques which are used to quickly and safely troubleshoot to the faulty component. *May be offered as a capstone course.

PLC Certification

ELMT 1001  PLC 1 - Programmable Logic Controllers  96 Hours
An introduction to programmable logic controllers as used in industrial environments including basic concepts, programming, applications, troubleshooting of ladder logic, and interfacing of equipment. Basic fundamentals of the Toyopuc
PLC to include basic instructions, parameter settings, hardware components, circuit creation, sequential flow control, and function block programming.

**ELMT1001  PLC 2 - Programmable Logic Controllers  80 Hours**
*Prerequisites: ELMT 1001 Programmable Logic Controllers I (PLCI)*
An introduction to programmable logic controllers as used in industrial environments including basic concepts, programming, applications, troubleshooting of ladder logic, and interfacing of equipment. This course introduces the Allen-Bradley 5000 PLC to include RSLinx, basic configuration, tags, Panel View, communication, ControlNet, DeviceNet, and Industry Programming Standards.

**ELMT 2039  PLC 3 – Advanced Programmable Logic Controllers  30 Hours**
*Prerequisites: PLC 1 and PLC 2 (ELMT 1001)*
Advanced applications of programmable logic controllers as used in industrial environments including concepts of programming, industrial applications, troubleshooting ladder logic, and interfacing to equipment.

### Information Technology

#### Introduction to Personal Computing
As the cost of personal computers continues to plummet, the number of households in the United States with a least one personal computer continues to rise. As recently as 2005, a survey reported that 76% of respondents claimed owning a personal computer. Whether you are a beginner or seeking to augment your skills through certification, Palo Alto College’s Corporate and Community Education program has just the right set of courses to get you the information you need to know to make informed computing decisions in today’s information age. Email? Spam? Viruses? Spyware? Phishing? It’s getting so you can’t safely walk the “cyber” streets anymore. Palo Alto College’s suite of Internet courses will get you all the information you need to navigate the Internet safely.

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<tr>
<th>Course</th>
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<tbody>
<tr>
<td>ITSC 1012</td>
<td>8</td>
<td>Introduction to Personal Computers</td>
</tr>
<tr>
<td>ITSC 1005</td>
<td>8</td>
<td>Introduction to the Windows XP Operating System</td>
</tr>
<tr>
<td>ITNW 1007</td>
<td>8</td>
<td>Introduction to the Internet</td>
</tr>
<tr>
<td>S 010</td>
<td>8</td>
<td>Online Safety and the Internet – A Primer for Parents</td>
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</table>

**ITSC 1012  Introduction to Personal Computers  8 Hours**
Students will identify the components of a computer system; assemble a computer system; demonstrate basic operating system functions; and install and use common applications such as word processors, spreadsheets and Internet applications such as email clients and browsers.
ITSC 1005  Introduction to the Windows XP Operating System  8 Hours
A study of file creation/deletion, data entry and manipulation, automatic file execution, configuration, and directory commands. Topics include installing, configuring, and maintaining operating systems; performing basic file management operations; organizing and allocating primary and secondary storage; accessing and control of peripheral devices; and running utilities.

ITNW 1007  Introduction to the Internet  8 Hours
Students will learn about using email to communicate, how to get free email addresses through online providers such as Yahoo and Gmail, and how to use email safely. Students will also use browser programs such as Internet Explorer and Firefox to conduct information searches and find services online.

S 010  Online Safety and the Internet – A Primer for Parents  8 Hours
The Internet provides a virtually unlimited source of information and services. However, as a parent you need to know where the pitfalls lie. This course will discuss Internet security hazards such as viruses, drive-by downloads, malware, and phishing; and how to protect your computer from these threats. Tools and strategies parents can use to help control Internet usage in the home, such as content filtering and safe browsing methods, will also be discussed.

CompTIA Certification Program
The Computing Technology Industry Association (CompTIA) A+ certification has become the industry standard for skills needed by computer support professionals in today’s fast-paced information technology environment. Palo Alto’s CompTIA A+
The certification training program will give you everything you need to know to get this valuable, internationally recognized certification. The program features extensive, hands-on training in both hardware and software aspects of computer support. By the end of the program students will acquire all the necessary skills and knowledge to pass the CompTIA A+ Certification test.

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<tr>
<th>Course</th>
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<tbody>
<tr>
<td>CPMT 1091</td>
<td>24</td>
<td>A+ Hardware Certification Training</td>
</tr>
<tr>
<td>CPMT 1091</td>
<td>24</td>
<td>A+ Software Certification Training</td>
</tr>
<tr>
<td>ITNW 1058</td>
<td>64</td>
<td>Networking + Certification Training</td>
</tr>
<tr>
<td>ITNW 1091</td>
<td>64</td>
<td>Security + Certification Training</td>
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</table>

**CPMT 1091   A+ Computer Certification Training  48 Hours**

Computer support professionals must have expertise in all aspects of desktop personal computer hardware. This course will focus on defining and identifying the various hardware and software components in a desktop system and how to diagnose hardware issues. Students will also study best practice configurations, preventive maintenance techniques, and have ample opportunity to perform hardware installation, configuration and troubleshooting. Training prepares individuals to pass the Software and Operating Systems Section of the CompTIA A+ certification exam.

**ITNW 1058   Network+ Certification Training  64 Hours**

The first step in preparing for a career as a Network Engineer in the Information Technology support industry, this course includes the various responsibilities and tasks required for a service engineer to successfully perform in a specific environment. Students will learn how to identify and define terminology, hardware, and software components of computer networks; utilize equipment, protocols, and topologies to differentiate between various network systems; demonstrate skills in installing network hardware, software, and cable; troubleshoot network connectivity; configure network protocol; and install and configure network client software. Prepares individuals to pass the CompTIA Network+ certification exam.

**ITNW 1091   Security+ Certification Training  64 Hours**

Students will receive instruction in security for network hardware, software, and data, including physical security; backup procedures; relevant tools; encryption; and protection from viruses. The course will discuss the physical security of file servers and other network components using NIST Guidelines and Best Practices; teach students how to develop backup procedures to provide for data security; use network operating system features to implement network security; discuss the nature of computer and network threats and vulnerabilities and methods to prevent their effects; use relevant tools to provide for network security; and use encryption techniques to protect network data. Prepares individuals to pass the CompTIA Security+ certification exam.
Help Desk Support and Customer Service

Now that you have your A+ Certification, it’s time to get a job as a Help Desk or Computer Support Technician. Palo Alto’s Corporate and Community Education Department can help you hone your customer service skills to get you the extra edge when it comes to securing your position.

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<tr>
<td>ITSC 1008</td>
<td>12</td>
<td>Help Desk Support for Operating Systems Service Skills</td>
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</table>

ITSC 1008 Help Desk Support for Operating Systems 12 Hours
Students will learn fundamental customer support concepts for personal computer users. Learn basic troubleshooting techniques that will help you diagnose and isolate software and hardware problems, re-imaging hard drives, updating drivers, and isolating hardware bugs.

ITSC 1044 Help Desk Support Customer Service Skills 12 Hours
Students will learn fundamental customer support concepts for the operation of a help desk or call center including effective communication, customer service principles, troubleshooting, and solution-oriented techniques. Students will learn to apply basic principles of effective business communication, customer service principles, troubleshooting, and problem solution techniques; and communicate software technical information via telephone.

Web-Multimedia Design

The Web-Multimedia Design Program is designed for individuals employed as web design specialists or who want to pursue a technical career in web design and multimedia. The program provides an array of software training focusing on cutting-edge web design tools and trends. As technology creates new avenues for business and marketing communications, the demand for skilled employees able to leverage this technology steadily rises. This program is ideal for those seeking to enhance current skills, to be employed by the leading organizations in web design, or to develop web page consulting businesses.

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<tbody>
<tr>
<td>IMED 1002</td>
<td>12</td>
<td>Website Building I – Graphic Design and Images</td>
</tr>
<tr>
<td>IMED 1040</td>
<td>12</td>
<td>Website Building II – Website Design and Layout</td>
</tr>
<tr>
<td>ITNW 2036</td>
<td>12</td>
<td>Website Building III – Website Construction</td>
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</table>

IMED 1002 Website Building I – Graphical Design 12 Hours
The first step in designing an award-winning website is deciding the content and information you will post there. This class will focus on using image manipulation programs such as Macromedia’s Fireworks and Adobe Photoshop to create the
graphical elements of your website. Students will learn how to resize photographs; correct red-eye or blurred images; create banner and button elements; and use layers to embed text into graphical images.

**IMED 1040  Website Building II – Website Design and Layout  12 Hours**
Learn how to design a website based on the information you want to present. Study best practices and industry standards in web design and layouts. Even more importantly, learn what pitfalls to avoid in designing your website. Create the structure for your website that will make it scalable and allow for easy updating, expansion, and interactivity.

**ITNW 2036  Website Building III – Website Construction  12 Hours**
Combine elements you learned in Website Building I and II to create your first website and establish your online presence. Students will use Macromedia Dreamweaver to incorporate images and text into a world-class website. Students will also learn about web-hosting options, how to use FTP to upload changes and additions, and how to incorporate multimedia elements such as sound and video files.

**ITNW 1091  Voice Data and Video Cabling  36 Hours**
Palo Alto College’s Corporate and Community Education Department is proud to offer our newest course in Voice Data and Video Cabling. This course is designed to give students hands-on training and skills in a realistic work environment. The program covers the three major cabling technologies (twisted pair, coaxial, and fiber-optic), the three applications (voice, data and video), and the three types of installations (industrial, commercial and residential). This course will prepare students for the BICSI Registered Certified Installer, Level 1, Exam. Upon completion, students will have acquired the skills and knowledge to qualify and succeed in the growing field of cable-installation.

**Educator Preparation 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.

Texas has many critical shortage areas. The Educator Preparation 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.

**AT 0001 English Language Arts and Reading, grades 4-8**
The focus of this content area will include knowledge and skills that reflect a student-centered atmosphere in a diverse learning environment. The main topics to be addressed for this discipline include, but are not limited to: Oral language, Foundations of Reading, Word analysis skills and reading fluency, Reading comprehension, Written language, Study and inquiry skills, viewing and representing, technology, and assessment of developing literacy. Blended classes available online.

**AT 0002 English Language Arts and Reading, grades 8-12**
The focus of this content area is on individual, group, collaborative instruction that is appropriate for each student and reflects each student's individual learning style. The areas of writing, reading, listening, speaking, viewing and representing in an atmosphere of continuous, varied types of assessment will be addressed. Subtopics of the above include, but are not limited to: reading process and application of the reading process, an extensive body of literature and literary genres used for interpretation, writing competence, writing for various audiences, purposes, forms, and context, structure of the English language, listening and speaking skills, interpretation, analysis, visual images and messages in various media that will provide students the opportunity to develop skills in the above areas. Blended classes available online.

**AT 0004 Science, grades 8-12**
This discipline encompasses a variety of disciplines in the classroom and prepares pre-service teachers to teach the content areas of physical science, biology, chemistry, physics and environmental science. Topics include, but are not limited to: classroom, field and laboratory management activities; ethical care of and treatment of organisms and specimens; correct use of tools, materials, equipment and technologies; solid understanding of the process of scientific inquiry; theoretical and practical knowledge about teaching science and how students learn science; varied and appropriate assessments and assessment practices used to monitor student learning; the history and nature of science; the effect of science on students' daily lives, both personal and societal; unifying processes and concepts that are common to all sciences, as well as the science content appropriate to teach the state wide curriculum (TEKS).

*THERE IS A PREREQUISITE OF 18 UPPER DIVISION COLLEGE HOURS REQUIRED BEFORE BEING CONSIDERED FOR ACCEPTANCE INTO THIS PROGRAM.*

**AT 0003 EC-4 Generalist**
This content area prepares the student to teach in the grades Pre-K- 4th grade.
Each core academic area (Language Arts, science, math, social studies) is covered as well as learning centers, formal and informal assessment strategies and techniques, classroom environment and integrated thematic learning and teaching. The pre-service teacher enrolled in this program acquires a vast and dynamic amount of content area knowledge that prepares them for success in the elementary classroom. Blended classes available online.

CATE – Career and Technology Education
Palo Alto College offers three teaching certificates under the CATE umbrella: they include: Introduction to Agricultural Science, Family & Consumer Science and Trade & Industrial Technology.

Introduction to Agricultural Science
This course provides a foundational overview of agriculture, the safety and standards of the industry, resource conservation, and the American agricultural system. Related business concepts include production, distribution, marketing, and economic factors of agricultural science. Historic and critical federal/state court cases directly influencing the evolution of land holdings and the educational system will be reviewed. Scientific principle applications involving mechanics, genetic selection, biotechnology, reproduction, nutrition, health, meats and marketing strategies and procedures for livestock will be included.

Family, & Consumer Science
This course concentrates on an overview of children, their families and communities, with regards to schooling. Lifestyles and issues of today’s families, to include child development levels and issues of neglect/abuse, will be another focal point. The use of Para-educators as well as parental involvement in compliance with NCLB standards will be introduced. Honoring diversity and multiculturalism will be reviewed as well.

Trade and Industrial Technology
This course concentrates on specific concerns related to business and industrial facilities, an introduction to layout and fabrication to include design, blueprints and written specifications. In addition, an introduction to welding, fillet and groove welds, shielded metal arc processes and cutting, will be included with the history and future in welding, safety, setup and maintenance of cutting equipment and supplies. Basic principles of electrical systems, the study selection and use of hand tools, portable and stationary power tools, construction equipment, and safety in the use of tools and equipment will be researched.

AT 0005 PPR Pedagogy and Professional Responsibilities grades EC-4, 4-8
AT 0006 PPR Pedagogy and Professional Responsibilities grades 8-12

The 122 hours follows the content course work and includes, but is not limited to: the lesson cycle, lesson planning, classroom management, technology in the
classroom, individual differences, professional growth and development, learning centers, model teaching, formal and informal assessment, survey of exceptionalities, special populations, learning resources available, and parent and community involvement.

**Coming Soon:** Science 4-8 and 6-12.

### New Upcoming Programs

#### Accounting

**Introduction to Bank Loan Processors**

This curriculum provides training for the fundamental principles of bank loan processing. This includes providing training in critical areas of bank loan processing such as loan applications, underwriting, debt ratios (ability-to-pay calculations), background investigations, salary calculation, loan auditing, loan closing credit report analysis, credit investigation, personal finance, auto finance, sale finance, mortgage finance and bank loans. The curriculum of courses is designed to provide students with training on bank loan processing principles and practices.

#### Industrial Automation Courses

**PLCs for Non-Programmers**

This course is an introductory course aimed at multi-skilled maintenance technicians, electricians, or other non-programmers who need a general understanding of PLCs.

**Introduction to VFDs**

This course is designed for persons requiring general knowledge and understanding of Variable Frequency Drives.

**Electrical Troubleshooting & Preventive Maintenance**

This course is a hands-on course providing training on some of the most commonly performed electrical troubleshooting tasks.

**Electrical Drawings, Diagrams, and Schematics**

This course is designed to teach/refresh students in how use Boolean algebra, how to read and write electrical symbols, gate logic, and digital ladder logic.

**Preventive Maintenance Techniques for Facility and Industrial Maintenance**

This course is targeted to maintenance technicians to teach them how to anticipate or catch a problem before it occurs.

**Electrical Safety and Arc Flash Protection**

This is an NEC-based course identifying and providing solutions for working around electrical systems and equipment.

**Basic Electricity for the Non-Electrician**
This is a basic electricity class with hands-on training on test equipment, wiring techniques, and personal protection equipment.

**Information Technology**

**CableTech Cable Installation Training**
Prerequisite: There are no prerequisites for this class. Technicians skilled in basic cabling and low-voltage wiring are in high demand in San Antonio’s growing IT support sector. Palo Alto College’s CableTech Cable Installation Training gives students extensive hands-on experience in a realistic work environment. Theory and hands-on experience is provided in three areas to fully prepare students to succeed in cable-installation jobs. The course covers three cabling technologies (twisted pair, coax, fiber), three industries (voice [telco], data, video), and three types of installations (industrial, commercial, and residential).

**CompTIA Network+ Certification Training**
Prerequisite: A+ certification or equivalent knowledge. Network+ is a CompTIA vendor neutral certification that measures the technical knowledge of networking professionals. Earning the Network+ certification means that the candidate possesses the knowledge needed to configure and operate a variety of networking products. This exam covers a wide range of vendor and product neutral networking technologies that can also serve as a prerequisite for vendor-specific IT certifications, such as Microsoft’s Certified Systems Engineer (MCSE), Cisco, and Novell. The Network+ training program at Palo Alto College is a 48-hour program including lecture, labs, and exam preparation. Note: This class does not include certification testing.

**CompTIA Server+ Certification Training**
Prerequisite: A+ certification or equivalent knowledge. Network+ certification or equivalent knowledge. Server+ certification is a standard of competency for mid- to upper-level technicians responsible for server hardware functionality. The Server+ certification credential validates advanced-level technical competency of server issues and technology, including installation, configuration, upgrading, maintenance, troubleshooting and disaster recovery. The Server+ training program at Palo Alto College is a 48-hour program including lecture, labs, and exam preparation. Note: This class does not include certification testing.

**CompTIA Security+ Certification Training**
Prerequisite: A+ certification or equivalent knowledge. Network+ certification or equivalent experience of at least 2 years on the job practice emphasizing data security. Server+ certification of equivalent experience. CompTIA Security+ validates knowledge of communication security, infrastructure security, cryptography, operational security, and general security concepts. Those holding the Security+ certification have demonstrated the aptitude and ability to master such knowledge areas as: general security concepts, communications
security, infrastructure security, basics of cryptography, and operational/organizational security. Major corporations such as Sun, IBM/Tivoli Software Group, Symantec, Motorola, Hitachi Electronics Services and Verisign value the CompTIA Security+ certification and recommend or require it of their IT employees.

**CompTIA HTI+ Certification**

Prerequisite: A+ certification or equivalent experience. Network+ or equivalent experience.

Technology in the home is big business. Integrating technologies through home networking is becoming an increasingly high demand skill set. CompTIA Home Technology Integrator (HTI+) certification proves technical competency regarding the installation, integration and troubleshooting of automated home sub-systems. CompTIA HTI+ is vendor-neutral, covering technologies such as home security, audio/video, computer networks, electrical and structured wiring, HVAC (Heating/Air Conditioning Systems), cable/satellite, broadband and telecommunications. Although CompTIA HTI+ is an entry level certification, it is recommended that candidates have at least one year of experience with either information technology, building or electrical trades, HVAC installation, audio/video integration, or home security. Companies such as Sears, Ingram Micro and Honeywell International support CompTIA HTI+, and recognize its value in setting industry standards for this emerging market.

**Logistics**

**Logistics & Warehousing**

A demand occupation course that offers study in introduction to logistics, forklift operation, electronic ID and barcoding, equipment, shipping and physical inventory, warehouse security, workplace safety and hazardous materials transportation. The Logistics and warehousing graduate will gain skills required for jobs in material management, forklift operation and inventory control.

**Workforce Ready**

This course is designed for individuals seeking to become better employees and get ahead by developing their personal skills such as time management, team building, customer service and communication skills. This course also develops foundation skills using basic skills in reading, writing, math, decision making and problem solving.
The Alamo Community Colleges encourages students to pursue an education beyond high school and welcomes all students to attend one of the Alamo Community Colleges. The Alamo Community Colleges recognize a variety of admissions:

- High school graduation
- General Education Development (GED)
- Early Admission
- College or university transfer
- Individual Approval
- Dual Credit

**GENERAL ADMISSION REQUIREMENTS**

Students are encouraged to complete the application process well before registration begins for the term they plan to attend the Alamo Community Colleges for the first time. The steps to complete admissions requirements are:

1. Submit the ApplyTexas two (2) year college admission application online
2. Submit an official high school/GED or college transcript from last college attended
3. Meet the placement requirements with official documentation of Texas Success Initiative (TSI) exemption or compliance (test scores or college transcript) or take mandatory placement tests
   
   Exception: Students enrolling in Level One-Certificate Programs that do not identify skill levels are not required to test.
4. Schedule an advising session if attending college for the first time or transferring with less than fifteen (15) semester credit hours
5. Meet additional requirements for some admission types (See information below)

Students applying to one college will also be admitted to any of the other Alamo Community Colleges and are encouraged to explore the programs available at all of the colleges. Students wishing to take courses at more than one college should notify the second college of their interest.

**APPLYTEXAS APPLICATION**

Potential students must submit an admission application for two-year institutions online at [http://www.applytexas.org](http://www.applytexas.org). Students may access computers at all of the Alamo Community Colleges if needed. The process should take 15-30 minutes. If the application is not completed in a single session the file can be saved.

Once students have submitted the ApplyTexas application to one or more of the
Alamo Community Colleges they do not need to re-apply for subsequent admission provided there is no break in enrollment.

Checklist of Application Materials
Students should have the following information available before beginning the online application.

- Social Security Number
  
  **Note:** Recording a social security number (SSN) is optional, but it is **strongly recommended.** Applications and documents without social security numbers are difficult to match up, which may result in additional processing time. For questions or concerns, contact the Enrollment Services/Admissions and Records Office.

- Name of the county in which you live

- Email address (Students without email accounts can create them at various free sites such as [http://www.yahoo.com](http://www.yahoo.com) or [http://www.hotmail.com](http://www.hotmail.com)).

- Visa/Permanent Resident information to include Permanent Residence Card, issue date, and number

- THEA or other TSI assessment scores

- SAT, ACT, and/or TAKS (grade 11) Scores and Test Dates

- Names and dates of high school(s) and college/university attended

Guidelines for completing the ApplyTexas application are available through the Alamo Community Colleges’ online home page at [http://www.accd.edu](http://www.accd.edu).

- Logon to [http://www.applytexas.org](http://www.applytexas.org) to create a student profile.
- Record the User ID and Password for future access.
- Select **Two-Year Undergraduate Application**
- Select the college to which the application will be delivered
- Submit the application to the appropriate Alamo Community College
- Copy the ID Number provided in the window for your records

Once the application is submitted, all corrections and updates require a visit to the Enrollment Services/Admissions and Records Office. Email verification will contain a verification number.

**When you consult with the Alamo Community Colleges, please have your email verification with you and number with you.**
TEXAS SUCCESS INITIATIVE (TSI)
The Texas Success Initiative (TSI) (online at http://www.thecb.state.tx.us/Rules/TAC.cfm under Chapter 4, Subchapter C) is a state-mandated program that promotes academic success by ensuring that all students are prepared for college-level coursework when they enter a public college or university.

TSI measures reading, English and mathematics skills to determine students’ readiness to enroll and perform in freshman-level academic coursework. Students are required to test and to be advised based on the results of TSI assessment. Students will not be denied admission to the Alamo Community Colleges based on TSI scores or college placement scores. However, testing is required prior to enrollment.

TSI Exams:
- Accuplacer
- ASSET
- COMPASS
- THEA
- or QT (Quick THEA)

TSI Requirement Exemptions
Students may be exempt from taking a TSI-eligible exam, unless it is needed as a prerequisite for a specific course, if they meet one of the following:

- **ACT**
  Composite score of twenty-three (23) or higher, with a minimum score of nineteen (19) in each section of the English and math tests. Scores are valid for five (5) years from date of testing.

- **SAT**
  Combined score of 1070 or higher, with a minimum of 500 in each section of the verbal and math tests. Scores are valid for five (5) years from date of testing.

- **TAKS Exit-Level**
  Minimum scale score of 2200 on the exit-level math section and 2200 on the English Language Arts (ELA) section with a writing sub-section score of three (3) or higher. Scores are valid for three (3) years from date of testing.

- **Readiness Status**
  Met college-level readiness standards in English, reading, and mathematics at an accredited Texas public institution of higher education.
• **Transfer from Private or Accredited Out-of-State Institutions**
  Satisfactorily completed a minimum of three (3) college-level semester credit hours in English, reading, and math.

• **Degree**
  Earned an Associate or Baccalaureate Degree from an accredited Texas public institution of higher education.

• **Certificate**
  Enrolled in THECB approved Certificate Level-One Programs of one (1) year or less with forty-two (42) or fewer semester credit hours that do not require specific skill levels for course enrollment.

• **Military**
  Currently serving on Active Duty in the US Armed Forces, Texas National Guard, or as a member of a reserve component of the US Armed Forces for at least three (3) years preceding enrollment.

  After August 1, 1990, was honorably discharged, released, or retired from Active Duty as a member of the US Armed Forces, Texas National Guard, or as a member of a reserve component of the US Armed Forces.

Students who do not provide official documentation to verify one of the exemptions above are required to take one of the TSI assessments. **Although students may be exempt from TSI, a college-level placement exam may be required to assist in course placement.**

Students who initially do not meet the college-level standard may re-take an assessment instrument according to Alamo Community Colleges and test instrument guidelines.

Following testing, students consult with a counselor/advisor to develop a plan that assures the best opportunity for each student to attain college-level readiness and student success.

Texas Education Code: Section 51.30621, Chapter 4, Subchapter online at [http://thecb.state.tx.us/Rules/TAC.cfm](http://thecb.state.tx.us/Rules/TAC.cfm)
ACADEMIC ADVISING
To be adequately prepared for registration, students should seek academic advising early in the registration process to become familiar with pre-requisites for courses, degrees and programs, and transfer institutions.

Advising is required for all first-time college students:
- Students who have not previously attended college.
- Students who have earned college Dual Credit as high school students.
- Transfer college students to the Alamo Community Colleges with fewer than fifteen (15) earned college semester credit hours.

A college may require one-on-one or group advising in which case a registration hold would be placed on the student’s record.

Students are encouraged to consult with an academic counselor/advisor about courses and other educational concerns whether currently enrolled and pursuing a two-year degree program, planning to transfer to another college or university, or simply taking a few selected courses. Course and degree requirements and policies and procedures are subject to change. Students are encouraged to stay informed of any changes that may affect them by meeting with an academic counselor/advisor regularly.

Many students who enroll at the Alamo Community Colleges plan to transfer to a college or university with upper-division or junior standing. During their enrollment at the Alamo Community Colleges, they are advised to fulfill the lower-division requirements for the college or university selected for their continued education. The Alamo Community Colleges’ transfer services aid students in making their transfer experience a seamless process. **It is the students’ responsibility to ensure that they take courses at the Alamo Community Colleges that will be accepted by the senior institution they wish to attend.**

Students should consult a current Class Schedule, the Alamo Community Colleges’ website, or contact the Enrollment Services/Admissions and Records Office for specific information pertaining to academic advising.
ACADEMIC HOLDS
Academic Holds will be placed on students’ records, preventing release of official Alamo Community Colleges transcripts, until all admissions requirements are met. Academic Holds result when a student does not provide official transcripts from the last institution attended or does not comply with the Alamo Community Colleges’ academic policies, such as failing to maintain a 2.0 GPA. Lack of compliance results in delayed registration. Academic Holds will be placed on students’ records to ensure that academic counseling is obtained whenever necessary.

ADMISSIONS CLASSIFICATIONS
High School Admissions
High school graduates follow the standard criteria for admission listed above. Following graduation, high school students are responsible for submitting complete, official high school transcripts, including the graduation date.

GED Admissions
GED students must submit official passing test scores and follow the standard criteria for admission listed above.

Home Schooled Admissions
Students applying for admission following completion of a home school program equivalent to the high school level will be admitted as High School Admission graduates. In addition to the standard criteria for admission to the Alamo Community Colleges, home schooled students must meet the following additional criteria:

- Be 16 years of age by the start of the academic year in which they enroll
- Present a signed, notarized record of the high school equivalent work completed and the date of successful completion

Early Admissions
Students enrolled in a high school may enroll at the Alamo Community College’s early. Several programs allow students to get a jump start on their future, including early admission for qualifying students. In addition to the standard criteria for admission to the Alamo Community Colleges, early admission students must meet the following additional criteria:

- Complete the sophomore year
- Be 16 years of age by the start of the academic year in which they enroll
- Complete the Early Admit Form
- Submit a letter of recommendation from the principal or designee and parental approval addressing the applicant’s maturity and ability to function well in a college environment
• Submit an official high school transcript of coursework completed prior to registration at one of the Alamo Community Colleges

Maximum combined class load must not exceed eighteen (18) semester credit hours, counting each high school course as equivalent to one three-hour course. Re-enrollment eligibility in subsequent semesters requires a grade of “C” or better in all college-level courses.

Dual Credit Admissions
The Dual Credit Program allows eligible high school juniors and seniors to earn college credit for certain high school courses in which they are currently enrolled while completing their high school requirements. Exceptions for sophomores with demonstrated outstanding academic performance and capability must be approved by the high school principal and the chief academic officer of the Alamo Community Colleges. In order for students to participate in the program, the high schools must be approved to offer Dual Credit courses.

In addition to the standard criteria for admission to the Alamo Community Colleges, Dual Credit students must meet the following additional requirements:
  • Submit Dual Credit Form(s), including Parental Consent Form and high school counselor approval
  • Demonstrate college-level ability in the subject area(s) requested

In accordance with Texas state regulations and the Alamo Community Colleges policy, students may take up to two Dual Credit classes per regular semester. Dual Credit courses are offered in the Fall and Spring semesters only.

Current Alamo Community Colleges policy allows tuition to be waived for six (6) to eight (8) eligible semester credit hours per semester for Dual Credit Program students enrolled in a Texas high school, some private schools, and students who have been home schooled. Course credit will be counted for both high school graduation credit and college credit.

Official transcripts of the Alamo Community Colleges’ coursework will not be released until the student’s complete, official high school transcript, including the graduation date, is on file. It is the responsibility of all students to ensure Dual Credit courses will be accepted by the transfer institution they plan to attend after graduation from high school.
Transfer Admissions

A transfer student is any student who has previous college work at a regionally accredited college or university and plans to attend the Alamo Community Colleges. In addition to the standard criteria for admission, an official transcript sent from the last college attended is required at the time of admission. An official transcript from the Community College of the Air Force (CCAF) fulfills the transcript requirement for the last college attended.

Transfer Transcript Evaluation

The term “official transcript of record” refers to the record of coursework transferred from other regionally accredited colleges and universities to the Alamo Community Colleges. An official evaluation of college transfer coursework will be processed during the first (1) semester of enrollment at the Alamo Community Colleges.

The Alamo Community Colleges accept any passing grade from any accredited institution. Passing is a grade of “D” or better. Transcripts received become the permanent property of the Alamo Community Colleges.

Official transcripts must be forwarded to the respective Alamo Community Colleges. Transcripts may not be faxed. Students unable to supply official transcripts at the time of admission may be admitted conditionally. (See Conditional Admissions.)

Transfer students are not at liberty to disregard any part of their past collegiate record and apply for admission on a partial college record or solely on the basis of a high school record.

Transfer Credit Policy

Only those courses in which a “D” or better has been earned may be applied to meet the requirements toward a certificate or degree, and only those technical courses in which a “C” or better has been earned may be applied to meet the requirements in the major field of study. This policy applies to all degree plans. Credit may be transferred to the Alamo Community Colleges from colleges and universities regionally accredited by one of the following associations:

• Middle States Association of Colleges and Schools
• New England Association of Colleges and Schools
• Northwest Association of Colleges and Schools
• North Central Association of Colleges and Schools
• Southern Association of Colleges and Schools
• Western Association of Colleges and Schools
Transfer Credit
Credit from institutions not regionally accredited by one of the above associations is not accepted by the Alamo Community Colleges. The Alamo Community Colleges’ Enrollment Services/Admissions and Records Offices are responsible for verifying an institution’s regional accreditation status and for evaluating the official transcripts. Traditional classroom instruction and credit by examination are the basis on which transferred credit is recognized. A minimum of 25% of the required semester credit hours toward a degree or certificate must be completed at the Alamo Community College granting the degree or certificate.

Transfer credit may meet graduation requirements if equivalent to the Alamo Community Colleges’ course. Questions regarding course equivalences should be directed to the Enrollment Services/Admissions and Records Office.

Military Transfer Admissions
Transfer work from military education is accepted based on the American Council on Education Guide. Students must present an official copy of the Army/American Council on Education Registry Transcript System or the Sailor/Marine American Council on Education Registry Transcript.

Former Student Admissions
Students who have previously attended one or more of the Alamo Community Colleges and have not enrolled within the past twelve (12) months or any other college or university must satisfy all applicable admissions requirements prior to registration, complete the ApplyTexas Application and submit an official transcript from the most recent college or university attended since being enrolled with the Alamo Community Colleges. Students with dismissals more than ten (10) years old will enter in Good Academic Standing. Returning students whose last status was academic dismissal must petition for readmission as outlined in the Academic Standing and Probation.

If students return to the Alamo Community Colleges after a five (5) year absence, they may be required to re-submit transcripts for admission and/or graduation. Students who have been academically dismissed from a former institution should refer to the Academic Standing and Probation.

International Student Admissions
International students bring a variety of cultures to enrich the college community and help to prepare all students for the challenges of an increasingly interdependent world.

All persons seeking admission holding non-permanent visas will be processed as International Students. Applicants for F-1 student visas, or F-1 visa students trans-
ferring from a high school, college, or university in the United States, must submit in person or by mail a completed International Student Application Form available online.

All International Students must follow the guidelines for Texas Success Initiative (TSI) as determined by Texas State law. International Student applicants not completing college-level courses at a United States college or university are required to take the Accuplacer, ASSET, or THEA examinations before the start of the first semester of enrollment. A student who fails any one (1) of three (3) areas (reading, math, or writing) may enroll in some program courses but may also be required to enroll in developmental courses as needed.

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

**Foreign Credentials Evaluation**

All Alamo Community Colleges follow the same admissions procedures for students seeking admission with foreign transcripts.

**Admissions Requirements**

Students using transcripts for admissions purposes ONLY and not for transfer credit are required to have only the transcript translated. Interpretation and evaluation of the transcript is not required.

**Transfer Credit Requirements**

Students requesting transcript evaluation for transfer credit must submit the official transcript and an official third (3) party report/recommendation from a National Association of Credential Evaluation Services (NACES) member that includes translation, interpretation, and evaluation of the transcript. Credit will be awarded based on the information contained in the report and offerings of the Alamo Community Colleges.

**Senior Citizens Admissions**

Senior citizens 65 years or older may enroll for up to six (6) hours of semester credit hours on non-credit status at the Alamo Community Colleges tuition-free. If enrolling for academic credit senior citizens must pay pledged tuition and the standard activity fee. Admission is on a first class day space available basis.

**Audit/Non-Credit Admissions**

Audit/Non-Credit status provides students with the usual learning opportunities without mandatory course requirements such as attendance, written work, and tests. Students who audit a course will not receive a grade or credit for the course. An additional charge will apply.

Students who enroll only for Audit or Non-Credit admission must complete the ApplyTexas application and contact Enrollment Services/Admissions and Records.
Audit/Non-Credit courses cannot be changed to credit or credit to Audit after the Census Date of the term. Audit/Non-Credit course will be noted on the student’s permanent record as “NC” for Non-Credit.

Individual Approval Admissions
Students who are eighteen (18) years or older and who are not graduates of high school or the equivalent may be admitted if they can prove their ability to successfully complete college-level coursework. Individual approval is also required in cases where the school no longer exists and a transcript is unavailable or an individual has a disability without high school graduation. In addition to the general admission requirements, individual approval will be granted by the appropriate director, dean or designee.

Conditional Admissions
Students unable to submit an official high school/college transcript or GED test score prior to enrollment the first semester in the Alamo Community Colleges:
- will be admitted conditionally for one (1) semester with unofficial credentials
- will not be permitted to re-enroll in future semesters
- will have official transcripts withheld until all admissions requirements are met
- will be prevented from taking certain courses without appropriate placement scores and/or prerequisites
- will be responsible for meeting TSI requirements
- will be subject to admissions policies upon receipt of the official transcript from the last institution attended.

Students who have responsibilities at previous institutions (money owed, etc.) are required to submit a letter from the institution indicating release from responsibility PLUS official transcript; or official written institutional agreement to fulfill responsibility PLUS unofficial transcript prior to enrollment. A letter indicating current status of Financial Hold or Administrative Hold is required each semester until official transcripts are submitted. Students will be placed on Academic Hold each term until final official transcripts are obtained.

Joint Admission Agreements
While attending the Alamo Community Colleges, students may complete a Joint Admission Agreement and follow a degree plan designated by a specific university. The degree plan outlines the courses that will apply toward a specific major at a specific university.

Most colleges and universities maintain catalogs online. See a complete listing of Texas institutions of higher education online at the Higher Education Locator Map, http://www.thecb.state.tx.us/interactivetools/HELM.
ADMISSION APPEAL PROCESS
All students who fail to meet the academic criteria stated in the Alamo Community Colleges’ current catalog, students on Academic Dismissal (previously referred to as Enforced Scholastic Withdrawal) and students on Suspension from any institution, must follow the admission/readmission procedures as described in the guidelines outlined under Academic Standing and Probation: Academic Dismissal in order to be admitted. In addition, students may be required to submit a brief written petition to a counselor/advisor or designee for an early return after remaining out one (1) semester. (Note that two (2) Summer sessions equal one (1) semester.)

CREDIT BY NON-TRADITIONAL MEANS
The Alamo Community Colleges provide students the opportunity to receive equivalent college semester credit hours earned through Advanced Placement and non-traditional sources. The Alamo Community Colleges, with appropriate departmental guidelines, reserve the right to determine the acceptable transfer credit to a maximum of thirty-two (32) semester credit hours once the student has earned six (6) college semester credit hours at one of the Alamo Community Colleges.

Credit hours earned by examination will not be included in a student’s GPA computation; however, the semester credit hours are counted for graduation. Credit by non-traditional means may not be awarded once a grade has been earned.

Students planning to transfer to other institutions should consult with those institutions regarding their policies on granting non-traditional credit.

Internal Proficiency Examinations
Students enrolled for the current semester, with paid tuition for that semester, may satisfy the requirement of certain courses by passing proficiency examinations provided the following criteria are met:

- Seek appropriate departmental requirements in order to take departmental exams and receive written departmental approval.
- Obtain information or approval from Enrollment Services/Admissions and Records Office. Upon approval students must pay appropriate costs.
- Take the exam by the Census Date of the semester if applying for credit by exam after enrolling in a course.
- Take a comprehensive written examination that may include prescribed performance tests.
- Earn a grade of “C” or better to receive credit.
Note: Examinations for credit hours are not administered in all departments. No more than sixteen (16) semester credit hours earned by internal proficiency examinations may apply toward graduation.

Tech Prep Articulation Agreement
College credit for certain technical courses may be requested after satisfactory completion of the secondary portion of a curriculum detailed in a Tech Prep articulation agreement. All Tech Prep agreements must be approved by the Texas Higher Education Coordinating Board (THECB). It is the student's responsibility to contact the appropriate department chair to request Tech Prep credit within the time limits detailed in the agreement. The student must provide the chair with proper documentation of satisfactory completion of the secondary portion of the curriculum.

Tech Prep credits approved by the department chair are not posted on the transcript until the student has satisfied the minimum semester credit hour resident requirement specified in the agreement. In no case will a Tech Prep semester credit hour resident requirement be less than three (3) semester credit hours. While the number of semester credit hours may vary between agreements, in no case will the maximum credit earned through a Tech Prep agreement exceed sixteen (16) semester credit hours. All credit earned through a Tech Prep agreement is included in the thirty-two (32) maximum semester credit hours that may be earned by non-traditional means and advanced standing.

External Standardized Examinations
Applicants must submit:

- Official test score reports from testing agencies: College Entrance Examination Board Advanced Placement Program, College-Level Equivalency Program, etc.

- Official transcripts if credit by examinations was earned at other regionally accredited institutions.

International Baccalaureate Diploma Program
The Alamo Community Colleges will grant at least twenty-four (24) semester credit hours or equivalent course credit for approved courses in appropriate subject areas to an entering freshman student for successful completion of the International Baccalaureate Diploma Program. For examined subjects, a grade of “A” will be assigned for seven points, a grade of “B” for five (5) or six (6) points, and a grade of “C” for four points. Fewer than twenty-four (24) semester credit hours will be awarded if the student received a score of less than four (4) on an examination administered as part of the diploma program. A minimum of six (6) hours of college-level credits must be earned at one of the Alamo Community Colleges before the International Baccalaureate credits are awarded.
Work Experience / Prior Learning Credit

The assessment of work experience/prior learning may be requested for specific technical programs by individuals seeking to obtain college-level credit for experience and/or training received at a technical institution or in a work environment. The Application for Work Experience Credit may be obtained from the department in which the student is majoring or the corresponding dean.

Sources of prior learning may include:
- Prior employment
- Extensive technical training in high school
- Trade or proprietary school equivalence
- Certification/licensure/credentials equivalents
- National ACE guides
- Military service
- Special agreements

After admission to the Alamo Community Colleges, students should consult with their departmental academic advisor to determine whether work experience/prior learning may be applicable for college credit. Students must be enrolled in the current semester for which they are applying for such credit.

A technical program advisor or other representative will guide students in the process of identifying the college courses that clearly match work experience/prior learning as evidenced by documentation, verification of experience, and sufficient justification. Before work experience/prior learning credit can be awarded and posted on a student’s official college transcript, final approval must be obtained by the appropriate dean or designee.

A maximum of twelve (12) semester credit hours may be earned through the assessment of work experience/prior learning and applied toward graduation. Credits earned by non-traditional methods are posted on the transcript as equivalency credit (non-graded). The Alamo Community Colleges will retain a copy of the documentation with the student’s permanent file.

ACADEMIC FRESH START

An applicant who elects Academic Fresh Start may apply these credit hours toward the determination of TSI requirement. Any Texas state resident may elect not to use college credits earned on courses that are ten (10) years or older under the provisions of Senate Bill 1321.

Students electing this policy may not single out specific credits to omit. Rather ALL coursework ten (10) years or older will be eliminated from evaluation for credit and from the current GPA calculation, and NONE can be applied toward a degree or certificate for credit at any of the Alamo Community Colleges and any other Texas state college or university. Such work, however, will NOT be removed from
students’ academic records and transcripts. Academic Fresh Start petitions are permanent and cannot be reversed at a later date.

This provision does not exempt students from notifying the Alamo Community Colleges of attendance at previous institutions nor of the need to submit official transcripts with all previous college-level coursework attempted prior to meeting with a designated official to review eligibility.

TRANSCRIPT SERVICES

One of the best ways students can ensure career success is to establish a clear focus on the career path they wish to pursue. The Alamo Community Colleges' transfer services guide students through college transfer planning, a career planning process, and job readiness and employment.

In general, Arts and Science courses with a first number of one (1) or two (2) are accredited by senior institutions as fully transferable. Courses beginning with a zero (0) (e.g., English 0301) generally are not accepted for transfer by four-year colleges or universities. For the Alamo Community Colleges, these freely transferable courses are identified in the THECB publication Lower-Division Academic Course Guide Manual. Specifically excluded are courses designated as vocational/technical, ESL/ESOL, developmental or remedial, and courses listed as Basic Skills (occupational and technical courses).

Senior institutions usually will accept a maximum of sixty (60) to sixty-six (66) lower-division general education and specific subject matter courses. However, what will be accepted and how it will transfer is determined by the senior college or university.

Transcript Request

To request an official transcript of record, students must complete a Transcript Request Form signed by the student. Once processed, transcripts will be sent to the receiving institution.

In compliance with FERPA regulations and Alamo Community Colleges policy, transcripts may only be released to the student of record. Transcripts may be requested and received:

- Online at the Web for Students http://www.accd.edu, if they date from 1984 to the present
- In person by the student presenting a photo ID
- Via U.S. mail or fax, provided the fax includes a signature
- Via telephone if the transcript is going to another college or university
- By a third party presenting appropriate identification and with official signed and dated written student consent that specifies the name of who will be acting on the student’s behalf.
Educational Releases signed by the student are required for each request and are subject to review to verify ID and names.

The Alamo Community Colleges will not mail via overnight services; fax to other educational institutions, students, employers or other third parties; or accept student’s personal requests for transcripts via email or phone.

An Academic Hold will prevent processing and release of a student transcript. Transcripts will be withheld if students have not settled all admissions requirements (e.g., submitting official transcripts from all institutions attended) and satisfied all financial obligations to the Alamo Community Colleges.

Students may access unofficial transcripts and grades through PALS or Web for Students.

**Transfer Dispute Resolution**

Transfer disputes may arise when students are transferring courses to the Alamo Community Colleges from other institutions and/or when the Alamo Community Colleges’ courses are not accepted for credit by another Texas public institution of higher education. Both institutions involved in the transfer issue will attempt to resolve the transfer dispute in accordance with the THECB rules and/or guidelines.

The purpose of the THECB’s transfer rules is to facilitate the transfer of lower-division courses and to clarify students’ rights and responsibilities as potential transfer students. The procedure for the resolution of transfer disputes is codified in THECB Rules and Regulations, Chapter 4, Subchapter B. (Online at [http://www.thecb.state.tx.us/Rules/tac3.cfm?Chapter_ID=4&Subchapter=B](http://www.thecb.state.tx.us/Rules/tac3.cfm?Chapter_ID=4&Subchapter=B))

In all disputes, the THECB Transfer Dispute Resolution Form must be completed to initiate a dispute action. The completed form must be forwarded to the receiving institution within fifteen (15) calendar days after the evaluation has been submitted to the student. From the date a student is notified of credit denial (date evaluation is sent by the receiving institution), the law allows a maximum of forty-five (45) calendar days for the resolution of the dispute by the sending and receiving institutions.
The following procedures, established by the THECB, shall be followed by institutions of higher education in the resolution of credit transfer disputes involving lower-division courses:

(1) If an institution of higher education does not accept course credit earned by a student at another institution of higher education, the receiving institution shall give written notice to the student and to the sending institution that transfer of the course credit is denied, and shall include in that notice the reasons for denying the credit. Attached to the written notice shall be the procedures for resolution of transfer disputes for lower-division courses as outlined in this section, accompanied by clear instructions outlining the procedure for appealing the decision to the Commissioner.

(2) A student who receives notice as specified in the first paragraph of this subsection may dispute the denial of credit by contacting a designated official at either the sending or the receiving institution.

(3) The two institutions and the student shall attempt to resolve the transfer of the course credit in accordance with Board rules and guidelines.

(4) 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 sending institution may notify the Commissioner in writing of the request for transfer dispute resolution, and the institution that denies the course credit for transfer shall notify the Commissioner in writing of its denial and the reasons for the denial.

(a) The Commissioner 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.

(b) Each institution of higher education shall publish in its course catalogs the procedures specified in subsections (a), (b), (d), and (e) of this section.

(c) The Board shall collect data on the types of transfer disputes that are reported and the disposition of each case that is considered by the Commissioner or the Commissioner’s designee.
(d) If a receiving institution has cause to believe that a course being presented by a student for transfer from another school is not of an acceptable level of quality, it should first contact the sending institution and attempt to resolve the problem. In the event that the two institutions are unable to come to a satisfactory resolution, the receiving institution may notify the Commissioner, who may investigate the course. If its quality is found to be unacceptable, the Board may discontinue funding for the course.

Transfer Rules Noncompliance Policy
If it is determined by the Texas Higher Education Coordinating Board that an institution inappropriately or unnecessarily has required a student to retake a course that is substantially equivalent to a course already taken at another institution, formula funding for credit hours in the repeated course will be deducted from the institution's appropriations.
STUDENT IDENTIFICATION

Personal Identification Number (PIN)
Personal identification numbers (PIN) provide security access to the Web registration system. Default PIN numbers are assigned to students according to the month and year of their birth (mmyy). Students are encouraged to assign themselves a unique PIN online at the Web for Students (http://www.accd.edu) or submit a request in person.

Identification Card (Photo ID)
All credit students are required to present a Student Identification Card for access to such services and activities as library usage, physical education facilities, special events, academic advisement, transcript requests, etc. Students seeking a student photo ID must be registered with tuition paid, be enrolled in an installment plan, or have no tuition balance. Students must provide a valid photo ID to receive a college student photo ID.

Name Changes
Students may change their legal name on their permanent academic record by presenting appropriate documentation to the Enrollment Services/Admissions and Records Office. Correcting spelling or the proper sequence of the legal name requires a copy of an official birth certificate. To request a name change, complete a Name Change Form and a copy of the signed court order, marriage license, or divorce decree showing the new legal name. To assume a spouse’s name following marriage, complete a request and provide a copy of the marriage certificate. To discontinue use of a married name and resume use of the original family name or another name, present a divorce decree or a signed court order showing restoration of the original or other name.

WEB REGISTRATION
Students who have completed all admission requirements are encouraged to register for classes on the WEB for Students at http://www.accd.edu. Details for the various registration periods are published in the Schedule of Classes, which is available on the individual Alamo Community Colleges’ websites. Students should follow the instructions for registration provided in the Schedule. For additional assistance, contact the appropriate Enrollment Services/Admissions and Records Office.
STUDENT DEVELOPMENT COURSE (SDEV)

The Alamo Community Colleges require all students to complete a student development course designed to help them successfully transition to college and better understand the Alamo Community Colleges’ expectations. Student Development Program (SDEV) courses offer techniques in life-long learning, creative and critical thinking, time management, test and note taking, studying, career planning, and building lasting relationships. Students who complete SDEV courses have a proven record of higher retention and persistence in college. A variety of SDEV courses are offered to fit specific student needs.

Entering students with fewer than fifteen (15) college semester credit hours are required to successfully complete a Student Development course during the first (1) semester of enrollment. Dual Credit hours are not counted as college credit hours for this purpose. Exceptions or waivers require approval. Regular tuition applies to Student Development courses.

Students who do not successfully complete the Student Development course during their first semester will be required to complete the course the following semester. Three-peat tuition will apply on a third (3) enrollment.

COURSE NUMBERING SYSTEM

Courses in this catalog are identified by subject prefixes and numbers that have been assigned in accordance with the Texas Common Course Numbering System (TCCNS) and the Workforce Education Course Manual (WECM) for Technical and Continuing Education courses. (Online at http://www.thecb.state.tx.us/AAR/UndergraduateEd/WorkforceEd/.)

Public colleges and universities in Texas use either the TCCNS or crosswalk courses to the TCCNS. Additionally, all Texas public institutions of higher education that offer Workforce Education programs or Continuing Education courses utilize WECM course numbers. Both of these common course numbering systems allow students to compare courses between colleges and provide them with greater ease of course credit transfer. Each course number contains four (4) digits.

For example, ENGL 1301 is:

1 – Level (Freshman in this case)
   o 0 – Developmental
   o 1 – Freshman
   o 2 – Sophomore

3 – Semester credit hours (Three in this case)

01 – Sequence Number (Part One in this case)
Though developmental-level (“0”) courses may be required prior to taking college-level courses, they do not fulfill requirements for any degrees and may not be transferable to a senior university.

A small number of academic courses contain a “7” in the third digit of the course number indicating that they do not comply with the TCCNS and may not be transferable to another college or university. Students should consult with the receiving institution to ensure transferability prior to enrolling. It is important for students who plan to transfer to another college or university to ensure that courses taken at the Alamo Community Colleges are transferable and apply to their degree program at the transfer institution.


PREREQUISITE AND CO-REQUISITE COURSES

A number of courses have prerequisites. The prerequisite may be a score on a placement test or successful completion of a lower-level course. Before registering for courses with prerequisites, students must show proof that they have fulfilled the requirement or are in the process of fulfilling the requirement. Questions regarding prerequisites should be directed to the appropriate academic department chair.

When a student registers for a course indicating a co-requisite course is required, all courses listed must be attempted simultaneously.
COURSE LOAD
Students may not enroll in more than the maximum semester credit hours allowed by the Alamo Community Colleges for any given semester. According to the Texas Higher Education Coordinating Board (THECB), students generally should not be allowed to enroll for more semester credit hours than the number of weeks in a semester/session. Students simultaneously enrolled in terms of different lengths may enroll in a maximum number of semester credit hours equal to the number of weeks in the longest term.

Session Enrollments

Fall/Spring 16-Week Semesters
Full-Time Student – Twelve (12) or more semester credit hours
Half-Time Student – Six to eleven (6-11) semester credit hours
Maximum Hours Allowed: Eighteen (18) semester credit hours

Summer Session
Full-Time Student – Six (6) or more semester credit hours
Half-Time Student – Three to five (3-5) semester credit hours
Maximum Hours Allowed: Eight (8) semester credit hours for the traditional Summer I session and six (6) semester credit hours for the traditional Summer II session, not to exceed a total of fourteen (14) semester credit hours for the entire Summer.

Flex Six-Week Session
Full-Time Student – Six (6) semester credit hours

Flex Eight-Week Session
Full-Time Student – Eight (8) semester credit hours

Maymester
Full-Time Student – Three (3) semester credit hours

Petition for Overload
Students enrolled in special block programs (e.g., English as a Second Language, Fire Academy, etc.) that require enrollment in semester credit hours beyond the maximum normally allowed, may be exempt from these limitations. Students may petition the appropriate dean or designee for additional hours.
CONCURRENT ENROLLMENT AT THE ALAMO COMMUNITY COLLEGES

- Students enrolling concurrently at more than one of the Alamo Community Colleges will be assessed tuition for all courses combined across the Alamo Community Colleges. (See Tuition.)
- A student’s combined enrollment at all institutions, during any semester, may not exceed the maximum hours allowed by the Alamo Community Colleges for any given semester, i.e., eighteen (18) maximum hours for Fall or Spring and fourteen (14) hours maximum for Summer.
- Students should notify each college of their enrollment at another college to coordinate services.

ALTERNATIVE LEARNING OPTIONS / DISTANCE LEARNING

The Alamo Community Colleges are committed to providing students an easy-access, flexible, and continuous registration/enrollment process. Alternative learning options meet the needs of students whose busy lives make scheduling college courses difficult. The various course delivery methods may be more appropriate for various learning styles. Students are encouraged to explore the requirements for each option to determine which offers the better opportunity for success. Students may be required to attend an on-site orientation, watch televised broadcasts or DVDs, attend on-campus review sessions, and take exams on-campus. Additional information may be requested from the Enrollment Services/Admission and Records office.

Open-Entry/Open-Exit (OE/OE) Learning Centers provide computer workstations in an unstructured classroom setting. (See Class Schedules for semester offerings and orientation schedules.)

Online Internet Courses allow students to learn any time, anywhere through electronic communications tools such as email, chat rooms, and bulletin boards.

Video Courses are broadcast on specified channels and allow students to independently complete all or most coursework off-campus. If broadcast times are not convenient, students may record lessons and view them at their convenience. Video Course lessons are also available on DVD in the Alamo Community Colleges’ libraries for check-out and for purchase in campus bookstores.

Interactive Video Conferencing Courses utilize real time audio and video between instructor and student and are broadcast on television or are available on DVD. Students complete most course assignments independently.

Blended/Hybrid Courses combine traditional classroom coursework such as lectures, class discussions, group work, and on-campus activities with online coursework. Blended Courses are recommended for students with flexible schedules.
MATH REQUIREMENT
Upon completion of twelve (12) college-level semester credit hours with a 2.0 GPA, students are encouraged to begin the Developmental Math sequence. Students testing into Developmental Math are encouraged to start the math sequence as soon as possible and continue the course sequence each semester without interruption.

CENSUS DATE
The Official Census Date of each semester or session established by the THECB is the Alamo Community Colleges official certified enrollment date. No grade is recorded or maintained for courses dropped prior to the Official Census Date. For a complete list of Census Dates see online at http://www.thecb.state.tx.us/Reports/PDF/1336.PDF.

CLASSIFICATION OF STUDENTS
Freshman: Must have completed less than thirty (30) semester credit hours in college-level courses at the Alamo Community Colleges or other regionally accredited college(s).

Sophomore: Must have completed not less than thirty (30) and not more than seventy-two (72) semester credit hours in college-level subjects at the Alamo Community Colleges or other regionally accredited college(s).

Unclassified: Must have completed more than seventy-two (72) semester credit hours with no associate or baccalaureate degree earned.

Associate Degree: Highest degree previously earned is an associate degree.

Baccalaureate or Above: Highest degree previously earned is a baccalaureate or higher.

Undergraduate: Less than a baccalaureate.

CANCELLATION OF CLASSES
In the case of cancelled classes due to inclement weather or other emergencies, attempts will be made to ensure that classroom hours are rescheduled. For the latest information on the Alamo Community Colleges’ closures, dial (210) 208-8189 or online at http://www.accd.edu. San Antonio College’s radio station, KSYM 90.1 FM, as well as local radio and television stations, will also have the latest information on the Alamo Community Colleges’ closures.
ADDS, DROPS, AND WITHDRAWALS

Students should carefully consider all options before changing their schedule. An add/drop schedule change period is provided each semester following the close of registration. From the beginning of classes through the Census Date, changes made in courses will be recorded/posted as “Dropped before Census” and will not appear on the official transcript. Students withdrawing after the Census Date will receive a grade of “W” during the withdrawal period. Official “W” recording dates are listed in the Academic Calendar.

It is very important to consider that:

• All class schedule adjustments must be recorded and officially processed by the Enrollment Services/Admissions and Records Office and may require approval from department chairs or designees.

• Withdrawing from a class after the Census Date may affect a student’s ability to re-enroll in the course without an increase in the tuition charged for the course and/or may count toward the maximum drop/withdrawals allowed by a Texas ruling. (See Drops and Withdrawals.)

• Adding or dropping classes, or withdrawing from all classes, can impact financial aid eligibility. Students should review the financial aid policies on withdrawing from classes. Students who receive financial aid should understand that simply notifying Student Financial Services offices of enrollment changes is not official notification to the Alamo Community Colleges.

• No drops or withdrawals will be accepted by phone or over the Internet.

Drop/Add Forms may be picked up in the Enrollment Services/Admissions and Records Office or the appropriate department.

Adds

Students may add courses online or on-campus during dates designated for schedule changes, which are identified in current Class Schedules. Once the semester/session begins, students may not add courses without departmental chair approval. Once the class has met, students may no longer be added to that course.

Drops and Withdrawals

Faculty Initiated Drops

Faculty may process drops for non-attendance when it results in a lack of progress. (See Attendance.) The course syllabus should include any established attendance policy and students should discuss absences or issues relating to attendance with each instructor.

Student Initiated Drops

Students must drop from a class in person with an advisor, faculty member
or other designee. A Notice of Change/Add/Drop Form must be submitted to the Enrollment Services/Admissions and Records Office for processing. Students are responsible for following up and confirming that requests to withdraw from classes have been processed.

**Third-Attempt Enrollment Ruling**

Dropping a course may result in the student having to re-enroll for a required course and with higher tuition for the repeated course. Effective Fall Semester 2005, the Alamo Community Colleges will charge a higher tuition rate to students registering the third (3) or subsequent time for a course.

The State of Texas financially subsidizes the education of college students and the tuition paid by any student represents only a portion of the real cost of any credit course. The State will no longer subsidize a student’s enrollment for the third (3) or subsequent attempt. Students should meet with an advisor to determine if they are repeating a course for the third (3) time.

Students are exempted from payments of higher tuition for any courses repeated in the final semester or term before graduation if the courses are taken for the purpose of receiving a grade that will satisfy a degree requirement. This exemption applies for only one (1) semester. This exemption does not affect an institution’s ability to charge a higher tuition rate for courses that cannot be reported for funding for other reasons such as the excess credit hour limit, or an institution’s ability to waive higher tuition rates for economic hardship.

**Six Course Drop Ruling**

Students are limited to a total of six course drops during their undergraduate career, including a course(s) dropped at another institution as defined in Section 51.907 of the Texas Education Code, which limits the number of courses that may be dropped under certain circumstances. A dropped course is defined as a course in which an undergraduate student at an institution of higher education has enrolled for credit but did not complete under these conditions:

- the student was able to drop without receiving a grade or incurring an academic penalty;
- the student’s transcript indicates or will indicate that the student was enrolled in the course past the deadline to add and drop prior to the census date; and
- the student is not dropping the course in order to withdraw from the institution.

Exceptions to the course drop limit include a total withdrawal from the institution and an approved waiver drop. Guidelines for requesting an exception may be located through the Alamo Community Colleges’ homepage online at [http://www.accd.edu](http://www.accd.edu).
Official Withdrawals
A total withdrawal from the Alamo Community Colleges is not counted in the above statute. If a student drops one or more courses during the semester before withdrawing completely, the student’s individual drops will be counted in the complete withdrawal.

To officially withdraw completely from the Alamo Community Colleges students must:
- Go to the Enrollment Services/Admissions and Records office.
- Resolve all financial obligations to the Alamo Community Colleges including library clearance

Withdrawal for Military Service
Military students may want their transcripts to reflect that they withdrew due to military reasons so that they are not penalized in the future – financially or through an admissions process – for reasons beyond their control. Alternatively, military students may request that their transcripts show no indication that they were enrolled, and the course(s) will be permanently removed from their transcript.

If a student withdraws as a result of being called to active military service, the Alamo Community Colleges, at the student’s option and with proper documentation, shall:
- Grant a student who is eligible under the Alamo Community Colleges’ guidelines a grade in all courses by designating “Withdrawn- Military” (WM) on the transcript, OR
- 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.

The Alamo Community Colleges shall provide a 100% refund with the presentation of military orders.

Recording Withdrawal Grades
Regular withdrawals will be recorded as a “W” (withdrawn). Waiver drops will be recorded as a “WX” (withdrawn with exception). Military Service withdrawals will be recorded as a “WM.” All “W” grades have no effect on the GPA. To simply stop attending a class may result in a grade of “F.”

Courses dropped do not become official until the drops have been processed.
REINSTATEMENT TO CLASS
A student dropped for excessive absences or lack of progress may be reinstated to class at the discretion of the instructor of record only if circumstances justify reinstatement. The appropriate reinstatement form must be signed by the faculty member and submitted to the Enrollment Services/Admissions and Records Office.
RESIDENCY

Students verify and establish residency based on the answers they provide to the core Residency questions on the ApplyTexas application. Students may be contacted by the Alamo Community Colleges for additional residency documentation.

- In-District Bexar County Resident: A Texas resident who has lived in Texas for the past twelve (12) months and resides in Bexar County.
- Out-of-District Student: A Texas resident for the past twelve (12) months who does not reside in Bexar County.
- Out-of-State Student: A U.S. citizen who has not lived in Texas for the past twelve (12) months.
- Out-of-Country Student: A non-U.S. citizen who is not a resident alien.

TUITION REIMBURSEMENT/REBATE POLICY

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.

Eligible students must meet all of the following requirements:

- Must have enrolled for the first time in an institution of higher education in Fall 1997 or later.
- Must be requesting a rebate for work related to a first baccalaureate degree received from a Texas public university.
- Must have been a resident of Texas, must have attempted all coursework at a Texas public institution of higher education, and must have been entitled to pay resident tuition at all times while pursuing the degree.
- Must have attempted no more than three (3) hours in excess of the minimum number of semester credit hours required to complete the degree detailed in the catalog under which they were graduated. Hours attempted include transfer credits, course credit earned by examination, courses dropped after the official Census Date, for-credit developmental courses, optional internship and cooperative education courses, and repeated courses.

Students who are seeking tuition rebates are responsible for enrolling only in courses that will qualify them for the rebates. Courses dropped for reasons that are determined by the institution to be beyond the control of the student shall not be counted.
TUITION REFUND SCHEDULE
(Subject to change without notice)

Students officially dropping or withdrawing from courses at the Alamo Community Colleges will have their tuition calculated according to the following schedules:

**Fall and Spring Semesters (16 Week Sessions)**
100% Prior to the first class day of semester
70% During class days one (1) through fifteen (15)
25% During class days sixteen (16) through twenty (20)
0 After the twentieth (20) class day

**Six Week Summer Sessions**
100% Prior to the first class day of semester
70% During class days one (1) through five (5)
25% During class days six (6) through seven (7)
0 After the seventh (7) class day

**Eight Week Summer Sessions and Flex Terms**
100% Prior to the first class day of the semester
70% During class days one (1) through eight (8)
25% During class days nine (9) through ten (10)
0 After the tenth (10) class day

**Open Entry/Open Exit**
100% Prior to the first class day of the semester
70% During class days one (1) through eight (8)
25% During class days nine (9) through ten (10)
0 After the tenth (10) class day

Refunds for other non-standard length courses shall be made based on the Refund of Tuition table provided by the Texas Higher Education Coordinating Board (THECB). Refunds are dependent on students having paid more than the minimum required tuition and having paid their tuition in full. Students are responsible for reimbursements to companies or agencies that have financially assisted them with their tuition.

Refunds for students on the Installment Plan will be applied to the balance due, as stated in the Installment Plan Contract. All academic calendar days are considered for refund purposes, not only the days the student attends class.

No refund is possible after the designated deadline, except in extraordinary circumstances and if approved by the Alamo Community Colleges. **Tuition paid by a credit card will be refunded back to the credit card.**
Federal regulations governing financial aid programs require Student Financial Services to put into place policies and procedures that may impact whether or not a student is eligible for a refund as described above. (See Financial Aid.)

**NOTE:** Students are responsible for verifying mailing address; refund checks will be mailed to the address the student provides.

**INSTALLMENT PAYMENT PLAN**
An installment payment plan is available for students in Good Standing. Detailed information is available online at [http://www.accd.edu/main/html/registration/tuition_payment.htm#installment](http://www.accd.edu/main/html/registration/tuition_payment.htm#installment).

**TUITION WAIVERS**
Under the Texas Education Code § 54.205, a deaf or blind person who is a Texas resident is entitled to exemption from the payment of tuition at any institution of higher education utilizing public funds if the following is presented:

- Certification that the applicant is a blind person or a deaf person by the Texas Rehabilitation Commission, Texas Commission for the Blind, or the Texas Commission for the Deaf and Hard of Hearing in a written statement, which certification is considered conclusive.

- A written statement of purpose from the student that indicates the certificate or degree program to be pursued or the professional enhancement to be realized from the course of study for that certificate or degree program.

- A high school diploma or its equivalent.

- A letter of recommendation from the principal of the high school attended by the deaf or blind individual, a public official, or some other responsible person who knows the deaf or blind individual and is willing to serve as a reference.

- Proof that all other entrance requirements of the institution are met. Students are required to present certification at the time of initial enrollment in the Alamo Community Colleges in the course of study they have designated. The certification is valid for each semester that the student enrolls in the Alamo Community Colleges in the designated course of study.
TUITION SCHEDULE

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

### TEXAS RESIDENTS

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### NON-TEXAS RESIDENTS & INTERNATIONAL STUDENTS

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**Fall/Spring Sessions Pledge Tuition**

1-6 credits are priced at a flat rate of $306.00 for In-District Tuition, $570.00 for Out-of-District Tuition, $1,098.00 for Non-Resident and International Student Tuition.

7-21 credits are priced at a rate of $51.00 per credit for In-District Tuition, $95.00 for Out-of-District Tuition, and $183.00 per credit for Non-Resident and International Student Tuition.

Any student currently enrolled as of the official Census Date who subsequently enrolls in a Flexible Entry class offered in the same semester will be assessed tuition as though another class were being added to the student’s current load.

### Summer Sessions

Minimum tuition for each Summer term is $153.00 for In-District Texas residents, $285.00 for Out-of-District Texas residents, and $549.00 for Non-Texas residents and International students.
**Pledge Tuition: Summer Sessions**
For each summer session, the Pledge Tuition is $116.00.

**REFUNDABLE CHARGES PAID BY ALL STUDENTS**

Pledged Tuition:
- 1-6 hours: $116.00
- 7 or more hours: $121.00
- Summer & Mini Semester: $116.00

Student Activity Charge:
- Per credit hour: $1.00

**OTHER REFUNDABLE CHARGES**

Audit Charge: $12.00

Specific Program Tuition:
- Water Treatment, Fire Science, Aviation, Dental Technology, etc.: Varies

International Student Insurance:
- Per Semester, Fall or Spring: $66.00
- Summer & Mini Semester: $22.00

**NON-REFUNDABLE CHARGES**

Examination Charges:
- Advanced Standing Examination: $51.00
- G.E.D.: $65.00
- Re-Examination (if failed): $7.00
- TASP Alternative: $15.00
- Correspondence Examination: $10.00
- Texas Securities Examination (Austin): $10.00

Parking Permits:
- Full Year: $21.00
- After January 1: $11.00
- Summer Term: $7.00
- Replacement: $8.00
Parking Fine ............................................................................................................ $12.00
  If not paid within 10 days ............................................................................... $18.00

Returned Check/ACH Return Charge ................................................................. $35

Library Fines:
  Books per day/per book ................................................................................. $0.10
  Reserved Books per day/per book ................................................................. $0.50

Installment Payment Plan
  Administrative Charge per semester ......................................................... $25.00
  Late Charge per each late payment ............................................................. $10.00

Foreign Student Registration Processing Cost............................................... $15.00

TUITION FREEZE PROGRAM

The Tuition FreeZe Program (TZP) guarantees a three (3) year freeze on tuition rates for those students who commit to selecting a major and steadily working toward that goal. Students pay the same tuition rate for three (3) years if they meet the initial and continuing eligibility criteria.

The TZP is available for students in the first (1) semester of college enrollment or students who have accumulated twelve (12) or fewer credit hours, either earned at the Alamo Community Colleges or transferred from another institution. Hours earned while enrolled at the Alamo Community Colleges as a Dual Credit student are excluded from the accumulated hours.

To enroll in TZP program prior to or during a semester of eligibility students should:
• Sign an electronic agreement during a Fall or Spring semester of eligibility
• Declare a major leading to an Associate Degree

Guidelines for applying for TZP are available online at http://www.accd.edu/main/html/registration/webforstudents.htm#tuitionfreeze.
ABOUT STUDENT FINANCIAL SERVICES

The most important function of Student Financial Services (SFS) is to administer and manage financial assistance programs to the benefit of eligible students and families who are unable to afford the cost of a college education. The goal of the SFS Office is to help students avail themselves of as many federal, state and institutional financial aid program opportunities as possible.

Financial aid comes in three basic types:
- Scholarships/grants
- Work-study programs
- Loans

Any or all of these may be combined in a financial aid package to help pay for educational expenses. Scholarships and grants do not have to be repaid. Loans must be repaid and are therefore not encouraged unless absolutely necessary as a last resort.

This section describes most available financial aid programs, their requirements, and other pertinent policies and procedures. Not all policies and procedures that SFS Offices of the Alamo Community Colleges are required to follow are listed. Policies listed here are only those deemed most important to students. The Alamo Community Colleges comply with all state and federal regulations governing administration of student financial aid programs. It is important to note that these policies change unexpectedly as a result of legislative action or U. S. Department of Education interpretation. Therefore, in the event of changes after the editing of this catalog, the Alamo Community Colleges will comply with the most current regulations and interpretations thereof. Extensive financial aid information can be found at the Alamo Community Colleges home page at http://www.accd.edu/district/schships/main/sfs.htm. This link will also provide additional information about student aid programs, scholarship searches, applying for financial aid, and links to other helpful websites.

AID ELIGIBILITY FOR CORPORATE AND COMMUNITY EDUCATION COURSES

Tuition assistance is available for eligible individuals who wish to enroll in Corporate and Community Education courses. The Texas Public Education Grant for Continuing Education (TPEG-CE) may be used for tuition only charges of non-credit courses. There is no reimbursement for pre-paid tuition bills. Financial aid may be awarded from 50-100% of course tuition, but funded amounts will be...
determined by each Student Financial Services Office. The standard Free Application for Federal Student Aid (FAFSA) must be completed eight (8) weeks prior to registering for the class. Once the Student Aid Report (SAR) is received, a TPEG-CE application must be completed and submitted before registering for the class. Awards will be based on determined eligibility and available state funding. Applications are available in the Student Financial Services Offices. Training programs that exceed a total of 260 clock hours will not be eligible.

In addition, limited loan assistance can be obtained by eligible students who are pursuing a teacher certification. Grant funding is sometimes available as well. Interested students should check with the Teacher Certification Office at their college for more details on the availability of assistance and specific application information.

**WHAT IS THE FAFSA AND WHAT DOES IT DO**

In order to determine financial aid eligibility for all federal financial aid programs, the U.S. Department of Education has developed the Free Application for Federal Student Aid (FAFSA). The state of Texas has also opted to accept the FAFSA and the financial aid methodology it represents to establish financial aid eligibility for state programs.

The FAFSA is the first step in the financial aid process and assesses a student’s or a family’s financial ability to pay. Responses to questions on the FAFSA go into a formula established by the Higher Education Act of 1965, as amended, called the Federal Methodology. The result is a student’s Expected Family Contribution (EFC). Colleges use the EFC to determine students’ financial need and their state, federal or institutional aid eligibility.

The FAFSA is available from high school guidance counselors, any public library, financial aid administrators at any university, or any of the Alamo Community Colleges’ SFS Offices. The FAFSA can be ordered by calling 1-800-4FEDAID or it can be accessed online at http://www.fafsa.ed.gov.

**APPLYING FOR FINANCIAL AID AT THE ALAMO COMMUNITY COLLEGES**

Students who apply for financial aid at the Alamo Community Colleges are automatically considered for the following programs:

- Federal Pell Grant
- Federal Supplemental Education Opportunity Grant (SEOG)
- Federal Academic Competitiveness Grant (ACG)
- Texas Public Education Grant (TPEG)
- Leveraging Educational Assistance Partnership / Special Leveraging Educational Assistance Partnership (LEAP/ SLEAP)
- Texas Grant I
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- Texas Educational Opportunity Grant (TEOG)
- Federal Stafford Loan (additional application required)
- Federal College-Work-Study (additional application/forms required)

The application procedures are described below and apply to need-based grants, loans, and work-study. (To apply for institutional scholarships follow the procedures in the section on scholarships under Financial Aid Resources.) Referenced further in this section are the Early High School Graduation Scholarship, the Educational Aide Exemption, and the Hazlewood Act Exemption.

Applications for aid will be considered complete when the following has taken place at one of the Alamo Community Colleges:

1. The student has been accepted for admission in a program of study leading to a degree or certificate and are making Satisfactory Academic Progress. First-time college freshmen are assumed to be making Satisfactory Academic Progress.

2. The student has the following on file in Student Financial Services:
   - The financial aid application. To ensure the application is electronically forwarded, the Federal School Code of the college to which the student is applying must appear on the FAFSA.
     - Northwest Vista College – Federal School Code…033723
     - Palo Alto College – Federal School Code…………016615
     - San Antonio College – Federal School Code……..009163
     - St. Philip’s College – Federal School Code………..003608
   - If selected for verification, the student must submit the appropriate Dependent/Independent Verification Worksheet, IRS Tax Returns, documentation of benefits and untaxed income, plus any other required documentation. Please see the section on Verification below for more specific information about requirements and procedure.

It is essential that the SFS Office always has the student’s most current permanent address and email address to avoid delays and ensure that important documents are received promptly. Update addresses as often as necessary by completing the appropriate forms at the Enrollment Services/Admissions and Records office.

DEADLINES FOR FILING THE FAFSA

The U.S. Department of Education publishes general deadlines that apply to the processing of a FAFSA by its processors online at http://www.fafsa.ed.gov. A processed FAFSA, however, does not guarantee that an eligible student will receive financial aid. While Alamo Community Colleges SFS offices accept financial aid applications virtually all year round, the student’s complete financial aid applica-
tion must be received at least six (6) weeks before the end of the semester to receive full consideration for funding. In addition, since funding is limited, grants and scholarships are awarded on a first-come, first-served basis to students who qualify. Therefore, applications should be received by the dates below in order to be considered on-time for the indicated semester:

<table>
<thead>
<tr>
<th>Semester</th>
<th>Priority Deadline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall</td>
<td>April 1</td>
</tr>
<tr>
<td>Spring</td>
<td>October 30</td>
</tr>
<tr>
<td>Summer</td>
<td>March 1</td>
</tr>
</tbody>
</table>

Completed applications received by the priority date will receive priority consideration of all available funds, subject to each student’s eligibility. Completed applications received after the priority date will be processed according to eligibility and remaining available funds. Students applying after the priority date should check with their college to make sure they have not applied after the final deadline for the semester. Applications received after the final date will be processed for future semesters only, but not beyond that academic year. A separate Summer Application is required to be considered for summer aid.

**ELIGIBILITY REQUIREMENTS FOR STUDENT FINANCIAL AID**

In general, students are eligible for federal, state, and institutional aid if they meet the following requirements:

- Be enrolled for at least six (6) semester credit hours as a regular student in an eligible program. (Less than half-time students may receive a Pell Grant if they are eligible.);
- Be a U.S. citizen or eligible non-citizen. Undocumented students who meet the criteria for Texas residency under HB1403 qualify for limited state financial aid;
- Have a high school diploma or a General Education Development (GED) certificate;
- Not be in default on any student loan or owe a refund to a federal financial aid program;
- Make Satisfactory Academic Progress in a declared course of study. All students must be familiar with the Alamo Community Colleges’ Satisfactory Academic Progress policy;
- Have financial need as determined by the federal need analysis methodology and institutional guidelines; and
- Not have been convicted of a felony or crime involving a controlled substance.
CALCULATING FINANCIAL NEED

The information students report when completing the FAFSA is used in a formula established by Congress that calculates an Expected Family Contribution (EFC). The EFC is the amount students and their families are expected to have available toward the student’s educational costs. For the Federal Pell Grant Program, if the EFC is below a certain number, students are eligible for a Pell Grant, assuming they meet all other eligibility requirements. There is no maximum EFC that defines eligibility for college-based programs. Instead, the EFC is used in an equation to determine financial need:

\[
\text{Cost of Education} - \text{Expected Family Contribution} = \text{Financial Need}
\]

The difference between the cost of education and the Expected Family Contribution is considered the student’s financial need. The financial need calculation helps the SFS Office establish eligibility for grants, loans, and work-study. The combination of financial aid from these sources is called a financial aid package and it is meant to help meet the student’s eligibility.

A booklet describing the formula that produces the Expected Family Contribution (EFC) is available by writing to:
Federal Student Aid Information Center
P.O. Box 84
Washington, D.C. 20044

VERIFICATION

Verification is the process by which a student’s financial aid application data is checked for accuracy. Only those students selected for verification by the federal processor need to go through this process. The U.S. Department of Education requires all colleges to complete this process for all students selected without exception. Students are notified of this requirement via the Student Aid Report (SAR) and through an email from the Alamo Community Colleges’ Student Financial Services Office. Log onto the WEB for Students at http://www01.accd.edu/district/it/webforstudents.html to view the specific documents that must be submitted to the Student Financial Services Office.

Students selected for verification are typically asked to submit the following documents, if applicable to their situation:

- Signed copy of the student’s (and spouse’s, if applicable) income tax return (1040’s, W2’s);
- Signed copy of the student’s parents’ income tax return if the student is considered a dependent student;
• Verification Worksheet (available at Student Financial Services or http://www.accd.edu/district/schships/main/sfs.htm; and
• Documentation that verifies benefits or untaxed income, such as:
  o Temporary Assistance for Needy Families (TANF), formerly AFDC
  o Veteran benefits
  o Other untaxed income and benefits

NOTIFICATION OF FINANCIAL AID AWARDS
All financial aid award notifications to students from the SFS Office can be found on the student's personal page online at http://www01.accd.edu/district/it/web-forstudents.html. The SFS Office no longer mails out written notifications. Instead, students are contacted via email at the personal email address provided on the FAFSA, and at the one assigned by the Alamo Community Colleges, to check their financial aid status online. The email provides instructions on how to view and accept awards via the Web for Students at the above web address. Students can view each source of aid and amount that they have been awarded. In order for aid to be credited to their account, students must accept their award on-line. The SFS Office can assist students in navigating the Web site or provide written instructions.

RECEIVING FINANCIAL AID FUNDS
Checks generated in the first (1) check run at the beginning of the Fall and Spring semesters are mailed to students at their permanent address without exception. Checks generated the rest of the term are held at the Bursar/Business Office for a few days for students to pick up before they are mailed. Loan funds are also credited directly into students’ accounts. This means that disbursement of loan funds is made on the same schedule as grants and scholarships.

Given that not all checks can be released to students by the payment deadline, students must make arrangements on their own for payment of tuition and for the purchase of books and supplies. Students should check with the SFS Office about the availability of short-term emergency loans for tuition.

SATISFACTORY ACADEMIC PROGRESS
FOR PURPOSES OF FINANCIAL AID
Federal Regulations require all students applying for financial assistance to maintain Satisfactory Academic Progress in order to receive aid. The progress standards that students are required to meet in order to maintain financial aid eligibility are:

• A minimum 2.0 GPA, “C” or better, per semester and overall GPA;
• Successful completion of 67% of all coursework attempted; and
• Completion of the academic program of study within ninety-nine (99) hours of attempted coursework (including all hours attempted at other
Compliance with the Satisfactory Academic Progress (SAP) policy is evaluated after every Spring semester. Students are advised to check their status through the WEB for Students. SAP policy is categorized in one (1) of three (3) ways: Good Standing, Financial Aid Probation, and Financial Aid Suspension. Students may receive financial aid while in Good Standing or on Financial Aid Probation status, but not if they are on Suspension. The information below describes specifically what the categories mean:

**Good Standing (RC1)**
Students are considered to be in Good Standing if they meet all three (3) standards of progress outlined above. These students may participate in any financial aid programs provided they meet all other eligibility criteria, subject to availability of funds.

**Financial Aid Probation (RC2)**
Students are placed on probation if, by the end of the Spring semester, they have not completed 67% of all coursework attempted and/or do not have at least a cumulative 2.0 GPA. These students may receive financial aid (except student loans) while on Financial Aid Probation, subject to individual financial aid program requirements and availability of funds.

**Financial Aid Suspension (RC4)**
Students are suspended from financial aid if, by the Spring semester of their probationary year, they do not meet one (1) or more of the Satisfactory Academic Progress criteria listed above. These students are sent a financial aid suspension notice and can continue to enroll but at their own expense.

**Appeal Process (RC3)**
Students may appeal their suspension status or may appeal to receive a loan if they have been denied one due to their probationary status. The appeal should include a personal statement (with appropriate documentation) detailing the circumstances that resulted in their failure to meet the required standards. Those who have been suspended due to exceeding ninety-nine (99) attempted hours must submit a degree plan, signed by an advisor, clearly showing courses earned towards the program, courses still needed, and the anticipated graduation date.

If the appeal is approved, eligibility is reinstated subject to program requirements. Progress is reviewed at the end of the semester to make sure that the student is meeting the standards and following the degree plan. Failure in either of these criteria will again result in financial aid suspension.

If the appeal is denied, no financial aid of any kind may be awarded. Students can continue to enroll but at their own expense. A re-appeal is acceptable after stu-
Students have completed at least one (1) semester (preferably two (2)) and believe they can make a case for getting back on track academically. The Committee’s decision is final and may not be appealed further.

**SPRING AND SUMMER TRANSFER STUDENTS**

Students transferring from another institution during the Spring or Summer semesters must make sure that their prior institution reports to the National Student Loan Database System (NSLDS) the cancellation of any undisbursed Federal Pell Grant and Stafford Loan amounts.

Failure to do so will prevent any of the Alamo Community Colleges from awarding any remaining funds for which a student is still eligible from those student aid programs. Students who plan to enroll at the Alamo Community Colleges only during the Summer and then return to their home institution the following Fall semester, are considered transient students and are therefore not eligible for financial aid at the Alamo Community Colleges.

**CONCURRENT ENROLLMENT AND FINANCIAL AID ELIGIBILITY**

Students may only receive aid at one school per period of enrollment. Students who are enrolled at two (2) or more of the Alamo Community Colleges for the same semester may receive financial aid at the college where they are enrolled at least half time (six (6) credit hours), and then only if the majority of their hours of enrollment are at that same college. At no time will students be allowed to count enrollment at a non-Alamo Community Colleges school towards their eligibility for financial aid at one of the Alamo Community Colleges.

**CONSORTIUM AGREEMENTS AND FINANCIAL AID ELIGIBILITY**

The Alamo Community Colleges will sometimes enter into consortium agreements with institutions willing to consider a student’s concurrent enrollment at an Alamo Community Colleges school as part of the student’s semester course load at their school for the purpose of awarding aid through their financial aid office. That institution becomes the student’s home institution for financial aid purposes, and it initiates such agreements on behalf of the student. These students are automatically ineligible for aid from any of the Alamo Community Colleges. All consortium agreements must be approved by the appropriate Alamo Community Colleges authorizing official.

**WITHDRAWING FROM COLLEGE AND RETURNING FINANCIAL AID FUNDS**

It is important that students know the Census Date for each semester or session. Although students may be awarded aid based on the number of hours they register for at the start of the semester, financial aid will be recalculated on the basis of the
number of hours in which they are still enrolled by the Census Day. For example, students who are initially awarded as full-time (twelve (12) hours) will have their financial aid award adjusted to half-time if they have dropped to six (6) hours by the Census Day. For some aid programs this means that the student has to pay back half of the aid received. A drop in enrollment (but not 100% withdrawal) after the Census Day will not impact the amount of aid received with two (2) exceptions: Federal Work-Study and loans cannot be disbursed at any time in the semester when a student is enrolled in less than six (6) hours.

When students withdraw 100%, federal regulations require all schools to pro-rate the amount of financial aid that they have earned based on the percentage of the semester that they have attended classes. The regulations require that such a percentage be calculated up until the 60% mark of the semester. Since in most cases students are disbursed 100% of their financial aid under the assumption that they will stay in school the entire semester, withdrawing before the 60% mark means they will have to pay back a portion of their financial aid. Failure to repay these funds results in Financial Aid Holds that prevent future registration at any college or university.

**Repayment of funds is applied to programs in the following order:**

1. FFELP Unsubsidized Stafford Loan
2. FFELP Subsidized Stafford Loan
3. FFELP PLUS Loan
4. Hinson-Hazlewood Loan
5. Federal Pell Grant
6. Federal Supplemental Opportunity Grant (SEOG)
7. Academic Competitiveness Grant (ACG)
8. TEXAS Grant or TEOG
9. Texas Public Education Grant (TPEG) or PSIG/LEAP
10. Scholarships

If a student withdraws before financial aid is disbursed, financial aid amounts will simply be pro-rated according to federal regulations.
FINANCIAL AID RESOURCES
STATE AND FEDERAL GRANTS

Federal Pell Grant Program
Awards to eligible students are determined through the use of a payment schedule published annually by the U.S. Department of Education. Award amounts vary according to the:

- Educational costs at the institution (the cost of attendance);
- Student’s enrollment status;
- Annual appropriations and award maximums set by Congress; and
- Expected Family Contribution on the student’s Student Aid Report.

Pell grant funds are awarded once per semester, and Summer awards are made if the student’s annual eligibility has not been exhausted during the Fall and Spring semesters.

Academic Competitiveness Grant (ACG)
Eligible students may receive an Academic Competitiveness Grant (ACG) of up to $750 for the first (1) academic year of study and up to $1,300 for the second (2) academic year of study. To be eligible for each academic year, students must:

- Be a U.S. citizen;
- Be a Federal Pell Grant recipient;
- Be enrolled full-time in a degree program;
- Be enrolled in the first (1) or second (2) academic year of their program of study at a two-year or four-year degree-granting institution;
- Have completed the recommended or advanced high school program of study (after January 1, 2006, if a first-year student, and after January 1, 2005, if a second-year student);
- If a first-year student, not have been previously enrolled in an undergraduate program; and
- If a second-year student, have at least a cumulative 3.0 GPA on a 4.0 scale for the first academic year.

Note that the amount of the ACG, when combined with a Pell Grant, may not exceed the student’s Cost of Attendance. In addition, if the number of eligible students is large enough that payment of the full grant amount would exceed the program appropriation in any fiscal year, the amount of the grant to each eligible student may be ratably reduced.

To be eligible for the second (2) year ACG, students must:

- Be eligible for a Pell Grant;
- Enroll full-time in the second (2) year of the program of study;
- Have a 75% course completion rate in the most recent academic year;
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• Have completed at least twenty-four (24) semester credit hours with at least a 3.0 GPA; and
• Must not have received an ACG at the same level in a prior year.

Eligibility for transfer students will be calculated based on hours accepted and using U.S. Department of Education guidance.

Federal Supplemental Educational Opportunity Grants Program
This program provides grants from $200 to $1,000 to undergraduate students with a zero (0) Expected Family Contribution who are also planning to go into the field of education. To receive SEOG funds students must be enrolled in six to eleven (6-11) hours.

Texas Public Educational Grant (TPEG)
Texas Public Educational Grants (TPEG) provide assistance to undergraduate students who demonstrate financial need as determined by Student Financial Services. Awards range from $200 to $2,000. The amount of the award is based on need and availability of funds. Students must be undergraduates enrolled for at least six (6) semester credit hours who are Texas residents, out of state students, or resident aliens. No repayment is necessary.

Towards EXcellence Access and Success Grant (TEXAS Grant)
The TEXAS Grant I Program pays tuition for students who meet the following program criteria:
• Maintain current Texas residency status;
• Graduated from an accredited Texas high school no earlier than Fall 1998;
• Completed a recommended or advanced high school curriculum;
• Apply and qualify for financial aid;
• Meet the state’s financial aid criteria. The expected family contribution must be less than $4,000;
• Enroll at least three-quarters time (nine (9) hours) in an Associate’s Degree or Certificate program;
• Enroll and receive the grant no later than the sixteenth (16) month after graduating from high school; and
• Not be convicted of a felony or crime involving a controlled substance.

Awards can be renewed based on criteria set by the Texas Higher Education Coordinating Board. In addition to the above requirements, students must meet the following renewal criteria:
• Not have earned an Associate or Baccalaureate Degree;
• Maintain a 75% course completion rate in the most recent academic year;
• Complete at least twenty-four (24) credit hours in the most recently completed academic year;
• Maintain a 2.5 GPA or higher and;
• Receive a TEXAS Grant I for no more than ninety (90) semester credit hours.

Texas Educational Opportunity Grant (TEOG)
The TEXAS Grant II Program pays tuition for students who meet the following program criteria:
• Maintain current Texas residency status;
• Graduated from an accredited high school;
• Apply for financial aid and have less than $2,000 Estimated Family Contribution (EFC);
• Enroll at least as a half-time student;
• Be in the first thirty (30) attempted hours of a first certificate or degree plan program;
• Not have been convicted of a felony or crime involving a controlled substance; and
• Not be eligible for the TEXAS Grant I Program.

Awards can be renewed based on criteria set by the Texas Higher Education Coordinating Board. In addition to the above requirements, students must meet the following renewal criteria:
• Not have earned an Associate or Baccalaureate Degree;
• Maintained a 75% course completion rate in the most recent academic year;
• Maintained a 2.5 GPA or better; and
• Received a TEXAS Grant II for no more than seventy-five (75) semester credit hours.

Students may contact the SFS Office for more information.

Educational Aides Exemption Program
The tuition exemption is available to Texas residents with financial need who worked as educational aides in a Texas public school district for at least one (1) out of the last five (5) years preceding the semester or session for which the exemption is received and who continue to be school employees serving in any capacity. Enrollment in courses leading to a teacher certification at a Texas public institution of higher education is required. Students should complete the FAFSA Form and/or provide a copy of the most current income tax information to show financial need. Applications for the exemption can be obtained from the SFS Office or from their school district’s Human Resource Office.

Early High School Graduation Scholarship Program
Texas residents who complete grades 9-12 within forty-six (46) months at a public high school in Texas may qualify for tuition exemptions ranging from $500 to $2,000. High school counselors must send a letter certifying a student’s level of eligibility to the Texas Higher Education Coordinating Board. The Coordinating
Board is responsible for notifying the Alamo Community Colleges and students of awarded amounts.

Hazlewood Program for Texas Veterans
The Hazlewood Act (Article 2654 B-I) aids veterans who have exhausted all of their Department of Veterans' Affairs (DVA) educational benefits. Veterans are exempt from tuition payment when the applicant meets all of the following conditions:

- Served during a national emergency;
- Resided one (1) year in Texas prior to entering the service from Texas, and, upon discharge from the service, continued residence in Texas;
- Served on active military duty (other than training) for more than one hundred eighty (180) days; and
- Not be in default on a federal loan or owe an overpayment of federal grant program.

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

- A letter from the DVA stating that the applicant has no further educational entitlement under the G.I. Bill (If first time Hazlewood user, DVA letter must be from Muskogee, Oklahoma); and
- A copy of the applicant’s DD214 showing “Character of Discharge.”

The applicant may enroll in non-credit courses if these conditions are met. A copy of the application is available online at http://www.accd.edu/district/schships/main/sfs.htm.

Leveraging Educational Assistance Partnership/Special Leveraging Educational Assistance Partnership (LEAP/SLEAP)
LEAP/SLEAP provides assistance to an undergraduate student who demonstrates financial need as determined by the SFS Office. To be eligible for this grant a student must be enrolled for at least six (6) semester credit hours. Awards are made to Texas residents on a first-come, first-served basis until funds run out.

Public Student Incentive Grants (PSIG) Program
Public student incentive grants provide assistance to undergraduate students who demonstrate financial need as determined by the SFS Office. To be eligible, students must be Texas residents enrolled in at least six (6) semester credit hours.

ALAMO COMMUNITY COLLEGES SCHOLARSHIPS
The Alamo Community Colleges award many scholarships, based on the availability of institutional and private funds, to academically meritorious or needy students. Scholarships range from $300-$1500 per academic year (Sept-May) and $375-$750 when awarded by semester. All scholarships and other financial aid already awarded is taken into consideration when determining eligibility. Scholarship lists and applications are available at Student Financial Services or online at http://www.accd.edu/district/schships/main/sfs.htm.
Eligibility Requirements:

- Complete the Free Application for Federal Student Aid (FAFSA) for need-based consideration;
- Enroll as a first time student in college or as a returning Alamo Community Colleges student with fewer than ninety-nine (99) cumulative college credit hours attempted. Students with Bachelors or Masters degrees will not be considered;
- Pursue an Associate Degree, Certificate, or transfer program at the Alamo Community Colleges;
- Enroll for six to twelve (6-12) credit hours, depending on individual scholarship criteria;
- Have and maintain a satisfactory GPA (2.00-4.00);
- Maintain Satisfactory Academic Progress. To review Alamo Community Colleges SAP policies see online at http://www.accd.edu/district/schships/main/sfs.htm and click on Policies;
- Not be in default on a student loan, or owe a refund to any college for state or federal funds; and
- Be a U.S. citizen or eligible non-citizen.

Application Procedures:
Complete and submit to Student Financial Services (SFS) an Alamo Community Colleges Scholarship Application including the items listed below:

- Submit an official college academic transcript from all colleges previously attended. (Copies of transcripts from other Alamo Community Colleges are not needed.);
- Provide two (2) letters of reference from high school or college faculty who can attest to the student’s academic promise and ability to succeed;
- Provide a one (1) page essay explaining career goals;
- Provide a one (1) page autobiography (include family background and personal interests);
- Entering freshmen must submit a high school transcript;
- Applicants applying for scholarship renewal must provide additional information as requested below; and
- Meet the application deadline of June 1 for the Fall semester and November 1 for the Spring semester.

The scholarship application and a list of available scholarships with descriptions and specific requirements are available at Student Financial Services or online at http://www.accd.edu/district/schships/main/sfs.htm.

Selection of Recipients:
Once scholarship applications are reviewed, students are notified via email to log onto the Web for Students at http://www01.accd.edu/district/it/webforstudents.html to review their status.
Notice of Awards:
Students will be notified by mail of any scholarship award or denial.

Renewal of Scholarships:
Scholarships may be renewed on an academic year or semester basis, contingent upon Satisfactory Academic Progress and availability of funds. Students must re-apply for continuation of scholarships by the deadline for the next academic year (September-May) or semester. Please attach a separate sheet describing how the scholarship benefited the student and why it should be renewed.

The Office of Student Financial Services reserves the right to cancel any scholarship at any time if the applicant fails to meet the standards of academic progress, scholarship requirements, or falsifies information reported.

LOANS

Federal Stafford Loans Programs (Subsidized and Unsubsidized)
Stafford Loans are low-interest student loans certified by the Alamo Community Colleges and guaranteed by the federal government. These loans can be made through almost any bank or credit union. The interest rate varies between 2.77% and 8.25%. For subsidized loans, the federal government pays the interest while the student is enrolled at least half-time. Unsubsidized loans, on the other hand, require students to make interest payments or to agree to capitalize the interest, which is deferred but becomes part of the principle. First-year students may borrow up to $3,500 per year, while second-year students may borrow up to $4,500. Because subsidized loans are based on financial need, the SFS Office establishes the amount students are eligible to borrow. Students must attend a counseling session concerning the loan, full repayment of which begins six (6) months after the student leaves school or drops below half-time status.

Stafford Loan deadlines
Fall       First Friday of November
Spring    First Friday of April
Summer    First Friday of June

These deadlines also apply to the PLUS Loan Program below.

Federal PLUS Loans Program
The PLUS Program allows parents to borrow up to the cost of education for each dependent enrolled in college at least half-time. PLUS loans can be made through almost any bank or credit union at a variable interest rate not to exceed 9%. Repayment for parent borrowers begins sixty (60) days after disbursement of the loan. The PLUS loan amount, together with all other financial aid, may not total more than the student’s Cost of Attendance at one of the Alamo Community Colleges.
Consolidation Loan Program
Consolidation Loans may be arranged to combine loans made to a student under Title IV programs and the Health Professions Student Loan (HPSL) Program. These loans provide repayment periods appropriate for the total amount outstanding. For example, a student whose total loan debt exceeds $7,500 may be given a repayment period longer than ten (10) years. Repayment of a Consolidation Loan must begin within sixty (60) days after the selected loans have been consolidated. Students must contact their lenders to see if the loan qualifies for Consolidation Loans.

Short-Term Loans
The Short-Term Loan is a zero (0) interest, institutional emergency loan for tuition that must be repaid in thirty (30) days. These loans are offered prior to the start of the Fall and Spring semesters only. Students work with the SFS Office to determine their eligibility and the amount of the loan. Students must show proof that they have applied for and will be eligible for a PELL grant. Funds are limited and a separate application is required.

WORK OPPORTUNITIES
Federal Work-Study Program
The Federal Work-Study (FWS) Program provides a job for undergraduate students enrolled at least half-time who demonstrate financial need to help pay for their educational expenses. The hourly pay rate is typically slightly above current federal minimum wage. The amount of FWS awarded depends on a student’s financial need, availability of funding, and the amount of other aid the student receives. Students may not work more than nineteen (19) hours per week. FWS students are paid once (1) per month and may pick up their checks at the Bursar/Business Office.

Off-Campus Employment
Private, off-campus employment is administered by many local community or city agencies that hire the Alamo Community Colleges’ students. The firms’ policies are not related to the Alamo Community Colleges. In addition to earning money while attending college, students have an opportunity to participate in the local work force and gain valuable work experience.
ATTENDANCE
Regular and punctual attendance at all classes and laboratories, day and/or evening, is required. Students absent for any reason should consult with their instructors. Course syllabi provide specific information regarding attendance. In all cases, students will be held responsible for completion of requirements. Excused absences apply only to students representing the school in an official capacity. The appropriate instructional division chair, dean, or vice president must approve such absences.

Both tardiness and early departure from class are forms of absenteeism. The instructor establishes the policy with regard to each. Absences are recorded from the official date of enrollment in the class.

Instructors may 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. If students are dropped from a class for lack of progress, the instructor will record a grade of “W” (Withdraw).

Students who stop attending class for any reason should contact the instructor and the registrar to officially withdraw from the class. Students may be required to consult with an advisor or designee before dropping. Failure to officially withdraw may result in a failing grade. It is the student’s responsibility to withdraw officially from a class if that becomes necessary. Students need to submit a completed Withdrawal Form and a statement indicating the course(s) from which they would like to be withdrawn. If the statement is mailed, the postmark date on the envelope is the official drop date.


GRADES
Grading System
Permanent grades are recorded only at the end of each semester/session. The grades used are:

- A (excellent/exceptional performance beyond mastery)
- B (above average/beyond basic mastery)
- C (average/mastery)
- D (below average/pass)
**Incomplete Grades**
The conditional grade of “I” may be issued to a student having a passing average on all completed coursework but for a justified reason, such as illness or death in the family or by providential hindrance, has been prevented from taking the final examination or completing other required coursework. The “I” becomes an “F” in one hundred twenty (120) calendar days from the end of the term unless the student completes the balance of the coursework with a performance grade of “D” or higher. Re-enrollment in the course will not resolve the “I.”

**In-Progress Grades**
The “IP” grade may be assigned to students who have not adequately mastered developmental course content during a given semester or term yet who in the instructor’s judgment have the potential to successfully complete the coursework. The only way to receive a grade in a course for which an “IP” grade has been recorded is to re-register for the course and earn a grade of “C” or better at the end of the semester or term in which the re-registration occurs.

Grade Availability
Students may access their grades online after the grade submission deadline, which is approximately one (1) week after the last day of finals.

Grade Changes
A student has a maximum of one (1) year from the end of the semester or term in which the final grade was issued to request a review of the grade or petition for a change of grade. 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 issue. Grade changes require the approval of the instructor and respective department chair. When the instructor cannot be located in a timely manner by the student and the department chair, the student’s grade appeal can be initiated with the department chair.
If students are not satisfied with an instructor’s decision, they may initiate an Academic Grievance within five (5) days of the instructor’s decision. See Academic Grievance Procedure.

Grade Point Average
The grade point average (GPA) is computed by assigning quality values to each grade as follows:

- A - 4 quality points per semester credit hour
- B - 3 quality points per semester credit hour
- C - 2 quality points per semester credit hour
- D - 1 quality point per semester credit hour
- F - 0 quality points per semester credit hour
- W, WX, WM, IP, CR, NC, AU - not computed in GPA
- I – to be computed upon completion of required work
- P – Continuing Education Completer (program-specific)

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

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

<table>
<thead>
<tr>
<th>Semester</th>
<th>Hours</th>
<th>Quality Points</th>
<th>Grade</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1406</td>
<td>4</td>
<td>3(B)</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>ENGL 1301</td>
<td>3</td>
<td>2(C)</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>SPAN 1411</td>
<td>4</td>
<td>4(A)</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>PSYC 2301</td>
<td>3</td>
<td>2(C)</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>KINE 1104</td>
<td>1</td>
<td>4(A)</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>15</strong></td>
<td></td>
<td><strong>44</strong></td>
<td></td>
</tr>
</tbody>
</table>

GPA = 44/15 = 2.93

Enrollment: Registered, paid, and officially registered through the semester’s withdrawal date.

Repetition of courses: Once a course is repeated the highest grade earned will be the one recorded in the GPA. Other colleges and universities may not follow this practice. Students planning to transfer to another institution should check with that institution concerning its repeat policy for admissions criteria.

For comprehensive information on grading and credit see online at http://www.tasb.org/policy/pol/private/015501/pol.cfm?DisplayPage=EGA(LEGAL).pdf.
ACADEMIC STANDING AND PROBATION

Acceptable scholastic performance, also known as Good Standing, is based upon student progress toward successful course and program completion. The components used to compute Academic Standing are GPA and course completion. Procedures are developed to positively intervene on behalf of students in order that they may maintain Good Academic Standing. Students are advised to check their status through the WEB for Students.

Good Standing
- Minimum 2.0 GPA, per semester/session and overall GPA, including developmental courses.

Academic Probation
- Students who begin any semester/session in Good Academic Standing but fail to maintain a cumulative GPA of 2.0 or higher are placed on Academic Probation. Notification of probationary status is communicated electronically through students’ PALS email addresses.
- Students may re-enroll for one (1) semester/session after meeting with an advisor.
- Student status is evaluated after each semester/session
- Students must earn a semester/session GPA of 2.0 or higher to remain enrolled.
- Upon completion of above requirements any appropriate Academic Hold will be cleared on student records.
- Academic Probation status is removed when students earn both a current and a cumulative 2.0 GPA.

Continued Academic Probation
- After the first (1) semester/session of Academic Probation Status, students may re-enroll at the Alamo Community Colleges on a Continued Academic Probation status after meeting with an advisor.
- Student status is evaluated after each completed semester/session. Students must meet minimum academic (2.0 GPA) standards for each subsequent semester/session
- The Continued Academic Probation status is removed when students earn a cumulative 2.0 GPA.

Academic Dismissal (First or Second Academic Dismissal)
- If students on Continued Academic Probation fail to earn a semester GPA of 2.0 or fail to earn a cumulative GPA of 2.0 in the next semester/session following the probation status they will be placed on Academic Dismissal. Students placed on Academic Dismissal will receive written
notification from the Alamo Community Colleges.

- After remaining out for one (1) semester for each of the First or Second Academic Dismissals, students may re-enter on Academic Probation only after receiving advisement.
- Students re-admitted must earn a semester GPA of 2.0 GPA overall or higher to remain enrolled.
- Students who wish to remain in school may petition for an exception. Exceptions granted will be re-enrolled under the status of Continued academic Probation.
- Students may re-enroll in Good Standing if minimum academic standards have been met at another accredited college or university during the period of dismissal.
- Students placed on Academic Dismissal for the third (3) time will not be allowed to enroll for one (1) calendar year.

Students who were placed on Academic Dismissal or Academic Suspension at their previous institutions and are seeking to transfer to the Alamo Community Colleges must follow the policy outlined above.

**Permanent Academic Dismissal**

A student on Permanent Academic Dismissal for a third (3) time or more will not be permitted to enroll in the Alamo Community Colleges for one (1) calendar year after which a petition may be made for re-admission. The Enrollment Services/Admission and Records office can provide information and deadlines on the petition process.

Academic Probation status is removed when students earn both a current and a cumulative 2.0 GPA.

**VETERANS AND THEIR DEPENDENTS**

Alamo Community Colleges students receiving the national Department of Veterans Affairs (DVA) educational benefits must meet the following minimum academic standards:

- Students receiving DVA educational benefits must maintain 2.0 cumulative GPA to be considered as making Satisfactory Progress.
- Students failing to maintain a 2.0 cumulative GPA will be placed on probation for one (1) semester. If students maintain at least a 2.0 GPA during the probationary period but do not meet the required 2.0 cumulative GPA, they may be placed on probation for another semester.
- Students failing to maintain a 2.0 semester GPA at the end of the first (1) probationary period will be reported to the Department of Veterans Affairs Regional Office (VARO) as making Unsatisfactory Progress.
- Students failing to maintain the required 2.0 cumulative GPA at the end of a second (2) consecutive probationary period will be reported
to the VARO as making Unsatisfactory Progress.
• The last activities recorded in the instructor’s record book will be reported by the Alamo Community Colleges’ Office of Veterans Affairs to the DVA as of the last date of attendance.

ELIGIBILITY FOR PARTICIPATION IN COLLEGE-SPONSORED PROGRAMS AND EVENTS
A student placed on Academic Probation during any semester may not participate in public activities of the Alamo Community Colleges, represent the Alamo Community Colleges in meetings or on competitive teams of the Alamo Community Colleges, or hold club or class office. In addition, a student having earned credit must have and maintain a minimum cumulative GPA of 2.00 in order to be a member of and participate in any student organization authorized by the Alamo Community Colleges.

HONORS
Honors are granted students who earn a cumulative GPA of 2.00 in addition to a current semester GPA of 3.5 or higher in their Fall or Spring semesters at the Alamo Community Colleges. Grades earned during the Summer sessions or for developmental courses beginning with the number zero (0) are not considered in Honors calculations.

The appropriate notations appear on the official and unofficial permanent record (transcript) but will not appear online.

Honors Calculations
• **Honors**: Students enrolled for twelve (12) or more semester credit hours with a cumulative GPA of at least 2.0 and a semester GPA of 3.5-3.99.
• **Presidents’ Honors**: Students enrolled for twelve (12) or more semester credit hours with a cumulative GPA of 2.0 and a semester GPA of 4.0.
• **Part-Time Honors**: Students enrolled for six (6) to eleven (11) semester credit hours with a cumulative GPA of at least 2.0 and a semester GPA of 3.5-3.99.
• **Presidents’ Part-Time Honors**: Students enrolled for six (6) to eleven (11) semester credit hours with a cumulative GPA of 2.0 and a semester GPA of 4.0.

An Honors Convocation is held each Fall to recognize students’ achievements from the previous Fall and Spring semesters.
STUDENT OBLIGATIONS
The philosophy and goals of the Alamo Community Colleges are to protect the equality of opportunity of all persons qualified to attend and to offer services that encourage and enable students to pursue new career goals, upgrade present skills, and enrich their personal lives.

Enrollment in the Alamo Community Colleges is a voluntary entrance into the academic community wherein the student assumes obligations of performance and behavior that are reasonably imposed by the institution relevant to its mission.

Such obligations may be higher than those imposed on all citizens by the civil and criminal law. A student does not surrender rights as a citizen upon enrollment in the Alamo Community Colleges. Rights and freedoms, however, like those of any other citizen, are not unlimited. The Alamo Community Colleges have an obligation not to submit to intimidation, violence, or disruptive behavior and expect students to recognize and accept their responsibilities as citizens and members of a scholarly community, among which are respect for the rights of others; academic and personal integrity; and adherence to federal, state, and local laws.

STUDENT CODE OF CONDUCT
The Alamo Community Colleges respect the dignity and worth of each individual in the campus community and recognizes the basic rights of freedom of speech, assembly, inquiry, reasonable use of services and facilities, and the right to due process. In the interest of guaranteeing the broadest range of freedom to each member of the college community, the Alamo Community Colleges have established a Student Code of Conduct and a due process system.

The Student Code of Conduct is based on promoting education and excellence regarding student behavior. The goal of the Student Code of Conduct is that acceptable standards of behavior are communicated to, and understood and upheld by, the students.

The Alamo Community Colleges encourage and facilitate an environment where students and student organizations take responsibility for their actions. The Student Code of Conduct educates students about their rights and responsibilities as members of the Alamo Community Colleges. The Student Code of Conduct is available online at http://www.accd.edu/main/html/registration/conduct.htm.
Questions regarding the Student Code of Conduct should be referred to the Vice President of Student Services or designee.

**Grievance Policies**

Should disagreements arise between students and their instructors, the Academic Grievance Policy provides equitable and expeditious resolutions. Students may ask their instructor to review a grievance and may appeal the instructor’s finding to the department chairperson. If necessary, a final appeal may be made to the dean. The Non-Academic Grievance Policy provides a remedy for students who believe they have been the object of unjust treatment by an Alamo Community Colleges’ employee. This policy does not apply to decisions regarding financial aid eligibility, student disciplinary actions, or academic matters. Grievance Policies are outlined in the Student Code of Conduct.

**AIDS/HIV POLICY**

AIDS/HIV educational literature is available free to students, employees and affiliates at the Alamo Community Colleges’ Student Health Centers. Information that students have or have not been tested, or have or do not have AIDS or HIV infection, may be released only to the college’s president or designee and to physicians, nurses, or other health care personnel who have a legitimate need to know in order to provide for their protection and to provide for students’ health and welfare. Release of this information to others must be based on written authorization by students (if they are over 18 years of age) or by students’ parents (if they are minors), and must specify the persons or positions to whom the information may be released. The persons or positions specified shall be provided with appropriate information concerning any precautions that may be necessary and shall be made aware of confidentiality requirements.

**CAMPUS SECURITY POLICY AND CAMPUS CRIME STATISTICS ACT**

Under the federal Clery Act provisions, the Alamo Community Colleges must publish statistics about criminal acts occurring on campus property. This information is available for all of the Alamo Community Colleges online at http://www.accd.edu/district/dps/stat.htm.

The Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act, codified at 20 USC 1092 (f) as a part of the Higher Education Act of 1965, is a federal law that requires colleges and universities to disclose certain timely and annual information about campus crime statistics, security policies, graduation rates, and job placement statistics. All public and private institutions of post-secondary education participating in federal student aid programs are subject to it. Violators can be fined up to $27,500 by the U.S. Department of Education, the agency charged with enforcement of the Act and where complaints of alleged violations should be made, or face other enforcement action. In compliance with the

Pursuant to federal law, alleged victims of violent crime are entitled to know the results of campus disciplinary proceedings concerning alleged perpetrators. The Alamo Community Colleges publish an annual Crime Awareness and Campus Security Report that pertains to the prior three (3) years of offenses occurring at any of the Alamo Community Colleges’ campuses. The report contains certain security policy statements, including sexual assault policies which assure basic victims’ rights, the law enforcement authority of the Alamo Community Colleges’ Department of Public Safety, and where students should go to report crimes. The report is available to all current and prospective students and employees through the Alamo Community Colleges’ Department of Public Safety online at http://www.accd.edu/district/dps/main.htm. A copy of these statistics is also provided to the U.S. Department of Education.


CAMPUS SEX CRIMES PREVENTION ACT

In compliance with the Campus Sex Crimes Present Act (section 1601 of Public Law 106-386 and the Jacob Wetterling Crimes Against Children and Sexually Violent Offender Registration Act), persons required to register as part of the State of Texas Sex Offender Registration Program must contact Alamo Community Colleges Police Department at (210) 208-8099.

For more information on legislation regarding safety on campus see online at http://www.securityoncampus.org/congress/cscpa/index.html.

CHILDREN ON CAMPUS POLICY

In order to prevent children from potential safety risks, from damaging expensive equipment, from being allowed in areas which might pose safety risks, and from interfering with the learning opportunities for all students, the following Alamo Community Colleges’ policy is currently in effect:

Students are urged not to bring children to classes, labs, or other facilities such as libraries. Minors under the age of 12 must not be left unattended on-campus at any time. Individual instructors may enforce additional restrictions or waivers for their particular classrooms or labs, which will be included in the course syllabus.
COMPUTER USAGE
Appropriate Computer Usage
Appropriate computer use guidelines are intended to help protect employees and students from the inappropriate use of technology. They supplement the laws, regulations, agreements, and contracts, which currently apply to technology services, and, therefore, they impose certain responsibilities and obligations on users and contracted agents.

Access to networks and computer systems owned or operated by the Alamo Community Colleges is a privilege granted to the users within the Alamo Community Colleges. Users are responsible for:

- Reviewing, understanding, and complying with all guidelines, procedures, and laws related to access, acceptable use, and security of the Alamo Community Colleges' information technology (IT) resources.
- Adhering to all hardware and software license agreements that are in force on any system, network, or server that the user operates.
- Asking systems administrators or data owners for clarification of access and acceptable use issues not specifically addressed in the Alamo Community Colleges' guidelines, rules, and procedures.
- Reporting possible guideline violations to the appropriate entities.

The Alamo Community Colleges’ computer resources, IT, and networks may be used for legitimate Alamo Community Colleges purposes only. Incidental personal use should be minimized. Therefore, one should not excessively use the Alamo Community Colleges’ sources of e-mail, Internet access, and/or other IT services for purposes not related to the Alamo Community Colleges’ business. Appropriate use of the Alamo Community Colleges’ computer resources, IT, and networks includes:

- Use by students related to completion of the Alamo Community Colleges’ class assignments or their education at the Alamo Community Colleges.
- Use by faculty, administrators, and staff directly related to instruction, research, scholarly, professional, and administrative endeavors on behalf of the Alamo Community Colleges or within the scope of the Alamo Community Colleges’ employment. While working in their Alamo Community Colleges’ employment capacities, students will be governed by the guidelines for employees.

Inappropriate Computer Usage
Users shall not access the Alamo Community Colleges’ computer resources, information technologies (IT), and networks for:

- Sending unsolicited electronic mail (e.g., “spam”) to interfere with the Alamo Community Colleges’ mail server or another’s server. Interference to the electronic mail system include: misusing listservs; propagating chain letters; virus hoaxes; fraudulent, harassing, or obscene messages (hateful or
• Communicating non-Alamo Community Colleges-related information on list-servs and newsgroups.
• Stalking or threatening a person. Using e-mail, chat rooms, and newsgroups to threaten and stalk a person is prohibited.
• Using computing resources for financial gain. Supporting, establishing, and conducting private business operations or commercial activities are prohibited.
• Accessing obscene material. Intentionally disseminating, accessing, and providing hyperlinks or access to obscenity as termed by law, unless such activities are directly related to the employee’s or student’s research or completion of an academic requirement, are prohibited.
• Endorsing any political candidate or ballot initiative. One may not use the Alamo Community Colleges’ IT resources to represent the interest of outside organizations unless authorized by an appropriate Alamo Community Colleges department.
• Violating city, state, or federal laws.
• Defeating system security; for example, “cracking” or guessing and applying the identification or password of another user. Since any account can serve as an entry point for theft, damage, or unauthorized use, users must protect the confidentiality of their personal identification codes and passwords. (This provision does not prohibit system administrators from using security scan programs within the scope of system authority.) Furthermore, users must not attempt to make any deliberate, unauthorized changes to data or attempt to intercept or access data communications intended for another.
• Misusing IP addresses or other network codes that have been assigned to users as individuals or for use as an Alamo Community Colleges employee. Clients must not have or seek to obtain unauthorized access to accounts, software, files, or any other Alamo Community Colleges IT resources.
• Attempting to compromise security. The Alamo Community Colleges’ resources may not be used in an attempt to compromise the security of any other personal, private, or public information system.
• Using excessive network bandwidth. Large-scale distribution of MP3 music or video files can cause excessive network overload. The Alamo Community Colleges’ IT Department reserves the right to manage and restrict any application or practice that involves significant network bandwidth or server load.
• Establishing any unauthorized network connections to any of the Alamo Community Colleges’ systems or components. In particular, users are prohibited from using unauthorized wireless devices or wired network devices.
• Concealing identity, except when the option of anonymous access is explicitly authorized. Users are prohibited from masquerading or impersonating others or otherwise using a false identity.
• Distributing computer viruses. Users must not knowingly distribute or launch racially, ethnically, or otherwise objectionable); or “bombing” (flooding an individual, group, or system with numerous or large e-mail messages).
computer viruses, Trojan horse, worms, or other rogue programs.

- Removing or modifying data or equipment. Without proper authorization, users may not remove or modify any Alamo Community Colleges-owned or -administered equipment or data.

- Modifying system facilities, operating systems, or disk partitions attempting to crash or hoard the Alamo Community Colleges’ computers. This includes damaging or vandalizing the Alamo Community Colleges’ IT resources, equipment, software, or computer files.

- Performing illegal functions. Use of technology systems in violation of civil or criminal laws at the federal, state, or local levels is prohibited. Examples of such uses are: promoting a pyramid scheme; distributing obscenity; receiving, transmitting, or possessing child pornography; infringing copyrights; or making bomb threats.

- Violating copyright laws. Users should be aware that copyright law governs (among other activities) the copying, display, and use of software and other works in digital form (text, sound, images, and other multimedia). The law permits use of copyrighted material without authorization from the copyright holder for select educational purposes. However, an educational purpose does not automatically mean that use is permitted without authorization. Therefore, written authorization is required.

- Violating any software license agreement, including copying or redistributing copyrighted computer software, data, or reports without proper, recorded authorization.

CRIMINAL OFFENSES

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

All of the general and criminal laws of Texas are declared by the Alamo Community Colleges' Board of Trustees to be in full force on all campuses. Any recognized misconduct, violation of regulations, or socially unacceptable behavior of students or non-students on- or off-campus, whether civil or criminal penalties are imposed for such conduct on the Alamo Community Colleges’ campuses is subject to administrative disciplinary action by the appropriate dean, vice president, and/or president of the college; action by a student-faculty disciplinary review committee; or possible arrest and charge by authorized campus or other peace officers of the city or state.

Discipline

After due process, any student or employee guilty of illegal use, possession, and/or sale of a drug or narcotic on any of the Alamo Community Colleges campuses or 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 specific 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.

A student may be requested or required to withdraw with or without public statement of charges by the Alamo Community Colleges’ administration. Specific disciplinary responsibilities of institutional officials, classification of offenses and sanctions appropriate to each disciplinary offense, and disciplinary procedures are set forth in the official Alamo Community Colleges’ policy under Discipline of Students online at http://www.tasb.org/policy/pol/private/015501/pol.cfm?idx=D.

DRUG-FREE SCHOOLS AND COMMUNITIES ACT AMENDMENTS OF 1989
The Alamo Community Colleges recognize the importance of awareness about alcohol and other drug abuse. In accordance with the Drug-Free Schools and Communities Act Amendments of 1989, Alamo Community Colleges have adopted and implemented a program to prevent the unlawful possession, use, and distribution of illicit drugs and alcohol by students on its property and as part of any of its activities. 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.

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 Alamo Community Colleges disciplinary action. Information about the disciplinary process is available in Alamo Community Colleges policy online at http://www.tasb.org/policy/pol/private/015501/pol.cfm?idx=D. The most common legal violations and their consequences are as follows:
<table>
<thead>
<tr>
<th>Alcohol</th>
<th>Penalty</th>
<th>Fine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minor in Possession (Sec.106.05.)</td>
<td>Class C Misdemeanor</td>
<td>Up to $200 fine</td>
</tr>
<tr>
<td></td>
<td>Class B Misdemeanor</td>
<td>Up to $1,000 fine and 6 months in jail</td>
</tr>
<tr>
<td>Contributing to the Delinquency of a Minor (Sec. 106.06.)</td>
<td>Class C Misdemeanor</td>
<td>Up to $200 fine</td>
</tr>
<tr>
<td></td>
<td>Class B Misdemeanor</td>
<td>Up to $1,000 fine and 6 months in jail</td>
</tr>
<tr>
<td>Public Intoxication (Sec. 42.08)</td>
<td>Class C Misdemeanor</td>
<td>Up to $200 fine</td>
</tr>
<tr>
<td>Other Drugs Drug Possession</td>
<td>Varies according to placement of the drug on schedules and amount in possession</td>
<td>Up to $50,000 fine and 5-99 years in jail</td>
</tr>
</tbody>
</table>

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 and to comply with institutional rules and directives issued by administrative officials. Students are expected also to observe standards of conduct appropriate for an academic institution.

Any student who engages in conduct prohibited by the Alamo Community Colleges’ rules or by federal, state, or local laws is subject to discipline whether such conduct takes place on- or off-campus or whether civil or criminal penalties also are 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-campus or 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 specific 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 detriments at both the cultural and individual levels. Awareness of the deleterious effects of any drug/alcohol is imperative for an individual’s well being and survival. Negative consequences may be exhibited through physical dependence and/or psychological dependence.

Physical Dependence: The body’s learned requirement for 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 contact 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 another drug 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 privacy 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 on the effects of specific drugs and alcohol as well as drug counseling resources in San Antonio, and surrounding areas, is available from the Alamo Community Colleges’ counselors/advisors.

A biennial review of this program will be conducted by the Alamo Community Colleges 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.

Substance Abuse Prevention
The Alamo Community Colleges are committed to substance free environments. Distribution, possession, manufacturing, dispensing, or use of alcoholic beverages, drugs, or controlled substances on any of its campuses will not be tolerated.
Information, consultation, and referrals are available from student services counseling/advising centers.

**ELECTRONIC DEVICES IN THE CLASSROOM**

Students are required to silence and store out of sight all electronic communication devices such as pagers, cellular phones, PDAs, etc. when in classrooms, laboratories, libraries, or other areas where such devices would interfere with instruction and learning. Faculty members have the latitude to modify this policy in their syllabi.

**EMERGENCY STUDENT CONTACT POLICY**

It is not possible for the Alamo Community Colleges’ staff to contact students on campuses except in cases of emergency. If it is necessary for someone to reach a student, the person should contact the Campus Police at (210) 208-8099.

**EQUAL OPPORTUNITY**

The Alamo Community Colleges are equal opportunity colleges and do not discriminate in access, admission, campus activities, education, employment, public accommodation, or public service on the basis of race, color, national origin, religion, disability, handicap, height, marital status, political affiliation, gender, sexual orientation, or veteran's status. No person shall be excluded from participation in, be denied the benefits of, or be subject to discrimination under any program or activity sponsored or conducted by the Alamo Community Colleges. Further, these principles shall apply to admission of students and to all aspects of the employment of personnel, staff, and faculty.

No act of retaliation shall occur to any person making a charge, filing a complaint, testifying or participating in any discrimination investigation or proceeding. Inquiries or complaints concerning these matters should be brought to the attention of:

Associate Vice Chancellor of Employee Services, Title IX Coordinator
Employee Services Department
201 W. Sheridan, Bldg. A
San Antonio, Texas 78204
(210) 208-8051

Persons with disabilities who plan to attend the Alamo Community Colleges who may need reasonable accommodations as per the Vocational Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990 should contact Educational Support Services at least four (4) working days prior to the program or activity so appropriate arrangements can be made. For comprehensive Alamo Community Colleges policy see online at [http://www.tasb.org/policy/pol/private/015501/pol.cfm?DisplayPage=FA(LEGAL).pdf](http://www.tasb.org/policy/pol/private/015501/pol.cfm?DisplayPage=FA(LEGAL).pdf).
FAMILY EDUCATIONAL RIGHTS AND PRIVACY ACT  
STUDENT INFORMATION RELEASE POLICY /  
CONFIDENTIALITY OF RECORDS

The Family Educational Rights and Privacy Act (FERPA) requires any school that receives federal funds to release or withhold a student’s education records in accordance with its rules.

Public Notice Designating Directory Information
The Alamo Community Colleges designate student Directory Information as:
- Name
- Major
- Enrollment status
- Dates of attendance
- Previous education agencies/institutions attended
- Degrees received
- Awards received

- Social Security numbers are **not** Directory Information AND MAY NEVER BE DISCLOSED.

- The Alamo Community Colleges must release students’ addresses and telephone numbers to military recruiters.

Request for Nondisclosure
FERPA permits release of Directory Information without a student’s consent unless a student makes a written request to withhold the information. A Request for Nondisclosure Form must be submitted to the Registrar’s office by the twelfth (12) class day of a Fall or Spring semester, or the fourth (4) class day of a Summer term or a student’s Directory Information is public. The Request for Nondisclosure is effective for the academic year in which it is submitted. It is a student’s responsibility to renew the request each academic year.

Students who elect nondisclosure must request their information in person using a valid photo student ID or driver’s license.

Privacy of Student Education Records
- All students attending college, including minors, are protected under FERPA.
- School officials are permitted to share student information freely with parents if the parents claim the student as a dependent on their taxes.
Notification of Rights under FERPA
The Family Educational Rights and Privacy Act (FERPA) is designed to protect the privacy of students’ education records. These protections include:

1. The right to inspect and review the student’s education records.
   A student should submit a written request that identifies the record(s) the student wishes to inspect to the appropriate college official. The official will make arrangements for access and notify the student of the time and place where the records may be inspected.

2. The right to request the amendment of the student’s education records that the student believes are inaccurate or misleading.
   A student who wants the college to amend a record should write the college official responsible for the record, clearly identify the part of the record the student wants changed, and specify why it should be changed.
   If the college decides not to amend the record as requested, the college will notify the student in writing of the decision and the student’s right to a hearing regarding the request for amendment. Additional information regarding the hearing procedures will be provided to the student when notified of the right to a hearing.

3. The right to provide written consent before the college discloses personally identifiable information from the student’s education records, except to the extent that FERPA authorizes disclosure without consent.
   The college discloses education records without a student’s prior written consent under the FERPA exception for disclosure to school officials with legitimate educational interests. A school official is a person employed by the college in an administrative, supervisory, academic or research, or support staff position (including law enforcement unit personnel and health staff); a person or company with whom the college has contracted as its agent to provide a service instead of using college employees or officials (such as an attorney, auditor, or collection agent); a person serving on the Board of Trustees; or a student serving on an official committee, such as a disciplinary or grievance committee, or assisting another school official in performing his or her tasks.
   A school official has a legitimate educational interest if the official needs to review an education record in order to fulfill his or her professional responsibilities for the Alamo Community Colleges.

4. The right to file a complaint with the U.S. Department of Education concerning alleged failures by the college or university to comply with the requirements of
FERPA. The name and address of the office that administers FERPA is:

Family Policy Compliance Office
U.S. Department of Education
400 Maryland Avenue, SW
Washington, DC  20202-5901

Health or Safety Emergency
College officials must balance the interests of safety and privacy for individual students. While the Family Educational Rights and Privacy Act (FERPA) generally requires colleges to ask for written consent before disclosing a student’s personally identifiable information, it also allows colleges and universities to maintain campus safety.

In an emergency, FERPA permits school officials to disclose education records without student consent, including personally identifiable information from those records, to protect the health or safety of students or other individuals. At such times records and information may be released to appropriate parties such as law enforcement officials, public health officials, and trained medical personnel. (See 34 CFR § 99.31(a) (10) and § 99.36). This exception to FERPA's general consent rule is limited to the period of the emergency and generally does not allow for a blanket release of personally identifiable information from a student's education records. More information is available online at http://www.ed.gov/policy/gen/guid/fpco/brochures/postsec.html.

Disclosure to Parents
The Department of Education interprets FERPA to permit institutions to disclose information from education records to parents if a health or safety emergency involves their son or daughter. When a student turns eighteen (18) years old or enters a post-secondary institution at any age, all rights afforded to parents under FERPA transfer to the student. However, FERPA also provides ways in which schools may share information with parents without the student’s consent. For example:

- Schools may disclose education records to parents if the student is a dependent for income tax purposes.
- Schools may disclose education records to parents if a health or safety emergency involves their son or daughter.
- A school official may generally share information with a parent that is based on that official’s personal knowledge or observation of the student.

FERPA and Student Health Information
Post-secondary institutions that provide health or medical services to students may share student medical treatment records with parents under the circumstances described above. While these records may otherwise be governed by the Health Insurance Portability and Accountability Act of 1996 (HIPAA), the HIPAA Privacy Rule excludes student medical treatment records and other records protected by

Communicable Diseases Definitions:
1. “Disabled person” means one who has a record of, or who is regarded as having, or who has a physical or mental impairment that substantially limits one or more major life activities. Students who would otherwise be “disabled persons” are not excluded from the definition solely because they are contagious.

2. “Physical or mental impairment” means (a) any physiological disorder or condition, cosmetic disfigurement, or anatomical loss affecting one or more of the following body systems: neurological; musculoskeletal special sense organs; respiratory, including speech organs; cardiovascular; reproductive; digestive; genitourinary; hermic and lymphatic; skin; and endocrine; (b) any mental or psychological disorder, such as mental retardation; organic brain syndrome; emotional or mental illness; and specific learning disabilities.

3. “Major life activities” means functions such as caring for oneself, performing manual tasks, walking, seeing, breathing, learning, and working.

4. “Has a record of” an impairment means the person has a history of, or has been classified as having, a mental or physical impairment that substantially limits one (1) or more major life activities.

5. “Is regarded as having” an impairment means (a) has a physical or mental impairment that does not substantially limit major life activities but that is treated by the Alamo Community Colleges as constituting such a limitation; (b) has a physical or mental impairment that substantially limits major life activities only as a result of the attitudes of others toward such impairment; (c) has no physical or mental impairment but is treated by the Alamo Community Colleges as having such an impairment.

Communicable diseases include, but are not limited to, measles, influenza, viral hepatitis-A (infectious hepatitis), viral hepatitis-B (serum hepatitis), Human Immunodeficiency Virus (HIV infection), Acquired Immune Deficiency Syndrome (AIDS), leprosy, Methicillin-resistant Staphylococcus aureus (MRSA), and tuberculosis.

Students with communicable diseases, whether acute or chronic, are subject to the following provisions:

A. The information that a student has a communicable disease shall be confirmed when the student brings the information to the Alamo Community Colleges’ attention; the student confirms the information when asked. If the college president or designee has reasonable cause to believe that a student has a communicable disease, the student may be asked to submit to a college-funded medical exami-
nation (a) to determine whether the student’s physical condition interferes with participation in an educational program or activity, or poses a threat to self or others; or (b) a test or medical examination is necessary to manage accidental exposure to blood or other bodily fluids or airborne pathogens (but only when the test or examination is conducted in accordance with the Communicable Disease Prevention and Control Act (Article 4419(b)-1, Section 902(d) of Vernon’s Annotated Civil Statutes of the State of Texas).

B. The results of such examination shall be kept confidential in accordance with the Communicable Disease Prevention and Control Act, (Article 4419(b)-1, Vernon’s Annotated Civil Statutes of the State of Texas), except that the college president or designee shall be informed of restrictions and necessary accommodations. Health care and safety personnel may also be informed to the extent appropriate if the condition is one that might require emergency treatment.

**Methicillin-resistant Staphylococcus Aureus (MRSA)**

A student diagnosed with Methicillin-resistant Staphylococcus aureus (MRSA) shall inform an Alamo Community Colleges administrator before he or she returns to the campus after receiving the diagnosis. The administrator shall immediately inform the college president. The college president, through the Alamo Community Colleges’ safety coordinator, shall take all measures to reduce or eliminate the spread of MRSA. These measures include, but are not limited to: (a) posting signs (e.g., encouraging hand washing) in common areas and communicating means to prevent contamination; (b) providing germicidal hand-washing soaps in common areas, and; (c) ensuring that custodial employees receive education and personal protective equipment.

Any faculty member, administrator, or student who becomes aware of a student’s actual or suspected MRSA infection shall notify the Alamo Community Colleges’ safety coordinator immediately.

Knowledge that a student has a communicable disease (other than AIDS/HIV) shall be confined to those persons with a direct need to know, e.g., the Chancellor, a person responsible for the Alamo Community Colleges’ health program, and the like.

Information that a student has or has not been tested, or has or does not have AIDS or HIV infection, may be released only to physicians, nurses, or other health care personnel who have a legitimate need to know in order to provide for their protection and to provide for the student’s health and welfare, and to the college president or designee, or upon written authorization specifying the persons or positions to whom the information may be released. The persons specified shall be provided with appropriate information concerning any precautions that may be necessary and shall be made aware of confidentiality requirements.

When it has been determined that a student has a communicable disease, the
college president or designee shall follow standards of the state and local health departments to determine: (a) the nature, duration, and severity of the risk, i.e., how the disease is transmitted, how long the student will be infectious, and the potential harm to self and others; (b) the probabilities that the disease will be transmitted and will cause varying degrees of harm; (c) whether the student’s condition interferes with the student’s academic program or activities. This determination shall include a report by a physician who has performed a medical examination of the student.

If academic or activity restrictions are deemed appropriate, the college president or designee shall determine whether the student is a “disabled person.” If it is determined that the student is disabled, a further determination shall be made as to whether the student is “qualified.” A “qualified disabled person” is one who, with reasonable accommodation, meets the academic and technical standards requisite to admission or participation in the educational programs and activities of the Alamo Community Colleges.

If it is determined that the student is a “qualified disabled person,” the student must be reasonably accommodated. In determining whether the accommodation is reasonable, the Alamo Community Colleges shall balance its interest and the interest of the student, considering financial expense, effects on the learning environment for other students, and the severity of the changes to the normal academic and activity procedures. Accommodation is not reasonable if it poses undue financial or administrative burdens, or if it would require fundamental alterations in the conduct of academic programs and activities.

Based on medical information and the requirements of the educational program or activity in which the student is enrolled, the college president or designee shall determine any appropriate exclusion or modification. A student may be excluded from an educational program or activity if the college president or designee determines, in accordance with this policy, that the student poses a risk of contagion to others, or poses a threat to personal health by continued participation in educational programs or activities, or if the student’s physical condition would interfere with participation in educational programs or activities.

The student must present evidence or information relevant to the question of fitness to continue participation in educational programs or activities.

FREEDOM OF SPEECH AND ASSEMBLY
The Alamo Community Colleges support the first amendment rights of every individual, recognizing that inquiry and discussion are essential to intellectual development. The Alamo Community Colleges embrace the right of individuals to express their views in a manner that conforms to federal, state, and local laws. Students are only limited in expression if the expression materially and substantially interferes with school activities or interferes with the rights of other students or teachers. Therefore, freedom of speech and assembly rights must be exercised in a
manner and at a location that does not intrude upon or interfere with the academic programs and administrative processes of the Alamo Community Colleges.

To reserve an area on-campus for such purposes, contact the appropriate college office. No equipment or materials will be provided by the Alamo Community Colleges. Any charges incurred due to the use of Campus Police will be the responsibility of the reserving party.

Complete information on free speech policy and procedures is available online at http://www.tasb.org/policy/pol/private/015501/pol.cfm?DisplayPage=FLAA(LEGAL).pdf&QueryText=SPEECH.

IMMUNIZATION

Immunization is required for admission to the Alamo Community Colleges unless the student submits to the admitting official at least one of the following:

- An affidavit or a certificate signed by the student's physician (M.D. or D.O.) who is duly registered and licensed to practice medicine in the United States and who has examined the student.
- An affidavit signed by the student or, if a minor, the student's parent or guardian stating that the student declines immunization for reasons of conscience, including a religious belief.
- Proof that he or she is a member of the armed forces of the United States and is on active duty.

The Texas Board of Health immunization requirements apply to all students enrolled in health-related courses that will involve direct patient contact in medical or dental care facilities and to veterinary medical students whose course work involves direct contact with animals or animal remains as required by the Texas Board of Health Education Code 51.933; 25 TAC 97.64.

Detailed information outlining the Alamo Community Colleges' immunization policy can be accessed online at http://www.tasb.org/policy/pol/private/015501/pol.cfm?DisplayPage=FDAB(LEGAL).pdf&QueryText=IMMUNIZATION.

INCIDENT REPORTING AND RESPONSE

Any criminal offense, suspected criminal activity, or other emergency on campus should be reported directly to the Alamo Community Colleges Police by telephone, in person, or by dialing (210) 222-0911 from any campus phone or by using one of the emergency telephones located throughout our campuses. Campus elevators are also equipped with emergency phones. Upon receipt of the call, the Police Communications Center personnel can supply information or dispatch officers as necessary.

For non-emergencies from a campus phone, dial (210) 485-0099. The e-mail address for the Alamo Community Colleges Police Department is dps@accd.edu;
however, request for police service should not be sent via email. The Alamo Community Colleges Police or Security officers in vehicles, on foot, or on bicycles are eager to be of assistance and may be contacted directly. The Alamo Community Colleges Police Department will respond as quickly and safely as possible to any request for assistance, whether it is an emergency or not. Response time is based on current activity and severity of the call. Crimes in progress, alarms, traffic accidents with injuries, and medical assists have a higher priority than other types of calls.

The importance of prompt and accurate crime reports, no matter when they occur, cannot be over-emphasized. If a student witnesses a crime or emergency, he/she should promptly report it to the Alamo Community Colleges Police Department and be prepared to answer questions as accurately as possible. The subsequent investigation can only be as thorough as the information received. If a student is a victim of a crime or has seen or received information of criminal activity or other emergency, he/she should contact the Alamo Community Colleges Police Department immediately.

INTELLECTUAL PROPERTY

Intellectual property developed, created, or conceived by students within the scope of classroom activity or through the use of school property is to be shared with fellow students and faculty at the Alamo Community Colleges. The release of intellectual property to entities outside the Alamo Community Colleges is at the discretion of the authoring student. The authoring student shall retain rights to royalties derived from the sale of intellectual property outside the Alamo Community Colleges. If royalties are derived from the sale of intellectual property within the Alamo Community Colleges, such royalties shall be donated to a scholarship or department fund designated by the student or by the college president.

PLAGIARISM / 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 student’s best interest that scholastic dishonesty not be tolerated and that the Alamo Community Colleges’ policies and procedures be followed so as to provide consistent college-wide enforcement. Scholastic dishonesty includes, but is not limited to, cheating on exams, tests, and quizzes; plagiarism; and collusion. See the Student Code of Conduct for more detailed information.

Cheating on exams, tests and quizzes includes, but is not limited to:

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

Plagiarism is the appropriation of another’s work and the unacknowledged incorporation of that work into one’s own coursework/assignment including the taking and using of ideas, passages, etc. Plagiarism is scholastic dishonesty and will result in disciplinary action.

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

RELIGIOUS HOLY DAYS
A “religious holy day” is a holy day observed by a religion whose places of worship are exempt from property taxation under Section 11.20, Tax Code. Students shall be excused from attending classes or other required activities, including examinations, for the observance of a religious holy day, including travel for that purpose. Students must notify the faculty member in writing within the first twelve (12) days of the semester which day(s) will be observed. Students whose absences are excused under this provision may not be penalized for those absences and shall be allowed to take examinations or complete assignments within a reasonable time as established by the faculty member. The faculty member may respond appropriately if students fail to satisfactorily complete the assignments or examinations by the deadline.

SEXUAL HARRASSMENT
Sexual harassment is against the law and is prohibited against all persons seeking benefits from the Alamo Community Colleges including all employees, students, applicants for enrollment or employment, or others who might receive the benefits of Alamo Community Colleges activities. Sexual harassment constitutes any unwelcome sexual advances, requests for sexual favors, or other verbal, nonverbal, or physical conduct of a sexual nature, or any conduct or other offensive unequal treatment of an individual that would not occur but for the sex of the individual. Allegations of harassment do not have to be repetitious in nature in order to constitute sexual harassment.

The disciplinary action taken against persons who engage in sexual harassment is subject to appropriate procedural and due process requirements. Any person may report an alleged violation of this policy whether or not the person is affected by the conduct or action. Because the law makes the Alamo Community Colleges responsible to investigate and if necessary take corrective action as soon as students or employees become aware of an allegation of sexual harassment they
shall report the alleged violation to any of the following:

• Associate Vice Chancellor of Employee Services or designee
• Employee’s supervisor or an Alamo Community Colleges administra-
tor
• College official
• Ethics and Compliance Officer
• Toll-free telephone number (866) 294-3696
• Ethics Hotline online

To file online please review complete information about the Ethics Hotline at http://www.accd.edu/district/ethics/default.htm. This page provides a link to Questions and Answers and a link on How to File a Report (English and Spanish options available). Please review this information before filing the complaint at the official online reporting site at http://www.ethicspoint.com.

Specific Alamo Community Colleges policies and procedures on sexual harass-
ment of students and employees at the Alamo Community Colleges are specified online at:


Enter “ACCD” in the “Organization Name” field and click “Submit.”


• Student Complaints-FLDA (Legal) http://www.tasb.org/poli-
cy/pol/private/015501/pol.cfm?DisplayPage=FLDA(LEGAL).pdf&QueryText=SEXUAL

• Student Complaints-FLDA (Local) http://www.tasb.org/poli-

SMOKING POLICY / TOBACCO-FREE CAMPUSES

All of the Alamo Community Colleges are designated smoke-free. Smoking and/or using tobacco products is prohibited in all classrooms, laboratories, offices, con-
ference rooms, hallways, parking lots, and all other rooms in all buildings of the Alamo Community Colleges and on all property that is owned, leased, rented, or otherwise under the control of the Alamo Community Colleges, including parking lots and any other property owned by the Alamo Community Colleges. Department of Public Safety officers will issue to those in violation of the policy a penalty cita-
tion. Repeated violations will result in further disciplinary action.

The Alamo Community Colleges offers education, counseling, and training to stu-
dents, faculty, and staff on the harmful effects of smoking and smoke inhalation and provides information about smoking cessation.
The Alamo Community Colleges confer (post on official transcript) degrees and certificates three (3) times a year: at the end of Fall and Spring semesters and Summer sessions.

The Alamo Community Colleges offer recognition for satisfactory completion of work in the following forms:

- Associate of Arts Degree
- Associate of Science Degree
- Associate of Arts in Teaching
- Associate of Applied Science Degree
- Certificates

Graduation Application

To be awarded a degree or certificate, students should request preparation of a degree plan and file an Application for Graduation Form after the completion of thirty (30) semester credit hours toward a specific degree or at least fifteen (15) semester credit hours toward a certificate at the Alamo Community Colleges.

Students seeking certificates requiring fewer than sixty (60) hours should file an Application for Graduation Form after completing half of the certificate requirements. All candidates should list the catalog edition under which graduation is requested when completing the Application for Graduation Form.

Degree/Certificate Requirements

To be awarded an Associate Degree or Certificate students must:

- Complete all required courses and semester credit hours for the specific degree or certificate.
- Achieve a cumulative GPA of 2.0 in all coursework completed at the Alamo Community Colleges (excluding developmental-level coursework) as well as courses successfully completed at all other colleges and universities that apply to the student’s degree or certificate program at the Alamo Community Colleges.
- Submit official transcripts of all coursework attempted at other colleges and universities.
- Complete all degree requirements for the technical program major in Associate Degree or Certificate programs, with a grade of “C” or better.
- Earn at least 25% of degree hours required for graduation in residency at the Alamo Community College granting the degree or certificate.
• Fulfill all Texas Success Initiative (TSI) requirements.
• Be in Good Academic Standing at the end of the final semester.

Degree Exit Competencies
The Alamo Community Colleges require students to demonstrate exit skill competencies in:
• Writing and Reading
• Speech/Oral Communication
• Mathematics
• Computer Literacy

Students should consult with their counselor/advisor about the degree competencies when developing a degree plan.

Catalog Requirements
Students may submit an Application for Graduation Form under the degree requirements of the Alamo Community Colleges’
• current catalog,
• the catalog in effect the date of first enrollment in the Alamo Community Colleges, or
• as outlined in an Alamo Community Colleges catalog subsequent to the first enrollment date but dated no more than five (5) years prior to the expected graduation date.

Degree requirements must be completed within five (5) academic years from the date of the Alamo Community Colleges’ catalog chosen.

Students may file a petition to Enrollment Services/Admissions and Records Office for an extension of the five (5) year rule. Veterans must remain with the catalog of first (1) enrollment unless the change is approved by the Veterans Administration Office.

Deadlines
To be awarded a degree or certificate, students must apply for graduation by submitting an Application for Graduation Form to the Enrollment Services/Admissions and Records Office by the semester/session deadline.

Commencement Exercises
All candidates for degrees and certificates are encouraged to participate in commencement exercises. Candidates need not be enrolled during the semester that the Application for Graduation Form is submitted or during the semester in which the degree is conferred. For example, a Fall graduate may elect to participate in the graduation ceremony the following May or a candidate for graduation may participate in the May graduation ceremony preceding Summer completion provided no more than two (2) courses are required to complete program requirements.
Participation in the graduation ceremony, however, does not ensure automatic fulfillment of requirements or that a degree will be awarded.

There is no cost for graduation. The diploma, cap, and gown are provided by the Alamo Community Colleges.

Guarantee for Job Competency for Professional/Technical/Workplace Students

If an Associate of Applied Science (A.A.S.) graduate or Certificate completer, whose coursework began in the Fall 1993 semester or thereafter is judged by an employer to be lacking in technical job skills identified as exit competencies for the specific degree or certificate program, the graduate will be provided up to nine (9) tuition-free semester credit hours of additional skill training by the Alamo Community College awarding the degree or certificate under the conditions of this policy. The guarantee does not imply that the graduate will pass any licensing or qualifying examination for a particular career.

Conditions applying to this guarantee policy:

• The graduate/completer must have earned the A.A.S. Degree or Certificate in a technical program published in the catalogs (or their addenda) of the college awarding the degree.
• The graduate/completer must have completed the A.A.S. Degree or Certificate with a majority (75%) of the credits being earned at the

“It’s important for students to become involved in clubs and organizations because you have more ownership of the school, you have a support system because it helps you attain a high GPA, and you can earn scholarships so it gives you more incentive.”

Michelle Vargas
Transferring to Texas A&M-San Antonio System Center as a Business Administration major
2006-07 Student Government Association President
college awarding the degree within a four (4) year time span from initial enrollment. The last fifteen (15) semester credit hours MUST be completed at the college awarding the degree and must include the capstone course for the respective degree. For information on the capstone course, contact the respective chairperson or program coordinator.

- The graduate/completer must be employed full-time in an area directly related to the area of program concentration as certified by the Alamo Community Colleges’ president or designee.
- The graduate/completer must commence employment within six (6) months of graduation/completion.
- The employer must certify in writing that the employee is lacking entry-level skills which were identified by the college awarding the degree or certificate 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’s/completer’s initial employment.
- The employer, graduate/completer, and representatives of the college awarding the degree will develop a written educational plan for retraining.
- Retraining will be limited to nine (9) credit hours related to the identified skill covered by the retraining plan.
- All retraining must be completed within one (1) calendar year from the time agreed upon for the educational plan.
- The graduate/completer and/or employer is responsible for the costs of books, insurance, uniforms, and/or other course-related expenses.
- The student’s sole remedy against the Alamo Community Colleges and its employees for skill deficiencies shall be limited to nine (9) credit hours of tuition-free education under the conditions described above.
- The program can be initiated through a written contract with the Office of the College President.

ARTICULATION AGREEMENTS AND JOINT ADMISSIONS PROGRAMS

The Alamo Community Colleges and senior colleges and universities work closely to ensure a smooth transition from the Alamo Community Colleges to senior colleges’ baccalaureate degree programs.

During their enrollment at the Alamo Community Colleges, students are advised to fulfill the lower-division requirements for college or university programs. Students wishing to transfer into a baccalaureate or professional degree program should obtain an undergraduate catalog of the university to which they plan to transfer and consult with an Alamo Community Colleges counselor/advisor.
The Alamo Community Colleges have established Articulation Agreements with a number of senior colleges and universities, including many universities in San Antonio. These agreements describe a partnership to facilitate the transfer process and may include:

- Joint Admissions Agreements
- Transfer Plans
- Transfer Guides for specific majors
- Core Curriculum Equivalences
- Course Equivalency Tables

The agreements allow students to identify which courses may be taken at the Alamo Community Colleges to complete freshman and sophomore requirements for a particular university degree program. Senior institutions generally will accept a maximum of sixty-six (66) transfer credit hours in lower-division general education and specific field of study curriculum courses.

Students are encouraged to visit Transfer Services to find out which universities have these agreements and to gather information concerning institutions to which they intend to transfer, including university admissions requirements, degree pro-
gram requirements, scholarships, housing, and university contact information. Information about scholarship resources is also available. University admissions representatives and transfer advisors from select institutions are scheduled each semester to advise prospective transfer students at each of the Alamo Community Colleges.

REVERSE TRANSFER DEGREE
Students who come to the Alamo Community Colleges having earned a bachelor’s degree from a Texas university, as well as Alamo Community Colleges students who transfer to another Texas college or university, may qualify for an Associate's Degree. The Reverse Transfer Degree Program is designed for students who have accumulated thirty (30) college-level credit hours at the Alamo Community Colleges and who have received a baccalaureate degree from a Texas college or university.

Once an official transcript is received documenting a student’s bachelor’s degree, the student will be approved for and notified of the Alamo Community Colleges' award of the Associate of Arts or Science Degree.
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 Colleges, 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.

<table>
<thead>
<tr>
<th>Core Element</th>
<th>Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Communication</td>
<td>Composition: ENGL 1301, ENGL 1302, SPCH 1311, 1315, 1318, 1321 or 2341</td>
</tr>
<tr>
<td></td>
<td>Speech: MATH 1314 or Higher, 1316, 1324, 1325, 1332, 1348, 1350, 1351, 1442, 2318, 2320, 2412, 2413, 2414, or 2415</td>
</tr>
<tr>
<td>2. Mathematics</td>
<td>MATH 1314 or Higher, 1316, 1324, 1325, 1332, 1348, 1350, 1351, 1442, 2318, 2320, 2412, 2413, 2414, or 2415</td>
</tr>
<tr>
<td>3. Natural Sciences</td>
<td>Natural Lab Science: BIOL, CHEM, ENV, GEOL or PHYS</td>
</tr>
<tr>
<td></td>
<td>Second Natural Science: BIOL, CHEM, ENV, GEOL or PHYS</td>
</tr>
<tr>
<td>4. Humanities &amp; Visual and Performing Arts</td>
<td>Humanities: ENGL, HUMA, PHIL or SPAN</td>
</tr>
<tr>
<td></td>
<td>Visual and Performing Arts: ARTS, DANC, DRAM, or MUSI</td>
</tr>
<tr>
<td>5. Social and Behavioral Sciences</td>
<td>History: HIST 1301, HIST 1302</td>
</tr>
<tr>
<td></td>
<td>Government: GOVT 2305, GOVT 2306</td>
</tr>
<tr>
<td></td>
<td>Social/Behavioral Sciences: ANTH, COMM, CRIJ, ECON, GEOG, GOVT, HIST, PSYC, or SOCI or SOCW</td>
</tr>
<tr>
<td>6. Computer Literacy</td>
<td>BCIS 1305 or COMM 2324 or BCIS 1305 or COMM 2324 or BCIS 1300 or COSC 1301</td>
</tr>
<tr>
<td>7. Kinesiology</td>
<td>KINE or DANC</td>
</tr>
<tr>
<td>TOTAL</td>
<td>48</td>
</tr>
</tbody>
</table>

The Core Curriculum was revised as a result of a June 6, 2007, communique from the Texas Higher Education Coordinating Board.
Core Curriculum Course Selection List

Speech Core (3 hours)
SPCH 1311, 1315, 1318, 1321, or 2341

Mathematics Core (3 hours)
MATH 1314, 1316, 1324, 1325, 1332*, 1348, 1350, 1351, 1442, 2318, 2320, 2412, 2413, 2414, 2415
(*A.S. students may not select)

Natural Sciences Core (7 hours)
BIOL 1322, 1406, 1407, 1408, 1409, 1411, 1413, 2306/2106, 2301, 2401, 2402, 2404
CHEM 1311/1111, 1312/1112, 1405, 1407
ENVR 1102, 1302
GEOL 1305, 1345, 1401, 1402, 1403, 1404
PHYS 1401, 1402, 1405, 1407, 2425, 2426

Humanities Core (6 hours)
ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2341, 2351, 2373
HUMA 1301, 1302, 1305, 2323
PHIL 1301, 1304, 2303, 2306
SPAN 2311, 2312

Visual and Performing Arts Core (3 hours)
ARTS 1301, 1303, 1304, 1316, 2316, 2326, 2346, 2348, 2356
DANC 1305, 2303
DRAM 1310
HUMA 1311
MUSI 1306, 1308, 1309, 1310

Social and Behavioral Sciences Core (3 hours)
ANTH 2346, 2351
COMM 1307, 2300
CRIJ 1301, 1307
ECON 1303, 2301, 2302
GEOG 1301, 1303
GOVT 2304, 2311
HIST 2301, 2311, 2312, 2313, 2314, 2321, 2322, 2323, 2327, 2328, 2381
PSYC 2301, 2303, 2306, 2307, 2308, 2314, 2316, 2317, 2319, 2370
SOCI 1301, 1306, 2301
SOCW 2361
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.

**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 Enrollment Center or the department advisor for specific transfer information.
In addition to the core curriculum, Texas law authorizes the state to create field of study curricula. A field of study curriculum consists of freshman and sophomore courses that apply to a specific major. A student who successfully completes all or part of a field of study curriculum prior to transferring will receive degree credit for the field of study curriculum course work (as long as the student stays in a degree program in that discipline)

**Associate of Arts in Teaching (AAT) Degree**

The Associate of Arts in Teaching (AAT) degree is a Board-approved collegiate degree program consisting of lower-division courses intended for transfer to baccalaureate programs that lead to initial Texas teacher certification. There are three AAT curricula which include 60-66 semester credit hours (SCH) of coursework. These three AATs can only be offered by Texas public community colleges, Lamar State College-Orange, and Lamar State College-Port Arthur, and are fully transferable to any Texas public university offering baccalaureate degree programs leading to initial teacher certification.

**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 Success Initiative (TSI) requirements. When the student seeks a TSI 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 TSI-waived status will end and the student must meet the TSI testing and/or remediation requirements that apply to students not enrolled in a TSI-waived certificate program. Students are encouraged to check with the respective departments or the Assessment Office regarding the TSI 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 for copies of the existing agreements or course transfer equivalency tables.**
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
Leo Pacheco, Bexar County
Alan McCabe, Frost National Bank
Cheryl Jones, City Public Service
Jose Sosa, Robert Half Int’l

Associate of Applied Science in
Administrative Computer Technology (3555)

First Year

First Semester – 16 Hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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<tr>
<td>POFT 1301</td>
<td>Business English</td>
<td>3</td>
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<tr>
<td>POFT 1319</td>
<td>Records and Information Management I</td>
<td>3</td>
</tr>
<tr>
<td>POFT 1325</td>
<td>Business Math &amp; Machines Applications</td>
<td>3</td>
</tr>
<tr>
<td>POFT 1429</td>
<td>Beginning Keyboarding (Majors)</td>
<td>4</td>
</tr>
<tr>
<td>HRPO 1311</td>
<td>Human Relations</td>
<td>3</td>
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Second Semester – 16 Hours

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>ENGL 1301</td>
<td>Freshman Composition</td>
<td>3</td>
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<tr>
<td>POFI 1301</td>
<td>Computer Applications I</td>
<td>3</td>
</tr>
<tr>
<td>POFT 2301</td>
<td>Intermediate Keyboarding</td>
<td>3</td>
</tr>
<tr>
<td>POFT 1309</td>
<td>Administrative Office Procedures I</td>
<td>3</td>
</tr>
<tr>
<td>POFT 1313</td>
<td>Professional Development for Office Personnel</td>
<td>3</td>
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<td>KINE</td>
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### Summer Session – 6 Hours

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<tr>
<td>or</td>
<td>HUMA 1302</td>
<td>Introduction to Humanities II</td>
</tr>
<tr>
<td>or</td>
<td>ARTS 1301</td>
<td>Art Appreciation</td>
</tr>
<tr>
<td>or</td>
<td>MUSI 1306</td>
<td>Music Appreciation</td>
</tr>
<tr>
<td>or</td>
<td>SPCH 1311</td>
<td>Fundamentals of Speech</td>
</tr>
<tr>
<td>or</td>
<td>SPCH 1321</td>
<td>Business and Professional Speech</td>
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</table>

### Second Year

#### First Semester – 15 Hours

<table>
<thead>
<tr>
<th>Course</th>
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<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>ACNT 1303</td>
<td>Introduction to Accounting I</td>
<td>3</td>
</tr>
<tr>
<td>POFI 2301</td>
<td>Word Processing</td>
<td>3</td>
</tr>
<tr>
<td>POFT 2312</td>
<td>Business Correspondence and Communication</td>
<td>3</td>
</tr>
<tr>
<td>ITCW 1304</td>
<td>Introduction to Spreadsheets</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1332</td>
<td>Math for Liberal Arts</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td>MATH 1314</td>
<td>College Algebra</td>
</tr>
<tr>
<td>or</td>
<td>BIOL 2306</td>
<td>Environmental Biology</td>
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</table>

#### Second Semester – 15 Hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>ACCT 2301</td>
<td>Principles of Accounting I</td>
<td>3</td>
</tr>
<tr>
<td>POFT 2333</td>
<td>Advanced Keyboarding</td>
<td>3</td>
</tr>
<tr>
<td>POFT 2380*</td>
<td>Cooperative Education – Administrative Asst/Secretarial Science, General</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 2302</td>
<td>Principles of Accounting II</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td>HIST 1302</td>
<td>History of the United States, Part II</td>
</tr>
<tr>
<td>or</td>
<td>GOVT 2306</td>
<td>State Government</td>
</tr>
<tr>
<td>or</td>
<td>ECON 2302</td>
<td>Microeconomics</td>
</tr>
<tr>
<td>or</td>
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<td>HIST 1301</td>
<td>History of the United States, Part I</td>
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<tr>
<td>or</td>
<td>PSYC 2301</td>
<td>Introduction to Psychology</td>
</tr>
<tr>
<td>or</td>
<td>GOVT 2305</td>
<td>National Government</td>
</tr>
</tbody>
</table>

*Capstone for this degree.

**Total Hours** 68
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. Beginning Keyboarding (Non-majors) POFT 1329
C. Speed and Accuracy Building POFT 2303
D. Beginning Keyboarding (Majors) POFT 1429

General Office Certificate-Level I (3524)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>HRPO 1311</td>
<td>Human Relations</td>
<td>3</td>
</tr>
<tr>
<td>POFT 1301</td>
<td>Business English</td>
<td>3</td>
</tr>
<tr>
<td>POFT 1319</td>
<td>Records and Information Management I</td>
<td>3</td>
</tr>
<tr>
<td>POFT 1325</td>
<td>Business Math &amp; Machine Applications</td>
<td>3</td>
</tr>
<tr>
<td>POFT 1429*</td>
<td>Beginning Keyboarding (Majors)</td>
<td>4</td>
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</tbody>
</table>

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

Total Hours 16

Secretarial Assistant Level I Certificate (3525)

First Semester – 16 Hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
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<tbody>
<tr>
<td>HRPO 1311</td>
<td>Human Relations</td>
<td>3</td>
</tr>
<tr>
<td>POFT 1301</td>
<td>Business English</td>
<td>3</td>
</tr>
<tr>
<td>POFT 1319</td>
<td>Records and Information Management I</td>
<td>3</td>
</tr>
<tr>
<td>POFT 1325</td>
<td>Business Math &amp; Machine Applications</td>
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</tr>
<tr>
<td>POFT 1429*</td>
<td>Beginning Keyboarding (Majors)</td>
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</tbody>
</table>

*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

<table>
<thead>
<tr>
<th>Course</th>
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</thead>
<tbody>
<tr>
<td>HRPO 1311</td>
<td>Human Relations</td>
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</tr>
<tr>
<td>POFT 1301</td>
<td>Business English</td>
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</tr>
<tr>
<td>POFT 1319</td>
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</tr>
<tr>
<td>POFT 1325</td>
<td>Business Math &amp; Machine Applications</td>
<td>3</td>
</tr>
<tr>
<td>POFT 1429</td>
<td>Beginning Keyboarding (Majors)</td>
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Second Semester – 15 Hours

<table>
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<tr>
<th>Course</th>
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<tbody>
<tr>
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<td>Introduction to Spreadsheets</td>
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</tr>
<tr>
<td>POFI 1301</td>
<td>Computer Applications I</td>
<td>3</td>
</tr>
<tr>
<td>POFT 1309</td>
<td>Administrative Office Procedures I</td>
<td>3</td>
</tr>
<tr>
<td>POFT 1313</td>
<td>Professional Development for Office Personnel</td>
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</tr>
<tr>
<td>POFT 2301</td>
<td>Intermediate Keyboarding</td>
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</table>

Second Year

First Semester – 15 Hours

<table>
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<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>ACNT 1303</td>
<td>Introduction to Accounting I</td>
<td>3</td>
</tr>
<tr>
<td>POFI 2301</td>
<td>Word Processing</td>
<td>3</td>
</tr>
<tr>
<td>POFT 2312</td>
<td>Business Correspondence and Communications</td>
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<td>SPCH 1311</td>
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<tr>
<td>or SPCH 1321</td>
<td>Business &amp; Professional Speech</td>
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*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 1329, 1429, 2301, 2303, or 2333, or credit by exam.

Business Communications Level I Certificate (3560)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>POFT 1301</td>
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<td>3</td>
</tr>
<tr>
<td>HRPO 1311</td>
<td>Human Relations</td>
<td>3</td>
</tr>
<tr>
<td>or POFT 1313</td>
<td>Professional Development for Office Personnel</td>
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</tr>
<tr>
<td>or POFT 1329*</td>
<td>Beginning Keyboarding (Non-Majors)</td>
<td>3</td>
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<tr>
<td>or POFT 2301*</td>
<td>Intermediate Keyboarding</td>
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</tr>
<tr>
<td>or POFT 2312</td>
<td>Business Correspondence &amp; Communications</td>
<td>3</td>
</tr>
<tr>
<td>or POFT 1301</td>
<td>Computer Applications I</td>
<td>3</td>
</tr>
<tr>
<td>or POFT 1319</td>
<td>Records &amp; Information Management I</td>
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</table>

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

Total Hours 15
# Customer Services Representative Level I Certificate (3520)

**First Semester – 18 Hours**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
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<tbody>
<tr>
<td>POFI 1301</td>
<td>Computer Applications I</td>
<td>3</td>
</tr>
<tr>
<td>HRPO 1311</td>
<td>Human Relations</td>
<td>3</td>
</tr>
<tr>
<td>POFI 1301</td>
<td>Business English</td>
<td>3</td>
</tr>
<tr>
<td>POFI 1329</td>
<td>Beginning Keyboarding (Non-majors)</td>
<td>3</td>
</tr>
<tr>
<td>POFI 1325</td>
<td>Business Math &amp; Machine Applications</td>
<td>3</td>
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<tr>
<td>MRKG 1301</td>
<td>Customer Relations</td>
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**Second Semester – 15 Hours**

<table>
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<tr>
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<th>Course Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>ACNT 1303</td>
<td>Introduction to Accounting I</td>
<td>3</td>
</tr>
<tr>
<td>POFI 1313</td>
<td>Professional Development for Office Personnel</td>
<td>3</td>
</tr>
<tr>
<td>POFI 2312</td>
<td>Business Correspondence &amp; Communications</td>
<td>3</td>
</tr>
<tr>
<td>POFI 2380*</td>
<td>Cooperative Education – Administrative Assistant/Secretarial Science, General</td>
<td>3</td>
</tr>
<tr>
<td>SPCH 1318</td>
<td>Interpersonal Communication</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
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<tr>
<td>SPCH 1321</td>
<td>Business &amp; Professional Speech</td>
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</table>

*Capstone for Certificate

**Total Hours** 33

# Data Entry Technician Level I Certificate (3561)

<table>
<thead>
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<th>Hours</th>
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<tbody>
<tr>
<td>HRPO 1311</td>
<td>Human Relations</td>
<td>3</td>
</tr>
<tr>
<td>ITSC 1301</td>
<td>Introduction to Computers</td>
<td>3</td>
</tr>
<tr>
<td>POFI 1301</td>
<td>Computer Applications I</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ITSC 1309</td>
<td>Integrated Software Applications I</td>
<td></td>
</tr>
<tr>
<td>POFI 1329*</td>
<td>Beginning Keyboarding (Non-Majors)</td>
<td>3</td>
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<tr>
<td>POFI 1325</td>
<td>Business Math &amp; Machine Applications</td>
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*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)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>HRPO 1311</td>
<td>Human Relations</td>
<td>3</td>
</tr>
<tr>
<td>or POFT 1313</td>
<td>Professional Development for Office Personnel</td>
<td>3</td>
</tr>
<tr>
<td>or POFT 1301</td>
<td>Business English</td>
<td>3</td>
</tr>
<tr>
<td>or POFT 2312</td>
<td>Business Correspondence &amp; Communications</td>
<td>3</td>
</tr>
<tr>
<td>or POFT 2301*</td>
<td>Intermediate Keyboarding</td>
<td>3</td>
</tr>
<tr>
<td>or ACNT 1301</td>
<td>Introduction to Accounting I</td>
<td>3</td>
</tr>
<tr>
<td>or POFI 1301</td>
<td>Computer Applications I</td>
<td>3</td>
</tr>
<tr>
<td>or POFT 1329</td>
<td>Beginning Keyboarding (Non-Majors)</td>
<td>3</td>
</tr>
<tr>
<td>or POFT 1429</td>
<td>Beginning Keyboarding (Majors)</td>
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<tr>
<td>or POFT 2321</td>
<td>Machine Transcription</td>
<td>3</td>
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<tr>
<td>or ITCW 1304</td>
<td>Introduction to Spreadsheets</td>
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*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)

First Semester – 18 Hours

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<tbody>
<tr>
<td>HRPO 1311</td>
<td>Human Relations</td>
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<tr>
<td>ITSW 1304</td>
<td>Introduction to Spreadsheets</td>
<td>3</td>
</tr>
<tr>
<td>POFI 1301</td>
<td>Introduction to Computers</td>
<td>3</td>
</tr>
<tr>
<td>POFL 1305</td>
<td>Legal Terminology</td>
<td>3</td>
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<tr>
<td>or HITT 1305</td>
<td>Medical Terminology I</td>
<td>3</td>
</tr>
<tr>
<td>or POFT 1329</td>
<td>Beginning Keyboarding (Non-majors)</td>
<td>3</td>
</tr>
<tr>
<td>or POFT 2303</td>
<td>Speed and Accuracy Building</td>
<td>3</td>
</tr>
<tr>
<td>or POFT 1325</td>
<td>Business Math &amp; Machine Applications</td>
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Second Semester – 15 Hours

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
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</thead>
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<tr>
<td>ACNT 1303</td>
<td>Introduction to Accounting I</td>
<td>3</td>
</tr>
<tr>
<td>POFI 1349</td>
<td>Spreadsheets</td>
<td>3</td>
</tr>
<tr>
<td>POFT 1313</td>
<td>Professional Development for Office Personnel</td>
<td>3</td>
</tr>
<tr>
<td>POFT 2380*</td>
<td>Cooperative Education</td>
<td>3</td>
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<tr>
<td>SPCH 1318</td>
<td>Interpersonal Communication</td>
<td>3</td>
</tr>
<tr>
<td>or SPCH 1321</td>
<td>Business &amp; Professional Speech</td>
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*Capstone for Certificate

Total Hours 33
# Data Entry Clerk Local Certificate

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>POFT 1325</td>
<td>Business Math &amp; Machine Applications</td>
<td>3</td>
</tr>
<tr>
<td>POFT 1307</td>
<td>Proofreading and Editing</td>
<td>3</td>
</tr>
<tr>
<td>POFT 1329</td>
<td>Beginning Keyboarding (Non-Majors)</td>
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**Total Hours**: 9

# Customer Service Clerk Local Certificate

<table>
<thead>
<tr>
<th>Course</th>
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<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>HRPO 1311</td>
<td>Human Relations</td>
<td>3</td>
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<tr>
<td>MRKG 1301</td>
<td>Customer Relations</td>
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<tr>
<td>POFT 1329</td>
<td>Beginning Keyboarding (Non-Majors)</td>
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<tr>
<td>SPCH 1342</td>
<td>Voice and Articulation</td>
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**Total Hours**: 12

# Office Clerk Local Certificate

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<tbody>
<tr>
<td>HRPO 1311</td>
<td>Human Relations</td>
<td>3</td>
</tr>
<tr>
<td>POFT 1319</td>
<td>Records &amp; Information Management I</td>
<td>3</td>
</tr>
<tr>
<td>POFT 1429</td>
<td>Beginning Keyboarding (Majors)</td>
<td>4</td>
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</table>

**Total Hours**: 10
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 the four-year university for specific course transferability.

**Associate of Science in Agriculture (3040)**

**First Year**  
**First Semester – 14 Hours**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>AGRI 1231</td>
<td>The Agricultural Industry</td>
<td>2</td>
</tr>
<tr>
<td>AGRI 1307</td>
<td>Agronomy</td>
<td>3/4</td>
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<tr>
<td>or</td>
<td>AGRI 1415</td>
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<tr>
<td>COSC 1300</td>
<td>Computer Literacy</td>
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<tr>
<td>ENGL 1301</td>
<td>Freshman Composition I</td>
<td>3</td>
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<td>MATH 1314</td>
<td>College Algebra</td>
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<td>KINE Course</td>
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**Second Semester – 16 Hours**

<table>
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<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>AGRI 1319</td>
<td>Animal Science</td>
<td>3</td>
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<tr>
<td>or</td>
<td>AGRI 2313</td>
<td></td>
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<tr>
<td>BIOL 1406</td>
<td>General Biology I</td>
<td>4</td>
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<td>or</td>
<td>BIOL 1411</td>
<td></td>
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<tr>
<td>CHEM 1311</td>
<td>General Chemistry I</td>
<td></td>
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<tr>
<td>or</td>
<td>CHEM 1111 &amp; 1111</td>
<td></td>
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<tr>
<td>GEOL 1403</td>
<td>Physical Geology</td>
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<tr>
<td>ENGL 1302</td>
<td>Freshman Composition II</td>
<td>3</td>
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<tr>
<td>HIST 1301</td>
<td>History of the United States, Part I</td>
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<tr>
<td>SPCH 1311</td>
<td>Fundamentals of Speech</td>
<td>3</td>
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<tr>
<td>or</td>
<td>SPCH 1321</td>
<td></td>
</tr>
<tr>
<td>SPCH 1321</td>
<td>Business and Professional Speech</td>
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## Second Year

### First Semester – 16 Hours

<table>
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<th>Course</th>
<th>Code</th>
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<th>Hours</th>
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<tbody>
<tr>
<td>AGRI</td>
<td>2330</td>
<td>Wildlife Conservation and Management</td>
<td>3</td>
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<tr>
<td>AGRI</td>
<td>2321</td>
<td>Livestock Evaluation I</td>
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<td>BIOL</td>
<td>1407</td>
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<td>BIOL</td>
<td>1413</td>
<td>General Zoology</td>
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<td>CHEM</td>
<td>1312 &amp; 1112</td>
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<td>GEOL</td>
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<td>GOVT</td>
<td>2305</td>
<td>National Government</td>
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<td>HIST</td>
<td>1302</td>
<td>History of the United States, Part II</td>
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<tr>
<td>Course</td>
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<td>Social and Behavioral Science</td>
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### Second Semester – 16 Hours

<table>
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<tr>
<th>Course</th>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>AGRI</td>
<td>1325</td>
<td>Marketing of Agricultural Products</td>
<td>3</td>
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<tr>
<td>AGRI</td>
<td>2317</td>
<td>Introduction to Agricultural Economics</td>
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<td>ENGL</td>
<td>2311</td>
<td>Technical Writing</td>
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<td>GOVT</td>
<td>2306</td>
<td>State Government</td>
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<td>Course</td>
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<tr>
<td>Course</td>
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</table>

**Total Hours**: 63/64
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**
   - Composition
     - ENGL 1301 3
     - ENGL 1302 3
   - Speech
     - SPCH 1311, 1318, 1321 or 2341 3

2. **Mathematics**
   - MATH 1314 or higher 3

3. **Natural Sciences**
   - Natural Lab Science 4
   - Second Natural Science 3 or 4
     - BIOL, CHEM, ENVR, GEOL or PHYS

4. **Humanities & Visual and Performing Arts**
   - Humanities
     - HUMA or PHIL 6
   - Visual and Performing Arts
     - ARTS, DRAM, MUSI, DANC 3

5. **Social and Behavioral Sciences**
   - 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**
   - COSC 1300, COSC 1301 or BCIS 1305 3

7. **Kinesiology**
   - KINE 1 or 2

8. **Area of Concentration**
   - SOCI 1301 3
   - ANTH 2346 3

Students may select any 2 of the following courses:
   - SOCI 2301, HUMA 1302, HUMA 1305, PSYC 2319

**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 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
   Composition ENGL 1301 3
   ENGL 1302 3
   Speech SPCH 1311 or 1321 3

2. Mathematics
   MATH 1332 3

3. Natural Sciences
   Natural Lab Science 4
   Second Natural Science 3
   BIOL, CHEM, ENVR, GEOL, or PHYS 7

4. Humanities & Visual and Performing Arts
   Humanities ENGL, SPAN, FREN, GERM, HUMA, or PHIL 6
   Visual and Performing Arts ARTS 3

5. Social and Behavioral Sciences
   History HIST 1301 3
   HIST 1302 3
   Government GOVT 2305 3
   GOVT 2306 3
   Social/Behavioral Sciences ANTH, COMM, CRIJ, ECON, GEOG, HIST, PSYC or SOCI 3

6. Computer Literacy
   COSC 1300, COSC 1301 or BCIS 1305 3

7. Kinesiology
   KINE 1-2

8. Area of Concentration
   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
Pete Conforti, Retired, USAF, CFI/II, MEI
David Crowe, Captain, American Airlines
Richard Crowe, Retired, Designated Pilot Examiner
Chris Halloran, CFI/II, MEI
Janet Pallottelli, Retired, North American Airlines
Andy Spinks, Airport Manager, New Braunfels Municipal Airport
John Reagan, ATC Quality Assurance Manager, San Antonio International Airport

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

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>ACCT</td>
<td>Principles of Accounting II</td>
<td>3</td>
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<tr>
<td>AVIM</td>
<td>Airline Management</td>
<td>3</td>
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<tr>
<td>AVIM</td>
<td>Airport Management</td>
<td>3</td>
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<td>MATH</td>
<td>Elements of Statistics</td>
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<tr>
<td>Elective</td>
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*Capstone Course

Total Hours 64

Associate of Applied Science in Aviation Security (3625)

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

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>AIRP</td>
<td>Introduction to Aviation</td>
<td>3</td>
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<tr>
<td>AIRP</td>
<td>Human Factors in Aviation designed for Aviation Security</td>
<td>4</td>
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<tr>
<td>ENGL</td>
<td>Freshman Composition I</td>
<td>3</td>
</tr>
<tr>
<td>GOVT</td>
<td>National Government</td>
<td>3</td>
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<tr>
<td>HMSY</td>
<td>Introduction to Homeland Security</td>
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Second Semester – 16 Hours

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<th>Title</th>
<th>Hours</th>
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<tr>
<td>AIRP</td>
<td>Aviation Safety designed for Aviation Security</td>
<td>4</td>
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<tr>
<td>HMSY</td>
<td>Understanding &amp; Combating Terrorism</td>
<td>3</td>
</tr>
<tr>
<td>ITSC</td>
<td>Integrated Software Applications I</td>
<td>3</td>
</tr>
<tr>
<td>MATH</td>
<td>College Algebra</td>
<td>3</td>
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<tr>
<td>or</td>
<td>Math for Liberal Arts</td>
<td>3</td>
</tr>
<tr>
<td>SPCH</td>
<td>Fundamentals of Speech</td>
<td>3</td>
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Summer Session – 6 Hours

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<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>AVIM</td>
<td>Transportation, Traffic, and Air Cargo</td>
<td>3</td>
</tr>
<tr>
<td>AVIM</td>
<td>Cooperative Education – Aviation Management</td>
<td>3</td>
</tr>
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Second Year

First Semester – 15 Hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>AVIM</td>
<td>Aviation Law</td>
<td>3</td>
</tr>
<tr>
<td>HMSY</td>
<td>Homeland Security Intelligence Operations</td>
<td>3</td>
</tr>
<tr>
<td>HMSY</td>
<td>Critical Infrastructure Protection</td>
<td>3</td>
</tr>
<tr>
<td>HMSY</td>
<td>Weapons of Mass Destruction</td>
<td>3</td>
</tr>
<tr>
<td>AIRP/AVIM</td>
<td>Aviation Directed Elective</td>
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Second Semester – 15 Hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
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<tbody>
<tr>
<td>AVIM</td>
<td>Airport Management</td>
<td>3</td>
</tr>
<tr>
<td>HMSY</td>
<td>Homeland Security Emergency Communications Management</td>
<td>3</td>
</tr>
<tr>
<td>HMSY</td>
<td>Homeland Security Emergency Contingency Planning</td>
<td>3</td>
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<tr>
<td>HMSY</td>
<td>Managing a Unified Incident Command</td>
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</tr>
<tr>
<td>Elective</td>
<td>Humanities/Fine Arts</td>
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</table>

*Capstone Course

Total Hours 68
Flight Attendant Level I Certificate (3624)

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 emphasized in all courses.

First Year

**First Semester – 12 Hours**

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Name</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMGT</td>
<td>Supervision</td>
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</tr>
<tr>
<td>ENGL</td>
<td>Freshman Composition I</td>
<td>3</td>
</tr>
<tr>
<td>KINE</td>
<td>First Aid</td>
<td>3</td>
</tr>
<tr>
<td>MRKG</td>
<td>Customer Relations</td>
<td>3</td>
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**Second Semester – 12 Hours**

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Name</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>AVIM</td>
<td>Aviation Law</td>
<td>3</td>
</tr>
<tr>
<td>PSYC</td>
<td>Introduction to Psychology</td>
<td>3</td>
</tr>
<tr>
<td>SPCH</td>
<td>Voice and Articulation</td>
<td>3</td>
</tr>
<tr>
<td>FREN</td>
<td>Intermediate French I</td>
<td>3</td>
</tr>
<tr>
<td>GERM</td>
<td>Intermediate German I</td>
<td></td>
</tr>
<tr>
<td>SPAN</td>
<td>Intermediate Spanish I</td>
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</tbody>
</table>

Second Year

**First Semester – 12 Hours**

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Name</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>AVIM</td>
<td>Special Topics: Flight Attendant</td>
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<tr>
<td>MRKG</td>
<td>Public Relations</td>
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<tr>
<td>TRVM</td>
<td>Introduction to Travel and Tourism</td>
<td>3</td>
</tr>
<tr>
<td>FREN</td>
<td>Intermediate French II</td>
<td>3</td>
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<tr>
<td>GERM</td>
<td>Intermediate German II</td>
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</tr>
<tr>
<td>SPAN</td>
<td>Intermediate Spanish II</td>
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*Capstone Course

**Total Hours** 36

**Humanities/Fine Arts Electives:**

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Name</th>
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<tbody>
<tr>
<td>ARTS</td>
<td>1301 Art Appreciation</td>
</tr>
<tr>
<td>MUSI</td>
<td>1306 Music Appreciation</td>
</tr>
<tr>
<td>DRAM</td>
<td>1310 Theater Appreciation</td>
</tr>
<tr>
<td>HUMA</td>
<td>1301 Introduction to the Humanities</td>
</tr>
<tr>
<td>PHIL</td>
<td>1301 Introduction to Philosophy</td>
</tr>
<tr>
<td>PHIL</td>
<td>2303 Logic</td>
</tr>
<tr>
<td>PHIL</td>
<td>2306 Ethics</td>
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<tr>
<td>SPAN</td>
<td>1411 Elementary Spanish I</td>
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**Directed Electives:**

<table>
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<tr>
<td>AIRP</td>
<td>2380 Cooperative Work Experience</td>
</tr>
<tr>
<td>ENGL</td>
<td>2311 Technical Writing</td>
</tr>
</tbody>
</table>
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**

<table>
<thead>
<tr>
<th>Course</th>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>ENGL</td>
<td>1301</td>
<td>Freshman Composition I</td>
<td>3</td>
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<tr>
<td>PSYC</td>
<td>2301</td>
<td>Introduction to Psychology</td>
<td>3</td>
</tr>
<tr>
<td>AIRP</td>
<td>1313</td>
<td>Introduction to Aviation</td>
<td>3</td>
</tr>
<tr>
<td>AIRP</td>
<td>1317</td>
<td>Private Pilot Ground School</td>
<td>3</td>
</tr>
<tr>
<td>AIRP</td>
<td>1315</td>
<td>Private Pilot Flight</td>
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**Second Semester – 16 Hours**

<table>
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<th>Hours</th>
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<tr>
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<td>1302</td>
<td>Freshman Composition II</td>
<td>3</td>
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<tr>
<td>SPCH</td>
<td>1311</td>
<td>Fundamentals of Speech</td>
<td>3</td>
</tr>
<tr>
<td>ITSC</td>
<td>1309</td>
<td>Integrated Software Applications I</td>
<td>3</td>
</tr>
<tr>
<td>MATH</td>
<td>1314</td>
<td>College Algebra</td>
<td>3</td>
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<tr>
<td>AIRP</td>
<td>1345</td>
<td>Aviation Safety</td>
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<tr>
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**Summer Session – 6 Hours**

<table>
<thead>
<tr>
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<th>Code</th>
<th>Title</th>
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<tbody>
<tr>
<td>AIRP</td>
<td>1351</td>
<td>Instrument Ground School</td>
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<tr>
<td>AIRP</td>
<td>1355</td>
<td>Intermediate Flight</td>
<td>3</td>
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### Second Year

**First Semester – 16 Hours**

<table>
<thead>
<tr>
<th>Course</th>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>AIRP</td>
<td>2337</td>
<td>Commercial Ground School</td>
<td>3</td>
</tr>
<tr>
<td>AIRP</td>
<td>2350</td>
<td>Instrument Flight</td>
<td>3</td>
</tr>
<tr>
<td>AVIM</td>
<td>2337</td>
<td>Aviation Law</td>
<td>3</td>
</tr>
<tr>
<td>AVIM</td>
<td>1301</td>
<td>Introduction to Aviation Management</td>
<td>3</td>
</tr>
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<tr>
<td>KINE</td>
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**Second Semester – 15 Hours**

<table>
<thead>
<tr>
<th>Course</th>
<th>Code</th>
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<th>Hours</th>
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<tbody>
<tr>
<td>AIRP</td>
<td>2349</td>
<td>Certified Flight Instructor Ground School</td>
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<tr>
<td>AIRP</td>
<td>1307</td>
<td>Aviation Meteorology</td>
<td>3</td>
</tr>
<tr>
<td>AIRP</td>
<td>2236*</td>
<td>Certified Flight Instructor Flight</td>
<td>2</td>
</tr>
<tr>
<td>AVIM</td>
<td>2331</td>
<td>Airline Management</td>
<td>3</td>
</tr>
<tr>
<td>AIRP</td>
<td>2333</td>
<td>Aircraft Systems</td>
<td>3</td>
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<tr>
<td>AIRP</td>
<td>2339</td>
<td>Commercial Flight</td>
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*Capstone Course

### Total Hours

70
Private Pilot Level I Certificate (3578)

<table>
<thead>
<tr>
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<th>Course Name</th>
<th>Hours</th>
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<tbody>
<tr>
<td>AIRP 1307</td>
<td>Aviation Meteorology</td>
<td>3</td>
</tr>
<tr>
<td>AIRP 1313</td>
<td>Introduction to Aviation</td>
<td>3</td>
</tr>
<tr>
<td>AIRP 1315*</td>
<td>Private Pilot Flight</td>
<td>3</td>
</tr>
<tr>
<td>AIRP 1317</td>
<td>Private Pilot Ground School</td>
<td>3</td>
</tr>
<tr>
<td>AIRP 1345</td>
<td>Aviation Safety</td>
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</table>

*Capstone Course

Total Hours 15

Multi-Engine Pilot Level I Certificate (3577)

First Year

First Semester – 15 Hours

<table>
<thead>
<tr>
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<th>Course Name</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIRP 1307</td>
<td>Aviation Meteorology</td>
<td>3</td>
</tr>
<tr>
<td>AIRP 1313</td>
<td>Introduction to Aviation</td>
<td>3</td>
</tr>
<tr>
<td>AIRP 1315</td>
<td>Private Pilot Flight</td>
<td>3</td>
</tr>
<tr>
<td>AIRP 1317</td>
<td>Private Pilot Ground School</td>
<td>3</td>
</tr>
<tr>
<td>AIRP 1345</td>
<td>Aviation Safety</td>
<td>3</td>
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</table>

Second Semester – 6 Hours

<table>
<thead>
<tr>
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<th>Course Name</th>
<th>Hours</th>
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<tbody>
<tr>
<td>AIRP 1191</td>
<td>Multi-Engine Ground School</td>
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<td>AIRP 2251*</td>
<td>Multi-Engine Flight</td>
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<tr>
<td>AIRP 2333</td>
<td>Aircraft Systems</td>
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</table>

*Capstone Course

Total Hours 21

Instrument Pilot Level I Certificate (3580)

First Year

First Semester – 15 Hours

<table>
<thead>
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<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>AIRP 1307</td>
<td>Aviation Meteorology</td>
<td>3</td>
</tr>
<tr>
<td>AIRP 1313</td>
<td>Introduction to Aviation</td>
<td>3</td>
</tr>
<tr>
<td>AIRP 1315</td>
<td>Private Pilot Flight</td>
<td>3</td>
</tr>
<tr>
<td>AIRP 1317</td>
<td>Private Pilot Ground School</td>
<td>3</td>
</tr>
<tr>
<td>AIRP 1345</td>
<td>Aviation Safety</td>
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Second Semester – 9 Hours

<table>
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<tbody>
<tr>
<td>AIRP 1351</td>
<td>Instrument Ground School</td>
<td>3</td>
</tr>
<tr>
<td>AIRP 1355</td>
<td>Intermediate Flight</td>
<td>3</td>
</tr>
<tr>
<td>AIRP 2350*</td>
<td>Instrument Flight</td>
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</table>

*Capstone Course

Total Hours 24
## Commercial Pilot Level I Certificate (3576)

### First Year

#### First Semester – 15 Hours

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>AIRP 1307</td>
<td>Aviation Meteorology</td>
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</tr>
<tr>
<td>AIRP 1313</td>
<td>Introduction to Aviation</td>
<td>3</td>
</tr>
<tr>
<td>AIRP 1315</td>
<td>Private Pilot Flight</td>
<td>3</td>
</tr>
<tr>
<td>AIRP 1317</td>
<td>Private Pilot Ground School</td>
<td>3</td>
</tr>
<tr>
<td>AIRP 1345</td>
<td>Aviation Safety</td>
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#### Second Semester – 9 Hours

<table>
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<tr>
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<th>Course Title</th>
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<tbody>
<tr>
<td>AIRP 1351</td>
<td>Instrument Ground School</td>
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</tr>
<tr>
<td>AIRP 1355</td>
<td>Intermediate Flight</td>
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</tr>
<tr>
<td>AIRP 2350</td>
<td>Instrument Flight</td>
<td>3</td>
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#### First Summer Session – 6 Hours

<table>
<thead>
<tr>
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<th>Course Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>AIRP 2337</td>
<td>Commercial Ground School</td>
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<tr>
<td>AIRP 2339*</td>
<td>Commercial Flight</td>
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</table>

*Capstone Course

### Total Hours 30

## Certified Flight Instructor Level I Preparation Certificate (3575)

### First Year

#### First Semester – 15 Hours

<table>
<thead>
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<th>Course Title</th>
<th>Hours</th>
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<tbody>
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<td>AIRP 1307</td>
<td>Aviation Meteorology</td>
<td>3</td>
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<tr>
<td>AIRP 1313</td>
<td>Introduction to Aviation</td>
<td>3</td>
</tr>
<tr>
<td>AIRP 1315</td>
<td>Private Pilot Flight</td>
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<tr>
<td>AIRP 1317</td>
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<td>3</td>
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<tr>
<td>AIRP 1345</td>
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#### Second Semester – 9 Hours

<table>
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<th>Course Title</th>
<th>Hours</th>
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<tbody>
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<td>AIRP 1355</td>
<td>Intermediate Flight</td>
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</tr>
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<td>AIRP 2350</td>
<td>Instrument Flight</td>
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#### First Summer Session – 6 Hours

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>AIRP 2337</td>
<td>Commercial Ground School</td>
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<tr>
<td>AIRP 2339</td>
<td>Commercial Flight</td>
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#### Second Year

#### First Semester – 9 Hours

<table>
<thead>
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<th>Course Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>AVIM 2331</td>
<td>Airline Management</td>
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</tr>
<tr>
<td>AIRP 2236*</td>
<td>Certified Flight Instructor Flight</td>
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<tr>
<td>AIRP 2349</td>
<td>Certified Flight Instructor Ground School</td>
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</tbody>
</table>

*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

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
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<tbody>
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<td>BIOL 1406**</td>
<td>General Biology I</td>
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<tr>
<td>or</td>
<td>BIOL 1411**</td>
<td>General Botany</td>
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<tr>
<td>COSC 1300</td>
<td>Computer Literacy or equivalent</td>
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<tr>
<td>ENGL 1301</td>
<td>Freshman Composition I</td>
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<tr>
<td>HIST 1301</td>
<td>History of the United States, Part I</td>
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<tr>
<td>MATH 1314*</td>
<td>College Algebra</td>
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<tr>
<td>KINE</td>
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Second Semester – 17 Hours

<table>
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<tr>
<td>or</td>
<td>BIOL 1413**</td>
<td>General Zoology</td>
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<td>Freshman Composition II</td>
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<td>MATH 1442*</td>
<td>Elements of Statistics</td>
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<tr>
<td>or</td>
<td>MATH 2412*</td>
<td>Precalculus</td>
</tr>
<tr>
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<td>ANTH, CRIJ, ECON, GEOG, GOVT, HIST, PSYC, or SOCI</td>
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Second Year

First Semester – 14 Hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>BIOL 2416</td>
<td>General Microbiology</td>
<td>4</td>
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<tr>
<td>CHEM 1111 &amp; 1311***</td>
<td>General Chemistry I</td>
<td>4</td>
</tr>
<tr>
<td>GOVT 2305</td>
<td>National Government</td>
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<tr>
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<td>HUMA, PHIL, ENGL, or Foreign Languages</td>
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Second Semester – 17 Hours

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<tbody>
<tr>
<td>BIOL 2416</td>
<td>Genetics</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 1112 &amp; 1312***</td>
<td>General Chemistry II</td>
<td>4</td>
</tr>
<tr>
<td>GOVT 2306</td>
<td>State Government</td>
<td>3</td>
</tr>
<tr>
<td>SPCH 1311</td>
<td>Fundamentals of Speech</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td>SPCH 1318</td>
<td>Interpersonal Communication</td>
</tr>
<tr>
<td>or</td>
<td>SPCH 1321</td>
<td>Business and Professional Speech</td>
</tr>
<tr>
<td>Elective</td>
<td>ARTS, DRAM, or MUSI</td>
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</tr>
</tbody>
</table>

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.

---

Use your vocational & technical courses to earn a college degree

The Bachelor of Applied Arts & Sciences degree gives you credit for vocational and technical courses that you’ve already taken.

- Small classes near the Palo Alto College campus.
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www.tamuk.edu/sanantonio
BUSINESS ADMINISTRATION

These AS degrees follow the 2+2 plans with UTSA. Please see your academic advisor for other 2+2 plans with area colleges and universities.

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.

Associate of Science in Business Administration (3004)
(For students majoring in Accounting)

1. Rhetoric
   ENGL 1301 3
   ENGL 1302 3

2. Mathematics
   MATH 1325 3

3. Sciences
   A. BIOL 1406, 2306 3
   B. BIOL 1407; CHEM 1311, 1312; GEOL 1403, 1404; PHYS 1401, 1402, 2425, 2426 3

4. U.S. History
   HIST 1301 and 1302 6

5. Political Studies
   GOVT 2305 and 2306 6

6. Social and Behavioral Sciences
   ANTH 2346; CRIJ 1301, 1306; PSYC 2301, 2340; SOCI 1301 3

7. Economics
   ECON 2301 3

8. The Arts
   ARTS 1301, 1303, 1304, or MUSI 1306 3

9. Literature
   ENGL 2331, 2332, or 2333 3

10. World Society and Issues
    ANTH 2351; COMM 1307; FREN 2311, 2312; GEOG 1303; GERM 2311, 2312; HIST 2312, 2321, 2322, 2323; HUMA 2323; KINE 1346; MUSI 1306; PHIL 1304, 2306; SPAN 2311, 2312, 2316 3

11. Area of Concentration
    ACCT 2301 3
    ACCT 2302 3
    BCIS 1305 3
    ECON 2302 3
    SPCH 1321 3
    Electives (courses outside the College of Business/nonbusiness courses) 9

Total Hours 66
Associate of Science in Business Administration (3135)  
(For students majoring in General Business)

1. Rhetoric  
   ENGL 1301 3
   ENGL 1302 3

2. Mathematics  
   MATH 1325 3

3. Sciences  
   A. BIOL 1406, 2306 3
   B. BIOL 1407; CHEM 1311, 1312; GEOL 1403, 1404; PHYS 1401, 1402, 2425, 2426 3

4. U.S. History  
   HIST 1301 and 1302 6

5. Political Studies  
   GOVT 2305 and 2306 6

6. Social and Behavioral Sciences  
   ANTH 2346; CRIJ 1301, 1306; PSYC 2301, 2340; SOCI 1301 3

7. Economics  
   ECON 2301 3

8. The Arts  
   ARTS 1301, 1303, 1304, or MUSI 1306 3

9. Literature  
   ENGL 2331, 2332, or 2333 3

10. World Society and Issues  
    ANTH 2351; COMM 1307; FREN 2311, 2312; GEOG 1303; GERM 2311, 2312; HIST 2312, 2321, 2322, 2323; HUMA 2323; KINE 1346; MUSI 1306; PHIL 1304, 2306; SPAN 2311, 2312, 2316 3

11. Area of Concentration  
    ACCT 2301 3
    ACCT 2302 3
    BCIS 1305 3
    ECON 2302 3
    PHIL 2371 3
    SPCH 1321 3
    Electives (courses outside the College of Business/nonbusiness courses) 6

Total Hours 66
Associate of Science in Business Administration (3100)  
(For students majoring in Information Systems)

1. Rhetoric  
   - ENGL 1301 3  
   - ENGL 1302 3

2. Mathematics  
   - MATH 1325 3

3. Sciences  
   A. BIOL 1406, 2306 3  
   B. BIOL 1407; CHEM 1311, 1312;  
      GEOL 1403, 1404; PHYS 1401, 1402, 2425, 2426 3

4. U.S. History  
   - HIST 1301 and 1302 6

5. Political Studies  
   - GOVT 2305 and 2306 6

6. Social and Behavioral Sciences  
   - ANTH 2346; CRIJ 1301, 1306;  
      PSYC 2301, 2340; SOCI 1301 3

7. Economics  
   - ECON 2301 3

8. The Arts  
   - ARTS 1301, 1303, 1304, or MUSI 1306 3

9. Literature  
   - ENGL 2331, 2332, or 2333 3

10. World Society and Issues  
    - ANTH 2351; COMM 1307; FREN 2311, 2312; GEOG 1303; GERM 2311, 2312;  
       HIST 2312, 2321, 2322, 2323; HUMA 2323;  
       KINE 1346; MUSI 1306; PHIL 1304, 2306;  
       SPAN 2311, 2312, 2316 3

11. Area of Concentration  
    - ACCT 2301 3  
    - ACCT 2302 3  
    - BCIS 1305 3  
    - ECON 2302 3  
    - ITSE 1318 3  
    - ITSE 2351 3  
    - PHIL 2303 3  
    - SPCH 1321 3

Total Hours 66
### Associate of Science in Business Administration (3105)
(For students majoring in Management)

1. **Rhetoric**
   - ENGL 1301
   - ENGL 1302

2. **Mathematics**
   - MATH 1325

3. **Sciences**
   - **A.** BIOL 1406, 2306
   - **B.** BIOL 1407; CHEM 1311, 1312; GEOL 1403, 1404; PHYS 1401, 1402, 2425, 2426

4. **U.S. History**
   - HIST 1301 and 1302

5. **Political Studies**
   - GOVT 2305 and 2306

6. **Social and Behavioral Sciences**
   - ANTH 2346; CRIJ 1301, 1306;
   - PSYC 2301, 2340; SOCI 1301

7. **Economics**
   - ECON 2301

8. **The Arts**
   - ARTS 1301, 1303, 1304, or MUSI 1306

9. **Literature**
   - ENGL 2331, 2332, or 2333

10. **World Society and Issues**
    - ANTH 2351; COMM 1307; FREN 2311, 2312; GEOG 1303; GERM 2311, 2312;
    - HIST 2312, 2321, 2322, 2323; HUMA 2323;
    - KINE 1346; MUSI 1306; PHIL 1304, 2306;
    - SPAN 2311, 2312, 2316

11. **Area of Concentration**
    - ACCT 2301
    - ACCT 2302
    - BCIS 1305
    - BMGT 1303
    - ECON 2302
    - PHIL 2371
    - SPCH 1321

**Total Hours** 63
Associate of Science in Business Administration (3108)
(For students majoring in Marketing)

1. Rhetoric
   - ENGL 1301 3
   - ENGL 1302 3
2. Mathematics
   - MATH 1325 3
3. Sciences
   - A. BIOL 1406, 2306 3
   - B. BIOL 1407; CHEM 1311, 1312; GEOL 1403, 1404; PHYS 1401, 1402, 2425, 2426 3
4. U.S. History
   - HIST 1301 and 1302 6
5. Political Studies
   - GOVT 2305 and 2306 6
6. Social and Behavioral Sciences
   - ANTH 2346; CRIJ 1301, 1306; PSYC 2301, 2340; SOCI 1301 3
7. Economics
   - ECON 2301 3
8. The Arts
   - ARTS 1301, 1303, 1304, or MUSI 1306 3
9. Literature
   - ENGL 2331, 2332, or 2333 3
10. World Society and Issues
    - ANTH 2351; COMM 1307; FREN 2311, 2312; GEOG 1303; GERM 2311, 2312; HIST 2312, 2321, 2322, 2323; HUMA 2323; KINE 1346; MUSI 1306; PHIL 1304, 2306; SPAN 2311, 2312, 2316 3
11. Area of Concentration
    - ACCT 2301 3
    - ACCT 2302 3
    - BCIS 1305 3
    - ECON 2302 3
    - SPCH 1321 3
    - Electives (courses outside the College of Business/nonbusiness courses) 9

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
M.P. Garza, Accutronics, Inc.
Angie Lopez, USAA
Antonio Perales, RCC-Kookier Norwood
Dolores R. Stone, AT&T
Gisela R. Stone, USAA
William Stone, Methodist Healthcare System
Tony Villanueva, Palo Alto College

Associate of Applied Science in Business Management (3581)

First Year

First Semester – 15 Hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
<th>Title</th>
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<tbody>
<tr>
<td>ENGL 1301</td>
<td>3</td>
<td>Freshman Composition I</td>
</tr>
<tr>
<td>MATH 1314</td>
<td>3</td>
<td>College Algebra</td>
</tr>
<tr>
<td>ITSC 1309</td>
<td>3</td>
<td>Integrated Software Applications I</td>
</tr>
<tr>
<td>BUSI 1301</td>
<td>3</td>
<td>Introduction to Business</td>
</tr>
<tr>
<td>or IBUS 1305</td>
<td>3</td>
<td>Introduction to International Business &amp; Trade</td>
</tr>
<tr>
<td>BMGT 1301</td>
<td>3</td>
<td>Supervision</td>
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Second Semester – 18 Hours

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<tr>
<td>BMGT 1303</td>
<td>3</td>
<td>Principles of Management</td>
</tr>
<tr>
<td>SPCH 1321</td>
<td>3</td>
<td>Business &amp; Professional Speech</td>
</tr>
<tr>
<td>MRKG 1311</td>
<td>3</td>
<td>Principles of Marketing</td>
</tr>
<tr>
<td>or IBUS 1354</td>
<td>3</td>
<td>International Marketing Management</td>
</tr>
<tr>
<td>HRPO 2301</td>
<td>3</td>
<td>Human Resources Management</td>
</tr>
<tr>
<td>or MRKG 1301</td>
<td>3</td>
<td>Customer Relations</td>
</tr>
<tr>
<td>or BUSG 2309</td>
<td>3</td>
<td>Small Business Management</td>
</tr>
<tr>
<td>or SPAN 1411</td>
<td>3</td>
<td>Elementary Spanish I</td>
</tr>
<tr>
<td>or COMM 1307</td>
<td>3</td>
<td>Intro to Mass Communications</td>
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<tr>
<td>or IBUS 2345</td>
<td>3</td>
<td>Import Customs Regulations</td>
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<tr>
<td>or IBUS 1301</td>
<td>3</td>
<td>Principles of Imports-Exports I</td>
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</table>
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
- HUMA 2323  World Cultures and Global Issues  or
- HUMA 1301  Intro to the Humanities  or
- ARTS 1301  Art Appreciation  or
- COMM 2324  Practicum in Electronic Media  3
- 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
- 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
Entrepreneurship Level I Certificate (3614)
The Entrepreneurship Certificate provides basic skills for the potential and current small business owner.

First Semester – 15 Hours
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
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<tbody>
<tr>
<td>ENGL 1301</td>
<td>Freshman Composition I</td>
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<tr>
<td>or&lt;br&gt;POFT 1301</td>
<td>Business English</td>
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<tr>
<td>BUSI 1301</td>
<td>Intro to Business</td>
<td>3</td>
</tr>
<tr>
<td>ITSC 1309</td>
<td>Integrated Software Applications I</td>
<td>3</td>
</tr>
<tr>
<td>MRKG 1311</td>
<td>Principles of Marketing</td>
<td>3</td>
</tr>
<tr>
<td>or&lt;br&gt;COMM 1307</td>
<td>Intro to Mass Communications</td>
<td>3</td>
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<td>MRKG 1301</td>
<td>Customer Relations</td>
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Second Semester – 15 Hours
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<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>BMGT 2303</td>
<td>Problem Solving and Decision Making</td>
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<tr>
<td>COMM 2324</td>
<td>Practicum in Electronic Media</td>
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<tr>
<td>ACCT 2301</td>
<td>Principles of Accounting I</td>
<td>3</td>
</tr>
<tr>
<td>or&lt;br&gt;ACNT 1303</td>
<td>Introduction to Accounting I</td>
<td>3</td>
</tr>
<tr>
<td>BUSI 2301</td>
<td>Business Law</td>
<td>3</td>
</tr>
<tr>
<td>BUSG 2309*</td>
<td>Small Business Management</td>
<td>3</td>
</tr>
</tbody>
</table>

* 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
<table>
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<tr>
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<tbody>
<tr>
<td>COSC 1300</td>
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<tr>
<td>ENGL 1301</td>
<td>Freshman Composition I</td>
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</tr>
<tr>
<td>BMGT 1303</td>
<td>Principles of Management</td>
<td>3</td>
</tr>
<tr>
<td>SPCH 1311</td>
<td>Fundamentals of Speech</td>
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Second Semester – 9 Hours
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<td>Introduction to Psychology</td>
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<td>BMGT 1301</td>
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<td>BMGT 2382*</td>
<td>Cooperative Education, Business Administration &amp; Management, General</td>
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</table>

*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

<table>
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<td>or</td>
<td>POFT 1301 Business English</td>
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<td>IBUS 1305</td>
<td>Intro to International Business &amp; Trade</td>
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<td>ITSC 1309</td>
<td>Integrated Software Applications I</td>
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<td>BMGT 1301</td>
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<td>SPAN 1411</td>
<td>Elementary Spanish I</td>
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<td>SPAN 2316 Career Spanish I</td>
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<td>or</td>
<td>GERM 1411 Elementary German I</td>
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<td>or</td>
<td>FREN 1411 Elementary French I</td>
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Second Semester – 15 Hours

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<td>Import Customs Regulation</td>
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<td>IBUS 1301 Principles of Imports-Exports I</td>
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<td>SPNL 1342</td>
<td>Business Spanish</td>
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<td>or</td>
<td>SPAN 2317 Career Spanish II</td>
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<td>or</td>
<td>SPAN 1412 Elementary Spanish II</td>
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<td>or</td>
<td>GERM 1412 Elementary German II</td>
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<td>IBUS 1354</td>
<td>International Marketing Management</td>
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<tr>
<td>IBUS 2380*</td>
<td>Cooperative Education-International Business</td>
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<td>ACCT 2301 Principles of Accounting I</td>
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<tr>
<td>or</td>
<td>ACNT 1303 Introduction to Accounting I</td>
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</table>

* 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

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
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<tr>
<td>QCTC</td>
<td>1305 Teaming</td>
<td>3</td>
</tr>
<tr>
<td>MRKG</td>
<td>1301 Customer Relations</td>
<td>3</td>
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<tr>
<td>HRPO</td>
<td>1311 Human Relations</td>
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Second Semester – 15 Hours

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<tbody>
<tr>
<td>BMGT</td>
<td>2309 Leadership</td>
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<tr>
<td>BMGT</td>
<td>2347 Critical Thinking and Problem Solving</td>
<td>3</td>
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<tr>
<td>or IBUS</td>
<td>2341 International Comparative Management</td>
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<td>or POFT</td>
<td>1328 Business and Professional Presentations</td>
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</tr>
<tr>
<td>BMGT</td>
<td>2303 Problem Solving and Decision Making</td>
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<tr>
<td>HRPO</td>
<td>2307 Organizational Behavior</td>
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</tr>
<tr>
<td>BMGT</td>
<td>2341* Strategic Management</td>
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* 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

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>BUSI</td>
<td>1301 Introduction to Business</td>
<td>3</td>
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<tr>
<td>ITSC</td>
<td>1309 Integrated Software Applications I</td>
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<tr>
<td>MRKG</td>
<td>1311 Principles of Marketing</td>
<td>3</td>
</tr>
<tr>
<td>MRKG</td>
<td>1301 Customer Relations</td>
<td>3</td>
</tr>
<tr>
<td>COMM</td>
<td>1307 Intro to Mass Communications</td>
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Second Semester – 12 Hours

<table>
<thead>
<tr>
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<th>Title</th>
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<tbody>
<tr>
<td>BMGT</td>
<td>1301 Supervision</td>
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<tr>
<td>COMM</td>
<td>2324 Practicum in Electronic Media</td>
<td>3</td>
</tr>
<tr>
<td>SPCH</td>
<td>1321 Business &amp; Professional Speech</td>
<td>3</td>
</tr>
<tr>
<td>MRKG</td>
<td>2380* Cooperative Education – Business Marketing and Marketing Management</td>
<td>3</td>
</tr>
</tbody>
</table>

* 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**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>HRPO</td>
<td>Human Relations</td>
<td>3</td>
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<tr>
<td>SPCH</td>
<td>Interpersonal Communications</td>
<td>3</td>
</tr>
<tr>
<td>EECT</td>
<td>Introduction to Telecommunications</td>
<td>3</td>
</tr>
<tr>
<td>POFT</td>
<td>Beginning Keyboarding</td>
<td>3</td>
</tr>
<tr>
<td>BUSI</td>
<td>Introduction to Business</td>
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**Second Semester – 15 Hours**

<table>
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<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MRKG</td>
<td>Customer Relations</td>
<td>3</td>
</tr>
<tr>
<td>BUSI</td>
<td>Principles of Salesmanship</td>
<td>3</td>
</tr>
<tr>
<td>EECT</td>
<td>Technical Customer Service</td>
<td>3</td>
</tr>
<tr>
<td>RTVB</td>
<td>Survey of Electronic Media</td>
<td>3</td>
</tr>
<tr>
<td>EECT</td>
<td>Wireless Telephony Systems</td>
<td>3</td>
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</table>

* Capstone Course

**Total Hours** 30
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**
   - Composition: ENGL 1301 (3), ENGL 1302 (3), SPCH 1311, 1318, 1321 OR 2341 (3)

2. **Mathematics**
   - MATH 2413 (4), MATH 2414 (4), MATH 2415 (4)

3. **Natural Sciences**
   - CHEM 1311/1111 (4), CHEM 1312/1112 (4)

4. **Humanities & Visual and Performing Arts**
   - Humanities: ENGL, FREN, GERM, HUMA, or PHIL (3)
   - Visual and Performing Arts: ARTS, DRAM, MUSI, DANC (3)

5. **Social and Behavioral Sciences**
   - History: HIST 1301 (3), HIST 1302 (3)
   - Government: GOVT 2305 (3), GOVT 2306 (3)
   - Social/Behavioral Sciences: ANTH, COMM, CRIJ, ECON, GEOG, HIST, PSYC or SOCI (3)

6. **Computer Literacy**
   - COSC 1300, COSC 1301, OR BCIS 1305 (3)

7. **Kinesiology**
   - KINE (1-2)

8. **Area of Concentration**
   - CHEM 2323/2223 (5), CHEM 2325/2225 (5)

**Total Hours**: 64-65

Most Bachelor’s degrees in Chemistry require these courses that are also offered at PAC:
- PHYS 1401/1402 (8)
- PHYS 2425/242 (6)

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 in which they live and with the necessary skills to thrive in this increasingly global and digital environment.

Palo Alto College offers three Communications sub-areas or “tracks” for Communications majors: Journalism/Mass Communication; Advertising/Public Relations; and Radio & Television.Broadcast Journalism.

Besides learning about the historical underpinnings of the mass media and learning how to critically analyze its content, students are offered courses with a strong hands-on learning emphasis through the creation of their own media content — professional-quality websites, broadcast-ready digital television productions, and well-crafted articles and layouts for Palo Alto’s student-produced newsletter, “The Pulse.” All Communications majors will build a portfolio of work to present to their transfer institutions and potential employers.

Those 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 transfer to should follow Palo Alto College’s degree plan for Communications majors.

Associate of Arts in Communications (3031)
(For students specializing in Journalism/Mass Communication)

1. Communication 9
   Composition
   ENGL 1301 3
   ENGL 1302 3
   Speech
   SPCH 1311 or 1321 3

2. Mathematics 3
   MATH 1332 3

3. Natural Sciences 7
   Natural Science with Lab 4
   Natural Science without Lab 3
   BIOL, CHEM, ENVR, GEOL or PHYS

4. Humanities & Visual and Performing Arts 9
   Humanities
   HUMA 1301 3
   HUMA 2323 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
   GEOG 1303 or PSYC 2314 3

6. Computer Literacy 3
   COMM 2324 3

7. Kinesiology 2
   KINE or DANC 1
   KINE or DANC 1

8. Area of Concentration * 12-15
   6-9 SCH from Competency 1 (see chart)
   3-9 SCH from Competency 2 (see chart)

* A course may count toward only one competency area, as designated by the sending institution.

Total Hours 60-63
Field of Study Curricula in Communications for Students Specializing in Journalism/Mass Communications

Total Block of 12 SCH (semester credit hours)  
(15-SCH block accepted at prerogative of accepting institution)

<table>
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<tr>
<th>Competency Area 1</th>
<th>Historical/ Theoretical/ Analytical</th>
<th>Competency</th>
<th>Area 1</th>
<th>6-9 SCH selected from:</th>
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<td>Intro to Mass Communication (COMM 1307) or Media Literacy (COMM 2300)</td>
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<td>Intro to Public Relations (COMM 2330)</td>
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<td>3</td>
<td>Intro to Advertising (COMM 2327)</td>
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<td></td>
<td>4</td>
<td>Survey of Radio/TV (COMM 1335)</td>
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<td></td>
<td>3</td>
<td>Editing &amp; Layout (COMM 2305)</td>
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<td>Photography I (COMM 1318)</td>
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<td>7</td>
<td>Writing for Radio, TV, &amp; Film (COMM 2339)</td>
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</table>

Associate of Arts in Communications (3031)
(For students specializing in Advertising/Public Relations)

1. Communication  
   Composition  
   ENGL 1301  
   ENGL 1302  
   Speech  
   SPCH 1311 or 1321

2. Mathematics  
   MATH 1332

3. Natural Sciences  
   Natural Science with Lab  
   Natural Science without Lab  
   BIOL, CHEM, ENVR, GEOL or PHYS

4. Humanities & Visual and Performing Arts  
   Humanities  
   HUMA 1301  
   HUMA 2323
   Visual and Performing Arts  
   ARTS 1301

5. Social and Behavioral Sciences  
   History  
   HIST 1301  
   HIST 1302  
   Government  
   GOVT 2305  
   GOVT 2306
   Social/Behavioral Sciences  
   GEOG 1303 or PSYC 2314

6. Computer Literacy  
   COMM 2324

7. Kinesiology  
   KINE or DANC

8. Area of Concentration *  
   6-9 SCH from Competency 1 (see chart)  
   3-9 SCH from Competency 2 (see chart)

* A course may count toward only one competency area, as designated by the sending institution.

Total Hours  60-63
Field of Study Curricula in Communications for Students Specializing in Advertising/Public Relations

Total Block of 12 SCH (semester credit hours) (15-SCH block accepted at prerogative of accepting institution)

<table>
<thead>
<tr>
<th>Competency Area 1</th>
<th>Historical/ Theoretical/ Analytical 6-9 SCH selected from:</th>
<th>Advertising/Public Relations</th>
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<tbody>
<tr>
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<td>• Intro to Mass Communication (COMM 1307)</td>
<td>• Intro to Mass Communication (COMM 1307)</td>
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<td>• Intro to Media Literacy (COMM 2300)</td>
<td>• Intro to Media Literacy (COMM 2300)</td>
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<td></td>
<td>• Intro to Public Relations (COMM 2330)</td>
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<td>• Intro to Advertising (COMM 2327)</td>
<td>• Intro to Advertising (COMM 2327)</td>
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<table>
<thead>
<tr>
<th>Competency Area 2</th>
<th>Writing/ Performance/ Production 3-9 SCH selected from:</th>
<th>Associate of Arts in Communications (3031) (For students specializing in Radio &amp; TV Broadcasting/Broadcast Journalism)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• News Gathering &amp; Writing I (COMM 2311)</td>
<td>1. Communication Composition ENGL 1301 3 ENGL 1302 3 Speech SPCH 1311 or 1321 3</td>
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<tr>
<td></td>
<td>• News Gathering &amp; Writing II (COMM 2315)</td>
<td>2. Mathematics MATH 1332 3</td>
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<td>• Editing &amp; Layout (COMM 2305)</td>
<td>3. Natural Sciences Natural Science with Lab 4 Natural Science without Lab 3</td>
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<td></td>
<td>• Radio/TV News (COMM 2332)</td>
<td>BIOL, CHEM, ENVR, GEOL or PHYS</td>
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<tr>
<td></td>
<td>• TV Production I (COMM 1336)</td>
<td>4. Humanities &amp; Visual and Performing Arts Humanities HUMA 1301 3 HUMA 2323 3 Visual and Performing Arts ARTS 1301 3</td>
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<tr>
<td></td>
<td>• TV Production II (COMM 1337)</td>
<td>5. Social and Behavioral Sciences History HIST 1301 3 HIST 1302 3 Government GOVT 2305 3 GOVT 2306 3 Social/Behavioral Sciences GEOG 1303 or PSYC 2314 3</td>
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<tr>
<td></td>
<td>• Writing for Radio, TV, &amp; Film (COMM 2339)</td>
<td>6. Computer Literacy COMM 2324 3</td>
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<tr>
<td></td>
<td>• Photography I (COMM 1318)</td>
<td>7. Kinesiology KINE or DANC 1 KINE or DANC 1</td>
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<td></td>
<td>• Photography II (COMM 1319)</td>
<td>8. Other</td>
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</table>

8. Other

9. Total Credits
8. **Area of Concentration** *

6-9 SCH from Competency 1 (see chart)
3-9 SCH from Competency 2 (see chart)

*A course may count toward only one competency area, as designated by the sending institution.

**Total Hours** 60-63

### Field of Study Curricula in Communications for Students Specializing in Radio & TV Broadcasting/Broadcast Journalism

<table>
<thead>
<tr>
<th>Total Block of 12 SCH (semester credit hours)</th>
<th>Radio &amp; TV Broadcasting/ Broadcast Journalism</th>
</tr>
</thead>
<tbody>
<tr>
<td>(15-SCH block accepted at prerogative of accepting institution)</td>
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<td>• Intro to Mass Communication (COMM 1307) or Media Literacy (COMM 2300)</td>
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<td></td>
<td>• Survey of Radio/TV (COMM 1335)</td>
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<td>• Intro to Film (COMM 2366)</td>
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<td><strong>Competency Area 2</strong></td>
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<td>• News Gathering &amp; Writing I (COMM 2311)</td>
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<td>• TV Production I (COMM 1336)</td>
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<tr>
<td></td>
<td>• TV Production II (COMM 1337)</td>
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<tr>
<td></td>
<td>• Writing for Radio, TV, &amp; Film (COMM 2339)</td>
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</table>
COMPUTER INFORMATION SYSTEMS

Computer Information Systems (CIS) focuses on the use of the computer as a tool in business data processing. While there is some overlap with the related field of Computer Science, CIS is generally more business-oriented and less engineering-oriented than Computer Science.

A four-year degree in CIS can lead to career positions such as Business Applications Programmer/Software Engineer, Systems Analyst, CIS Manager, or Information Technology Consultant. 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 CIS 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 Career and Transfer Services or the Computer Science & Computer Information Systems Department Office.

For a student who wants or needs to enter the workforce after only two years of study, the Computer Information Systems Department also offers an Associate of Applied Science (AAS) degree in CIS. This can lead to career positions such as Computer Support (or Help Desk) Specialist, Web Developer, or Network Administrator (the latter may require additional specialized training).

Associate of Science in Computer Information Systems (3053)

1. Communication
   Composition
   ENGL 1301 3
   ENGL 1302 3
   Speech
   SPCH 1311, 1318, 1321 or 2341 3

2. Mathematics
   MATH 1314 3

3. Natural Sciences
   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
   8

4. Humanities & Visual and Performing Arts
   Humanities
   ENGL 2322, ENGL 2323, ENGL 2327, 6
   ENGL 2328, ENGL 2332, ENGL 2333,
   ENGL 2373, HUMA 1301, HUMA 2323,
   PHIL 1301, PHIL 1304,
   PHIL 2303, PHIL 2306, PHIL 2371,
   SPAN 2311, or SPAN 2312
   Visual and Performing Arts
   ARTS 1301, ARTS 1303, ARTS 1304,
   DRAM 1310, MUSI 1306, DANC 2303
   9
### Social and Behavioral Sciences

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>History</td>
<td>3</td>
</tr>
<tr>
<td>Government</td>
<td>3</td>
</tr>
<tr>
<td>Social/Behavioral Sciences</td>
<td>3</td>
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</tbody>
</table>

#### History
- HIST 1301 (3 credits)
- HIST 1302 (3 credits)

#### Government
- GOVT 2305 (3 credits)
- GOVT 2306 (3 credits)

#### 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 2381, PSYC 2301, PSYC 2303, PSYC 2306, PSYC 2308, PSYC 2314, PSYC 2316, PSYC 2317, PSYC 2370, SOCI 1301, SOCI 1306, or SOCI 2301

### Computer Literacy

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>COSC 1301, COSC 1300, or BCIS 1305</td>
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### Kinesiology

<table>
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<tr>
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### Area of Concentration

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<td>ITSE 2351</td>
<td>3</td>
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<tr>
<td>ITSE 1331 or COSC 1315</td>
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</tbody>
</table>

### Total Hours

- **Total Hours**: 60
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. There are 5 options available for students pursuing AAS degrees in Computer Information Systems. They are: Personal Computer Support, Advanced Web Programming, Information Technology Security Academy, Network Administration (Cisco Network Associate), and Network Security.

Advisory Committee
William Burke, Texas Department of Human Services
Richard Cavin, Southwestern Bell
Ivan Chestnut, MITRE Corporation

Associate of Applied Science in Computer Information Systems

Personal Computer Support (3503)

First Year

First Semester – 15 Hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>BUSI</td>
<td>1301</td>
<td>Introduction to Business</td>
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<tr>
<td>ENGL</td>
<td>1301</td>
<td>Freshman Composition I</td>
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<td>1301</td>
<td>Introduction to Computers</td>
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<td>ITSC</td>
<td>1309</td>
<td>Integrated Software Applications I</td>
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<td>SPCH</td>
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<td>Fundamentals of Speech</td>
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Second Semester – 15 Hours

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<td>Principles of Microeconomics</td>
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<td>ITSW</td>
<td>2334</td>
<td>Advanced Spreadsheets</td>
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<td>ITSW</td>
<td>1310</td>
<td>Introduction to Presentation Graphics Software</td>
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<td>IMED</td>
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<td>Web Page Design I</td>
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<td>PSYC</td>
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<td>Introduction to Psychology</td>
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Summer Session – 3 Hours

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Second Year

First Semester – 15 Hours

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<td>ARTS</td>
<td>2348</td>
<td>Digital Art I</td>
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<tr>
<td>HUMA</td>
<td>1301</td>
<td>Introduction to the Humanities</td>
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<tr>
<td>ITSC</td>
<td>1305</td>
<td>Introduction to PC Operating Systems</td>
<td>3</td>
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<tr>
<td>ITSE</td>
<td>1350</td>
<td>Systems Analysis and Design</td>
<td>3</td>
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<tr>
<td>MATH</td>
<td>1314</td>
<td>College Algebra</td>
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<tr>
<td>Elective</td>
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<td>Any other computer course (beyond the introductory level)</td>
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Second Semester – 14 Hours

<table>
<thead>
<tr>
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<th>Hours</th>
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<tbody>
<tr>
<td>ITNW</td>
<td>1321</td>
<td>Introduction to Networking</td>
<td>3</td>
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<tr>
<td>ITSC</td>
<td>1325</td>
<td>Personal Computer Hardware</td>
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<tr>
<td>ITSC</td>
<td>2586*</td>
<td>Internship – Computer Information Systems</td>
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<tr>
<td>ITSY</td>
<td>2359</td>
<td>Security Assessment and Auditing</td>
<td>3</td>
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<tr>
<td>ACCT</td>
<td>2301</td>
<td>Principles of Accounting I</td>
<td>3</td>
</tr>
</tbody>
</table>

*Capstone Course

Total Hours 60-62
### Associate of Applied Science in Computer Information Systems

**Advanced Web Programming (3503)**

#### First Year

**First Semester – 15 Hours**
- HMSY 1337 Introduction to Homeland Security 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**
- PHTC 1300 Photo Digital Imaging I 3
- or ARTS 2348 Digital Art I 3
- ITSC 1305 Introduction to PC Operating Systems 3
- ITSW 1310 Introduction to Presentation Graphics Software 3
- IMED 1316 Web Page Design I 3
- PSYC 2301 Introduction to Psychology 3
- or SOCI 1301 Introduction to Sociology 3

**Summer Session – 3 Hours**
- ITSW 2337 Advanced Database 3

#### Second Year

**First Semester – 15 Hours**
- ARTS 1301 Art Appreciation 3
- or HUMA 1301 Introduction to the Humanities 3
- COSC 1315 Fundamentals of Programming—Visual Basic 3
- IMED 2315 Web Page Design II 3
- MATH 1314 College Algebra 3
- Elective Any other computer course (beyond the introductory level) 3

**Second Semester – 12 Hours**
- INEW 2334* Advanced Web Page Programming 3
- INEW 2338 Advanced Java Programming 3
- ITNW 1321 Introduction to Networking 3
- ITSE 1331 Programming in Visual Basic.Net 3

---

*Capstone Course

**Total Hours** 60
## Associate of Applied Science in Computer Information Systems
Information Technology & Security Academy (3503)

### First Year
#### First Semester – 15 Hours
<table>
<thead>
<tr>
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<th>Hours</th>
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<tbody>
<tr>
<td>HMSY 1337</td>
<td>Introduction to Homeland Security</td>
<td>3</td>
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<tr>
<td>ENGL 1301</td>
<td>Freshman Composition I</td>
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<tr>
<td>ITSC 1301</td>
<td>Introduction to Computers</td>
<td>3</td>
</tr>
<tr>
<td>ITSC 1309</td>
<td>Integrated Software Applications I</td>
<td>3</td>
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<tr>
<td>SPCH 1311</td>
<td>Fundamentals of Speech</td>
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#### Second Semester – 16 Hours
<table>
<thead>
<tr>
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<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>ECON 2302</td>
<td>Principles of Microeconomics</td>
<td>3</td>
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<tr>
<td>ITSW 2334</td>
<td>Advanced Spreadsheets</td>
<td>3</td>
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<tr>
<td>ITSE 1402</td>
<td>Computer Programming</td>
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<tr>
<td>ITSY 1300</td>
<td>Fundamentals of Information Security</td>
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<tr>
<td>PSYC 2301</td>
<td>Introduction to Psychology</td>
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<td>SOCI 1301</td>
<td>Introduction to Sociology</td>
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### Summer Session – 4 Hours
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<tbody>
<tr>
<td>ITSY 1442</td>
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### Second Year
#### First Semester – 16 Hours
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<thead>
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<th>Course</th>
<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>ARTS 1301</td>
<td>Art Appreciation</td>
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<td>ARTS 2348</td>
<td>Digital Art I</td>
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<tr>
<td>HUMA 1301</td>
<td>Introduction to the Humanities</td>
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<td>ITSC 1305</td>
<td>Introduction to PC Operating Systems</td>
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<td>Fundamentals of Networking Technology</td>
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#### Second Semester – 12 Hours
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<tbody>
<tr>
<td>ITNW 2321</td>
<td>Networking with TCP/IP</td>
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<tr>
<td>ITSC 1325</td>
<td>Personal Computer Hardware</td>
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<tr>
<td>ITSY 2359*</td>
<td>Security Assessment and Auditing</td>
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<td>ACCT 2301</td>
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*Capstone Course

### Total Hours 63
Associate of Applied Science in Computer Information Systems
Network Administration (Cisco Network Associate) (3503)

First Year
First Semester – 18 Hours

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<tbody>
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<td>BUSI 1301</td>
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<tr>
<td>ENGL 1301</td>
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<tr>
<td>ITSC 1301</td>
</tr>
<tr>
<td>ITSC 1309</td>
</tr>
<tr>
<td>ITCC 1302</td>
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<tr>
<td>SPCH 1311</td>
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Second Semester – 15 Hours

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<tbody>
<tr>
<td>ECON 2302</td>
</tr>
<tr>
<td>HMSY 1337</td>
</tr>
<tr>
<td>IMED 1316</td>
</tr>
<tr>
<td>PSYC 2301</td>
</tr>
<tr>
<td>or</td>
</tr>
<tr>
<td>SOCI 1301</td>
</tr>
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<td>ITCC 1306</td>
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Summer Session – 3 Hours

<table>
<thead>
<tr>
<th>Course</th>
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<tr>
<td>Elective</td>
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Second Year
First Semester – 12 Hours

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>ARTS 1301</td>
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<tr>
<td>or</td>
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<tr>
<td>ARTS 2348</td>
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<tr>
<td>or</td>
</tr>
<tr>
<td>HUMA 1301</td>
</tr>
<tr>
<td>ITSC 1305</td>
</tr>
<tr>
<td>ITCC 1342</td>
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<tr>
<td>MATH 1314</td>
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Second Semester – 15 Hours

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>ITCC 1346</td>
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<tr>
<td>ITNW 1321</td>
</tr>
<tr>
<td>ITSC 1325</td>
</tr>
<tr>
<td>ITSY 2359*</td>
</tr>
<tr>
<td>Elective</td>
</tr>
</tbody>
</table>

*Capstone Course

Total Hours 63
# Associate of Applied Science in Computer Information Systems
## Network Security (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
- **ITNW 1325** Fundamentals of Networking Technologies 3
- **SPCH 1311** Fundamentals of Speech 3

#### Second Semester – 15 Hours
- **ECON 2302** Principles of Microeconomics 3
- **ITNW 1333** Microsoft Networking Essentials 3
- **HMSY 1337** Introduction to Homeland Security 3
- **ITNW 1354** Implementing and Supporting Servers 4.0 3
- **PSYC 2301** Introduction to Psychology 3
  or
- **SOCI 1301** Introduction to Sociology

#### Summer Session – 6 Hours
- **ITSW 2337** Advanced Database 3
- **ITMC 2332** Designing a MS WIN Networking SVC Infrastructure 3

### Second Year
#### First Semester – 15 Hours
- **ITMC 2333** Designing a Secure MS WIN Network 3
- **ITSC 1305** Introduction to PC Operating Systems 3
- **ITMC 1341** Implementing Microsoft Windows Professional Serv 3
- **MATH 1314** College Algebra 3
- **Elective** Any other computer course (beyond the introductory level) 3

#### Second Semester – 16 Hours
- **ARTS 1301** Art Appreciation 3
  or
- **ARTS 2348** Digital Art I
  or
- **HUMA 1301** Introduction to the Humanities
- **ITMC 1342** Implementing a MS WIN 2000 Network Infrastructure 3
- **ITMC 1419** Installing & Administering MS Win Op Systems 4
- **ITSC 1325** Personal Computer Hardware 3
- **ITSY 2359** Security Assessment and Auditing 3

*Capstone Course

**Total Hours** 67
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

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>ITSC 1301</td>
<td>Introduction to Computers</td>
<td>3</td>
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<tr>
<td>ITSC 1309</td>
<td>Integrated Software Applications I</td>
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Second Semester – 9 Hours

<table>
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<th>Course Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>ITSW 1310</td>
<td>Introduction to Presentation Graphics Software</td>
<td>3</td>
</tr>
<tr>
<td>ITSW 2334</td>
<td>Advanced Spreadsheets</td>
<td>3</td>
</tr>
<tr>
<td>ITSW 2337*</td>
<td>Advanced Database</td>
<td>3</td>
</tr>
</tbody>
</table>

* Capstone Course

Total Hours 15

Network Administration Level I Certificate (3627)
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

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>ITNW 1325</td>
<td>Fundamentals of Networking Technology</td>
<td>3</td>
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<tr>
<td>ITSC 1307</td>
<td>UNIX Operating System I</td>
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<tr>
<td>ITSC 1325</td>
<td>Personal Computer Hardware</td>
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<tr>
<td>ITSY 2300</td>
<td>Operating System Security</td>
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Second Semester – 9 Hours

<table>
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<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>ITNW 1354</td>
<td>Implementing &amp; Supporting Servers</td>
<td>3</td>
</tr>
<tr>
<td>ITSC 2337</td>
<td>UNIX Operating System II</td>
<td>3</td>
</tr>
<tr>
<td>ITSY 2301</td>
<td>Firewalls and Network Security</td>
<td>3</td>
</tr>
</tbody>
</table>

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 website 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
- IMED 1316 Web Page Design I 3

Second Semester – 9 Hours
- ARTS 2348 Digital Art I 3
- COMM 2324 Practicum in Electronic Media 3
- IMED 2315* Web Page Design II 3

* Capstone Course

Total Hours 18

Advanced Web Programming Level I Certificate (3582)
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
- IMED 1316 Web Page Design I 3
- ARTS 2348 Digital Art I 3

Second Semester – 12 Hours
- ITSE 2317 JAVA Programming 3
- ITMt 1345 Enterprise Development Using MS Visual Studio.NET 3
- COMM 2324 Practicum in Electronic Media 3
- IMED 2315 Web Page Design II 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
- ITCC 1306 CCNA 2: Router and Routing Basics 3

Second Semester
- ITCC 1342 CCNA 3: Switching Basic and Intermediate Routing 3
- 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. 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. 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.

<table>
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<tr>
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<th>Course Title</th>
<th>Credit Hours</th>
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<td>ITNW 1325</td>
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<tr>
<td>ITNW 1333</td>
<td>Microsoft Networking Essentials</td>
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<tr>
<td>ITNW 1354*</td>
<td>Implementation and Supporting Servers</td>
<td>3</td>
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<tr>
<td>ITNW 1164</td>
<td>Practicum</td>
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<tr>
<td>ITSC 1301</td>
<td>Introduction to Computers</td>
<td>3</td>
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<td>ITSC 1305</td>
<td>PC Operating Systems</td>
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<tr>
<td>ITSC 1325</td>
<td>Personal Computer Hardware</td>
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</table>

*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. 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.

<table>
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<tbody>
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<td>ITMC 1301</td>
<td>MS Windows Network &amp; OS Essentials</td>
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<td>ITMC 1341</td>
<td>Implementing MS Windows Professional and Server</td>
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<td>ITMT 1350</td>
<td>Implementing, Managing, Maintaining MS Windows</td>
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<td>ITMT 2300</td>
<td>Planning, Implementing, Maintaining MS Windows</td>
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<td>ITMC 1419</td>
<td>Installing and Administering MS Windows Server OS</td>
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<td>Fundamentals of Networking Technologies</td>
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</table>

*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 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.

<table>
<thead>
<tr>
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<th>Hours</th>
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<tbody>
<tr>
<td>ITSC 1301</td>
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<td>PC Operating Systems</td>
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<td>Fundamentals of Networking Technologies</td>
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</tr>
<tr>
<td>ITNW 1333</td>
<td>Microsoft Networking Essentials</td>
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<tr>
<td>ITNW 1354</td>
<td>Implementation and Supporting Servers</td>
<td>3</td>
</tr>
<tr>
<td>ITNW 1164</td>
<td>Practicum</td>
<td>1</td>
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<tr>
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<td>Implementing Microsoft Windows Professional and Server</td>
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<td>ITMT 2330</td>
<td>Designing a Microsoft Windows Server</td>
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<td>ITMT 2340</td>
<td>Designing Security for Microsoft Networks</td>
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<tr>
<td>ITNW 2165*</td>
<td>Practicum – Business Systems Networking and Telecommunications</td>
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*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
<table>
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<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>ITSC 1301</td>
<td>Introduction to Computers</td>
<td>3</td>
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<tr>
<td>ITSC 1325</td>
<td>Personal Computer Hardware</td>
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Second Semester – 7 Hours
<table>
<thead>
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<tbody>
<tr>
<td>ITNW 1425</td>
<td>Fundamentals of Networking Technology</td>
<td>4</td>
</tr>
<tr>
<td>ITSC 1305</td>
<td>Introduction to PC Operating Systems</td>
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Second Year
First Semester – 7 Hours
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<tr>
<td>ITSE 1402</td>
<td>Computer Programming</td>
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<tr>
<td>ITSY 1300</td>
<td>Fundamentals of Information Security</td>
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Second Semester – 7 Hours
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<tr>
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</tr>
<tr>
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Total Hours 27
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 Career and Transfer Services or the Computer Science & Computer Information Systems Department.

Associate of Science in Computer Science (3047)

1. **Communication**
   - Composition
     - ENGL 1301 3
     - ENGL 1302 3
   - Speech
     - SPCH 1311, 1318, 1321 or 2341 3

2. **Mathematics**
   - MATH 1314 3
   - MATH 2412 4

3. **Natural Sciences**
   - 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**
   - Humanities
     - ENGL 2322, ENGL 2323, ENGL 2327, ENGL 2328, ENGL 2332, ENGL 2333, ENGL 2373, HUMA 1301, HUMA 2323, PHIL 1301, PHIL 1304, PHIL 2303, PHIL 2306, PHIL 2371, SPAN 2311 or SPAN 2312
   - Visual and Performing Arts
     - ARTS 1301, ARTS 1303, ARTS 1304, DRAM 1310, MUSI 1306, or DANC 2303

5. **Social and Behavioral Sciences**
   - 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 2381, PSYC 2301, PSYC 2303, PSYC 2306, PSYC 2308, PSYC 2314, PSYC 2316, PSYC 2317, PSYC 2370, SOCI 1301, SOCI 1306, or SOCI 2301

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</table>
6. **Computer Literacy**  
   COSC 1301, COSC 1300, or BCIS 1305  
   3  
7. **Kinesiology**  
   KINE  
   2  
8. **Area of Concentration**  
   COSC 1318  
   COSC 2315  
   COSC 2330  
   9  

**Total Hours**  
62

“The science and computer labs are in great condition and have a lot of useful resources. The computer labs in Ozuna were all up-to-date and the computers are functioning when you need them, rather than having to share time with another student.”

William “T.J.” Thompson  
Dual Credit Student
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**
   - Composition: ENGL 1301, ENGL 1302, SPCH 1311, 1318, 1321, 2341

2. **Mathematics**
   - MATH 1314 or higher

3. **Natural Sciences**
   - Natural Lab Science, Second Natural Science

4. **Humanities & Visual and Performing Arts**
   - Humanities: ENGL, HUMA, PHIL, or SPAN
   - Visual and Performing Arts: ARTS, DRAM, MUSI, or DANC

5. **Social and Behavioral Sciences**
   - History: HIST 1301, HIST 1302
   - Government: GOVT 2305, GOVT 2306
   - Social/Behavioral Sciences: CRIJ 1301

6. **Computer Literacy**
   - COSC 1300, COSC 1301, or BCIS 1305

7. **Kinesiology**
   - KINE

8. **Major Field of Study**
   - CRIJ 1306, CRIJ 1307, CRIJ 1310, CRIJ 2313, CRIJ 2328, CRIJ 2314 or 1313

**Total Hours:** 65-66
Field of Study Curriculum for Criminal Justice

<table>
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<tr>
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<td>Introduction to Criminal Justice</td>
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<tr>
<td>CRIJ 1306</td>
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<td>Court Systems &amp; Practices</td>
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<td>CRIJ 1310</td>
<td>3</td>
<td>Fundamentals of Criminal Law</td>
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<td>CRIJ 2313</td>
<td>3</td>
<td>Correctional Systems &amp; Practices</td>
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<td>CRIJ 2328</td>
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<td>Police Systems &amp; Practices</td>
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</table>

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**
   - Composition: ENGL 1301 3
   - ENGL 1302 3
   - Speech: SPCH 1311, 1318, 1321, or 2341 3

2. **Mathematics**
   - MATH 1314 or higher 3

3. **Natural Sciences**
   - Natural Science Lab 4
   - Second Natural Science 3
   - BIOL, CHEM, ENVR, GEOL, PHYS

4. **Humanities & Visual and Performing Arts**
   - Humanities: ENGL, SPAN, HUMA, or PHIL 6
   - Visual and Performing Arts: ARTS, DRAM, MUSI, DANC 3

5. **Social and Behavioral Sciences**
   - History: HIST 1301 3
   - HIST 1302 3
   - Government: GOVT 2305 3
   - GOVT 2306 3
   - Social/Behavioral Sciences: CRIJ 1301 3

6. **Computer Literacy**
   - COSC 1300, COSC 1301, or BCIS 1305 3

7. **Kinesiology**
   - KINE 1-2

8. **Major Field of Study**
   - CRIJ 1307 3
   - CRIJ 1306 or 1310 3
   - CRIJ 2328 3
   - FORS 2440* 4
   - FORS 2450* 4

**Total Hours**: 65
CRIMINAL JUSTICE
WITH A CONCENTRATION IN LEGAL STUDIES

The Criminal Justice degree with a concentration in legal studies prepares those students who are pursuing a career as a prosecuting attorney, defense attorney, judge, paralegal, or legal assistant in the criminal justice field. 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 15 hours of Criminal Justice course requirements and a Technical Writing course. 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, on transfer agreements with specific universities.

Associate of Arts in Criminal Justice (3051)

1. Communication
   - Composition
     - ENGL 1301
     - ENGL 1302
   - Speech
     - SPCH 1311, 1318, 1321, or 2341

2. Mathematics
   - MATH 1314 or higher

3. Natural Sciences
   - Natural Lab Science
   - Second Natural Science
   - BIOL, CHEM, ENVR, GEOL or PHYS

4. Humanities & Visual and Performing Arts
   - Humanities
     - ENGL, SPAN, HUMA, or PHIL
   - Visual and Performing Arts
     - ARTS, DRAM or MUSI

5. Social and Behavioral Sciences
   - History
     - HIST 1301
     - HIST 1302
   - Government
     - GOVT 2305
     - GOVT 2306
   - Social/Behavioral Sciences
     - CRIJ 1301

6. Computer Literacy
   - COSC 1300, COSC 1301, or BCIS 1305

7. Kinesiology
   - KINE

8. Major Field of Study
   - CRIJ 1306
   - CRIJ 1307
   - CRIJ 1310
   - CRIJ 2328, or 2313
   - CRIJ 2323
   - ENGL 2311 (Technical Writing)

Total Hours 66
The Dance program is offered by the Fine & Performing Arts/Speech Communication Department. It provides credit for the fine arts and kinesiology courses required by the Palo Alto College Core Curriculum. The department also offers options for further studies in the field of Dance. The Associate of Arts in Dance prepares students for professions in recreational dance, primary and secondary dance education, dance performance and dance for physical fitness. Careers in Dance may include work in community recreational centers, health and fitness clubs, private dance schools, senior and youth centers, primary and secondary education, dance therapy, fine arts performance, and entertainment.

Dance courses will transfer to four-year institutions with Dance and Dance Education degrees including Texas State University-San Marcos, Sam Houston State University, University of Texas at Austin, University of Texas - Pan American, University of Northern Iowa, and University of Wisconsin-Madison. Please consult with your faculty advisor for further information on Dance degrees offered by these and other institutions.

### Associate of Arts in Dance (3054)

<table>
<thead>
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<th>Category</th>
<th>Courses</th>
</tr>
</thead>
<tbody>
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<tr>
<td>Communication</td>
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<tr>
<td>Composition</td>
<td>ENGL 1301 3</td>
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<td>ENGL 1302 3</td>
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<tr>
<td>Speech</td>
<td>SPCH 1311 or SPCH 2341 3</td>
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<td>2. Mathematics</td>
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<tr>
<td>3. Natural Sciences</td>
<td></td>
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<td>4. Humanities &amp; Visual and</td>
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<td>5. Social and Behavioral Sciences</td>
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<td>Social/Behavioral Sciences</td>
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<td>HIST 1301 3</td>
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<td>7. Kinesiology</td>
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**Total Hours**: 60-62
The Digital Art program provides quality instruction by offering training in industry standard digital media for students majoring in the Arts, leading to the Associate of Arts in Digital Art. It can also lead toward transfer to a four-year degree, BFA or other area of new media and technology arts. The associate degree requires completion of the outlined core curriculum but also offers local certificates, in Digital Art and Digital Photography, which do not require general education courses.

The digital art studio courses require skills development that includes outside work done in the department’s MacLab, which will vary with each student, to achieve course competencies. The program includes a gateway course, ARTS 1313 Foundations of Digital Art, which introduces the student to the media and serves as a pre-requisite for all other courses.

Students who intend to major in Digital Art should meet with their advisor in Fine and Performing Arts to determine their degree plan for Digital Art and to explore their options to apply their skills or transfer to a four-year institution.

### Associate of Arts in Digital Art (3058)

<table>
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<tr>
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<td>2. Mathematics</td>
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<tr>
<td>3. Natural Sciences</td>
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<td>BIOL, CHEM, ENVR, GEOL, or PHYS</td>
<td>3</td>
</tr>
<tr>
<td>4. Humanities &amp; Visual and Performing Arts</td>
<td>Humanities: ENGL, SPAN, FREN, GERM, or HUMA</td>
<td>6</td>
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<tr>
<td></td>
<td>Visual and Performing Arts: ARTS 1301, 1303, 1304, 2316, 2326, or 2346</td>
<td>3</td>
</tr>
<tr>
<td>5. Social and Behavioral Sciences</td>
<td>History: HIST 1301, 1302</td>
<td>6</td>
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<tr>
<td></td>
<td>Government: GOVT 2305, 2306</td>
<td>3</td>
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<tr>
<td></td>
<td>Social/Behavioral Sciences: ANTH, COMM, CRIJ, ECON, GEOG, HIST, PSYC, or SOCI</td>
<td>3</td>
</tr>
<tr>
<td>6. Computer Literacy</td>
<td>COSC 1300, COSC 1301, or BCIS 1305</td>
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</tr>
<tr>
<td>7. Kinesiology</td>
<td>KINE</td>
<td>1-2</td>
</tr>
<tr>
<td>8. Area of Concentration</td>
<td>ARTS 1313, 1325, 2348, 2356 (digital section), 2349, 2357 (digital section), 2389</td>
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**Total Hours**: 64-65
### Digital Art Local Certificate

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARTS 1313</td>
<td>Foundations of Digital Art</td>
<td>3</td>
</tr>
<tr>
<td>ARTS 1325</td>
<td>Digital Drawing and Painting</td>
<td>3</td>
</tr>
<tr>
<td>ARTS 2348</td>
<td>Digital Art I</td>
<td>3</td>
</tr>
<tr>
<td>ARTS 2349</td>
<td>Digital Art II</td>
<td>3</td>
</tr>
<tr>
<td>ARTS 2389</td>
<td>Academic Cooperative in Fine Arts</td>
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</table>

**Total Hours** 14

### Digital Photography Local Certificate

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARTS 1313</td>
<td>Foundations of Digital Art</td>
<td>3</td>
</tr>
<tr>
<td>ARTS 2348</td>
<td>Digital Art I</td>
<td>3</td>
</tr>
<tr>
<td>ARTS 2356</td>
<td>Photo I: Digital Photography I</td>
<td>3</td>
</tr>
<tr>
<td>ARTS 2357</td>
<td>Photo II: Digital Photography II</td>
<td>3</td>
</tr>
<tr>
<td>ARTS 2389</td>
<td>Academic Cooperative in Fine Arts</td>
<td>2</td>
</tr>
</tbody>
</table>

**Total Hours** 14

“All of my professors were very caring. They want to help you. They’re available after class, give you their email and phone numbers, and are very willing to go out of their way for you as a student. The classes were challenging and when you had a question, the professor would stop the class to answer your question.”

Jonathan Truesdell
Transferring to Texas Tech University as Architecture major
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)

<table>
<thead>
<tr>
<th>Category</th>
<th>Courses</th>
</tr>
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<tbody>
<tr>
<td><strong>1. Communication</strong></td>
<td>Composition: ENGL 1301, ENGL 1302, Speech: SPCH 1311 or SPCH 2341</td>
</tr>
<tr>
<td><strong>2. Mathematics</strong></td>
<td>MATH 1332</td>
</tr>
<tr>
<td><strong>3. Natural Sciences</strong></td>
<td>Natural Lab Science, Second Natural Science, BIOL, CHEM, ENVR, GEOL or PHYS</td>
</tr>
<tr>
<td><strong>4. Humanities &amp; Visual and Performing Arts</strong></td>
<td>Humanities: ENGL, SPAN, FREN, GERM, HUMA, or PHIL, Visual and Performing Arts: DRAM 1310</td>
</tr>
<tr>
<td><strong>5. Social and Behavioral Sciences</strong></td>
<td>History: HIST 1301, HIST 1302, Government: GOVT 2305, GOVT 2306, Social/Behavioral Sciences: ANTH, COMM, CRIJ, ECON, GEOG, HIST, PSYC or SOCI</td>
</tr>
<tr>
<td><strong>6. Computer Literacy</strong></td>
<td>COSC 1300, COSC 1301 or BCIS 1305</td>
</tr>
<tr>
<td><strong>7. Kinesiology</strong></td>
<td>KINE</td>
</tr>
<tr>
<td><strong>8. Area of Concentration</strong></td>
<td>DRAM 1341, DRAM 1351, DRAM 1352, DRAM 2336, DRAM 2351, DRAM 1120 (4 technical lab hours over 4 semesters)</td>
</tr>
</tbody>
</table>

**Total Hours**: 63-65
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 public 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 hours)
   - Composition
     - ENGL 1301 3
     - ENGL 1302 3
   - Speech
     - SPCH 1311 3

2. **Mathematics** (3 hours)
   - MATH 1314

3. **Natural Sciences** (7 hours)
   - Natural Lab Science 4
   - Second Natural Science 3
   - BIOL, CHEM, ENVIR, GEOL or PHYS

4. **Humanities & Visual and Performing Arts** (9 hours)
   - Humanities
     - ENGL, SPAN, FREN, GERM, HUMA, or PHIL
   - Visual and Performing Arts
     - ARTS, DRAM, MUSI, or DANC

5. **Social and Behavioral Sciences** (15 hours)
   - History
     - HIST 1301 3
     - HIST 1302 3
   - Government
     - GOVT 2305 3
     - GOVT 2306 3
   - Social/Behavioral Sciences
     - ANTH, COMM, CRIJ, GEOG, HIST, PSYC or SOCI

6. **Computer Literacy** (3 hours)
   - COSC 1300, COSC 1301 or BCIS 1305

7. **Kinesiology** (2 hours)
   - KINE

8. **Area of Concentration** (15 hours)
   - 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
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
Laura Aten, East Central ISD
Jesse Aldana, South San Antonio ISD
Robert Jaklich, Harlandale ISD
Rose Longoria, Harlandale ISD
Christine Moczygemba, Natalia ISD
Joey Moczygemba, Natalia ISD
Kevin Murray, Southside ISD

Associate of Applied Science in Education Aide (3573)
First Year
First Semester – 15 Hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>CDEC 1359</td>
<td>Children with Special Needs</td>
<td>3</td>
</tr>
<tr>
<td>CDEC 1356</td>
<td>Emergent Literacy for Early Childhood</td>
<td>3</td>
</tr>
<tr>
<td>or EDTC 1307</td>
<td>Teaching Reading in the Elementary School</td>
<td>3</td>
</tr>
<tr>
<td>or EDTC 1313</td>
<td>Introduction to Educational Software and Technology</td>
<td>3</td>
</tr>
<tr>
<td>or EDTC 1311</td>
<td>Instructional Practices – Effective Learning Environments</td>
<td>3</td>
</tr>
<tr>
<td>or LBRA 1391</td>
<td>Special Topics in Library Assistant: Information Sources &amp; Services</td>
<td>3</td>
</tr>
<tr>
<td>or EDTC 1301</td>
<td>Instructional Practices – Educational Processes</td>
<td>3</td>
</tr>
<tr>
<td>or EDTC 1325</td>
<td>Principles and Practices of Multicultural Education</td>
<td>3</td>
</tr>
<tr>
<td>or BMGT 1345</td>
<td>Communication Skills for Managers: Introduction to Libraries</td>
<td>3</td>
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Second Semester – 15 Hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>CDEC 1354</td>
<td>Child Growth and Development</td>
<td>3</td>
</tr>
<tr>
<td>or LBRA 1391</td>
<td>Special Topics: Acquisitions &amp; Cataloging</td>
<td>3</td>
</tr>
<tr>
<td>or CDEC 1313</td>
<td>Curriculum Resources for EC Programs</td>
<td>3</td>
</tr>
<tr>
<td>or EDTC 1321</td>
<td>Bilingual Education</td>
<td>3</td>
</tr>
<tr>
<td>or EDTC 2305</td>
<td>Reading Problems</td>
<td>3</td>
</tr>
<tr>
<td>or SGNL 1301</td>
<td>American Sign Language</td>
<td>3</td>
</tr>
<tr>
<td>or ENGL 1301</td>
<td>Freshman Composition I</td>
<td>3</td>
</tr>
<tr>
<td>or SPCH 1311</td>
<td>Fundamentals of Speech</td>
<td>3</td>
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</table>
# Summer Session I & II – 6 Hours
ENGL 1302 Freshman Composition II 3
Elective Social Science 3

## Second Year

### First Semester – 12 Hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>CDEC</td>
<td>2307</td>
<td>Math and Sciences for Early Childhood</td>
<td>3</td>
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<tr>
<td>or</td>
<td>LBRA</td>
<td>1391</td>
<td>Special Topics in Library Assistant: Public Services</td>
</tr>
<tr>
<td>or</td>
<td>EDTC</td>
<td>2317</td>
<td>Guiding Student Behavior</td>
</tr>
<tr>
<td>or</td>
<td>HUMA</td>
<td>1301</td>
<td>Introduction to the Humanities</td>
</tr>
<tr>
<td>or</td>
<td>MATH</td>
<td>1314</td>
<td>College Algebra</td>
</tr>
<tr>
<td>or</td>
<td>MATH</td>
<td>1332</td>
<td>Math for Liberal Arts</td>
</tr>
<tr>
<td>or</td>
<td>BIOL</td>
<td>2306</td>
<td>Environmental Biology</td>
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</table>

### Second Semester – 16 Hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>SPAN</td>
<td>1411</td>
<td>Elementary Spanish I</td>
<td>4</td>
</tr>
<tr>
<td>CDEC</td>
<td>2341</td>
<td>The School Age Child</td>
<td>3</td>
</tr>
<tr>
<td>ENGL</td>
<td>2375</td>
<td>Children and Adolescent’s Literature</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td>COMM</td>
<td>1307</td>
<td>Introduction to Mass Communications</td>
</tr>
<tr>
<td>or</td>
<td>CDEC</td>
<td>1311</td>
<td>Introduction to Early Childhood Education</td>
</tr>
<tr>
<td>or</td>
<td>TECA</td>
<td>1311</td>
<td>Introduction to Early Childhood Education</td>
</tr>
<tr>
<td>or</td>
<td>PSYC</td>
<td>2307</td>
<td>Adolescent Psychology I</td>
</tr>
<tr>
<td>or</td>
<td>EDTC</td>
<td>1364*</td>
<td>Practicum (Field Experience) Teacher’s Assistant</td>
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<tr>
<td>or</td>
<td>COMM</td>
<td>2289</td>
<td>Practicum In Communication &amp; Library Seminar</td>
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</tbody>
</table>

* Capstone Course for AAS degree

**Total Hours 64/65**
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

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>EDTC 1325</td>
<td>Principles and Practices of Multicultural Education</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td>EDTC 1301 Instructional Practices - Educational Processes</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td>EDTC 1307 Teaching Reading in the Elementary School</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td>CDEC 1356 Emergent Literacy for Early Childhood</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td>EDTC 1313 Educational Technology and Software</td>
<td>3</td>
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<tr>
<td>or</td>
<td>CDEC 1354 Child Growth and Development</td>
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<td>ENGL 1301</td>
<td>Freshman Composition I</td>
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Second Semester – 16 Hours

<table>
<thead>
<tr>
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<th>Course Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>CDEC 1359</td>
<td>Children with Special Needs</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 1302</td>
<td>Freshman Composition II</td>
<td>3</td>
</tr>
<tr>
<td>EDTC 2305</td>
<td>Reading Problems</td>
<td>3</td>
</tr>
<tr>
<td>EDTC 1321</td>
<td>Bilingual Education</td>
<td>3</td>
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<tr>
<td>or</td>
<td>CDEC 1313 Curriculum Resources for EC Programs</td>
<td>3</td>
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<tr>
<td>SPAN 1411</td>
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<td>SPAN 1412 Elementary Spanish II</td>
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Summer Session I or II – 6 Hours

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<tr>
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<th>Course Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>EDTC 1311*</td>
<td>Instructional Practices – Effective Learning Environments</td>
<td>3</td>
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<tr>
<td>SPCH 1311</td>
<td>Fundamentals of Speech</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td>SPCH 1318 Interpersonal Communication</td>
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</table>

* Capstone course for 37-hour certificate

Total Hours 37
ELECTRO-MECHANICAL TECHNOLOGY
(SEE INDUSTRIAL AUTOMATION)

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

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>CHEM</td>
<td>General Chemistry I</td>
<td>3</td>
</tr>
<tr>
<td>CHEM</td>
<td>General Chemistry Laboratory I</td>
<td>1</td>
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<tr>
<td>ENGL</td>
<td>Freshman Composition I</td>
<td>3</td>
</tr>
<tr>
<td>ENGR</td>
<td>Introduction to Engineering</td>
<td>2</td>
</tr>
<tr>
<td>GOVT</td>
<td>National Government</td>
<td>3</td>
</tr>
<tr>
<td>MATH</td>
<td>Calculus I</td>
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Second Semester – 17 Hours

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<th>Course</th>
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<tbody>
<tr>
<td>ENGL</td>
<td>Freshman Composition II</td>
<td>3</td>
</tr>
<tr>
<td>ENGR</td>
<td>Engineering Graphics</td>
<td>3</td>
</tr>
<tr>
<td>ENGR</td>
<td>Statics/Dynamics</td>
<td>3</td>
</tr>
<tr>
<td>GOVT</td>
<td>State Government</td>
<td>3</td>
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<tr>
<td>MATH</td>
<td>Calculus II</td>
<td>4</td>
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Second Year
First Semester – 16 Hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>ARTS</td>
<td>Art History Survey I</td>
<td>3</td>
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<tr>
<td>ECON</td>
<td>Principles of Microeconomics</td>
<td>3</td>
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<tr>
<td>HIST</td>
<td>History of the United States, Part I</td>
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<td>PHYS</td>
<td>University Physics I</td>
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<tr>
<td>SPCH</td>
<td>Business and Professional Speech</td>
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Second Semester – 16 Hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>ENGR</td>
<td>Plane Surveying</td>
<td>3</td>
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<tr>
<td>ENGR</td>
<td>Computer Programming for Engineering</td>
<td>3</td>
</tr>
<tr>
<td>ENGR</td>
<td>Mechanics of Solids</td>
<td>3</td>
</tr>
<tr>
<td>HIST</td>
<td>History of the United States, Part II</td>
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<tr>
<td>PHYS</td>
<td>University Physics II</td>
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</table>

* ENGR 2304 or COSC 1300

Total Hours 65
## Associate of Science in Electrical Engineering (3120)

### First Year

**First Semester – 16 Hours**

<table>
<thead>
<tr>
<th>Course</th>
<th>Number</th>
<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>CHEM</td>
<td>1311</td>
<td>General Chemistry I</td>
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<td>General Chemistry Laboratory I</td>
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<td>ENGL</td>
<td>1301</td>
<td>Freshman Composition I</td>
<td>3</td>
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<tr>
<td>ENGR</td>
<td>1201</td>
<td>Introduction to Engineering</td>
<td>2</td>
</tr>
<tr>
<td>GOVT</td>
<td>2305</td>
<td>National Government</td>
<td>3</td>
</tr>
<tr>
<td>MATH</td>
<td>2413</td>
<td>Calculus I</td>
<td>4</td>
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**Second Semester – 17 Hours**

<table>
<thead>
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<th>Course</th>
<th>Number</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>ENGL</td>
<td>1302</td>
<td>Freshman Composition II</td>
<td>3</td>
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<tr>
<td>ENGR</td>
<td>1304</td>
<td>Engineering Graphics</td>
<td>3</td>
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<tr>
<td>ENGR</td>
<td>2303</td>
<td>Statics/Dynamics</td>
<td>3</td>
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<td>GOVT</td>
<td>2306</td>
<td>State Government</td>
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### Second Year

**First Semester – 16 Hours**

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<td>ECON</td>
<td>2302</td>
<td>Principles of Microeconomics</td>
<td>3</td>
</tr>
<tr>
<td>ENGL</td>
<td>2311</td>
<td>Technical Writing</td>
<td>3</td>
</tr>
<tr>
<td>HIST</td>
<td>1301</td>
<td>History of the United States, Part I</td>
<td>3</td>
</tr>
<tr>
<td>PHYS</td>
<td>2425</td>
<td>University Physics I</td>
<td>4</td>
</tr>
<tr>
<td>SPCH</td>
<td>1321</td>
<td>Business and Professional Speech</td>
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**Second Semester – 16 Hours**

<table>
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<tr>
<th>Course</th>
<th>Number</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>ARTS</td>
<td>1303</td>
<td>Art History Survey I</td>
<td>3</td>
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<tr>
<td>ENGR</td>
<td>2304*</td>
<td>Computer Programming for Engineering</td>
<td>3</td>
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<td>ENGR</td>
<td>2305</td>
<td>Circuits I for Electrical Engineering</td>
<td>3</td>
</tr>
<tr>
<td>HIST</td>
<td>1302</td>
<td>History of the United States, Part II</td>
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* ENGR 2304 or COSC 1300

**Total Hours** 65
### Associate of Science in Mechanical Engineering (3121)

#### First Year

**First Semester – 16 Hours**

<table>
<thead>
<tr>
<th>Course</th>
<th>KINE 1301</th>
<th>General Chemistry I</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM</td>
<td>1111</td>
<td>General Chemistry Laboratory I</td>
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<tr>
<td>ENGL</td>
<td>1201</td>
<td>Introduction to Engineering</td>
<td>2</td>
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<td>GOVT</td>
<td>2305</td>
<td>National Government</td>
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<td>MATH</td>
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<td>Calculus I</td>
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**Second Semester – 17 Hours**

<table>
<thead>
<tr>
<th>Course</th>
<th>KINE 1301</th>
<th>Freshman Composition II</th>
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<tbody>
<tr>
<td>ENGR</td>
<td>2303</td>
<td>Statics/Dynamics</td>
<td>3</td>
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<td>GOVT</td>
<td>2306</td>
<td>State Government</td>
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<td>MATH</td>
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**Second Year**

**First Semester – 16 Hours**

<table>
<thead>
<tr>
<th>Course</th>
<th>KINE 1301</th>
<th>Principles of Microeconomics</th>
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<tbody>
<tr>
<td>ENGR</td>
<td>2304*</td>
<td>Computer Programming for Engineering</td>
<td>3</td>
</tr>
<tr>
<td>HIST</td>
<td>2302</td>
<td>History of the United States, Part I</td>
<td>3</td>
</tr>
<tr>
<td>PHYS</td>
<td>2425</td>
<td>University Physics I</td>
<td>4</td>
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<tr>
<td>SPCH</td>
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<td>Business and Professional Speech</td>
<td>3</td>
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**Second Semester – 16 Hours**

<table>
<thead>
<tr>
<th>Course</th>
<th>KINE 1301</th>
<th>Art History Survey I</th>
<th>3</th>
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</thead>
<tbody>
<tr>
<td>ENGR</td>
<td>2302</td>
<td>Dynamics</td>
<td>3</td>
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<tr>
<td>ENGR</td>
<td>2332</td>
<td>Mechanics of Solids</td>
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<td>HIST</td>
<td>2302</td>
<td>History of the United States, Part II</td>
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<tr>
<td>PHYS</td>
<td>2426</td>
<td>University Physics II</td>
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</tr>
</tbody>
</table>

* ENGR 2304 or COSC 1300

**Total Hours** 65
ENGINEERING TECHNOLOGY

The Area of Engineering Technology provides high quality, applied engineering technology programs with appeal to a broad range of students. The engineering technologist generally works in the applied part of the engineering spectrum and is playing an increasingly important role in our technological society. The engineering technology program prepares students for those engineering activities that emphasize applying current technology to solve practical industrial problems. The activities of the engineering technologist usually include product development, construction supervision, technical sales, component design, field service engineering, work force coordination, and supervision.

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

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
HIST 1301 History of the United States, Part I 3
MATH 2413 Calculus I 4

Second Semester – 16 Hours
ENGL 1302 Freshman Composition II 3
ENGR 1304 Engineering Graphics 3
GOVT 2305 National Government 3
HIST 1302 History of the United States, Part II 3
MATH 2414 Calculus II 4

Second Year
First Semester – 18 Hours
GOVT 2306 State Government 3
ENGR 1307 Plane Surveying 3
ENGR 2304* Computer Programming 3
ENGT 1409 AC/DC Circuits 4
PHYS 2425 University Physics I 4
Course KINE 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 66
Associate of Science in Electrical and Electronics Engineering Technology (3201)

First Year
First Semester – 16 Hours

<table>
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<tr>
<td>ENGL</td>
<td>1301</td>
<td>Freshman Composition I</td>
<td>3</td>
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<tr>
<td>ENGR</td>
<td>1201</td>
<td>Introduction to Engineering</td>
<td>2</td>
</tr>
<tr>
<td>HIST</td>
<td>1301</td>
<td>History of the United States, Part I</td>
<td>3</td>
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<tr>
<td>MATH</td>
<td>2413</td>
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Second Semester – 19 Hours

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<td>Art Appreciation</td>
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<tr>
<td>ENGL</td>
<td>1302</td>
<td>Freshman Composition II</td>
<td>3</td>
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<td>1304</td>
<td>Engineering Graphics</td>
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<tr>
<td>HIST</td>
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<td>History of the United States, Part II</td>
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Second Year
First Semester – 12 Hours

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<tbody>
<tr>
<td>ENGR</td>
<td>2304*</td>
<td>Computer Programming for Engineering</td>
<td>3</td>
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<tr>
<td>ENGT</td>
<td>1401</td>
<td>Circuits I</td>
<td>4</td>
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<tr>
<td>PHYS</td>
<td>2425</td>
<td>University Physics I</td>
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Second Semester – 18 Hours

<table>
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<tbody>
<tr>
<td>ECON</td>
<td>2301</td>
<td>Principles of Macroeconomics</td>
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<td>ENGT</td>
<td>1402</td>
<td>Circuits II</td>
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<td>ENGT</td>
<td>1407</td>
<td>Digital Fundamentals</td>
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<td>2306</td>
<td>State Government</td>
<td>3</td>
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<td>PHYS</td>
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<td>University Physics II</td>
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* ENGR 2304 or COSC 1300

Total Hours 65
Associate of Science in Manufacturing and Mechanical Engineering Technology (3202)

First Year
First Semester – 13 Hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Code</th>
<th>Title</th>
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<tbody>
<tr>
<td>CHEM</td>
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<td>General Chemistry I</td>
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<td>CHEM</td>
<td>1111</td>
<td>General Chemistry Laboratory I</td>
<td>1</td>
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<tr>
<td>ENGL</td>
<td>1301</td>
<td>Freshman Composition I</td>
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<tr>
<td>ENGR</td>
<td>1201</td>
<td>Introduction to Engineering</td>
<td>2</td>
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<tr>
<td>MATH</td>
<td>2413</td>
<td>Calculus I</td>
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Second Semester – 19 Hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
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<tbody>
<tr>
<td>ENGL</td>
<td>1302</td>
<td>Freshman Composition II</td>
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<tr>
<td>ENGR</td>
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<td>Engineering Graphics</td>
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<td>2310</td>
<td>Introduction to Manufacturing Processes I</td>
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<td>HIST</td>
<td>1302</td>
<td>History of the United States, Part II</td>
<td>3</td>
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<td>GOVT</td>
<td>2305</td>
<td>National Government</td>
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<tr>
<td>MATH</td>
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Second Year
First Semester – 14 Hours

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<td>2311</td>
<td>Technical Writing</td>
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<tr>
<td>ENGR</td>
<td>2304*</td>
<td>Computer Programming for Engineering</td>
<td>3</td>
</tr>
<tr>
<td>HIST</td>
<td>1301</td>
<td>History of the United States, Part I</td>
<td>3</td>
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<tr>
<td>PHYS</td>
<td>2425</td>
<td>University Physics I</td>
<td>4</td>
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<td>Course</td>
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Second Semester – 16 Hours

<table>
<thead>
<tr>
<th>Course</th>
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<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>ARTS</td>
<td>1301</td>
<td>Art Appreciation</td>
<td>3</td>
</tr>
<tr>
<td>ECON</td>
<td>2301</td>
<td>Principles of Macroeconomics</td>
<td>3</td>
</tr>
<tr>
<td>ENGT</td>
<td>2307</td>
<td>Engineering Materials I</td>
<td>3</td>
</tr>
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<td>GOVT</td>
<td>2306</td>
<td>State Government</td>
<td>3</td>
</tr>
<tr>
<td>PHYS</td>
<td>2426</td>
<td>University Physics II</td>
<td>4</td>
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</tbody>
</table>

* ENGR 2304 or COSC 1300

Total Hours: 62
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**
   - Composition: ENGL 1301 3
   - Speech: SPCH 1311 or SPCH 2341 3

2. **Mathematics**
   - MATH 1332 3

3. **Natural Sciences**
   - Natural Lab Science: 4
   - Second Natural Science: 3
   - BIOL, CHEM, ENVR, GEOL or PHYS

4. **Humanities & Visual and Performing Arts**
   - Humanities: HUMA 1301 3
   - Visual and Performing Arts: ARTS, DRAM, MUSI, or DANC 3

5. **Social and Behavioral Sciences**
   - History: HIST 1301 3
   - GOVT 2305 3
   - GOVT 2306 3
   - Social/Behavioral Sciences: COMM 1307 3

6. **Computer Literacy**
   - COSC 1300, COSC 1301, or BCIS 2303 3

7. **Kinesiology**
   - KINE 1-2

8. **Area of Concentration**
   - ENGL 2322, ENGL 2323, ENGL 2333, ENGL 2328 3

Total Hours 60
## ENVIRONMENTAL STUDIES

This course of study will assist the student in pursuing a bachelor’s degree in the Environmental Sciences. With increasing concerns of our relationship and dependency upon our environment, a degree in Environmental Science will be on the forefront of identifying environmental problems, developing solutions, and monitoring environmental conditions. A degree in Environmental Science prepares students by providing them with skills in many areas of the Environmental Sciences. The main areas of study will be natural resources including biological, geological and chemical aspects of environmental processes. The concerns we have with our environment will require personnel who are educated in more than one discipline, highly trained in technical skills, and aware of the political and social dimensions of environmental decisions.

### Associate of Science in Environmental Studies (3204)

1. **Communication**
   - Composition: ENGL 1301 3, ENGL 1302 3, SPCH 1311, 1318, or 1321 3
2. **Mathematics**
   - MATH 1314 or higher 3, Second MATH course** 3
3. **Science**
   - Two sequential lab courses from: BIOL 1406 and BIOL 1407 4, CHEM 1311/1111 and CHEM 1312/1112 4, PHYS 1401 and 1402 4
4. **Humanities & Visual and Performing Arts**
   - Humanities: ENGL 2322, 2323, 2327, 2328, 2332 or 2333* 3, Elective from HUMA, PHIL or Foreign Language 3, ARTS, DRAM, MUSI, DANC 3
5. **Social and Behavioral Sciences**
   - History: HIST 1301 3, HIST 1302 3, GOVT 2305 3, GOVT 2306 3, ANTH, COMM, CRIJ, ECON, GEOG, HIST, PSYC or SOCI 3
6. **Computer Literacy**
   - COSC 1300, COSC 1301, or BCIS 1305 3
7. **Kinesiology**
   - KINE or DANC 2
8. **Area of Concentration**
   - BIOL 2306/2106 4, GEOG 1301 3, GEOL 1305 3, GEOL 1403 3

**Total Hours 66**

* Some university degree plans require one literature course; others will require technical writing. Check the degree plan of the university to which you wish to transfer for the specific math course requirements.

** Some university degree plans require calculus while others will require statistics. Check the degree plan of the university to which you wish to transfer for the specific course requirements.

*** The student is encouraged to carefully examine requirements at the transfer institution. Requirements vary from institution to institution and can change from one year to the next.
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
   Composition
   ENGL 1301 3
   ENGL 1302 3
   Speech
   SPCH 1311 or SPCH 2341 3

2. Mathematics
   MATH 1332 3

3. Natural Sciences
   Natural Lab Science 4
   Second Natural Science 3
   BIOL, CHEM, ENVR, GEOL or PHYS

4. Humanities & Visual and Performing Arts
   Humanities
   ENGL 2332 3
   ENGL 2333 3
   Visual and Performing Arts
   ARTS, DRAM, MUSI, or DANC 3

5. Social and Behavioral Sciences
   History
   HIST 1301 3
   HIST 1302 3
   Government
   GOVT 2305 3
   GOVT 2306 3
   Social/Behavioral Sciences
   ANTH 2346 3

6. Computer Literacy
   COSC 1300, COSC 1301, or BCIS 1305 3

7. Kinesiology
   KINE 1-2

8. Area of Concentration
   SPAN 1411 4
   SPAN 1412 4
   SPAN 2311 3
   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 4
   PHYS 1401/1402 4

4. Humanities & Visual and Performing Arts 6
   Humanities  
   ENGL, FREN, GERM, HUMA, or PHIL 3
   Visual and Performing Arts  
   ARTS, DRAM, MUSI, DANC 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, 3
   GEOG, HIST, PSYC or SOCI 3

6. Computer Literacy 3
   COSC 1300, COSC 1301, or DANC 3

7. Kinesiology 1
   KINE 1

8. Area of Concentration 16
   GEOL 1403 4
   GEOL 1404 4
   GEOL 1445 4
   GEOL 1446 4

Total Hours 66
GOVERNMENT

The Associate of Arts degree in Government provides the student with an understanding of the philosophical foundation of governing institutions, the framework of governing institutions at all levels of government, the functions of governing systems, the importance of the political process and the impact these governing institutions have on the daily lives of their citizens. The program also emphasizes interdependency of government with all other social sciences.

### Associate of Arts in Government (3012)

<table>
<thead>
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<th>Requirement</th>
<th>Courses</th>
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<tbody>
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<td>Composition: ENGL 1301 3, ENGL 1302 3, Speech: SPCH 1311 3</td>
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<tr>
<td>2. Mathematics</td>
<td>MATH 1314 3</td>
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<td>3. Natural Sciences</td>
<td>Natural Lab Science: 4, Second Natural Science: 3</td>
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<td></td>
<td>BIOL, CHEM, ENV, GEOL, or PHYS</td>
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<td>4. Humanities &amp; Visual and Performing Arts</td>
<td>Humanities: ENGL, FREN, GERM, HUMA, or PHIL, Visual and Performing Arts: ARTS, DRAM, MUSI, or DANC</td>
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<td>5. Social and Behavioral Sciences</td>
<td>HIST 1301 3, HIST 1302 3, ANTH, COMM, CRIJ, ECON, GEOG, HIST, PSYC, or SOCI</td>
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<td>6. Computer Literacy</td>
<td>COSC 1300, COSC 1301, or BCIS 1305</td>
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<td>7. Kinesiology</td>
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<td>8. Area of Concentration</td>
<td>GOVT 2305 3, GOVT 2306 3</td>
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<td>Choose 2 of the following:</td>
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</table>
HEALTH

The Department of Kinesiology & Health – 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, or PHIL 3
   Visual and Performing Arts
      ARTS, DRAM, MUSI, or DANC 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, PSYC, or SOCI 3

6. Computer Literacy 3
   COSC 1300, COSC 1301 or BCIS 1305 3

7. Kinesiology 2
   Any KINE 1
   Any KINE 1

8. Area of Concentration 12
   KINE 1304 3
   KINE 1305 3
   KINE 1306 3
   KINE 1346 3

Total Hours 62
Palo Alto College offers a variety of History courses leading toward 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.


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 Journalism programs.

### Associate of Arts in History (3013)

1. **Communication**  
   - Composition: ENGL 1301 3  
   - Speech: ENGL 1302, SPCH 1311, 1318, 1321 or 2341 3

2. **Mathematics**  
   - MATH 1314 or higher 3

3. **Natural Sciences**  
   - Natural Lab Science 4  
   - Second Natural Science 3

4. **Humanities & Visual and Performing Arts**  
   - Humanities: ENGL, FREN, GERM, HUMA, or PHIL 6  
   - Visual and Performing Arts: ARTS, DRAM, MUSI, DANC 3

5. **Social and Behavioral Sciences**  
   - History: HIST 1301, HIST 1302 3  
   - Government: GOVT 2305, GOVT 2306 3  
   - Social/Behavioral Sciences: ANTH, COMM, CRIJ, ECON, GEOG, HIST, PSYC or SOCI 3

6. **Computer Literacy**  
   - COSC 1300, COSC 1301, or BCIS 1305 3

7. **Kinesiology**  
   - KINE 1-2

8. **Area of Concentration**  
   - Students may select from any of the following History Courses: 2301, 2311, 2312, 2313, 2314, 2321, 2322, 2323, 2327, 2328, and 2381 12

**Total Hours** 60
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)

<table>
<thead>
<tr>
<th>Category</th>
<th>Courses</th>
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<tbody>
<tr>
<td>1. <strong>Communication</strong></td>
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<tr>
<td>Composition</td>
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<td>ENGL 1302 3</td>
</tr>
<tr>
<td>Speech</td>
<td>SPCH 1311, 1318, 1321 or 2341 3</td>
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<td>2. <strong>Mathematics</strong></td>
<td>MATH 1314 or higher 3</td>
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<td>3. <strong>Natural Sciences</strong></td>
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<td>BIOL 2306 3</td>
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<td>6. <strong>Computer Literacy</strong></td>
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<td>KINE 2</td>
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<td>7. <strong>Kinesiology</strong></td>
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<td>8. <strong>Area of Concentration</strong></td>
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<tr>
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<td>HUMA 1302 3</td>
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<tr>
<td>Students may select any 2 of the following courses:</td>
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<tr>
<td>HUMA 1305, HUMA 1311, HUMA 2323, PHIL 1304, PHIL 2306 6</td>
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**Total Hours** 60
Industrial Automation is the incorporation of new technologies and advanced manufacturing processes into today’s workplace. The evolution of automated manufacturing and the integration of new technologies with other standard technologies are the two trends that have forced a new training approach to the industrial workforce. This new strategy requires a different view of training industry’s current workforce needs. Past needs required highly specialized technicians in very specific areas. Today’s requirements are for technicians trained in many different areas. The combination of electrical, electronic, fluid power, and mechanical devices have blurred the traditional electronic and mechanical lines. As a result, industry is demanding qualified multi-skilled technicians.

Some examples of employment industries are Food and Bottling, Manufacturing, Automotive, Pharmaceutical, Chemical, Petroleum, and many more process-driven industries.

Advisory Committee
Les Casler, DPT Laboratories Ltd.
Jim Luther, H-E-B Facility Services
Hugo Rodriguez, Pioneer Flour Mills
Bill Sherrill, Advance Technologies Consultants
Bill Sturgis, Roosevelt High School
John Swift, SMI Steel Mill
Johnny B. Wallace, Southwest Research Institute

Please review online catalog for possible changes made to this program.

Associate of Applied Science in Industrial Automation Technology (3570)

First Year
First Semester – 16 Hours

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<th>Course</th>
<th>Title</th>
<th>Hours</th>
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<td>CETT</td>
<td>1303 DC Circuits</td>
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<tr>
<td>ELMT</td>
<td>1391 Introduction to Industrial Automation</td>
<td>3</td>
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<tr>
<td>ENGL</td>
<td>1301 Freshman Composition</td>
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<td>EEIR</td>
<td>1301 Math for Electronic Technicians</td>
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<td>PHYS</td>
<td>1405 Introduction to Physics</td>
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Second Semester – 16 Hours

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<thead>
<tr>
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<td>CETT</td>
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<tr>
<td>CETT</td>
<td>1415 Digital Applications</td>
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<tr>
<td>CETT</td>
<td>1321 Electronic Fabrication</td>
<td>3</td>
</tr>
<tr>
<td>ENGL</td>
<td>2311 Technical Writing</td>
<td>3</td>
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<tr>
<td>INCR</td>
<td>1302 Physics of Instrumentation</td>
<td>3</td>
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</table>
Summer Session – 6 Hours
ELMT  1305  Basic Fluid Power  3
HUMA  1301  Introduction to Humanities  3
or
PHIL  1301  Introduction to Philosophy
or
PHIL  2303  Logic
or
PHIL  2306  Ethics

Second Year
First Semester – 15 Hours
CETT  1329  Solid State Devices  3
RBTC  1305  Robotic Fundamentals  3
ELMT  1301  Programmable Logic Controllers  3
ENTC  1349  Reliability and Maintainability  3
INTC  1357  AC/DC Motor Control  3

Second Semester – 12 Hours
ELMT  2333  Industrial Electronics  3
ELMT  2339  Advanced Programmable Logic Controllers  3
ELMT  2341  Electromechanical Systems  3
ELMT  2337*  Electronic Troubleshooting, Service, & Repair  3
or
ELMT  2380*  Co-Op Education

Summer Session – 3 Hours
SOCI  1301  Introduction to Sociology  3
or
PSYC  2301  Introduction to Psychology

* Capstone for Award

Total Hours 68

Industrial Automation Helper Level I Certificate (3602)
CETT  1303  DC Circuits  3
CETT  1305  AC Circuits  3
ELMT  1305*  Basic Fluid Power  3
INTC  1312  Intro to Instrumentation & Safety  3
ELMT  1391  Intro to Industrial Automation  3
EEIR  1301  Math for Electronic Technicians  3

Total Hours 15
### Industrial Automation Associate Level I Certificate (3603)

**First Semester – 18 Hours**

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<td>CETT 1305</td>
<td>AC Circuits</td>
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<tr>
<td>ELMT 1305</td>
<td>Basic Fluid Power</td>
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<tr>
<td>INTC 1312</td>
<td>Intro to Instrumentation &amp; Safety</td>
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<tr>
<td>ELMT 1391</td>
<td>Intro to Industrial Automation</td>
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<td>EEIR 1301</td>
<td>Math for Electronic Technicians</td>
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**Second Semester – 16 Hours**

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<tr>
<td>CETT 1321</td>
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<tr>
<td>ELMT 1301*</td>
<td>Programmable Logic Controllers</td>
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<tr>
<td>ENTC 1349</td>
<td>Reliability &amp; Maintainability</td>
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<td>INCR 1302</td>
<td>Physics of Instrumentations</td>
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**Total Hours** 37

### Industrial Automation Assistant Level 2 Certificate (3604)

**First Year**

**First Semester – 15 Hours**

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<td>CETT 1305</td>
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<td>ELMT 1305</td>
<td>Basic Fluid Power</td>
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</tr>
<tr>
<td>INTC 1312</td>
<td>Intro to Instrumentation &amp; Safety</td>
<td>3</td>
</tr>
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<td>ELMT 1391</td>
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<td>EEIR 1301</td>
<td>Math for Electronic Technicians</td>
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**Second Semester – 16 Hours**

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<th>Course Code</th>
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<th>Hours</th>
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<tr>
<td>CETT 1415</td>
<td>Digital Applications</td>
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</tr>
<tr>
<td>CETT 1321</td>
<td>Electronic Fabrication</td>
<td>3</td>
</tr>
<tr>
<td>ELMT 1301*</td>
<td>Programmable Logic Controllers</td>
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<tr>
<td>ENTC 1349</td>
<td>Reliability &amp; Maintainability</td>
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<tr>
<td>INCR 1302</td>
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**Second Year**

**First Semester – 15 Hours**

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<td>ELMT 2339</td>
<td>Advanced Programmable Logic Controllers</td>
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<tr>
<td>ELMT 2341</td>
<td>Electromechanical Systems</td>
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<tr>
<td>ELMT 2337*</td>
<td>Electronic Troubleshooting, Service, &amp; Repair</td>
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<td>RBTC 1305</td>
<td>Robotic Fundamentals</td>
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<td>INTC 1357</td>
<td>AC/DC Motor Control</td>
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**Second Semester – 66 Hours**

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<tr>
<td>ELMT 2333</td>
<td>Industrial Electronics</td>
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</table>

* Capstone for Award

**Total Hours** 52
INTERNATIONAL RELATIONS

This A.A. degree follows the 2+2 plan with St. Mary’s University. Please see your academic advisor for other 2+2 plans with area colleges and universities.

The field of international relations involves cultural, economic, environmental, military and political interactions among states, international organizations, transnational corporations and nongovernmental agencies. The courses from the Palo Alto College Core Curriculum coupled with intensive concentrations in economics, government and/or history will provide the student with a strong foundation in the analytical tools, historical contexts and political processes that play an important role in the daily lives of citizens at the local, national and international levels.

The Associate of Arts in International Relations major provides students with a specialized knowledge of world affairs and is designed to serve as a springboard for students wishing to pursue a Bachelor of Arts at a four-year university in fields such as pre-law, economics, public policy and/or employment with agencies such as the U.S. Foreign Service, the federal government, international business relations, banking and financial agencies, and international organizations.

### Associate of Arts in International Relations (3059)

1. **Communication**
   - Composition ENGL 1301 3
   - ENGL 1302 3
   - Speech SPCH 1311 3

2. **Mathematics**
   - MATH 1314 3

3. **Natural Sciences**
   - Natural Science w/Lab 4
   - BIOL, CHEM, ENVIR, GEOL, PHYS 3

4. **Humanities & Visual and Performing Arts**
   - Humanities ENGL, GERM, PHIL 2303 (required) 6
   - PHIL 3
   - Visual and Performing Arts ARTS, DRAM, MUSI 3

5. **Social and Behavioral Sciences**
   - History HIST 1301 3
   - HIST 1302 3
   - Government GOVT 2305 3
   - GOVT 2306 3
   - Social/Behavioral Sciences ECON 2311 and GOVT 2304 are required for this AA 6

6. **Computer Literacy**
   - COSC 1300, COSC 1301, or BCIS 1305 3

7. **Kinesiology**
   - KINE 2

8. **Area of Concentration – Student to select one of the following:**
   - **Economics**
     - Course 1: ECON 2301 3
     - Course 2: ECON 2302 3
     - Course 3: ECON 2389 3
   - **or Social Science Composite**
     - Course 1: GOVT 2311 or 2389 3
     - Course 2: ECON 2301 or 2302 3
     - Course 3: GEOG 1303 3
   - **or History**
     - HIST 2311 or HIST 2312 required 3
     - The student selects 9 hours from HIST 2313, 2314, 2323, 2380, 2381, 2327, 2322, or 2321 6

**Total Hours** 60
INTERNATIONAL STUDIES

The Associate of Arts in International Studies is designed to include the Palo Alto College Core Curriculum and provide students with an opportunity to enhance their understanding of global issues. The Associate of Arts in International Studies requires a portfolio project that demonstrates global competencies that include the ability to: (a) understand how his/her actions have a global impact; (b) participate in the global marketplace; (c) understand the economic interdependency among nations; (d) understand social, political, religious, and cultural constructions throughout the world; (e) understand global environmental issues; (f) access and evaluate global information; and, (g) accept responsibility for global citizenship.

Associate of Arts in International Studies (3609)

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<thead>
<tr>
<th>1. Communication</th>
<th>ENGL 1301</th>
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<td>4. Humanities &amp; Visual and Performing Arts</td>
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**Total Hours** 60

**IMPORTANT NOTE:** All students pursuing the AA in International Studies should save ALL of their work in these courses in a digital (disk, zip or flash drive) format for their ePortfolio.
The International Studies Certificate is designed to support the basic Palo Alto College Core Curriculum with consideration of the following guidelines.

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

The International Studies Certificate is designed to support the basic Palo Alto College Core Curriculum. In addition to the 12 hours (completed with a “C” or better grade) needed for the International Studies Certificate, students will also be required to submit an e-Portfolio, an electronic portfolio, that will be reviewed by a faculty committee.

3 hrs Gateway Course: HUMA 2323 –World Cultures & Global Issues

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

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International Component Courses

Student must choose a minimum of three hours (one course) taught by the professor specified. The faculty member identified with each course has “internationalized” the curricula for the sections.

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Total Hours for Certificate Plus Portfolio Project: 12

IMPORTANT NOTE: All students pursuing the International Studies Certificate should save ALL of their work in these courses in a digital (disk, zip or flash drive) format for their ePortfolio.
The Department of Kinesiology & Health – 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 Arts 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 Arts in Kinesiology (3020)

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Total Hours 60
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### Associate of Science in Kinesiology (3020)

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Physical Fitness Specialist I Certificate

KINE 1197  Weight Training II  1
KINE 1238  Concepts of Physical Fitness  2
KINE 1306  First Aid and CPR  3
KINE 2101  Skill Analysis (Individual)  1
KINE 2102  Skills Analysis (Dual)  1
or
KINE 2103  Skills Analysis (Team)  

Total Hours  8

Physical Fitness Specialist II Certificate

Completion of Physical Fitness Specialist I Certificate plus:
KINE 1304  Personal/Community Health (Nutrition)  3
KINE 1338  Concepts of Physical Fitness* (Personal Trainer course)  3
KINE 1346  Substance Abuse  3
KINE 1105  Aerobics II  2
or
KINE 1127  Cardio Kick Boxing II
or
KINE 1156  Physical Conditioning
or
KINE 1198  Yoga II

*  Pre-requisites or Co-requisites: KINE 1238, 1304, 1306, 1346, 2101

Total Hours  11
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
M. Scott Kelley, Mortellaros Nursery
Karen Ortega, Sunscapes
Jose Perez, Fairway Landscape and Nursery
Jimmy Thomas, J.T. Landscaping
Richard Thompson, Thompson Landscaping
John Worrell Jr., Bartlett Tree Experts

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

First Year

First Semester – 16 Hours

<table>
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<tr>
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<tr>
<td>ITSC</td>
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<td>ENGL</td>
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Second Semester – 15/16 Hours

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<td>BIOL</td>
<td>General Botany</td>
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Summer Session – 3 Hours

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### Second Year

#### First Semester – 15 Hours

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#### Second Semester – 15 Hours

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<td>or</td>
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#### Summer Session – 3 Hours

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* Capstone Course

**Total Hours** 67/68

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### Landscape and Horticultural Science Level I Certificate (3571)

#### First Year

#### First Semester – 13 Hours

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#### Second Semester – 12 Hours

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<td>Woody Plant Materials</td>
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<td>or</td>
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<td>or</td>
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* Capstone Course
Second Year
First Semester – 15 Hours

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<td>Soil Fertility and Fertilizers</td>
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<td>Horticultural Pest Control</td>
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<td>HALT 1351</td>
<td>Landscape Business Operations</td>
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<td>HALT 1338</td>
<td>Irrigation Water Management &amp; Conservation</td>
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<tr>
<td>HALT 2331</td>
<td>Advanced Landscape Design</td>
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<td>HALT 2301</td>
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<td>HALT 2320</td>
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Total Hours 40

Turf and Landscape Irrigation Level I Certificate (3606)
First Semester – 13 Hours

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<td>BMGT 1303</td>
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<td>HALT 2318</td>
<td>Soil Fertility and Fertilizers</td>
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<td>or</td>
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<td>HALT 1351</td>
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<tr>
<td>HALT 1324</td>
<td>Turfgrass Science &amp; Management</td>
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<td>HALT 1303</td>
<td>Herbaceous Plants</td>
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Second Semester – 12 Hours

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<tr>
<td>HALT 1333</td>
<td>Landscape Irrigation</td>
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<tr>
<td>HALT 1331</td>
<td>Woody Plant Materials</td>
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</tr>
<tr>
<td>HALT 1338</td>
<td>Irrigation Water Management &amp; Conservation</td>
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* Capstone Course

Total Hours 25
## Basic Nursery and Landscape Operations Level I Certificate (3566)

### First Semester – 13 Hours

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<tbody>
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<td>Horticulture</td>
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<td>HALT 1324</td>
<td>Turfgrass Science &amp; Management</td>
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<tr>
<td>HALT 2318</td>
<td>Soil Fertility and Fertilizers</td>
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### Second Semester – 9 Hours

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<td>Landscape Irrigation</td>
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<td>HALT 1322*</td>
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<tr>
<td>or</td>
<td>HALT 1319*</td>
<td>Landscape Construction</td>
</tr>
<tr>
<td>or</td>
<td>HALT 2314*</td>
<td>Plant Propagation</td>
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*Capstone course

### Total Hours

22
LIBERAL STUDIES (3183)

The Liberal Studies major is appropriate for students who desire to earn an associate degree, but who have not yet selected a major or who may be considering several majors. This plan is also for students desiring a general liberal arts degree. The degree is based on the college’s core curriculum and additional hours in transferable college hours. Students following this plan have the opportunity to sample courses in a variety of areas, which can be very helpful in identifying areas of interest.

**Associate of Arts in Liberal Studies (3183)**

1. **Communication**
   - Composition
     - ENGL 1301 3
     - ENGL 1302 3
   - Speech
     - SPCH 1311, 1318, 1321 or 2341 3

2. **Mathematics**
   - MATH 1314, 1316, 1324, 1325, 1332*, 1348, 1442, 2318, 2320, 2412, 2413, 2414, 2415. *AS students may not select.

3. **Natural Sciences**
   - Natural Science with Lab
     - BIOL 1322, 1406, 1408, 1409, 1411, 1413, 2306/2106, 2401, 2402
     - CHEM 1311/1111, 1312/1112, 1406, 1407
     - ENVR 1401, GEOL 1401, 1402, 1403, 1404
     - PHYS 1401, 1402, 1405, 1407

4. **Humanities & Visual and Performing Arts**
   - Humanities
     - ENGL 2322, 2323, 2324, 2325, 2333, 2332, HUMA 1301, 1302, 2333;
     - PHIL 1301, 1304, 2303, 2306, 2306, 2371
     - SPAN 2311, 2312
   - Visual and Performing Arts
     - ARTS 1301, 1303, 1304, DRAM 1310,
     - MUSI 1306, DANC 2303

5. **Social and Behavioral Sciences**
   - History
     - HIST 1301 3
     - HIST 1302 3
   - Government
     - GOVT 2305 3
     - GOVT 2306 3
   - Social/Behavioral Sciences
     - ANTH 2346, COMM 1307, CRJ 1301, 1307, ECON 2301, 2302, GEOG 1301, 1303, 1307,
     - HIST 2301, 2311, 2312, 2313, 2314, 2321,
     - 2322, 2323, 2380, 2381, PSYC 2301, 2303, 2306, 2308, 2314, 2316, 2317, 2370, SOCI 1301, 1306, 2301 3

6. **Computer Literacy**
   - COSC 1300, COSC 1301, or BCIS 1305 3

7. **Kinesiology**
   - KINE 1-2

8. **Area of Concentration**
   - **Choose a minimum of 12 semester hours of academic, transfer level courses from one or more areas of concentration.** To insure that the courses selected will also be accepted at the intended transfer college/university/professional program and will apply to the major, contact the advisor at your transfer institution.

**Total Hours**

If a student successfully completes the entire core curriculum at a public institution of higher education in Texas, that block of courses may be transferred to any other public institution of higher education in Texas and must be substituted for the receiving institution’s core curriculum, unless the core at the receiving institution is larger. Students who complete only a portion of the core at the first institution must meet the Core Curriculum requirements of the second institution.
LIBRARY TECHNOLOGY

The Library Technology 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 Corporate & Community 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
   - Composition: ENGL 1301 3
   - ENGL 1302 3
   - Speech: SPCH 1311 or SPCH 1321 3

2. Mathematics
   - MATH 1314 or MATH 1332 3

3. Natural Sciences
   - Natural Lab Science 4
   - Second Natural Science 3

4. Humanities & Visual and Performing Arts
   - Humanities (two): ENGL, HUMA, PHIL, or SPAN 6
   - Visual and Performing Arts: ARTS, DRAM, MUSI, or DANC 3

5. Social and Behavioral Sciences
   - History: HIST 1301 3
   - HIST 1302 3
   - Government: GOVT 2305 3
   - GOVT 2306 3
   - Social/Behavioral Sciences: ANTH, COMM, CRIJ, ECON, GEOG, HIST, PSYC, or SOCI 3

6. Computer Literacy
   - COSC 1300 or COSC 1301 3

7. Kinesiology
   - KINE 1

8. Area of Concentration
   - BMGT 1345 (Intro) 3
   - LBRA 1391 (Cataloging) 3
   - LBRA 1391 (Access Svcs.) 3
   - LBRA 1391 (Info. Svcs.) 3
   - 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: Information Sources and Services 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 AND SUPPLY CHAIN MANAGEMENT

The Logistics and Supply Chain 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 and Supply Chain 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
Tom Delgado, Fiesta Warehousing & Distribution
Scott Erickson, Metropolitan Planning Organization
Bob Hand, Ryder, Inc.
Mark Lewis, H-E-B
John Maldonado, Clarke American
Sarah Sanchez, Free Trade Alliance San Antonio
Rick Staller, Bee Trucking Inc.

Associate of Applied Science in
Logistics and Supply Chain Management (3550)

First Year

First Semester – 15 Hours

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<td>ENGL 1301</td>
<td>Freshman Composition I</td>
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<td>ITSC 1309</td>
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<td>BMGT 1301</td>
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Second Semester – 15 Hours

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Second Year

First Semester – 18 Hours

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<td>or</td>
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### Logistics Management Level I Certificate (3551)

#### First Semester – 15 Hours

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<tr>
<td>POFI</td>
<td>1301</td>
<td>Computer Applications I</td>
<td>3</td>
</tr>
<tr>
<td>LMGT</td>
<td>1319</td>
<td>Introduction to Business Logistics</td>
<td>3</td>
</tr>
<tr>
<td>LMGT</td>
<td>1325</td>
<td>Warehouse &amp; Distribution Center Mgmt</td>
<td>3</td>
</tr>
<tr>
<td>LMGT</td>
<td>1393</td>
<td>Special Topics: Logistics &amp; Material Mgt.</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Second Semester – 15 Hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Section</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMGT</td>
<td>1303</td>
<td>Principles of Management</td>
<td>3</td>
</tr>
<tr>
<td>ECON</td>
<td>2302</td>
<td>Principles of Microeconomics</td>
<td>3</td>
</tr>
<tr>
<td>ENGL</td>
<td>1301</td>
<td>Freshman Composition I</td>
<td>3</td>
</tr>
<tr>
<td>MATH</td>
<td>1314</td>
<td>College Algebra</td>
<td>3</td>
</tr>
<tr>
<td>LMGT</td>
<td>1323*</td>
<td>Domestic &amp; International Transportation Mgt.</td>
<td>3</td>
</tr>
</tbody>
</table>

* Capstone course

**Total Hours**

30

### Warehouse Management Level I Certificate (3552)

<table>
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<tr>
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<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>BMGT</td>
<td>1301</td>
<td>Supervision</td>
<td>3</td>
</tr>
<tr>
<td>ITSC</td>
<td>1309</td>
<td>Integrated Software Applications I</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>POFI</td>
<td>1301</td>
<td>Computer Applications I</td>
<td>3</td>
</tr>
<tr>
<td>LMGT</td>
<td>1319</td>
<td>Introduction to Business Logistics</td>
<td>3</td>
</tr>
<tr>
<td>LMGT</td>
<td>1325*</td>
<td>Warehouse &amp; Distribution Center Mgmt</td>
<td>3</td>
</tr>
<tr>
<td>LMGT</td>
<td>1323</td>
<td>Domestics &amp; International Transportation Mgt.</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LMGT</td>
<td>1393</td>
<td>Special Topics: Logistics &amp; Material Mgt.</td>
<td>3</td>
</tr>
</tbody>
</table>

* 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
  or
- POFI 1301 Computer 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
  or
- POFI 1301 Computer Applications I 3
- LMGT 1319 Introduction to Business Logistics 3
- LMGT 1323 Domestic & International Transportation Mgt. 3
- LMGT 1393 Special Topics: Logistics Material Management 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
  or
- POFI 1301 Computer Applications I 3
- LMGT 1319 Introduction to Business Logistics 3
- LMGT 1323 Domestic & International Transportation Mgt 3
- LMGT 2330* International Logistics Management 3

*Capstone course

Total Hours 18

Directed Electives
Students should pick two electives from the following list based on which certificates they choose to achieve as part of the AAS.

<table>
<thead>
<tr>
<th>Social/Behavioral Science</th>
<th>Humanities/Fine Arts</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH 2346</td>
<td>ARTS 1301-2372</td>
</tr>
<tr>
<td>GOVT 2305, 2306</td>
<td>DRAMA 1310-2336</td>
</tr>
<tr>
<td>HIST 1301-2380</td>
<td>HUMA 1301, 1302</td>
</tr>
<tr>
<td>PSYC 2301-2371</td>
<td>MUSIC 1306-1312, 2311-2312</td>
</tr>
<tr>
<td>SOCI 1301-2301</td>
<td>PHIL 1301-2306</td>
</tr>
</tbody>
</table>
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)

<table>
<thead>
<tr>
<th>Category</th>
<th>Credits</th>
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<tbody>
<tr>
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<tr>
<td>Composition</td>
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<tr>
<td></td>
<td>ENGL 1302 3</td>
</tr>
<tr>
<td>Speech</td>
<td>SPCH 1311, 1318, 1321 OR 2341 3</td>
</tr>
<tr>
<td>Mathematics</td>
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<td>MATH 2413 4</td>
</tr>
<tr>
<td></td>
<td>MATH 2414 4</td>
</tr>
<tr>
<td>Natural Sciences</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>BIOL, CHEM, ENVR, GEOL or PHYS 7</td>
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<tr>
<td>Humanities &amp; Visual and</td>
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<tr>
<td>Performing Arts</td>
<td>ENGL, FREN, GERM, HUMA, or PHIL 3</td>
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<td></td>
<td>ARTS, DRAM, MUSI, DANC 3</td>
</tr>
<tr>
<td>Social and Behavioral Sciences</td>
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<tr>
<td>History</td>
<td>HIST 1301 3</td>
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<tr>
<td></td>
<td>HIST 1302 3</td>
</tr>
<tr>
<td>Government</td>
<td>GOVT 2305 3</td>
</tr>
<tr>
<td></td>
<td>GOVT 2306 3</td>
</tr>
<tr>
<td>Social/Behavioral Sciences</td>
<td>ANTH, COMM, CRIJ, ECON, 3</td>
</tr>
<tr>
<td></td>
<td>GEOG, HIST, PSYC or SOCI 3</td>
</tr>
<tr>
<td>Computer Literacy</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>COSC 1300, COSC 1301, or BCIS 1305 3</td>
</tr>
<tr>
<td>Kinesiology</td>
<td>1-2</td>
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<tr>
<td></td>
<td>KINE 1-2</td>
</tr>
<tr>
<td>Area of Concentration</td>
<td>10-11</td>
</tr>
<tr>
<td></td>
<td>MATH 2415 4</td>
</tr>
<tr>
<td></td>
<td>MATH 2318 3</td>
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<tr>
<td></td>
<td>MATH 2320 or MATH 1442 3-4</td>
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<tr>
<td>Total Hours</td>
<td>60/61</td>
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</table>
MEXICAN-AMERICAN STUDIES

The Associate of Arts in Mexican-American Studies prepares students for transfer to universities offering Bachelor degrees in Mexican-American Studies. The courses listed below are based on the field of study curriculum proposed to the Texas Higher Education Coordinating Board.

Associate of Arts in Mexican-American Studies (3116)

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 SPAN 2312 3
   HUMA 1305 3
   Visual and Performing Arts ARTS, DRAM, MUSI, DANC 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, SOCI, or GEOG 3

6. Computer Literacy 3
   COSC 1300, COSC 1301, or BCIS 1305 3

7. Kinesiology 1-2
   KINE 1-2

8. Area of Concentration 12
   Choose any 4 of the following:
   ENGL 2351, GOVT 2311, HIST 2327
   HIST 2328, HUMA 1311

Total Hours 60

Field of Study Curriculum for Mexican-American Studies

<table>
<thead>
<tr>
<th>Category</th>
<th>SCH (semester credit hours)</th>
<th>Course Number</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>Introduction</td>
<td>3</td>
<td>HUMA 1305</td>
<td>Introduction to Mexican-American Studies</td>
</tr>
<tr>
<td>History</td>
<td>3</td>
<td>HIST 2327</td>
<td>Mexican-American History I</td>
</tr>
<tr>
<td></td>
<td></td>
<td>HIST 2328</td>
<td>Mexican-American History II</td>
</tr>
<tr>
<td>Government</td>
<td>3</td>
<td>GOVT 2311</td>
<td>Mexican-American Politics</td>
</tr>
<tr>
<td>English/Literature</td>
<td>3</td>
<td>ENGL 2351</td>
<td>Mexican-American Literature</td>
</tr>
<tr>
<td>Spanish</td>
<td>3</td>
<td>SPAN 2312</td>
<td>Intermediate Spanish II</td>
</tr>
<tr>
<td>Fine Arts</td>
<td>3</td>
<td>HUMA 1311</td>
<td>Mexican-American Fine Arts Appreciation</td>
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</table>
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 includes ensembles in Choir, Conjunto, Jazz Band, Jazz Show Choir, and Mariachi; 2) MUAP, which includes private lessons in: accordion, violin, flute, clarinet, saxophone, trumpet, trombone, percussion, voice, piano, and guitar and 3) MUSI, which includes courses in guitar, piano, voice, ear training and sight singing, improvisation, literature, jazz appreciation, Tejano appreciation, and music theory. The program provides an Academic Cooperative in Music that allows 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  
   Composition  
   ENGL 1301  3
   ENGL 1302  3
   Speech  
   SPCH 1311, SPCH 1318, SPCH 1321 or SPCH 2341  3

2. Mathematics  
   MATH 1332  3

3. Natural Sciences  
   Natural Lab Science  4
   Second Natural Science  3
   BIOL, CHEM, ENVR, GEOL or PHYS  7-8

4. Humanities & Visual and Performing Arts  
   Humanities  
   ENGL, SPAN, FREN, GERM, HUMA, or PHIL  6
   Visual and Performing Arts  
   MUSI 1306 or 1310  3

5. Social and Behavioral Sciences  
   History  
   HIST 1301  3
   HIST 1302  3
   Government  
   GOVT 2305  3
   GOVT 2306  3
   Social/Behavioral Sciences  
   ANTH, COMM, CRIJ, ECON, GEOG, HIST, PSYC or SOCI  3

6. Computer Literacy  
   COSC 1300, COSC 1301, or BCIS 1305  3

7. Kinesiology  
   KINE  1-2

8. Area of Concentration  
   MUSI 1308  3
   MUSI 1311  3
   MUSI 1312  3
   MUSI 1216  2
   MUSI 1217  2
   MUEN 11xx  1

Total Hours  62
Field of Study Curricula in Music
For Students Specializing in Instruments
The field of study curriculum for music is designed to apply to the Bachelor of Music degree but may also be applied to the Bachelor of Arts or other baccalaureate-level music degrees as deemed appropriate by the awarding institution. This field of study curriculum shall consist of 35 lower-division semester credit hours in the area of concentration and 3 hours of Music Literature in the Core Curriculum. Transfer of credit in ensemble, applied study, and theory/aural skills shall be on a course-for-course basis. Transferring students who complete the field of study curriculum must satisfy the competency and proficiency requirements of the receiving institution. Transferring students shall not be required to repeat courses transferred as part of the field of study curriculum. Courses selected for inclusion in the field of study curriculum are those considered to be common to lower division study for most music degrees. Receiving institutions may require transfer students in specialized programs (e.g., jazz studies, performance, composition, music therapy, etc.) to take additional degree-specific lower-division courses that are not included in the field of study curriculum.

Associate of Arts in Music with Instrument Emphasis (3060)

1. **Communication**
   - Composition
     - ENGL 1301 3
     - ENGL 1302 3

2. **Mathematics**
   - MATH 1314 or 1332 3

3. **Humanities & Visual and Performing Arts**
   - Humanities
     - ENGL, SPAN, FREN, GERM, HUMA, or PHIL 6
   - Visual and Performing Arts
     - MUSI 1308 3

4. **Social and Behavioral Sciences**
   - History
     - HIST 1301 3
     - HIST 1302 3
   - Government
     - GOVT 2305 3
     - GOVT 2306 3

5. **Kinesiology**
   - KINE or DANC 1

6. **Area of Concentration**
   - Intro to Music Literature II MUSI 1309 3
   - Basic Music Theory I MUSI 1311 3
   - Basic Music Theory II MUSI 1312 3
   - Music Theory III MUSI 2311 3
   - Music Theory IV MUSI 2312 3
   - Ear Training & Sight Sing I MUSI 1216 2
   - Ear Training & Sight Sing II MUSI 1217 2
   - Ear Training & Sight Sing III MUSI 2216 2
   - Ear Training & Sight Sing IV MUSI 2217 2
   - Beginning Piano MUSI 1181 1
   - Elementary Piano MUSI 1182 1
   - Inter Piano/Private Piano MUAP 2170 1
   - Inter Piano II/Private Piano MUAP 2171 1
   - Prim Instrument/Priv Instruc MUAP XXXX 4
   - Jazz Ensemble MUEN 1121 (taken each semester) 4
     or
   - Mariachi Ensemble MUEN 1153 (taken each semester) 4
     or
   - Ensemble Conjunto MUEN 1155 4

**Total Hours** 66
### Field of Study Curriculum for Music-Instrument

<table>
<thead>
<tr>
<th>Courses</th>
<th>Semesters</th>
<th>Credit Hours</th>
</tr>
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<tbody>
<tr>
<td>Ensemble (MUEN 1121 or MUEN 1153 or MUEN 1155, repeated each semester for a total of 4 credits)</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Applied Study (MUAP 2170, MUAP 2171, 4 semesters of MUAP XXXX, primary instrument), and MUSI 1181, MUSI 1182</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>Theory/Aural Skills (MUSI 1311, MUSI 1312, MUSI 2311, MUSI 2312, MUSI 1216, MUSI 1217, MUSI 2216, MUSI 2217)</td>
<td>4</td>
<td>20</td>
</tr>
<tr>
<td>Music Literature (MUSI 1309; NOTE: MUSI 1308 is included in the Virtual/Performing Arts option of the Core Curriculum)</td>
<td>1</td>
<td>3</td>
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<tr>
<td>Total</td>
<td>4</td>
<td>35</td>
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</table>

### Field of Study Curricula in Music

#### For Students Specializing in Voice

The field of study curriculum for music is designed to apply to the Bachelor of Music degree but may also be applied to the Bachelor of Arts or other baccalaureate-level music degrees as deemed appropriate by the awarding institution. This field of study curriculum shall consist of 35 lower-division semester credit hours in the area of concentration and 3 hours of Music Literature in the Core Curriculum. Transfer of credit in ensemble, applied study, and theory/aural skills shall be on a course-for-course basis. Transferring students who complete the field of study curriculum must satisfy the competency and proficiency requirements of the receiving institution. Transferring students shall not be required to repeat courses transferred as part of the field of study curriculum. Courses selected for inclusion in the field of study curriculum are those considered to be common to lower division study for most music degrees. Receiving institutions may require transfer students in specialized programs (e.g., jazz studies, performance, composition, music therapy, etc.) to take additional degree-specific lower-division courses that are not included in the field of study curriculum.

#### Associate of Arts in Music with Voice Emphasis (3061)

1. **Communication**
   - ENGL 1301
   - ENGL 1302
   - 6

2. **Mathematics**
   - MATH 1314 or 1332
   - 3

3. **Humanities & Visual and Performing Arts**
   - ENGL, SPAN, FREN, GERM, HUMA, or PHIL
   - MUSI 1308
   - 9

4. **Social and Behavioral Sciences**
   - HIST 1301
   - HIST 1302
   - GOVT 2305
   - GOVT 2306
   - 12

5. **Kinesiology**
   - KINE or DANC
   - 1
### Field of Study Curriculum for Music-Voice

<table>
<thead>
<tr>
<th>Courses</th>
<th>Semesters</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>Ensemble (MUEN 1141, repeated each semester for a total of 4 credits)</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Applied Study (MUAP 2170, MUAP 2171, MUAP 1181, MUAP 1182, MUAP 2181, MUAP 2182 and MUSI 1181, MUSI 1182)</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>Theory/Aural Skills (MUSI 1311, MUSI 1312, MUSI 2311, MUSI 2312, MUSI 1216, MUSI 1217, MUSI 2216, MUSI 2217)</td>
<td>4</td>
<td>20</td>
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<tr>
<td>Music Literature (MUSI 1309; NOTE: MUSI 1308 is included in the Virtual/Performing Arts option of the Core Curriculum)</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>4</td>
<td>35</td>
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</tbody>
</table>
Music Business Local Certificate – Option 1

MUSB 1305 Survey of Music Business 3
MUSB 2355 Legal Aspects of Entertainment 3
MUSB 2309 Record Industry 3
MUSB 2309 Music Business Elective* 3
MUSI 1181 Beginning Piano I 1

or

MUAP Private Instrument

or

MUEN 1121, 1141, 1151, 1152, or 1155 2

*Music Business Elective to be taken from the following courses:

MUSB 1341 Concert Promotion and Venue Management
MUSB 2301 Music Marketing
MUSB 2305 Music Publishing
MUSB 2345 Live Music & Talent Management

Total Hours 14

Music Business Local Certificate – Option 2

First Semester – 7 Hours

MUSB 1305 Survey of Music Business 3
MUSB 2355 Legal Aspects of Entertainment 3
MUSI 1181 Beginning Piano I 1

or

MUAP Private Instrument

or

MUEN 1121, 1141, 1151, 1152, or 1155

Second Semester – 7 Hours

MUSB 2309 Record Industry 3
MUSB Music Business Elective* 3
MUSI 1181 Beginning Piano I 1

or

MUAP Private Instrument

or

MUEN 1121, 1141, 1151, 1152, or 1155

*Music Business Elective to be taken from the following courses:

MUSB 1341 Concert Promotion and Venue Management
MUSB 2301 Music Marketing
MUSB 2305 Music Publishing
MUSB 2345 Live Music & Talent Management

Total Hours 14
### Conjunto Performance Local Certificate

**PIANO**
- MUSI 1181: Beginning Piano I
- MUSI 1182: Beginning Piano II
- MUAP 2170: Intermediate Piano I/Private
- MUAP 2171: Intermediate Piano II/Private

**ENSEMBLE**
- MUEN 1155: Conjunto Ensemble

**PRIMARY INSTRUMENT**
- MUAP XXXX: Primary Instrument/Private

**CO-OP OR HISTORY**
- MUSI 2389: Academic Music Co-operative*
- MUSI 1310: American Music**

*MUSI 2389 is a Capstone course to be taken in final semester
**MUSI 1310 should be taken in Semester 1 if elected instead of co-op

**Total Hours:** 13

### Jazz Performance Local Certificate

**PIANO**
- MUSI 1181: Beginning Piano I
- MUSI 1182: Beginning Piano II
- MUAP 2170: Intermediate Piano I/Private
- MUAP 2171: Intermediate Piano II/Private

**ENSEMBLE**
- MUEN 1121: Jazz Ensemble

**PRIMARY INSTRUMENT**
- MUAP XXXX: Primary Instrument/Private

**CO-OP OR HISTORY**
- MUSI 2389: Academic Music Co-operative*
- MUSI 1310: American Music**

*MUSI 2389 is a Capstone course to be taken in final semester
**MUSI 1310 should be taken in Semester 1 if elected instead of co-op

**Total Hours:** 13
Mariachi Performance Local Certificate

**PIANO**
- MUSI 1181 Beginning Piano I
- MUSI 1182 Beginning Piano II
- MUAP 2170 Intermediate Piano I/Private
- MUAP 2171 Intermediate Piano II/Private

**ENSEMBLE**
- MUEN 1151 Beginning Mariachi Ensemble
- MUEN 1152 Intermediate Mariachi Ensemble
- MUEN 1153 Advanced Mariachi Ensemble

**PRIMARY INSTRUMENT**
- MUAP XXXX Primary Instrument/Private

**CO-OP OR HISTORY**
- MUSI 2389 Academic Music Co-operative*

*Capstone course

**Total Hours**: 13

“The Admissions and Financial Aid Offices really cater to people. They try to make it as easy as possible for you and walk you through it, which is awesome, especially for incoming freshmen.”

Scarlett Cerna
Sophomore Anthropology major
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**
   - Composition
     - ENGL 1301 3
     - ENGL 1302 3
   - Speech
     - SPCH 1311, 1318, 1321 or 2341 3

2. **Mathematics**
   - MATH 1314 or higher 3

3. **Natural Sciences**
   - Natural Lab Science 4
   - Second Natural Science 3
   - BIOL, CHEM, ENVR, GEOL or PHYS 7

4. **Humanities & Visual and Performing Arts**
   - Humanities
     - ENGL, FREN, GERM, SPAN or HUMA 6
   - Visual and Performing Arts
     - ARTS, DRAM, MUSI, DANC 3

5. **Social and Behavioral Sciences**
   - History
     - HIST 1301 3
     - HIST 1302 3
   - Government
     - GOVT 2305 3
     - GOVT 2306 3
   - Social/Behavioral Sciences
     - ANTH, COMM, CRIJ, ECON, GEOG, HIST, PSYC or SOCI 3

6. **Computer Literacy**
   - COSC 1300, COSC 1301, or BCIS 1305 3

7. **Kinesiology**
   - KINE 1-2

8. **Area of Concentration**
   - PHIL 1301 3
   - PHIL 1304 3
   - PHIL 2303 3
   - PHIL 2306 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, SPAN, HUMA, or PHIL 3
   Visual and Performing Arts ARTS, DRAM, MUSI, DAN 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, PSYC or SOCI 3

6. Computer Literacy 3
   COSC 1300, COSC 1301, or BCIS 1305 3

7. Kinesiology 1-2
   KINE 1-2

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 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. 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**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>BIOL 1406**</td>
<td>General Biology I</td>
<td>4</td>
</tr>
<tr>
<td>or BIOL 1411**</td>
<td>General Botany</td>
<td></td>
</tr>
<tr>
<td>COSC 1300</td>
<td>Computer Literacy</td>
<td>3</td>
</tr>
<tr>
<td>or equivalent</td>
<td></td>
<td></td>
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<tr>
<td>ENGL 1301</td>
<td>Freshman Composition I</td>
<td>3</td>
</tr>
<tr>
<td>HIST 1301</td>
<td>History of the United States, Part I</td>
<td>3</td>
</tr>
<tr>
<td>Course KINE 1442*</td>
<td>Elements of Statistics</td>
<td>1</td>
</tr>
<tr>
<td>MATH 1314*</td>
<td>College Algebra</td>
<td>3</td>
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**Second Semester – 17 Hours**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>BIOL 1407**</td>
<td>General Biology II</td>
<td>4</td>
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<td>or BIOL 1413**</td>
<td>General Zoology</td>
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<tr>
<td>ENGL 1302</td>
<td>Freshman Composition II</td>
<td>3</td>
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<tr>
<td>HIST 1302</td>
<td>History of the United States, Part II</td>
<td>3</td>
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<tr>
<td>MATH 1442*</td>
<td>Elements of Statistics</td>
<td>4</td>
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<tr>
<td>or MATH 2412*</td>
<td>Precalculus</td>
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<td>Course ANTH, CRIJ, ECON, GEOG, GOVT, HIST, PSYC, or SOCI</td>
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Second Year

**First Semester – 14 Hours**

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<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>BIOL 2421</td>
<td>General Microbiology</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 1111/1311***</td>
<td>General Chemistry I</td>
<td>4</td>
</tr>
<tr>
<td>GOVT 2305</td>
<td>National Government</td>
<td>3</td>
</tr>
<tr>
<td>Course ENGL, HUMA, PHIL or Foreign Languages</td>
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**Second Semester – 17 Hours**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>BIOL 2416</td>
<td>Genetics</td>
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<tr>
<td>CHEM 1112/1312***</td>
<td>General Chemistry II</td>
<td>4</td>
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<tr>
<td>GOVT 2306</td>
<td>State Government</td>
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<tr>
<td>SPCH 1311</td>
<td>Fundamentals of Speech</td>
<td>3</td>
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<tr>
<td>or SPCH 1318</td>
<td>Interpersonal Communication</td>
<td>3</td>
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<tr>
<td>or SPCH 1321</td>
<td>Business and Professional Speech</td>
<td>3</td>
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<tr>
<td>Course ARTS, DRAM or MUSI</td>
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</table>

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-MEDICINE

The Associate of Science concentration 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. 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**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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</thead>
<tbody>
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<td>BIOL</td>
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<td>or</td>
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<tr>
<td>COSC</td>
<td>1300 Computer Literacy</td>
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</tr>
<tr>
<td>or equivalent</td>
<td></td>
<td></td>
</tr>
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<td>ENGL</td>
<td>1301 Freshman Composition I</td>
<td>3</td>
</tr>
<tr>
<td>HIST</td>
<td>1301 History of the United States, Part I</td>
<td>3</td>
</tr>
<tr>
<td>Course</td>
<td>KINE</td>
<td>1</td>
</tr>
<tr>
<td>MATH</td>
<td>1314* College Algebra</td>
<td>3</td>
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</table>

**Second Semester – 17 Hours**

<table>
<thead>
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<th>Course</th>
<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>BIOL</td>
<td>1407** General Biology II</td>
<td>4</td>
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<td>or</td>
<td>BIOL 1413** General Zoology</td>
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<td>ENGL</td>
<td>1302 Freshman Composition II</td>
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<tr>
<td>HIST</td>
<td>1302 History of the United States, Part II</td>
<td>3</td>
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<tr>
<td>MATH</td>
<td>1442* Elements of Statistics</td>
<td>4</td>
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<td>or</td>
<td>MATH 2412* Precalculus</td>
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<tr>
<td>Course</td>
<td>ANTH, CRIJ, ECON, GEOG, GOVT, HIST, PSYC, SOCI</td>
<td>3</td>
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</table>

**Second Year**

**First Semester – 14 Hours**

<table>
<thead>
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<th>Course</th>
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<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>BIOL</td>
<td>2421 General Microbiology</td>
<td>4</td>
</tr>
<tr>
<td>CHEM</td>
<td>1111/1311*** General Chemistry I</td>
<td>4</td>
</tr>
<tr>
<td>GOVT</td>
<td>2305 National Government</td>
<td>3</td>
</tr>
<tr>
<td>Course</td>
<td>ENGL, HUMA, PHIL or Foreign Languages</td>
<td>3</td>
</tr>
</tbody>
</table>
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
   Humanities PHIL 1301, PHIL 2306 or HUMA 1301 3
   Visual and Performing Arts ARTS, DANC, DRAM or MUSI 3
5. Social and Behavioral Sciences
   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
   COSC 1300 or 1301, or BCIS 1305 3
7. Kinesiology
   KINE 1
8. Elective
   PHIL, PSYC or SOCI 3

Total Hours 66

**Students applying to UTHSC will also need to complete CHEM 1407

Field of Study Curriculum for Nursing

<table>
<thead>
<tr>
<th>Content Area</th>
<th>Course Number</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>Anatomy &amp; Physiology</td>
<td>BIOL 2401</td>
<td>Human Anatomy &amp; Physiology I</td>
</tr>
<tr>
<td></td>
<td>BIOL 2402</td>
<td>Human Anatomy &amp; Physiology II</td>
</tr>
<tr>
<td>Microbiology</td>
<td>BIOL 2402</td>
<td>Microbiology &amp; Pathology</td>
</tr>
<tr>
<td>Chemistry</td>
<td>CHEM 1405</td>
<td>Introductory Chemistry I</td>
</tr>
<tr>
<td>Nutrition</td>
<td>BIOL 1322</td>
<td>Nutrition &amp; Diet Therapy</td>
</tr>
<tr>
<td>Psychology</td>
<td>PSYC 2301</td>
<td>Introduction to Psychology</td>
</tr>
<tr>
<td></td>
<td>PSYC 2314</td>
<td>Developmental Psychology: Life Span</td>
</tr>
<tr>
<td>Mathematics</td>
<td>MATH 1442</td>
<td>Elements of Statistics</td>
</tr>
</tbody>
</table>
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. **Natural Sciences**
   - PHYS 1401/1402 4
   - PHYS 2425/2426 4

4. **Humanities & Visual and Performing Arts**
   - Humanities: ENGL, FREN, GERM, HUMA, or PHIL 3
   - Visual and Performing Arts: ARTS, DRAM or MUSI 3

5. **Social and Behavioral Sciences**
   - History: HIST 1301 3
   - GOVT 2305 3
   - GOVT 2306 3
   - Social/Behavioral Sciences: ANTH, COMM, CRIJ, ECON, GEOG, HIST, PSYC or SOCI 3

6. **Computer Literacy**
   - COSC 1300, COSC 1301, or BCIS 1305 3

7. **Kinesiology**
   - KINE 1-2

8. **Area of Concentration**
   - CHEM 1311/1111 4
   - CHEM 1312/1112 4
   - CHEM 2323/2325 6
   - CHEM 2223/2225 4

**Total Hours:** 65

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**PRE-VETERINARY**

The Associate of Science concentration 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. 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 4
- **COSC 1300** Computer Literacy or equivalent 3
- **ENGL 1301** Freshman Composition I 3
- **HIST 1301** History of the United States, Part I 3
- **Course** KINE 1
- **MATH 1314** College Algebra 3
Second Semester – 17 Hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Course Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>BIOL</td>
<td>1407** General Biology II</td>
<td>4</td>
</tr>
<tr>
<td>or</td>
<td>BIOL 1413** General Zoology</td>
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<tr>
<td>ENGL</td>
<td>1302 Freshman Composition II</td>
<td>3</td>
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<tr>
<td>HIST</td>
<td>1302 History of the United States, Part II</td>
<td>3</td>
</tr>
<tr>
<td>MATH</td>
<td>1442* Elements of Statistics</td>
<td>4</td>
</tr>
<tr>
<td>or</td>
<td>MATH 2412* Precalculus</td>
<td></td>
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<td>Course</td>
<td>ANTH, CRJ, ECON, GEOG, GOVT, HIST, PSYC, or SOCI</td>
<td>3</td>
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</tbody>
</table>
Psychology is the scientific study of human behavior and mental processes. Common goals for an undergraduate student in psychology include: a broad knowledge base of information in psychology that truly reflects an understanding of human behavior; developing effective critical thinking skills in reading and writing; increased information gathering skills (e.g., library, computerized databases, the Internet); developing quantitative and qualitative methods of data analysis in research; developing interpersonal skills that includes sensitivity to the diversity in the environment as well as increased self-knowledge to manage one’s own behavior; gaining increased knowledge relative to the historical development of psychology; and developing an increased sense of ethical standards essential to maintaining academic and scientific integrity.

An Associate Degree of Arts in Psychology prepares a student to pursue a career in the following areas: clinical psychologists, assessing and treating mental, emotional, and behavioral disorders; cognitive psychologists, focusing on thought processes and the ability to reason including how people generate logical and coherent ideas; counseling psychologists, providing vocational, career, and academic guidance as well as helping individuals adjust to the challenges of everyday life; educational psychologists, concentrating on those conditions that influence teaching and learning; developmental psychologists, focusing on scientific research in such areas as motivation, thinking, learning and memory, and physiology; forensic psychologists, applying psychological principles to legal issues; focusing on how psychological factors influence health and illness; industrial/organizational psychologists, applying psychological principles and research methods to the workplace; and neuropsychologists, studying the relationships between behavior and physiology including the brain.

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

### Associate of Arts in Psychology (3022)

<table>
<thead>
<tr>
<th>Category</th>
<th>Hours</th>
<th>Courses</th>
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<tr>
<td>1. Communication</td>
<td>9</td>
<td>Composition ENGL 1301, ENGL 1302</td>
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<tr>
<td></td>
<td></td>
<td>Speech SPCH 1311, 1318, 1321 or 2341</td>
</tr>
<tr>
<td>2. Mathematics</td>
<td>3</td>
<td>MATH 1314 or higher</td>
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<td>3. Natural Sciences</td>
<td>7</td>
<td>Natural Lab Science, Second Natural Science</td>
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<td>BIOL, CHEM, ENVR, GEOL, or PHYS</td>
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<td>4. Humanities &amp; Visual and Performing Arts</td>
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<td>Visual and Performing Arts ARTS, DRAM, MUSI, or DANC</td>
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<td>5. Social and Behavioral Sciences</td>
<td>15</td>
<td>History HIST 1301, HIST 1302</td>
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<td>Government GOVT 2305, GOVT 2306</td>
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<td>Social/Behavioral Sciences ANTH, COMM, CRIJ, ECON, GEOG, HIST, PSYC or SOCI</td>
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<td>6. Computer Literacy</td>
<td>3</td>
<td>COSC 1300, COSC 1301, or BCIS 1305</td>
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<td>7. Kinesiology</td>
<td>1-2</td>
<td>KINE</td>
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<tr>
<td>8. Area of Concentration</td>
<td>12</td>
<td>PSYC 2301</td>
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<tr>
<td></td>
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<td>Students may select any 3 of the following Psychology Courses: 2306, 2308, 2314, 2316, 2317, 2319, 2370</td>
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<tr>
<td>Total Hours</td>
<td>60</td>
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</table>
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 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. Students who are intending to transfer to a four-year institution must seek advisement with the Social Work Program Advisor, for information on transfer agreements with specific universities.

**Associate of Arts in Social Work (3046)**

<table>
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<th>Category</th>
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<td>Communication</td>
<td>ENGL 1301</td>
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<tr>
<td></td>
<td>ENGL 1302</td>
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<td></td>
<td>Speech</td>
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<td>SPCH 1311, 1318, 1321 or 2341</td>
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<tr>
<td>2. Mathematics</td>
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<td></td>
<td>MATH 1314 or higher</td>
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</tr>
<tr>
<td>3. Natural Sciences</td>
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<td>7-8</td>
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<tr>
<td></td>
<td>Natural Lab Science</td>
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<tr>
<td>4. Humanities &amp; Visual and Performing Arts</td>
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<td>6. Computer Literacy</td>
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<td>KINE 1346</td>
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<tr>
<td></td>
<td>PSYC 2319</td>
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</table>

**Total Hours** 66
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)

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<td>3. Natural Sciences</td>
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<td>Second Natural Science</td>
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<td>BIOL, CHEM, ENVR, GEOL or PHYS</td>
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<td>4. Humanities &amp; Visual and Performing Arts</td>
<td>Humanities HUMA or PHIL</td>
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<td>ARTS, DRAM, MUSI, DANC</td>
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<td>GOVT 2306</td>
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<td>7. Kinesiology</td>
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<td>HUMA 1305, PSYC 2319</td>
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**Total Hours** 60
SPEECH COMMUNICATION

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 Communication (3024)

1. Communication  
   Composition  
   ENGL 1301  3  
   ENGL 1302  3  
   Speech  
   SPCH 1311  3  

2. Mathematics  
   MATH 1314 or 1332  3  

3. Natural Sciences  
   Natural Lab Science  4  
   Second Natural Science  3  

4. Humanities & Visual and Performing Arts  
   Humanities  
   ENGL, SPAN, FREN, GERM, HUMA, or PHIL  6  
   Visual and Performing Arts  
   ARTS 1301 or DRAM 1310 or  3  
   MUSI 1306, 1310 or DANC 2303  

5. Social and Behavioral Sciences  
   History  
   HIST 1301  3  
   HIST 1302  3  
   Government  
   GOVT 2305  3  
   GOVT 2306  3  
   Social/Behavioral Sciences  
   ANTH, COMM, CRIJ, ECON, GEOG,  3  
   HIST, PSYC or SOCI  

6. Computer Literacy  
   COSC 1300, COSC 1301 or BCIS 1305  3  

7. Kinesiology  
   KINE  1-2  

8. Area of Concentration  
   SPCH 1318  3  
   SPCH 1321  3  
   SPCH 1342  3  
   SPCH 2341  3  

Total Hours  60
TEACHER EDUCATION

Associate of Arts in Teaching (3585, 3587, 3586)
The Associate of Arts in Teaching (AAT) is a new degree offering that allows students to choose to enter the education field without having to select a four-year university immediately. All four-year public universities are required to accept this degree as fully transferable into a bachelor’s degree program leading to initial teacher certification. There are three main degree offerings which include 60-66 semester hours of coursework. Students interested in EC-4, 4-8, Special Education and Bilingual Education will select the Generalist degree plan (major code AAT 3587); students interested in Early Childhood Specialization should select the EC-4 plan with Early Childhood Specialization (major code AAT 3585); and students who are interested in teaching at the 8th grade-12th grade level should follow the 8-12 degree plan (major code 3586). For Teacher’s Aide see Education Aide.

AAT Associate of Arts in Teaching (3585)
EC-4 Generalist (Early Childhood Specialization)

1. Communications 9
   Composition
   ENGL 1301  3
   ENGL 1302  3
   Speech
   SPCH 1311 or 1318  3

2. Mathematics 9
   MATH 1314  3
   MATH 1350  3
   MATH 1351  3

3. Natural Sciences 8
   BIOL 1408  4
   PHYS 1405  4

4. Humanities & Visual and Performing Arts 9
   Humanities Option * 3
   Humanities Option * 3
   Visual/Performing Arts Option **** 3

5. Social and Behavior Sciences 15
   HIST 1301  3
   HIST 1302  3
   GOVT 2305  3
   GOVT 2306  3
   GEOG 1303**  3

6. Computer Literacy 3
   COSC 1300, 1301, or BCIS 1305  3

7. Kinesiology 1
   KINE

8. Area of Concentration 12
   TECA 1354  3
   TECA 1303  3
   TECA 1311  3
   TECA 1318  3

Total Hours 66

*Humanities Option:
   ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2375
   FREN 2311, 2312
   SPAN 2311, 2312
   GERM 2311, 2312
   HUMA 1301, 1302, 1305, 2323
   PHIL 1301, 1304, 2303, 2306
**Social Science Option:**
- ANTH 2346
- CRIJ 1301, 1306, 1307, 1310
- ECON 2301, 2302
- GEOG 1301, 1303
- HIST 2301, 2311, 2312
- PSYC 2301, 2306, 2308, 2314, 2316, 2317, 2370
- SOCI 1301, 1306, 2301
- SOCW 2361, 2362

***Visual/Performing Arts Option:***
- ARTS 1301, 1303, 1304
- DRAM 1310
- MUSI 1306

(Choose one from these departments: ARTS, DRAMA, MUSI, DANC) May include a combination of activity, performance, or private instruction courses

**AAT Associate of Arts in Teaching-(3587)**
**EC-4 Generalist (Bilingual, ESL, Generalist, 4-8 Generalist, EC-12 Special Education)**

1. **Communications**
   - ENGL 1301 3
   - ENGL 1302 3
   - SPCH 1311 or 1318 3

2. **Mathematics**
   - MATH 1314 3
   - MATH 1350 3
   - MATH 1351 3

3. **Natural Sciences**
   - BIOL 1408 4
   - PHYS 1405 4
   - Science Option** 3
   - Science Option ** 3

4. **Humanities & Visual and Performing Arts**
   - Humanities Option * 3
   - Humanities Option * 3
   - Visual/Performing Arts Option **** 3

5. **Social and Behavioral Sciences**
   - HIST 1301 3
   - HIST 1302 3
   - GOVT 2305 3
   - GOVT 2306 3
   - GEOG 1303*** 3

6. **Computer Literacy**
   - COSC 1300, 1301 or BCIS 1305 3

7. **Kinesiology**
   - KINE 1

8. **Area of Concentration**
   - EDUC 1301 3
   - EDUC 2301 3

**Total Hours** 66/67
XII Fields of Study

*Humanities Option:  
ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2375  
FREN 2311, 2312  
SPAN 2311, 2312  
GERM 2311, 2312  
HUMA 1301, 1302, 1305, 2323  
PHIL 1301, 1304, 2303, 2306

**Natural Science Option:  
BIOL 1408, 1409, 1411, 1413, 2401, 2402, 2306, 1322  
CHEM 1311/1111, 1312/1112  
ENVR 1401, 1402  
GEOL 1401, 1402, 1403, 1404  
PHYS 1401, 1402

***Social Science Option:  
ANTH 2346  
CRJ 1301, 1306, 1307, 1310  
ECON 2301, 2302  
GEOG 1301, 1303  
HIST 2301, 2311, 2312  
PSYC 2301, 2306, 2308, 2314, 2316, 2317, 2370  
SOCL 1301, 2301  
SOCW 2361, 2362

****Visual/Performing Arts  
Option:  
ARTS 1301, 1303, 1304  
DRAM 1310  
MUSI 1306

(Choose one from these departments: ARTS, DRAMA, MUSI. May include a combination of activity, performance, or private instruction courses)

AAT Associate of Arts in Teaching (3586)

8-12 Specialization

1. Communication  
   Communication  
   ENGL 1301  
   ENGL 1302  
   Speech  
   SPCH 1311 or 1318

2. Mathematics  
   MATH 1314

3. Natural Sciences  
   BIOL 1408**  
   PHYS 1405**

4. Humanities & Visual and Performing Arts  
   Visual/Performing Arts Option ****  
   Humanities Option *  
   Humanities Option *

5. Social and Behavioral Sciences  
   HIST 1301  
   HIST 1302  
   GOVT 2305  
   GOVT 2306  
   Social Science Option***

6. Computer Literacy  
   COSC 1300, 1301 or BCIS 1305
7. **Kinesiology**

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8. **Area of Concentration**

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**Total Hours**: 66

*Humanities Option:*

- ENGL 2322, 2323, 2327, 2328, 2332, 2333, 2375
- FREN 2311, 2312
- SPAN 2311, 2312
- GERM 2311, 2312
- HUMA 1301, 1302, 1305, 2323
- PHIL 1301, 1304, 2303, 2371

**Natural Science Option:*

- BIOL 1408, 1409, 1411, 1413, 2401, 2402
- CHEM 1311/1111, 1312, 1112
- ENVR 1401, 1402
- GEOL 1401, 1402, 1403, 1404
- PHYS 1401, 1402

**Social Science Option:*

- ANTH 2346
- CRIJ 1301, 1306, 1307, 1310
- ECON 2301, 2302
- GEOG 1301, 1303
- HIST 2301, 2311, 2312
- PSYC 2301, 2306, 2308, 2314, 2316, 2317, 2370
- SOCI 1301, 1306, 2301
- SOCW 2361, 2362

****Visual/Performing Arts Option:*

- ARTS 1301, 1303, 1304
- DRAM 1310
- MUSI 1306

(Choose one from these departments: ARTS, DRAM, MUSI. May include a combination of activity, performance, or private instruction courses)
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
Mike Davison, Estes, Inc.
David Doguet, Bladerunner Farms
Don Thompson, Turfgrass America

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

First Year
First Semester – 16 Hours
- HALT 1401 Principles of Horticulture 4
- or
- AGRI 1415 Horticulture
- 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 3/4
- 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 3
- HALT 1338 Irrigation Water Management and Conservation 3
- HALT 1322 Landscape Design 3
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<td>ARTS</td>
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<td>Art Appreciation</td>
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<tr>
<td>HUMA</td>
<td>1301</td>
<td>Introduction to Humanities</td>
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<td>DRAM</td>
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<td>Theater Appreciation</td>
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<td>Cooperative Education—Turf Management</td>
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* Capstone Course

**Total Hours: 65/66**

### Turfgrass and Golf Course Management Level I Certificate (3572)

**First Year**

**First Semester – 12 Hours**

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<td>Horticulture</td>
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<td>ITSC</td>
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<td>Integrated Software Applications I</td>
<td>3</td>
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<td>HALT</td>
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<td>Herbaceous Plants</td>
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**Second Semester – 12 Hours**

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<td>HALT</td>
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### Second Year

**First Semester – 12 Hours**

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<td>Horticulture Pest Control</td>
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* Capstone Course

**Total Hours: 37**
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 Veterinary Technician Education and Activities 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 approximately 50 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 the selected number of 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 for the fall semester.

For further information, refer to the Veterinary Technology website: www.accd.edu/pac/vettech.

Advisory Committee
Dr. John August, Texas A&M University
Dr. Noberto Espitia, Texas A & M University
Adrian Ford, LVT, Emergency Clinic
Dr. John Herbold, UT-Houston School of Public Health
Dr. Anna Kaiser, Encino Park Veterinary Clinic
Dr. Dennis McIntosh, El Dorado Animal Hospital
Dr. Tom Vice, Broadway Animal Hospital
Linda Larson, VCA Mission Animal Hospital
Dr. Samantha Mixon, Texas Veterinary Hospital
Nicole Reininger, MWI

Associate of Applied Science in Veterinary Technology (3540)

First Year
Summer I Session – 6 Hours

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<td>SPCH**</td>
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Summer II Session – 7 Hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1408 or 1413</td>
<td>General Biology I or General Zoology</td>
<td>4</td>
</tr>
<tr>
<td>ENGL 1301</td>
<td>Freshman Composition I</td>
<td>3</td>
</tr>
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</table>
### Fall Semester – 15 Hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>VTHT 1203</td>
<td>Canine &amp; Feline Care and Husbandry</td>
<td>2</td>
</tr>
<tr>
<td>VTHT 1205</td>
<td>Veterinary Medical Terminology</td>
<td>2</td>
</tr>
<tr>
<td>VTHT 1209</td>
<td>Veterinary Nutrition</td>
<td>2</td>
</tr>
<tr>
<td>VTHT 1291</td>
<td>Math for Veterinary Technicians</td>
<td>2</td>
</tr>
<tr>
<td>VTHT 1301</td>
<td>Introduction to Veterinary Technology</td>
<td>3</td>
</tr>
<tr>
<td>VTHT 1413</td>
<td>Veterinary Anatomy and Physiology</td>
<td>4</td>
</tr>
</tbody>
</table>

### Spring Semester – 12 Hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>VTHT 2301</td>
<td>Canine &amp; Feline Clinical Management</td>
<td>3</td>
</tr>
<tr>
<td>VTHT 2313</td>
<td>Laboratory Animal Clinical Management</td>
<td>3</td>
</tr>
<tr>
<td>VTHT 2321</td>
<td>Veterinary Parasitology</td>
<td>3</td>
</tr>
<tr>
<td>VTHT 2323</td>
<td>Veterinary Clinical Pathology I</td>
<td>3</td>
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</tbody>
</table>

### Summer Session – 6 Hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>VTHT 1349</td>
<td>Veterinary Pharmacology</td>
<td>3</td>
</tr>
<tr>
<td>VTHT 2366*</td>
<td>Practicum</td>
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### Second Year

#### Fall Semester – 14 Hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYC 2301</td>
<td>Introduction to Psychology</td>
<td>3</td>
</tr>
<tr>
<td>VTHT 1341</td>
<td>Anesthesia and Surgical Assistance</td>
<td>3</td>
</tr>
<tr>
<td>VTHT 2305</td>
<td>Equine Clinical Management</td>
<td>3</td>
</tr>
<tr>
<td>VTHT 2217</td>
<td>Exotic Animal Clinical Management</td>
<td>2</td>
</tr>
<tr>
<td>VTHT 2331</td>
<td>Veterinary Clinical Pathology II</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Spring Semester – 12 Hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>VTHT 1125</td>
<td>Pharmacological Calculations</td>
<td>1</td>
</tr>
<tr>
<td>VTHT 1317</td>
<td>Veterinary Office Management</td>
<td>3</td>
</tr>
<tr>
<td>VTHT 1345</td>
<td>Veterinary Radiology</td>
<td>3</td>
</tr>
<tr>
<td>VTHT 2209</td>
<td>Food Animal Clinical Management</td>
<td>2</td>
</tr>
<tr>
<td>Elective</td>
<td>Humanities / Fine Arts Elective</td>
<td>3</td>
</tr>
</tbody>
</table>

* Capstone Course
** SPCH 1311, 1318 or 1321
*** ITSC 1309, 1301 or COSC 1301

### Total Hours 72

The student must select one course from the following Humanities/Fine Arts Electives:

- ARTS 1301
- MUSI 1306
- DRAM 1310
- HUMA 1301
- PHIL 1301
- PHIL 2303
- PHIL 2306
- SPAN 1411
### Animal Health Assistant Level II Certificate (3539)

#### First Year

**Summer I Session – 6 Hours**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITSC 1309</td>
<td>Integrated Software Applications I</td>
<td>3</td>
</tr>
<tr>
<td>or ITSC 1301</td>
<td>Introduction to Computers</td>
<td></td>
</tr>
<tr>
<td>or COSC 1301</td>
<td>Introduction to Computer and Information Systems</td>
<td></td>
</tr>
<tr>
<td>SPCH 1318</td>
<td>Interpersonal Communication</td>
<td>3</td>
</tr>
<tr>
<td>or SPCH 1311</td>
<td>Fundamentals of Speech</td>
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</tr>
<tr>
<td>or SPCH 1321</td>
<td>Business &amp; Professional Speech</td>
<td></td>
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</table>

**Summer II Session – 7 Hours**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1413</td>
<td>General Zoology</td>
<td>4</td>
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<tr>
<td>or BIOL 1408</td>
<td>General Biology I</td>
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</tr>
<tr>
<td>ENGL 1301</td>
<td>Freshman Composition I</td>
<td>3</td>
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**Fall Semester – 13 Hours**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>VTHT 1203</td>
<td>Canine &amp; Feline Care &amp; Husbandry</td>
<td>2</td>
</tr>
<tr>
<td>VTHT 1205</td>
<td>Medical Terminology</td>
<td>2</td>
</tr>
<tr>
<td>VTHT 1291</td>
<td>Math for Veterinary Technology</td>
<td>2</td>
</tr>
<tr>
<td>VTHT 1301</td>
<td>Introduction to Veterinary Technology</td>
<td>3</td>
</tr>
<tr>
<td>VTHT 1413</td>
<td>Animal Anatomy and Physiology</td>
<td>4</td>
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</table>

**Spring Semester – 12 Hours**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>VTHT 1349</td>
<td>Veterinary Pharmacology</td>
<td>3</td>
</tr>
<tr>
<td>VTHT 2301</td>
<td>Canine and Feline Clinical Management</td>
<td>3</td>
</tr>
<tr>
<td>VTHT 2313</td>
<td>Laboratory Animal Clinical Management</td>
<td>3</td>
</tr>
<tr>
<td>VTHT 2321</td>
<td>Veterinary Parasitology</td>
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</table>

#### Second Year

**Fall Semester – 8 Hours**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>VTHT 1317*</td>
<td>Veterinary Office Management</td>
<td>3</td>
</tr>
<tr>
<td>VTHT 2217</td>
<td>Exotic Animal Clinical Management</td>
<td>2</td>
</tr>
<tr>
<td>VTHT 2305</td>
<td>Equine Clinical Management</td>
<td>3</td>
</tr>
</tbody>
</table>

*Capstone course for Animal Health Assistant Certificate

**Total Hours** 46
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 and the Summer Sessions. 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.
ACCT  Accounting
ACNT  Accounting
AGRI  Agriculture
AIRP  Professional Pilot
ANTH  Anthropology
ARTS  Art
AVIM  Aviation
BCIS  Computer Information Systems
BIOL  Biology
BMGT  Business Management/Logistics Mgt
BUSG  Business, General
BUSI  Business Administration
CDEC  Education Aide-Early Childhood
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
EDUC  Teacher Education
EECT  Telecomm Technology
ELMT  Electro-Mechanical Technology
ENGL  English
ENGR  Engineering
ENTC  Engineering Technology
ESOL  English for Speakers of Other Languages
ETWR  Technical and Business Writing
FORC  Forensic Science
FREN  French
GEOG  Geography
GEOL  Geology
GERM  German
GOVT  Political Science
HALT  Landscape & Horticultural 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
IMED  Computer Information Systems
INCR  Electro-Mechanical Technology
INEW  Internetworking (CIS)
INTC  Electro-Mechanical Technology
ITCC  CISCO
ITMC  Computer Information Systems
ITNW  Computer Information Systems
ITSC  Computer Information Systems
ITSE  Computer Information Systems
ITSW  Computer Information Systems
ITSY  Information Security
KINE  Kinesiology
LBRA  Library Assistant
LATI  Latin
LMGT  Business Mgt./Logistics Mgt.
MATH  Mathematics
MRKG  Marketing/Business Management
MUAP  Music – Individual Instruction
MUEN  Music – Small Ensemble
MUSB  Music Business
MUSC  Commercial Music
MUSI  Music
PHED  Physical Education
PHIL  Philosophy
PHYS  Physics
POFI  Admin Computer Technology
POFL  Admin Computer Technology
POFM  Admin Computer Technology
POFT  Admin Computer Technology
PSYC  Psychology
QCTC  Quality Control Technology
RTVB  Radio and Television Broadcasting
SDEV  Student Success
SOCI  Sociology
SOCW  Social Work
SPAN  Spanish
SPCH  Speech
SPNL  Business Spanish
TECA  Education Aide-Early Childhood
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 flow. The course is designed for all business students, whether future users or preparers of accounting information.

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, whether future users or preparers of accounting information.

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.

ACNT 1311  Introduction to Computerized Accounting  
(3-3-0)  
Introduction to utilizing the computer in maintaining accounting records, making management decisions, and processing common business applications with primary emphasis on a general ledger package.

ACNT 1329  Payroll and Business Tax Accounting  
(3-3-0)  
A study of payroll procedures, taxing entities, and reporting requirements of local, state, and federal taxing authorities in a manual and computerized environment.

ACNT 1331  Federal Income Tax: Individual  
(3-3-0)  
Prerequisite: ACCT 2302
A study of the laws currently implemented by the IRS, providing a working knowledge of preparing taxes for the individual.

ACNT 2302  Accounting Capstone  
(3-3-0)  
Prerequisite: Departmental approval
A learning experience that allows students to apply broad knowledge of the accounting profession through discipline specific projects involving the integration of individuals and teams performing activities to simulate workplace situations.
ACNT 2303  Intermediate Accounting I  
(3-3-0)  
Prerequisite: ACCT 2302  
Critical analysis of generally accepted accounting principles, concepts, and theory underlying the preparation of financial statements. Emphasis on current theory and practice.

ACNT 2304  Intermediate Accounting II  
(3-3-0)  
Prerequisite: ACNT 2303  
Continued in-depth analysis of generally accepted accounting principles underlying the preparation of financial statements including comparative analysis and statement of cash flow.

ACNT 2309  Cost Accounting  
(3-3-0)  
Prerequisite: ACCT 2302  
A study of budgeting and cost control systems including a detailed study of manufacturing cost accounts and reports, job order costing, and process costing. Includes introduction to alternative costing methods such as activity-based and just-in-time costing.

ACNT 2331  Internal Control and Auditing  
(3-3-0)  
Prerequisite: ACCT 2302  
A study of internal control and auditing standards and processing used by internal auditors, managers, and independent public accountants.

ACNT 2333  Advanced Accounting  
(3-3-0)  
Prerequisite: ACNT 2304  
Methods of measuring and communicating economic information, including consolidated statements, partnerships, real estate, foreign operations, and fund units.

ACNT 2386  Internship - Accounting Technology/Technician and Bookkeeping  
(3-0-18)  
Prerequisite: Departmental approval  
A work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts. A learning plan is developed by the college and the employer.

AGRI 1231  The Agricultural Industry  
(2-2-0)  
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 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 1329  Principles of Food Science  
(3-3-0)  
Biological and scientific aspects of modern industrial food supply systems. Food classification, modern processing, and quality control.

AGRI 1415  Intro to Horticulture  
(4-3-3)  
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 2301  Agricultural Power Units  
(3-2-2)  
Fundamentals of combustion engines: gasoline, diesel, and liquefied petroleum. Maintenance and adjustments of the electrical, ignition, fuel, lubricating, and cooling systems of agricultural power machinery.

AGRI 2303  Agricultural Construction  
(3-2-2)  
Selection, use, and maintenance of hand and power tools; arch and oxy-acetylene welding; and construction materials and principles.

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)  

AIRP 1191  Special Topics Multi-Engine Ground  
(1-1-0)  
Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. 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  
(3-1-4)  
Prerequisite: AIRP 1317 or concurrent enrollment.  
Flight training to prepare the student for the completion of the Federal Aviation Administration private pilot certification 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**  
(3-1-4)  
Prerequisite: AIRP 1317 and AIRP 1315, 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 1315, 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 aero-medical information of significance to flight crews.

AIRP 2236  Certified Flight Instructor – Airplane (Lab)
(2-1-3)
Prerequisite:  AIRP 1317, AIRP 1315, AIRP 1351, AIRP 1355, AIRP 2337, AIRP 2339, and AIRP 2349 or concurrent enrollment, AIRP 2350, and a current and unrestricted second class medical certificate
Flight instruction necessary to qualify for the Federal Aviation Administration Certified Flight Instructor-Airplane certificate.  Topics include ground and flight instruction.  Special Fees Apply.

AIRP 2251  Multiengine Flight (Lab)
(2-2-0)
Prerequisite:  AIRP 1317 and AIRP 1315 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 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
(3-1-7)
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)  
(3-2-3)  
Prerequisite: AIRP 1317, AIRP 1351 or concurrent enrollment, AIRP 1355, AIRP 1315, 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.

ANTH 2346  General 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.

ANTH 2351  Cultural Anthropology  
(3-3-0)  
Key concepts, methods and theory in the study of cultural diversity, social institutions, linguistics, and culture change among world peoples.

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 1313  Foundations of Digital Art  
(3-3-3)  
Introduction to creative digital media designed to enhance artistic awareness and sensitivity through the creative and imaginative use of digital art media and tools. Includes art history and culture through the exploration of a variety of art works with an emphasis on aesthetic judgment and growth.

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  Digital Drawing and Painting  
(3-3-3)  
Prerequisite: None  
An art studio course in the basic problems encountered in the process of drawing and painting with digital media. Student will not only learn to use industry standard software and hardware as creative tools but will also explore their visual and conceptual approaches to image creation. Emphasis is on the employment of computer as a vehicle for the resolved 2-dimensional artwork and the application of critical thinking skills.
ARTS 2289  Academic Cooperative  
(2-0-0)  
Prerequisite: ARTS 2357 or ARTS 2349 (May be taken concurrently)  
This is a capstone class for the Associate of Art in Digital Art and serves as an on-campus study with practical hands-on work experience via creation of a student e-portfolio for use in job interview or academic program application. In conjunction with class seminars, the student will set specific goals and objectives in the study of digital studio art.

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 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: Digital Imaging
(3-3-3)
Prerequisite: ARTS 1313
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. This course will be continuation of previous digital experience with an emphasis on application of digital media skills to issues of content and presentation.

ARTS 2349 Digital Art II: Special Topics
(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 camera.

ARTS 2356 Photography I - Digital
(3-3-3)
An art studio course introducing the possibilities of digital photography as an art medium. Technical information will include camera operation, computer applications and software for the manipulation of raster based imagery as well as computer printing techniques 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 digital camera. Course may be repeated for credit provided that the second course topic varies from the first.

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 camera. 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 2357  Photography II - Digital  
(3-3-3)  
Prerequisite: ARTS 2356  
An art studio course offering further investigation into digital photographic processes and techniques with emphasis on individual expression with regard to specific application of the photographic process. Students will provide their own digital camera. With the instructor’s approval, this course may be repeated for additional credit as a study in advanced problems and techniques.

ARTS 2372  Studies in Contemporary Art  
(3-3-0)  
A lecture course with a focus on a specific period or art movement within the study of contemporary art. This course traces the historical development, specific artists and art works of contemporary art. Contemporary Art may be repeated for credit when topics vary.

ARTS 2389  Academic Cooperative in Digital Arts  
(3-3-0)  
Prerequisite: ARTS 2357 (digital section) or ARTS 2349. May be taken concurrently.  
This is a capstone class for the Associate of Art in Digital Art and serves as an on-campus study with practical hands-on work experience via creation of a student e-portfolio for use in job interview or academic program application. In conjunction with class seminars, the student will set specific goals and objectives in the study of digital studio art.

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.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>AVIM 2331</td>
<td>Airline Management</td>
<td>(3-3-0)</td>
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<tr>
<td></td>
<td>An examination of the organization, operation, and management of airlines. Topics include financing, aircraft selection, route feasibility studies, load factors, and marketing.</td>
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<tr>
<td>AVIM 2335</td>
<td>Airport Management</td>
<td>(3-3-0)</td>
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<td></td>
<td>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.</td>
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<tr>
<td>AVIM 2337</td>
<td>Aviation Law</td>
<td>(3-3-0)</td>
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<td></td>
<td>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.</td>
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<tr>
<td>BCIS 1305</td>
<td>Business Computer Applications</td>
<td>(3-3-1)</td>
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<td></td>
<td>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.</td>
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<tr>
<td>BIOL 1308</td>
<td>Biology for Non-Science Majors</td>
<td>(3-3-0)</td>
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<td></td>
<td>Fundamental principles of living organisms including physical and chemical properties of life, organization, function, evolutionary adaptation, and classification. Concepts of reproduction, genetics, ecology, and the scientific method are included.</td>
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<tr>
<td>BIOL 1309</td>
<td>Biology for Non-Science Majors II</td>
<td>(3-3-0)</td>
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<tr>
<td></td>
<td>Fundamental principles of living organisms including physical and chemical properties of life, organization, function, evolutionary adaptation, and classification. Concepts of reproduction, genetics, ecology, and the scientific method are included.</td>
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<tr>
<td>BIOL 1322</td>
<td>Nutrition and Diet Therapy</td>
<td>(3-3-0)</td>
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<td></td>
<td>Recommended: One semester of biology and one semester of chemistry</td>
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<td></td>
<td>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.</td>
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<tr>
<td>BIOL 1406</td>
<td>General Biology I</td>
<td>(4-3-3)</td>
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<td></td>
<td>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.</td>
<td></td>
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</tbody>
</table>
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, energetics, 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 2301  Principles of Anatomy and Physiology  
(3-3-0)  
This course is a preparatory course in human anatomy and physiology which incorporates various study skills and introduces principles of the structure and function of the human body. It emphasizes terminology, scientific method and basic skills.
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 lecture and all lab 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 lecture and all lab sections are web-enhanced. Consult course schedule.

BIOL 2404  Human Anatomy and Physiology  
(4-3-3)  
A one semester Human Anatomy and Physiology lecture and lab course that focuses on the fundamental principles of body systems and their functions.

BIOL 2406  Environmental Biology (Lec & Lab)  
(4-3-3)  
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 healthy environment. The laboratory exercises will complement the lecture topics. This course may fulfill a science requirement for the Associate of Arts degree.
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)  
Recommended: BIOL 2401  
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 environmental and industrial 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)  
Introduction to management theory, research and practice; integrating latest trends in technology, global management and ethics. 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 and Supply Chain 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 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 motivate and identify.

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.
BUSG 2309  Small Business Management  
(3-3-0)  
Starting and operating a small business. Includes 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 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. (Also listed as TECA 1354)
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 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 2307  Math and Science for Early Childhood (Formerly CDEC 1357)  
(3-3-0)  
An exploration of principles, methods, and materials for teaching children math and science concepts through discovery and play.

CDEC 2341  The School Age 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)  
Corequisite: ENTC 1347  
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)  
Prerequisite: CETT 1303, ELMT 1391  
A study of the fundamentals of alternating current including series and parallel AC circuits, phasors, capacitive and inductive networks, transformers, and resonance.

CETT 1321  Electronic Fabrication  
(3-2-4)  
Prerequisite: ELMT 1391/CETT 1303  
A study of electronic circuit fabrication techniques including printed circuit boards, wire wrapping, bread boarding, and various soldering techniques.

CETT 1329  Solid State Devices  
(3-2-4)  
Prerequisite: CETT 1305  
A study of diodes, transistor characteristics and other semiconductor devices, including analysis of static and dynamic characteristics, biasing techniques, and thermal considerations.

CETT 1415  Digital Applications  
(4-2-4)  
Prerequisite: CETT 1303 & ELMT 1391  
Investigation of combinational and sequential logic elements and circuits with emphasis on design and troubleshooting of combinational and sequential circuits.
CHEM 1111  General Chemistry Laboratory I  
(1-0-4)  
Prerequisite: MATH 1314 or permission of the instructor 
Corequisite: Concurrent enrollment in CHEM 1311 or permission of the instructor 

Chemistry 1111 is a laboratory course involving principles and practices of identification of basic molecules and selected laboratory studies related to topics in Chemistry 1311.

CHEM 1112  General Chemistry Laboratory II  
(1-0-4)  
Prerequisite: CHEM 1111.  
Corequisite: Concurrent enrollment in CHEM 1312 or permission of the instructor 

Chemistry 1112 is a laboratory course involving principles and practice of separation and identification of ions and selected laboratory studies related to topics in Chemistry 1312.

CHEM 1207  Biological and Chemical Calculations  
(2-2-0)  

Chemistry 1207 is a study of the mathematical applications used in chemistry and biology. Topics such as scientific notation, molarity, molality, dosage usage and reconstituting powder media. This course will not fulfill any science or math requirements.

CHEM 1311  General Chemistry I  
(3-3-0)  
Prerequisite: MATH 1314 or permission of the instructor  
Corequisite: Concurrent enrollment in CHEM 1111 or permission of the instructor 

A course in the fundamental principles of inorganic chemistry, modern atomic theory, chemical bonding, states of matter, solutions, stoichiometry and other selected topics. Must be followed by Chemistry 1312 to fulfill a science requirement.

CHEM 1312  General Chemistry II  
(3-3-0)  
Prerequisite: CHEM 1311  
Corequisite: Concurrent enrollment in CHEM 1112 or permission of the instructor 

This course is a continuation of Chemistry 1311. It covers molecular and ionic equilibria, elementary thermodynamics, electrochemistry, nuclear chemistry and an introduction to organic chemistry.

CHEM 1405  Introductory Chemistry I (formerly CHEM 1406)  
(4-3-3)  
Prerequisite: MATH 0303 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 1318  Photography I  
(3-3-3)  
Introduction to the basics of photography. Includes camera operation, techniques, knowledge of chemistry, and presentation skills. Emphasis on design, history, and contemporary trends as a means of developing an understanding of photographic aesthetics. For fine arts emphasis take ARTS 2356.
COMM 1319  Photography II  
(3-3-3)  
Prerequisite: COMM 1318 or equivalent  
Extends the students' knowledge of technique and guides them in developing personal outlooks toward specific application of the photographic process. For fine arts emphasis take ARTS 2357.

COMM 1335  Survey of Radio/Television  
(3-3-0)  
Study of the development, regulation, economics, social impact, and industry practices in broadcasting and cable communication. Includes non-broadcast television, new technologies, and other communication systems.

COMM 1336  Television Production I  
(3-3-3)  
Practical experience in the operation of television studio and control room equipment, including both pre- and post-production needs.

COMM 1337  Television Production II  
(3-3-3)  
Prerequisite: COMM 1336  
Extends the students' knowledge of practical experience in the operation of television studio and control room equipment, including both pre- and post-production needs, and guides them in developing personal outlooks toward specific application of the television process.

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 2300  Media Literacy  
(3-3-0)  
Criticism and analysis of the function, role, and responsibility of the mass media in modern society from the consumer perspective. Includes the ethical problems and issues facing each media format, with the effect of political, economic, and cultural factors on the operation of the media.

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, desktop publishing, and web publishing.
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 to develop entry-level Web publishing skills. Students will learn the Web design process and its terminology. In addition, they will develop a sense of design and come to understand the complex interaction required to produce quality Web pages and Websites.

COMM 2327  Introduction to Advertising  
(3-3-0)  
Fundamentals of advertising including marketing theory and strategy, copy writing, design, and selection of media.

COMM 2330  Introduction to Public Relations  
(3-3-0)  
Exploration of the history and development of public relations. Presentation of the theory behind and process of public relations, including the planning, implementation, and evaluation of PR campaigns.

COMM 2332  Radio/Television News  
(3-3-0)  
Preparation and analysis of news styles for the electronic media.

COMM 2339  Writing for Radio, Television, & Film  
(3-3-0)  
Introduction to basic script formats, terminology, and writing techniques, including the writing of commercials, public service announcements, promotions, news, documentary, and fictional materials.

COMM 2366  Introduction to Film  
(3-3-0)  
Emphasis on the analysis of the visual and aural aspects of selected motion pictures, dramatic aspects of narrative films, and historical growth and sociological effect of film as an art.
COSC 1300  Computer Literacy
(3-3-1)
The student is introduced to the effect of computers on society, the history and use of computers, computer applications in various segments of society, programming concepts, and hardware and software terminology. Exact topics may be varied to reflect emerging technological changes. Includes exercises in productivity software tools such as word processing, spreadsheets, database management, presentation graphics, and web browsing. Course not intended for Computer Science majors.

COSC 1301  Introduction to Computer and Information Systems
(3-3-1)
Overview of computer information systems. Introduces computer hardware, software, data, procedures, systems and human resources, and explores their integration and application in business and other segments in society. The fundamentals of computer problem-solving and programming may be discussed and applied. Specific topics may be varied to reflect emerging technological changes. Provides a foundation for further study in computer science or computer information systems.

COSC 1315  Fundamentals of Programming
(3-3-1)
Prerequisite: COSC 1301 or ITSC 1301 or COSC 1300
The student is introduced to the fundamentals of computer programming, using a current programming language. Emphasis is on the fundamentals of structured design, development, testing, implementation, and documentation. Includes coverage of language syntax, data and file structures, input/output devices, and disks/files.

COSC 1317  Programming in FORTRAN
(3-3-1)
Prerequisite: Any of the following: ITSE 1318 or COSC 1318, or COSC 1315
The student adapts his/her knowledge of fundamental programming techniques to programming in FORTRAN language. Attention to such topics as file access, data structures, program control structures and modular program design as well as syntax of FORTRAN. Students design, write, and test programs.

COSC 1318  Structured Programming in PASCAL
(3-3-1)
Prerequisite: COSC 1300 or 1301
Recommended: ITSE 1318 or COSC 1315
The student is introduced to structured programming techniques. Fundamental concepts such as data types, data structures and algorithms are emphasized. Special attention is paid to top down, modular design, testing and documentation. Programming language PASCAL is used for exercises. Students design, write and test programs.

COSC 1320  Programming in “C”
(3-3-1)
Prerequisite: COSC 1301 and any other computer programming course
The student is introduced to the use of fundamental programming techniques and related data structures as implemented in the “C” language. Students design, write and test programs in a microcomputer environment.
COSC 2315  Data Structures  
(3-3-1)  
Prerequisite:  COSC 1318  
The student is introduced to complex data structures such as stacks, queues, heaps, linked lists and trees. Advanced programming techniques such as recursion, sorting, searching and algorithm analysis are also used. A structured programming language (PASCAL) is used for exercises. Students design, write, analyze and test programs that enforce the theoretical part of the course.

COSC 2330  Advanced Structured Programming  
(3-3-1)  
Prerequisite:  COSC 1301 and any other computer programming class  
This course will cover advanced preparing techniques not ordinarily found in an introductory programming course. Topics such as object oriented, cross-platform and visual programming will be covered. Students will be expected to develop real-life, stand alone applications in a language such as JAVA or C++. Previous programming experience in a high level structured language required.

CRIJ 1301  Introduction to Criminal Justice  
(3-3-0)  
This course is a survey of the history and philosophy of criminal justice. It will examine ethical considerations, crime definitions by nature and impact, and an overview of the components of the criminal justice system. Included are law enforcement, court systems, prosecution and defense, trial process, and corrections.

CRIJ 1306  Court Systems and Practices  
(3-3-0)  
Prerequisite:  CRIJ 1301  
This course studies the judiciary in the criminal justice system. Included are the structure of the court system, right to counsel, pretrial release, grand juries, the adjudication process, types and rules of evidence, and sentencing.

CRIJ 1307  Crime in America  
(3-3-0)  
This course is the study of American crime problems in historical perspective. Included are social and public policy factors affecting crime, impact and crime trends, a multi-disciplinary survey of major criminological theories, and the prevention of crime.

CRIJ 1310  Fundamentals of Criminal Law  
(3-3-0)  
Prerequisite:  CRIJ 1301  
This course is a study of the nature of criminal law. Topics are: philosophical and historical development, major definitions and concepts, classification of crime, elements of crime and penalties using Texas statutes as illustrations, and criminal responsibility.

CRIJ 1313  Juvenile Justice System  
(3-3-0)  
Prerequisite:  CRIJ 1301  
This course is a study of the juvenile justice process. Topics included in this course are specialized juvenile law, the role of juvenile law, of juvenile courts, of police agencies, and of correctional agencies, and the theories of delinquent conduct.
CRIJ 2301  Community Resources in Corrections
(3-3-0)
Prerequisite: CRIJ 1301
This course is an introductory study of the role of the community in corrections, community programs for adults and juveniles, administration of community programs, legal issues and future trends in community treatment.

CRIJ 2313  Correctional Systems and Practices
(3-3-0)
Prerequisite: CRIJ 1301
This course is a study of corrections in the criminal justice system, organization of correctional systems, correctional role, institutional operations, alternatives to institutionalization, treatment and rehabilitation and current and future issues.

CRIJ 2314  Criminal Investigation
(3-3-0)
Prerequisite: CRIJ 1301
This course explores investigative theory, collection and preservation of evidence, sources of information, interview and interrogation, and uses of forensic sciences case and trial preparation.

CRIJ 2323  Legal Aspects of Law Enforcement
(3-3-0)
Prerequisite: CRIJ 1301
The course studies police authority, responsibilities, constitutional constraints, laws of arrest, search, and seizure and police liability.

CRIJ 2328  Police Systems and Practices
(3-3-0)
Prerequisite: CRIJ 1301
The course studies the police profession, organization of law enforcement systems, the police role, police discretion, police community interaction, current and future issues.

DANC 1112  Dance Practicum I
(1-2-1)
This course will enable dance majors and minors, and/or serious dance students to learn about live dance performance with a focus on technical theatre, staging, production and promotion.

DANC 1113  Dance Practicum II
(1-2-1)
This course will enable dance majors and minors, and/or serious students to experience dance performance in order to develop technical, cognitive and aesthetic learning in the field of dance. The focus is on the elements of live dance performance, including choreography, rehearsal, and production.

DANC 1122  Folk Dance - Capoeira I
(1-2-1)
Students will learn to identify and perform the basic movements of capoeira as well as developing an understanding of the history, culture, and philosophy associated with this Afro-Brazilian martial art/dance form.
DANC 1128 Social Dance I
(1-2-1)
This course will introduce the student to a variety of popular and traditional social dance forms including Latin dances, swing, jitterbug, hip-hop and country western.

DANC 1129 Social Dance II
(1-2-1)
This course will build on dance rhythms and basic forms learned in Social Dance I with an emphasis on placement, partnering, rhythmic analysis and variations.

DANC 1141 Ballet I
(1-2-1)
Students are introduced to the fundamentals of ballet technique including barre, center work, and beginning combinations with an emphasis on alignment and vocabulary.

DANC 1142 Ballet II
(1-2-1)
Students will build on technical and performance skills learned in Ballet I with a continued emphasis on alignment and vocabulary.

DANC 1145 Modern Dance I
(1-2-1)
Students will explore dance as a creative art form that develops mental and physical integration and expressive skills. Students will practice and understand the fundamental elements of movement, structures improvisation and basic dance combinations.

DANC 1146 Modern Dance II
(1-2-1)
Students will continue to explore dance as creative art form. Aesthetic understanding and critical response skills will be developed as well.

DANC 1147 Jazz Dance I
(1-2-1)
Students will learn how to do jazz dance warm-up and cool-down and movement combinations with a focus on alignment, ensemble work, and musicality.

DANC 1148 Jazz Dance II
(1-2-1)
Students will develop and improve dance skills and technique, form classical steps (i.e. ball change step) to jazz influenced by Latin culture (hip sways and rhythmic footwork). This introductory course will explore their own choreographic vocabulary.

DANC 1149 Ballet Folklorico I
(1-2-1)
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.
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 1151  Dance Performance I  
(1-1-2)  
Prerequisite: DANC 1145 or 1147 or instructor permission.  
Instruction and participation in dance performance.

DANC 1152  Dance Performance II  
(1-1-2)  
Prerequisite: DANC 1151 or instructor permission.  
Co-requisite: DANCE 1145 or 1147 or instructor permission.  
Instruction and participation in dance performance.

DANC 1151  Dance Performance I  
(1-1-2)  
Prerequisite: DANC 1145 or 1147 or instructor permission.  
Instruction and participation in dance performance.

DANC 1152  Dance Performance II  
(1-1-2)  
Prerequisite: DANC 1151 or instructor permission.  
Co-requisite: DANCE 1145 or 1147 or instructor permission.  
Instruction and participation in dance performance.

DANC 1301  Dance Composition I  
(3-3-0)  
Prerequisite: DANC 1145  
Development of basic principles and theories involved in composition. Emphasis is placed on movement principles, group and structural forms.

DANC 1305  World Dance  
(3-3-0)  
This course will introduce students to the study of dance cultures from around the world. Through selected readings, viewing of dance videos, discussion, and participation in live dance experiences, students will develop sensitivity to and awareness of culturally diverse dance perspectives.

DANC 2112  Dance Practicum III  
(1-1-2)  
This course will enable dance, kinesiology and education students to gain experience in creative movement, improvisation and choreography as well as facilitating groups. This dance practicum focuses on improvisation, choreography, rehearsal, performance and group facilitation.

DANC 2149  Ballet Folklorico III  
(1-2-1)  
Students will improve footwork techniques emphasizing fundamentals of body placement, vocabulary, and regions in Mexican Folkloric Dance. Students continue to develop dance combinations to enhance technical skills, memory, and performance qualities.

DANC 2150  Ballet Folklorico IV  
(1-2-1)  
This course further develops the student in the elements of choreography, performance, interpretation and cultural traditions. They will improve footwork techniques emphasizing fundamentals of body placement, vocabulary, and regions in Mexican Folkloric Dance.
DANC 2151  Dance Performance III  
(1-1-2)  
Prerequisite: DANC 1152 or instructor permission  
Co-requisite: DANC 1146 or 1148 or instructor permission  
Instruction and participation in dance performance.

DANC 2152  Dance Performance IV  
(1-1-2)  
Prerequisite: DANC 2151 or instructor permission  
Co-requisite: DANC 1146 or 1148 or instructor permission  
Instruction and participation in dance performance.

DANC 2303  Dance Appreciation  
(3-3-0)  
This course introduces the student to dance as a universal form of human expression and surveys dance forms as they have developed throughout history and around the world. Comparisons are made between dance and other art forms in 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)  
This course is a practicum (few lectures; no tests; lots of hands-on experience) in scene construction, lighting, sound, costuming, publicity, stage properties, acting, and general theater practice. This course may be repeated for a maximum of four semester hours credit. All drama majors should enroll in this course each semester.

DRAM 1310  Theater Appreciation  
(3-3-0)  
This course is 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 acting, directing, technical theater, and play analysis.

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. Basic make-up principles and practical experience of make-up application are needed.

DRAM 1351  Acting I  
(3-3-0)  
Corequisite DRAM 1120  
This course is for the development of the basic skills and techniques of acting, including greater self-confidence, increased sensory awareness, stage movement, characterization, and improvisation.
DRAM 1352  Acting II  
(3-3-0)  
Corequisite: DRAM 1120  
A continuation of Acting I, this course emphasizes 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)  
This course introduces the use of creative dramatics as a teaching tool as well as a tool for enhancing personal creativity. Scripting and directing children's plays, improvisation, pantomime, puppetry, storytelling, and a brief survey of children's literature are some of the activities included in this class. This is an excellent class for pre-school and elementary teachers, as well as, actors, writers and other creative professions.

DRAM 2336  Voice and Articulation  
(3-3-0)  
This is a practical course designed to develop an understanding of the use and function of the performer's voice as well as provide individual instruction and articulation to facilitate oral communication. (Same as Speech 1342.)

DRAM 2351  Acting III  
(3-3-0)  
Corequisite DRAM 1120  
This course, a continuation of Acting II, is designed to deepen the student's understanding of acting, including the major acting styles and periods of theatre history. Through a series of lectures, demonstrations, research, and scene exercises, the student will develop a series of audition monologues from theatre history to be presented in a public performance at the end of the semester.

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  Educational Systems  
(3-3-0)  
A study of the role and responsibilities of educational personnel 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 1307  Introduction to Teaching Reading  
(3-3-0)  
General principles of reading instruction. Topics include emergent literacy, reading readiness, reading instruction, literacy-based environments, and a review of varied materials and techniques for teaching reading.

EDTC 1311  Instructional Practices and Effective Learning Environments  
(3-3-0)  
General principles for selecting developmentally appropriate strategies in core curriculum areas and planning the classroom environment. Topics address methods for supporting instructional planning and implementation of educational goals. Exploration of teamwork skills and methods for providing instructional accommodations and modifications.

EDTC 1313  Educational Software and Technology  
(3-3-0)  
Introduction to the use of educational software, instructional applications, and technology in the educational setting. Evaluate the use of technology for guided practice and self-paced student remediation.

EDTC 1321  Bilingual Education  
(3-3-0)  
An overview of bilingual education. Topics include awareness of cultural diversity, assessment strategies, teaching techniques, instructional activity development, and historical/philosophical concepts of bilingual/bicultural education.

EDTC 1325  Principles and Practices of Multicultural Education  
(3-3-0)  
An examination of cultural diversity found in society and reflected in the classroom. Topics include the study of major cultures and their influence on lifestyle, behavior, learning, intercultural communication and teaching, as well as psychosocial stressors encountered by diverse cultural groups.
EDTC 1364  Practicum (or Field Experience) – Teacher Assistant  
(3-0-21)  
Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

EDTC 2305  Reading Problems (Formerly EDTC 1305)  
(3-3-0)  
Prerequisite: EDTC 1307  
In-depth coverage of reading difficulties. Emphasis on the theories, strategies, recognition, and remediation of reading problems. Topics include assessment, direct instruction, and motivational/interactive literacy activities.

EDTC 2317  Guiding Student Behavior (Formerly EDTC 1317)  
(3-3-0)  
A study of developmentally appropriate direct and indirect guidance techniques for use in various school environments. Topics include identification of causes of inappropriate behavior, establishing and managing routines, the environment’s role in promoting positive behavior, promoting self-esteem negotiation/conflict resolution strategies, and enhancing positive self-direction. Emphasis in implementation of a behavior management plan.

EDUC 1301  Introduction to the Teaching Profession  
(3-2-2)  
Prerequisite: ENGL 1301  
An enriched, integrated pre-service course and content experience that: 1) provides active recruitment and institutional support of students interested in a teaching career, especially in high need fields; 2) provides students with opportunities to participate in early field observations at all levels of P-12 schools with varied and diverse student populations 3) provides students with support from college and school faculty, preferably in small cohort groups, for the purpose of introduction to and analysis of the culture of schooling and classrooms; 4) course content should be aligned as applicable with State Board for Educator Certification Pedagogy and Professional Responsibilities standards; and 5) course includes a 30 contact hours lab component, 15 hours of which must be in P-12 schools.

EDUC 2301  Introduction to Special Populations  
(3-2-2)  
Prerequisite: EDUC 1301  
An enriched, integrated pre-service course and content experience that: 1) provides an overview of schooling and classrooms from the perspectives of language, gender, socioeconomic status, ethnic and academic diversity, and equity with an emphasis on factors that facilitate learning; 2) provides students with opportunities to participate in early field observations of P-12 special populations; 3) course content should be aligned as applicable with State Board for Educator Certification Pedagogy and Professional Responsibilities standards; and 4) course includes a 30 contact hour lab component, 15 hours of which must be with special populations in P-12 schools.
EECT 1300  Technical Customer Service (Formerly EECT 1391)  
(3-3-0)  
General principles of customer service within a technical environment. Topics include internal/external customer relationships, time-management, best practices, and verbal and non-verbal communications skills. Specific training in the industry is addressed concerning products to be sold, serviced, or troubleshooted. (Credit may be awarded for Vendor Training).

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 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)  
Prerequisite: CETT 1415, CETT 1305  
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)  
Prerequisite: ELMT 1391 or concurrent registration  
Basic fluid power course covering vacuum systems, pneumatic and hydraulic systems, fluid power symbols, operating theory, components, and basic electrical and manual controls.

ELMT 1391  Introduction to Industrial Automation Technologies  
(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.
ELMT 2333  Industrial Electronics  
(3-2-4)  
Prerequisite: ELMT 1301, CETT 1329, INTC 1357  
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)  
Prerequisite: Departmental Approval  
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)  
Prerequisite: ELMT 1301  
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)  
Prerequisite: ELMT 1301, INTC 1357, CETT 1329, ELMT 1391  
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.

ELMT 2380  Cooperative Education-Electromechanical Technology  
(3-1-19)  
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. The course includes a lecture component.

ENGL 0220  Basic English Skills  
(2-2-2)  
For the student entering with special English needs who placed below 5th grade English level on the college’s placement instrument. Class size controlled for individual attention. This course is not part of the college’s developmental sequence but is specifically designed for students scoring below the testing floor. Two lecture hours and two lab hours per week.
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. 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 1301  Freshman Composition I
(3-3-0)
Emphasizes training in academic reading and writing. Essays written will be based on a variety of purposes and be created in a multitude of forms. Students will study the principles of invention and arrangement and work to develop a sense of audience and purpose in their writing. Students must earn a minimum grade of “C” in ENGL 1301 before enrolling in ENGL 1302. ENGL 1301 and 1302 cannot be taken concurrently. (3 lecture hours per week)

ENGL 1302  Freshman Composition II
(3-3-0)
Prerequisite: ENGL 1301
An introduction to the study of literature that includes 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. 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 to 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 Since the 18th Century  
(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  American Literature to 1870  
(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  American Literature Since 1870  
(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 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  World Literature Since the 18th Century  
(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 2341  New Voices in Literature  
(3-3-0)  
Prerequisite: ENGL 1301 & ENGL 1302  
This course includes selections in literature organized by theme, genre, interdisciplinary content, or major author. Topics vary with each section offered. This course may be repeated once for credit. A research paper or term project is required. (3 lecture hours per week)
ENGL 2351  Mexican American Literature  
(3-3-0)  
Prerequisite: ENGL 1301 and ENGL 1302  
Investigates the prose, poetry, and drama of Mexican American or Chicano writers. Various literary movements will be examined. 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. A research paper or term project is required. (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. (3 lecture hours per week)

ENGR 1201  Introduction to Engineering  
(2-2-0)  
An introduction to engineering as a discipline and a profession. It includes instruction in the application of mathematical and scientific principles to the solution of practical problems for the benefit of society.

ENGR 1304  Engineering Graphics 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 1304  
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  
(4-3-3)  
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  
(3-3-1)  
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  
(3-3-1)  
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  
(3-3-1)  
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 Fundamentals  
(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
(4-3-3)
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
(3-3-1)
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
(3-3-1)
The course will concentrate on manufacturing processes for metallic materials. Machines
and technologies used for casting, forming, fabricating, welding, heat treating, process con-
trol, injection molding will be described and discussed.

ENTC 1349    Reliability and Maintainability
(3-2-4)
Prerequisite: ENTC 1347
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.

ESOL 0320    Writing II
(3-3-2)
Level II instruction in writing focuses on students’ prior experiences and knowledge for use
in daily writing assignments designed to increase fluency and accuracy. Students will also
read materials at a level of difficulty calculated to advance their acquaintance with written
English, and some writing may be related to these readings. Students will receive daily
feedback from their instructor(s), using the Focused Rewrite Technique. Through guided
writing practice and associated reading, students will attain at least a low-intermediate level
of proficiency when writing English prose on topics that are familiar to them. Placement into
this course is based on assessment.
ESOL 0321 Conversational English II  
(3-3-2)
Level II instruction in conversational English focuses on the students' prior experiences and knowledge to improve the ability to comprehend every-day conversational English. Through exposure to large amounts of conversational English at the appropriate level of difficulty, students will attain at least a low-intermediate level of comprehension when listening to clear, careful English spoken by a variety of speakers discussing a broad range of everyday topics. Placement into this course is based on assessment.

ESOL 0322 Reading II  
(3-3-2)
Level II instruction in reading and vocabulary focuses on the students' prior experiences and knowledge while exposing the students to a wide variety of reading material such as The San Antonio Express News, easy fiction, popular magazines, and Internet articles. Through exposure to massive amounts of written English at the appropriate level of difficulty students will attain at least a low-intermediate level of comprehension when reading English prose dealing with a variety of non-technical topics. Placement into this course is based on assessment.

ESOL 0323 Grammar/Mechanics II  
(3-3-2)
Level II instruction in Grammar/Mechanics focuses on the students' prior experiences and knowledge to increase students' accuracy in grammar and mechanics through writing essays, participating in class discussions, giving oral presentations, and in general, engaging in the kinds of classroom and study activities that are normal and expected in an academic environment. Through these activities, and reading textbooks and articles; listening to lectures; watching and listening to AV materials, students will attain at least a high-intermediate level of accuracy in grammar and mechanics. Placement into this course is based on assessment.

ESOL 0330 Writing III  
(3-3-2)
Level III instruction in writing focuses on students' prior experiences and knowledge for use in daily writing assignments designed to increase fluency and accuracy. Students will also read materials at a level of difficulty calculated to advance their acquaintance with English, and some writing may be related to these readings. Students will receive daily feedback from their instructor(s), using the Focused Rewrite Technique. Through guided writing practice and associated reading, students will attain at least an them. Placement into this course is based on assessment.

ESOL 0331 Conversational English III  
(3-3-2)
Level III instruction in conversational English focuses on the students’ prior experiences and knowledge to improve the ability to comprehend every-day conversational English. Through exposure to large amounts of conversational English at the appropriate level of difficulty, students will attain at least an intermediate level of comprehension when listening to clear, careful English spoken by a variety of speakers discussing a broad range of everyday topics. Placement into this course is based on assessment.
ESOL 0332  Reading III  
(3-3-2)
Level III instruction in reading and vocabulary focuses on the student's prior experience and knowledge while exposing the students to a wide variety of reading material such as The San Antonio Express News, fiction, popular magazines, and Internet articles. Through exposure to massive amounts of written English at the appropriate level of difficulty, students will attain at least an intermediate level of comprehension when reading English prose dealing with a variety of non-technical topics. Placement into this course is based on assessment.

ESOL 0333  Grammar/Mechanics III  
(3-3-2)
Level III instruction in Grammar/Mechanics focuses on the students' prior experiences and knowledge to increase students' accuracy in grammar and mechanics through writing essays, participating in class discussions, giving oral presentations, and in general, engaging in the kinds of classroom and study activities that are normal and expected in an academic environment. Through these activities, and reading textbook and articles; listening to lectures; watching and listening to AV materials, students will attain at least a low-advanced level of accuracy in grammar and mechanics. Placement into this course is based on assessment.

ESOL 0340  Writing IV  
(3-3-2)
Level IV instruction in writing focuses on students' prior experiences and knowledge for use in daily writing assignments designed to increase fluency and accuracy. Students will also read materials at a level of difficulty calculated to advance their acquaintance with written English, and some writing may be related to these readings. Students will receive daily feedback from their instructor(s), using the Focused Rewrite Technique. Through guided writing practice and associated reading, students will attain at least a high-intermediate level of proficiency when writing English prose on topics that are familiar to them. Placement into this course is based on assessment.

ESOL 0341  Conversational English IV  
(3-3-2)
Level IV instruction in conversational English focuses on the students’ prior experiences and knowledge to improve the ability of conversational English at the appropriate level of difficulty, students will attain at least a high-intermediate level of comprehension when listening to clear, careful English spoken by a variety of speakers discussing a broad range of everyday topics. Placement into this course is based on assessment.

ESOL 0342  Reading IV  
(3-3-2)
Level IV instruction in reading and vocabulary focuses on the students' prior experiences and knowledge while exposing the students to a wide variety of reading materials such as The San Antonio Express News, fiction, popular magazines, and Internet articles. Through exposure to massive amounts of written English at the appropriate level of difficulty, students will attain at least an intermediate level of comprehension when reading English prose dealing with a variety of non-technical topics. Placement into this course is based on assessment.
ESOL 0343  Grammar/Mechanics IV  
(3-3-2)  
Level IV instruction in Grammar/Mechanics focuses on the students’ prior experiences and knowledge to increase students’ accuracy in grammar and mechanics through writing essays, participating in class discussions, giving oral presentations, and in general, engaging in the kinds of classroom and study activities that are normal and expected in an academic environment. Through these activities, and reading textbooks and articles; listening to lectures; watching and listening to AV materials, students will attain an advanced level of accuracy in grammar and mechanics. Placement into this course is based on assessment.

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  
(3-3-2)  
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.

FMKT 1301  Floral Design  
(3-3-2)
Principles of floral art with an emphasis in commercial design. Topics include basic design styles and color harmonies; identification, use and care of processing of cut flowers and foliages; mechanical aids and containers; personal flowers; holiday designs; and plant identification and care.

FORS 2440  Forensic Science I  
(4-3-3)  
Prerequisite: CHEM 1311, 1111
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.

FORS 2450  Forensic Science II  
(4-3-3)  
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.

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 FREN 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
(3-3-0)
A study of current environmental problems from a geologic perspective. Topics include natural geological hazards (e.g., volcanism, earthquakes, mass movements, flooding, erosion) and the impact of a human activity (e.g., urban development, agriculture, dam construction, fossil fuel consumption, waste disposal) on the geological environment.

GEOL 1345  Oceanography
(3-3-0)
Methods and principles of oceanography. Geological, 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.

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 and man’s future in space. A summary of earth history – with a focus on climatic and biological changes through time. A survey of historic and contemporary global change. Studies will include the significance to society of the earth sciences including environmental problems, natural resource exploration and utilization, and global climate change. 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. Must be taken with GEOL 1404 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. Must be taken with GEOL 1403 to fulfill the science requirement.

GEOL 1445  Oceanography  
(4-3-3)  
Survey of physical and historical geology, astronomy, meteorology, oceanography, and related sciences.

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 2304  Introduction to Political Science  
(3-3-0)  
Prerequisite: GOVT 2305  
Introductory survey of the discipline of political science focusing on the history, scope, and 
methods of the field, and the substantive topics in the discipline. This course can not be 
substituted for GOVT 2305 – American Government or GOVT 2306 – Texas Government.

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, feder-
alism, citizenship, voting and local governments with an emphasis on Texas government. 
Credit in both GOVT 2305 and 2306 is necessary to satisfy the legislative requirement for 
gratuation. 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.

GOVT 2311  Mexican-American Politics  
(3-3-0)  
The purpose of this course is to study the political experiences of Mexican Americans in the 
United States by reviewing the evolving relationships between governmental institutions 
and the diverse groups within the Mexican-American Culture. The course takes the student 
through the historical development of the introduction of the Spaniards to the evolvement 
of the indigenous groups to the present day manifestation of political and social power. 
This course also views the impact of local, state and national government roles within the 
community structure. As the emerging majority minority group within the United States, this 
explosion without a doubt will affect the infrastructure of the political, health, welfare, and 
educational system of the nation. An analysis of the preceding will be assessed in identify-
ing key areas of consideration not only in the United States structure but also on the global 
scene.

GOVT 2389  Academic Cooperative  
(3-3-0)  
Prerequisite: GOVT 2305 and GOVT 2306  
An instructional program designed to integrate on-campus study with hands-on experience 
in government. In conjunction with class seminars, the individual student will set specific 
goals and objectives in the study of human social behavior and/or social institutions.

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.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>HALT 1319</td>
<td>Landscape Construction</td>
<td>(3-2-2)</td>
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<td></td>
<td>Exploration of landscape construction materials and the methods used for installation. Topics include site preparation, use of common construction materials; landscape lighting, water features, and general construction details.</td>
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<td>HALT 1322</td>
<td>Landscape Design</td>
<td>(3-2-2)</td>
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<td></td>
<td>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.</td>
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<td>HALT 1324</td>
<td>Turfgrass Science &amp; Management</td>
<td>(3-2-2)</td>
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<td></td>
<td>In-depth coverage of various species of warm and cool season grasses including their uses, application, adaptability, environmental tolerances, anatomy, and physiological responses.</td>
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<td>HALT 1331</td>
<td>Woody Plant Materials</td>
<td>(3-2-2)</td>
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<td></td>
<td>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.</td>
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<td>HALT 1333</td>
<td>Landscape Irrigation</td>
<td>(3-2-2)</td>
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<td></td>
<td>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.</td>
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<tr>
<td>HALT 1338</td>
<td>Irrigation Water Management and Conservation</td>
<td>(3-2-2)</td>
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<td>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.</td>
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<tr>
<td>HALT 1345</td>
<td>Golf/Sports Field/Park Management</td>
<td>(3-3-0)</td>
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<td>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.</td>
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<tr>
<td>HALT 1346</td>
<td>Specialized Turfgrass Management</td>
<td>(3-2-2)</td>
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<td>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.</td>
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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 1401  Introduction to Horticulture  
(4-3-3)  
An overview of the horticulture industry, plant science, terminology, classification, propagation, environmental responses, and careers and opportunities in the field of horticulture.

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 2315  Landscape Management  
(3-2-2)  
A study of the procedures and practices used in the horticulture industry for proper landscape maintenance. Topics include landscape installation, lawn maintenance, shrub and tree care, and management practices.

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  Horticultural 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 and Turfgrass 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-Applied Horticulture/Horticultural Operations, General  
(3-0-18)  
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)  
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)  
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 2327  Mexican-American History I  
(3-3-0)  
This course covers the Pre-Columbian period up to the Mexican-American War of 1846-1848. This course focuses on an in-depth analysis of Pre-Columbian influences, Spanish colonization of North America, Mexican control over the region, borderlands development, immigration issues, and emerging social, political, cultural and economic issues of the Mexican American population.
HIST 2328  Mexican-American History II  
(3-3-0)  
This course covers the period after the Mexican-American War to present. The course places a special emphasis on the borderlands, migration/immigration, social, cultural, economic, political developments, and civil rights issues impacting the Mexican American population in their efforts for inclusion into the American political system.

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  
(3-3-0)  
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  
(3-3-0)  
Prerequisite: HMSY 1337  
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  
(3-3-0)  
Prerequisite: HMSY 1337  
Procedures for 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 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  
(3-3-0)  
Prerequisite: HMSY 1337  
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  
(3-3-0)  
Prerequisite: HMSY 1337
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  
(3-3-0)  
Prerequisite: HMSY 1337
Study of terrorism and reasons why America is a terrorist target. Includes methods of terrorism, domestic and international terrorism, Islam and Radical Islam, terrorist operations, cyber-terrorism, narco-terrorism, the mind of the terrorist, and organized crime’s impact on terrorism.

HMSY 1343  Weapons of Mass Destruction  
(3-3-0)  
Prerequisite: HMSY 1337
Weapons of mass destruction and 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  
(3-3-0)  
Prerequisite: HMSY 1337
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 aes-
thetic 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  Readings in the Humanities  
(3-3-0)  
An interdisciplinary, multi-perspective assessment of cultural, political, philosophical, scient-
ific and aesthetic factors critical to the formulation of values and historical development of 
the individual and society.

HUMA 1305  Introduction to Mexican-American Studies  
(3-3-0)  
This course is an interdisciplinary assessment of cultural, political, and aesthetic factors 
critical to the formation of values that shape Mexican-American culture.

HUMA 1311  Mexican-American Fine Arts Appreciation  
(3-3-0)  
A survey course exploring Mexican-American or Chicano visual arts, music, theatre, includ-
ing evaluation of selected works. Course topics will change each semester and students will 
only be allowed to take this course once in fulfillment of FINE ARTS requirements.

HUMA 2323  World Cultures and Global Issues  
(3-3-0)  
An interdisciplinary, multi-perspective assessment of cultural, political, philosophical, scient-
ific 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 learn-
ing, 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 require-
ment 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 Exports  
(3-3-0)  
Export management processes and procedures. Includes governmental controls and compliance, licensing of products, documentation, commercial invoices, and traffic procedures. Emphasizes 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 1303 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 Intercultural Management  
(3-3-0)  
Prerequisite: BMGT 1303 or Departmental Approval  
Cross-cultural comparisons of management and communications processes. Emphasizes cultural geographic distinctions and antecedents that affect individual, group, and organizational behavior. May include sociocultural demographics, economics, technology, political-legal issues, negotiations, and processes of decision making in the international cultural environment.

IBUS 2345 Import Customs Regulations  
(3-3-0)  
Duties and responsibilities of the licensed customs broker. Includes 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.

IMED 1316 Web Page Design I  
(3-3-1)  
Prerequisite/Corequisite: ITSC 1301 and ITSC 1309 or equivalent  
Instruction in web page design and related graphic design issues including mark-up languages, websites, and browsers.
IMED 2315  Web Page Design II
(3-3-1)
Prerequisites: IMED 1316 or equivalent
A study of mark-up language advanced layout techniques for creating web pages. Empha-
sis on identifying the target audience and producing websites according to accessibility
standards, cultural appearance, and legal issues.

INCR 1302  Physics of Instrumentation
(3-2-4)
Prerequisite: ELMT 1391
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 Gate-
way Interface (CGI), Database Interaction, Active Server Pages, Java Applets, Javascripts,
tables, HTML, and/or interactive elements.

INEW 2338  Advanced Java Programming
(3-3-1)
Prerequisite: COSC 1301 or any Programming Course
A continuation of advanced Java programming techniques such as servlets, and advanced
graphical functions. Other topics covered include: Objects and Classes, Strings, Inheri-
tance, Ploymorphism, Event-driven programming, Creating user interfaces, Applets, and
Exceptions and Assertions.

INTC 1312  Introduction to Instrumentation & Safety
(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
(3-2-4)
Prerequisite: CETT 1305
A study of electric motors and motor control devices common to a modern industrial envi-
ronment. A presentation of motor characteristics with emphasis on starting, speed control,
and stopping systems.

ITCC 1302  CCNA 1: Networking Basics
(3-2-3)
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
(3-2-4)
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  
(3-2-3)
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  
(3-2-3)
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  
(3-3-1)  
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. Provides the skills and knowledge necessary to install and configure Windows Server to create file, print, and servers.

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 network operating systems and to the fundamentals of networking technologies that they support.

ITMC 1419  Installing and Administering Microsoft Windows Server Operating Systems  
(4-4-0)  
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 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.
ITMT 1345  Enterprise Development using MS Visual Studio.NET  
(3-3-1)
Visual Studio.NET programming language for developing, distributing, and maintaining objects across distributed networks including the Internet. Includes using Visual Studio.NET to access data stored on a Microsoft Structured Query Language (SQL) server database and allows implementation as a middleware (business rules) application.

ITMT 1350  Implementing, Managing, Maintaining MS Windows Server 2003 Network Infrastructure: Network Services  
(3-3-0)
Prerequisites: ITSC 1301 and ITSC 1317 and ITSC 1325
Implementing routing; implementing, managing, and maintaining Dynamic Host Configuration Protocol (DHCP), Domain Name System (DNS), and Windows Internet Name Service (WINS); securing Internet Protocol (IP) traffic with Internet Protocol security (IPSec) and certificates; implementing a network access infrastructure by configuring the connections for remote access clients; and managing and monitoring network access.

ITMT 2300  Planning, Implementing and Maintaining MS Windows Server 2003 Active Directory Infrastructure  
(3-3-0)
Prerequisites: ITSC 1301 and ITSC 1317 and ITSC 1325 and ITNW 1325 and ITNW 1333 and ITNW 1354
Windows Server 2003 directory service environment. Includes forest and domain structure; Domain Name System (DNS); site topology and replication; organizational unit structure and delegation of administration; Group Policy; and user, group, and computer account strategies.

ITMT 2330  Designing a Microsoft Windows Server 2003 Active Directory and Network Infrastructure  
(3-3-0)
Prerequisites: ITSC 1301 and ITSC 1317 and ITSC 1325 and ITNW 1325 and ITNW 1333 and ITNW 1354
Designing a Microsoft Active Directory service and network infrastructure for a Microsoft Windows Server 2003 environment. Intended for systems engineers who are responsible for designing directory service and/or network infrastructures.

ITMT 2340  Designing a Security for Microsoft Networks  
(3-3-0)
Prerequisites: ITSC 1301 and ITSC 1317 and ITSC 1325 and ITNW 1325 and ITNW 1333 and ITNW 1354
Assembling the design team, modeling threats, and analyzing security risks in order to meet business requirements for securing computers in a networked environment. Includes decision-making skills through an interactive tool that simulates real-life scenarios. Focuses on collecting information and sorting through details to resolve a given security requirement.

ITNW 1321  Introduction to Networking  
(3-3-1)
Prerequisite: ITSC 1304
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  
(3-3-1)  
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  
(3-3-1)  
Implement, administer, and troubleshoot information systems that incorporate servers in a networked computing environment.

ITNW 1425  Fundamentals of Network Technology  
(4-3-2)  
Instruction in networking technologies and their implementation. Topics include the OSI reference model, network protocols, transmission media, and networking hardware and software.

ITNW 1680  Cooperative Education – Computer Systems Networking and Telecommunications  
(6-1-39)  
Prerequisite: Department 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.

ITNW 2165  Practicum (or Field Experience) - Computer 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 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.
ITNW 2321  Networking with TCP/IP for ITSA  
(3-2-3)  
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 1301  Introduction to Computers for ITSA  
(3-2-3)  
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 1305  Introduction to PC Operating Systems for ITSA  
(3-2-3)  
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 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 1325 Personal Computer Hardware for ITSA**

(3-2-3)

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**

(5-0-21)

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 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 includes (SSI), Perl, HTML, Java applets, Javascript, and/or ASP.

ITSE 2309  Database Programming  
(3-3-1)  
Prerequisite: ITSW 2337  
Database 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 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  
(3-2-3)  
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.

ITSY 2359  Security Assessment and Auditing  
(3-3-1)  
Prerequisite: Department Approval  
Capstone experience for the security curriculum. Synthesizes technical material covered in prior courses to monitor, audit, analyze, and revise computer and network security systems to ensure appropriate levels of protection are in place.
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 1110  Badminton I  
(1-1-2)  
This class is for true beginners and others with no previous instruction in Badminton. Basic badminton skills including grips, basic forehand and backhand strokes, and serves will be covered. Students will also learn the rules and etiquette of the game.

KINE 1111  Badminton II  
(1-1-2)  
Prerequisite: KINE 1110 or permission from department  
This class is for students with credit in Badminton I or equivalent experience. Basic skills will be reviewed and refined. New and more advanced skills will also be introduced and the student will be introduced to the methods of conducting a beginning Badminton class.

KINE 1112  Ballet I (formerly PHED 1149)  
(1-2-1)  
Students are introduced to the fundamentals of ballet technique including barre, center work, and beginning combinations with an emphasis on alignment and vocabulary.

KINE 1113  Ballet II (formerly PHED 1160)  
(1-2-1)  
Students will build on technical and performance skills learned in Ballet I with a continued emphasis on alignment and vocabulary.
KINE 1114 Ballet Folklorico I (formerly PHED 1152)  
(1-2-1)  
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 1128  Folk Dance I – Capoeira I  
(1-2-1)
Students will learn to identify and perform the basic movements of capoeira as well as developing an understanding of the history, culture, and philosophy associated with this Afro-Brazilian martial art/dance form.

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)  
(1-2-1)
Students will learn how to do jazz dance warm-up and cool-down and movement combinations with a focus on alignment, ensemble work, and musicality.

KINE 1145  Jazz Dance II  
(1-2-1)
Students will develop and improve jazz dance skills and technique, from classical steps (i.e. ball change step) to jazz influenced by Latin culture (hip sways and rhythmic footwork). This introductory course will explore the means of self-expression through movement and will invite students to explore their own choreographic vocabulary.

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 systems 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)  
(1-2-1)  
Students will continue to explore dance as a creative art form. Aesthetic understanding and critical response skills will be developed as well.

KINE 1154  Pilates I  
(1-1-2)  
Pilates is a world-renowned method of conditioning and strengthening which emphasizes developing a sustained strength of the spine and torso to have a leaner, more defined and supportive musculature. The Pilates I mat work course is designed to develop strength, flexibility coordination and balance to participants of all ages, through a safe progression of challenging and functional exercises.

KINE 1155  Pilates II  
(1-1-2)  
Prerequisite: KINE 1154 or permission from department  
Pilates is a world-renowned method of conditioning and strengthening which emphasizes developing a sustained strength of the spine and torso to have a leaner, more defined and supportive musculature. The Pilates II mat work course is designed to further develop strength, flexibility coordination and balance to participants of all ages, through a safe progression of challenging and functional exercises.

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 1157  Physical Conditioning II: Boot Camp  
(1-1-2)  
Prerequisite: None  
This intermediate physical conditioning course combines high energy cardiorespiratory activities with a military-style physical training to improve muscular strength, muscular endurance, cardiorespiratory endurance, flexibility, and body composition.
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 previous 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 1338  Concepts of Physical Fitness: Personal Training  
(3-3-0)  
Concepts and use of selected physiological variables of fitness, individual testing and consultation, and the organization of sports and fitness programs. This course is designed to prepare and qualify students to work as personal trainers. The course bridges the gap between exercise science related course work and the practical application skills of personal training.
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 2104  Aerobics III  
(1-1-2)  
Prerequisite: KINE 1105 or permission from department  
This course will introduce students to the basic components involved in constructing and teaching a safe, enthusiastic and appropriate aerobic dance class for various fitness levels.

KINE 2105  Aerobics IV  
(1-1-2)  
Prerequisite: KINE 2104 or permission from department  
This course will introduce the student to the intermediate/advanced components involved in constructing and teaching a safe, enthusiastic and appropriate aerobic dance class for various fitness levels.

KINE 2110  Badminton III  
(1-1-2)  
Prerequisite: KINE 1115 or permission from department  
This class is for students who have had at least two semesters of badminton or equivalent. Students will continue to refine their basic skills, deepen their understanding of badminton tactics and participate in planning for course content.

KINE 2114  Ballet Folklorico III  
(1-2-1)  
Students will improve footwork techniques emphasizing fundamentals of body placement, vocabulary, and regions in Mexican Folkloric Dance. Students continue to develop dance combinations to enhance technical skills, memory, and performance qualities.
KINE 2115  Ballet Folklorico IV  
(1-2-1)  
This course further develops the student in the elements of choreography, performance, interpretation and cultural traditions. They will improve footwork techniques emphasizing fundamentals of body placement, vocabulary, and regions in Mexican Folkloric Dance.

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 offense and defense with foil, as well as explanation of rules of foiling fencing.

KINE 2198  Yoga III  
(1-1-2)  
Prerequisite: KINE 1199 or permission from department  
This class will focus on the practice and refinement of asanas (poses) and pranayama (breath awareness), as well as on the philosophy and practice of yoga as a way to enhance physical, mental, and spiritual well-being. Level II students learn how to design a yoga practice session and how to lead a group through a practice session. All students will be expected to practice at home as well as in the classroom.

KINE 2356  Care and Prevention of Athletic Injuries  
(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.

LATI 2311  Intermediate Latin I  
(3-3-0)  
Review and further mastery through readings in Roman civilization and history based on Latin prose authors.

LATI 2312  Intermediate Latin II  
(3-3-0)  
Review and further mastery through readings in Roman civilization and history based on the study of Latin poets.
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 – 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 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 and LMGT 1323 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.

LMGT 2388  Internship: Logistics and Materials Management (Formerly BMGT 2388)  
(3-0-9)  
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.

MATH 0301  Introduction to Algebra  
(3-3-2)  
Prerequisite: Qualifying score on placement exam  
Topics include operations with real numbers, algebraic expressions, exponents, linear equations, the metric system, the Pythagorean Theorem, and the use of these concepts in problem-solving.
MATH 0302  Elementary Algebra  
(3-3-0)  
Prerequisite: MATH 0301 with a grade of “C” or better, or equivalent  
Topics include real numbers, integral exponents, polynomials, scientific notation, factoring,  
linear equations, graphs of linear equations in two variables, quadratic equations (solved by  
factoring), and the use of these concepts in problem-solving.

MATH 0303  Intermediate Algebra  
(3-3-0)  
Prerequisite: MATH 0302 with a grade of “C” or better, or equivalent  
Topics include rational expressions and equations, an introduction to relations and func-
tions, radical expressions and equations, rational exponents, complex numbers, quadratic  
equations (to include 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, to include the algebra of functions, composites and inverses of  
functions, graphs of functions and their translations; polynomial functions, to include the  
Remainder Theorem, Factor Theorem and the Rational Root Theorem; logarithmic and ex-
ponential functions and equations; systems of equations, to include Cramer’s Rule and  
matrices; the Binomial Theorem, 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  Mathematics for Business & Social Sciences I (Formerly Finite Mathematics)  
(3-3-0)  
Prerequisite: MATH 0303 with a grade of “C” or better, or equivalent.  
Topics from College Algebra (linear equations, quadratic equations, function and graphs,  
inequalities), mathematics of finance (simple and compound interest, annuities), linear pro-
gramming, matrices, systems of linear equations, applications to management, economics,  
and business.

MATH 1325  Mathematics for Business & Social Sciences II (Formerly Calculus for Business)  
(3-3-0)  
Prerequisite: MATH 1324 with a grade of “C” or better, or equivalent.  
Topics include limits, continuity, derivatives of polynomials and other algebraic functions,  
implicit differentiation, higher order derivatives, extrema, logarithmic and exponential func-
tions, definite and indefinite integrals, and applications to business and business-related  
topics.
MATH 1332  Math for Liberal Arts  
(3-3-0)  
Prerequisite: MATH 0302 with a grade of “C” or better, or equivalent.  
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 pre-  
requisite 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.  
Some knowledge of trigonometry is recommended but not required.  
Graphing calculator required.  
Topics include rectangular and polar coordinate systems, conic sections, vectors, transform-  
ations, 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 geo-  
metry 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 applica-  
tions. Topics include distributions, histograms, exploratory data analysis, measures of loca-  
tion and dispersion, elementary probability functions (binomial, normal, and t-distribution,  
chi-square distribution), analysis of measurements (confidence intervals and hypothesis  
testing), and analysis of paired data (linear regression and correlation).

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, and 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, vectors, and mathematical induction.

MATH 2413  Calculus I
(4-4-0)
Prerequisite: The combination of MATH 1316 and MATH 1348, each with a grade of “C” or better, 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. Also Riemann sums, definite integrals, the 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'Hopital's Rule, techniques of integration, numerical methods, improper integrals, volume, arc length and other applications of integration. Also parametric equations, derivatives and areas in polar coordinates, 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 vectors, curl, partial derivatives, the 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.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MRKG 1301</td>
<td>Customer Relations (3-3-0)</td>
<td></td>
</tr>
<tr>
<td>MRKG 1311</td>
<td>Principles of Marketing (3-3-0)</td>
<td></td>
</tr>
<tr>
<td>MRKG 1313</td>
<td>Public Relations (3-3-0)</td>
<td></td>
</tr>
<tr>
<td>MRKG 2380</td>
<td>Cooperative Education - Marketing/Marketing Management, General (3-1-20)</td>
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</tr>
<tr>
<td>MUAP 1100</td>
<td>Accordion – Private (1-1-1)</td>
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<tr>
<td>MUAP 1101</td>
<td>Violin – Private (1-1-1)</td>
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<tr>
<td>MUAP 1117</td>
<td>Flute – Private (1-1-1)</td>
<td></td>
</tr>
<tr>
<td>MUAP 1129</td>
<td>Clarinet – Private (1-1-1)</td>
<td></td>
</tr>
</tbody>
</table>

General principles of customer service including skills, knowledge, attitudes, and behaviors.

Introduction to the marketing functions; identification of consumer and organizational needs; explanation of economic, psychological, sociological, and global issues; and description and analysis of the importance of marketing research.

Exploration of theories, techniques, and processes of public relations including means of influencing methods of building good will, analysis of media, obtaining publicity, and implementation of public relations programs.

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.

A comprehensive study of the performance techniques of the accordion and the different styles of performance such as Tejano, Mariachi, polkas, and waltzes.

Technical studies to develop instrumental techniques.

Includes the study of all scales, chromatic, arpeggios, various articulations, and short compositions from standard repertoire.

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.

MUAP 2181  Intermediate Voice I/Private Instruction  
(1-1-1)  
Prerequisite: MUAP 1181  
Continuation of MUAP 1182. Open to students with previous voice experience. Offers the opportunity for further development of the fundamentals of singing.

MUAP 2182  Intermediate Voice II/Private Instruction  
(1-1-1)  
Prerequisite: MUAP 2181  
Continuation of MUAP 2181. Open to students with previous voice experience. Offers the opportunity for further development of the fundamentals of singing.

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 1135  Beginning Mariachi Ensemble (formerly MUEN 1151)  
(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 1136 Intermediate Mariachi Ensemble (formerly MUEN 1152)  
(1-0-3)  
A continuation of MUEN 1151. Develop further vocal and instrumental performance techniques.

MUEN 1137 Advanced Mariachi Ensemble (formerly MUEN 1153)  
(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.

MUSB 1305 Survey of the Music Business  
(3-3-0)  
An overview of the music industry including songwriting, live performance, the record industry, music merchandising, contracts and licenses, and career opportunity.

MUSB 1341 Concert Promotion and Venue Management  
(3-3-0)  
Prerequisite: MUSB 1305  
Concert promotion and venue management. Includes considerations in purchasing a club, concert promotion and advertising, talent buying, city codes, insurance, Texas Alcoholic Beverage Commission Regulation, performance rights organization licenses, personnel management, and concert production and administration.

MUSB 2301 Music Marketing and Merchandising  
(3-3-0)  
Prerequisite: MUSB 1305  
Methods of music distribution, retailing, and wholesaling. Includes identifying a target market, image building, distribution (brick and mortar vs. digital delivery), pricing, advertising, and marketing mix.

MUSB 2305 Music Publishing  
(3-3-0)  
Prerequisite: MUSB 1305  
A study of the administrative and marketing aspects of music publishing including the application of current copyright law, developing songwriters, right exploration, and royalty collection.
MUSB 2309 The Record Industry  
(3-3-0)  
Prerequisite: MUSB 1305  
A study of the history of the record industry and the organization of large and small record companies. Topics include record company functions such as artist and repertoire (A&R), promotion, marketing, business affairs administration and distribution.

MUSB 2345 Live Music and Talent Management  
(3-3-0)  
Prerequisite: MUSB 1305  
An examination of the role, scope, and activities of the talent manager including establishing the artist/manager relationship; planning the artist’s career; and developing goals, strategies, and tactics with an overall view of the live music business.

MUSB 2355 Legal Aspects in the Entertainment Industry  
(3-3-0)  
Prerequisite: MUSB 1305  
This course will cover copyright law and the various agreements used in the entertainment industry. Emphasizes contracts used by music publishers, record companies, artist managers, record producers, film and television producers, and booking agencies.

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 I  
(3-3-0)  
A survey of vocal and instrumental literature, melding forms and representing styles. Offered Fall Semester Only.

MUSI 1309  Introduction to Music Literature II  
(3-3-0)  
Course is a continuation of MUSI 1308. A survey of vocal and instrumental literature, melding forms and representing styles.

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 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
(3-1-6)
An instructional program designed to integrate on-campus study with practical hands-on work experience in music. In conjunction with class seminars, the individual student will set goals and objectives in the study of music and performance.

PHED — SEE KINE

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.

PHTC 1300 Photo Digital Imaging I (3-3-3)
Computer and software instruction for electronic imaging. Includes color, gray scale, image conversion, presentation, and ethics.

PHYS 1401 General Physics I (4-3-3)
Prerequisite: MATH 1316 (Plane Trigonometry) or MATH 1314 and 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 (formerly PHYS 1105 and 1305) (4-3-3)
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 (4-3-3)
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 (formerly PHYS 1570) (4-4-3)
Prerequisite: MATH 2413
Corequisite: MATH 2414
For pre-engineering and physics majors or minors. The principles and applications of mechanics, heat, and fluids are covered through an analytic, problem-solving procedure.

PHYS 2426 University Physics II (formerly PHYS 2570) (4-4-3)
Prerequisite: MATH 2414, PHYS 2425
Corequisite: MATH 2415
For pre-engineering and physics majors or minors. The principles and applications of electricity and magnetism, wave phenomena, and some topics in modern physics are investigated.
POFI 1301  Computer Applications I
(3-3-1)
Recommended: Keyboarding proficiency
Overview of computer office applications including current terminology and technology. Introduction to computer hardware, software applications, and procedures.

POFI 1341  Computer Applications II
(3-2-3)
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 focusing on business applications.

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 material using word processing desktop publishing features. Emphasis on layout techniques, graphics, multiple page displays, and business applications.

POFL 1305  Legal Terminology
(3-3-0)
Spelling, pronunciation, and definition of legal terms. Includes an overview of the areas of law and legal 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 applicable to 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 1325  Business Math and Machine Applications  (3-3-0)  
Skill development in the use of electronic calculators and business math functions. Emphasis on business problem-solving skills using spreadsheet software and/or electronic calculator/keyboard. Students will also learn how to use the following machines: fax, copier, digital camera, PDA, Web Cam, scanners, and binding machine.

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  Beginning Keyboarding (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 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  Beginning Keyboarding (Majors)  (4-3-2)  
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  Intermediate Keyboarding  
(3-2-3)  
Prerequisite: POFT 1329 or POFT 1429 or equivalent  
A continuation of keyboarding skills in document formatting, emphasizing 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 five-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 and presentation skills to produce effective business communications.

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 Keyboarding  
(3-2-3)  
Prerequisite: POFT 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 five-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 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.
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.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYC 2319</td>
<td>Social Psychology</td>
<td>(3-3-0)</td>
<td>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.</td>
</tr>
<tr>
<td>PSYC 2370</td>
<td>Abnormal Psychology</td>
<td>(3-3-0)</td>
<td>This course is a study of the description, current classifications, etiology, and treatment of major psychological disorders, including both functional and organic disorders.</td>
</tr>
<tr>
<td>QCTC 1305</td>
<td>Teaming</td>
<td>(3-3-0)</td>
<td>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.</td>
</tr>
<tr>
<td>RBTC 1305</td>
<td>Robotic Fundamentals</td>
<td>(3-2-4)</td>
<td>An introduction to flexible automation. Topics include installation, repair, maintenance, and development of flexible robotic manufacturing systems.</td>
</tr>
<tr>
<td>READ 0220</td>
<td>Basic Reading Skills</td>
<td>(2-2-2)</td>
<td>For the student entering with special reading needs below 6th grade reading level based on the college’s placement instrument. Class size controlled for individual attention. This course is not part of the college’s developmental sequence but is specifically designed for students scoring below the testing floor. Two lecture hours and two lab hours per week.</td>
</tr>
<tr>
<td>READ 0300</td>
<td>Reading I</td>
<td>(3-3-2)</td>
<td>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.</td>
</tr>
<tr>
<td>READ 0301</td>
<td>Reading II</td>
<td>(3-3-2)</td>
<td>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.</td>
</tr>
</tbody>
</table>
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 0170  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 0171  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.

SDEV 0172  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 0370  Personal and Academic Success  
(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.

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 at some universities.)
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>Prerequisite(s)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SGNL 1302</td>
<td>Beginning Sign Language Basic II (formerly SPCH 1374)</td>
<td>(3-3-0)</td>
<td>Prerequisite: SGNL 1301</td>
<td>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 at some universities.)</td>
</tr>
<tr>
<td>SOCI 1301</td>
<td>Introduction to Sociology</td>
<td>(3-3-0)</td>
<td></td>
<td>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.</td>
</tr>
<tr>
<td>SOCI 1306</td>
<td>Contemporary Social Problems</td>
<td>(3-3-0)</td>
<td></td>
<td>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.</td>
</tr>
<tr>
<td>SOCI 2301</td>
<td>Marriage and the Family</td>
<td>(3-3-0)</td>
<td></td>
<td>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.</td>
</tr>
<tr>
<td>SOCW 2361</td>
<td>Introduction to Social Work</td>
<td>(3-3-0)</td>
<td></td>
<td>Development of the philosophy and practice of social work in the United States, survey of the fields and techniques of social work.</td>
</tr>
<tr>
<td>SOCW 2362</td>
<td>Introduction to Social Welfare</td>
<td>(3-3-0)</td>
<td>Prerequisite: SOCW 2361</td>
<td>Introduction to the study of modern social work, the underlying philosophy and ethics of social work, and the major divisions and types of social work together with their methods and objectives.</td>
</tr>
<tr>
<td>SPAN 1300</td>
<td>Beginning Conversational Spanish I</td>
<td>(3-3-0)</td>
<td></td>
<td>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.</td>
</tr>
<tr>
<td>SPAN 1310</td>
<td>Beginning Conversational Spanish II</td>
<td>(3-3-0)</td>
<td>Prerequisite: SPAN 1300</td>
<td>A continuation of SPAN 1300. Does not fulfill degree requirements.</td>
</tr>
</tbody>
</table>
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 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. There is a multi-cultural aspect of the course that allows it to be part of the International Studies Certificate. Recommended for elementary education, drama, speech, and English majors preparing to teach literature.

TECA 1303  Families, School, and Community
(3-3-1)
A study of the child, family, community, and schools, including parent education and involvement, family and community lifestyles, child abuse, and current family life issues. Course content must be aligned as applicable with State Board for Educator Certification Pedagogy and Professional Responsibilities standards. Requires students to participate in field experiences with children from infancy through age 12 in a variety of settings with varied and diverse populations. And course includes a minimum of 15 hours of field experiences.

TECA 1311  Educating Young Children
(3-3-1)
An introduction to the education to the young child, including developmentally appropriate practices and programs, theoretical and historical perspectives, ethical and professional responsibilities, and current issues. Course content must be aligned as applicable with State Board for Educator Certification Pedagogy and Professional Responsibilities standards. Requires student to participate in field experiences with children from infancy through age 12 in a variety of setting with varied and diverse populations. Course includes a minimum of 15 hours of field experiences.

TECA 1318  Wellness of the Young Child
(3-3-1)
A study of the factors that impact the well-being of the young child including healthy behavior, food nutrition, fitness and safety practices. Focus on local and national standards and legal implications of relevant policies and regulations. Course content must be aligned as applicable with State Board for Educator Certification Pedagogy and Professional Responsibilities standards. Requires students to participate in field experiences with children from infancy through age 12 in a variety of setting with varied and diverse populations. Course includes a minimum of 15 hours of field experience.
TECA 1354  Child Growth and Development  
(3-3-0)  
A study of the physical, emotional, social, and cognitive factors impacting growth and development of children through adolescence.

TRVM 1300  Introduction to Travel and Tourism  
(3-3-0)  
An overview of the travel and tourism industry. 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  
(2-2-1)  
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  
The students will learn the 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  
(2-1-3)  
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  
(3-2-4)  
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  
(3-2-4)  
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  
(3-2-4)  
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.

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. Professional Liability Required.

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  

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  
(3-2-4)  
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  
(3-2-4)  
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.
VTHT 2331  Veterinary Clinical Pathology II  
(3-2-4)  
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.

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 1291, 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.
Palo Alto College Administration

Ana M. “Cha” Guzmán, Ed.D. ................................................................. President
Stacey Johnson, Ed.D. ........................................................................... Vice President of Academic Affairs
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Ernestina Mesa, M.L.I.S. ................................................................. Dean, Learning Resources
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Elizabeth Tanner, M.S. ................................................................. Interim Dean, Arts, Humanities & Social Sciences

Palo Alto College Professional Staff

Robert Aguinaga, B.A. .......................................................... Manager of Institutional Research & Effectiveness
David Alfaro, M.Div. ................................................................................ Recruiter/Advisor
David Amaya ..................................................................................LAN Administrator/Engineer
Lucy Barlow, B.A. ........................................................................... Distance Learning Program Specialist
Vincent Bosquez, M.B.A. .......................................................... Director of Public Relations
Tod Bruning, M.S. ................................................................. Corporate & Community Education Program Manager
Ginger Hall Carnes, M.S. .......................................................... Coordinator of Publications
Lydia Casas, M.S. ........................................................................... Math Instructional Skills Specialist
Gilivaldo Castaneda, B.S. .......................................................... Instructional Skills Specialist
Catherine Chapa, M.S. .......................................................... Director of Institutional Research, Planning & Effectiveness
Alianna Chavez, B.A. ........................................................................... Education Skills Specialist II
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Linda Cooke, B.S. ................................................................................ Assistant Director of Records
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Ray Hernandez, M.A. ................................................................. Director of Retention & Support Services
Valerie Hernandez, B.A. .......................................................... Education Skills Specialist/ Writing Assistance Center
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Rosemarie Laguna, B.A. ............................................. Associate Director of Student Financial Services
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Jessica Lopez, B.S. ................................................ Instructional Skills Specialist, Upward Bound
Nicholas Lopez, B.A. .................................................... Educational Skills Specialist, Upward Bound
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Cynthia Mendiola-Perez, Ed.D. ......................................... Director of Advising and Student Support Services
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Yolanda Reyes, B.A. ............................................................ Recruiter/Advisor
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Esteban Sosa, A.A. ............................................................ Senior Multi-Media Specialist
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Jane Velasquez ............................................................... Community Outreach Coordinator
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Bridgett Willett, B.S. ........................................................ Interim Curriculum Analyst
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Alamo Community Colleges

Administrative Staff

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Kristine L. Clark, Ed.D. .......................................................................................................... Vice Chancellor, Academic Success
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Patricia Major ..................................................................................................................... Director of Internal Audit
Linda O’Nave ....................................................................................................................... Director of Acquisitions & Administrative Services
Lula W. Pelayo .................................................................................................................... Director of Nursing
John Soto ............................................................................................................................. Director of Business Outreach
Jo B. Tucker ........................................................................................................................ Director of Workforce Admin. & Special Projects
Vacant .................................................................................................................................. Director of Public Relations

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Date following board member’s name indicates expiration of term.

The College District administers five colleges — Northeast Lakeview College, Northwest Vista College, Palo Alto College, St. Philip’s College, and San Antonio College.
FACULTY

Professor Emeritus
Margarita Fresquez-Zaske, Professor Emeritus of Mathematics: B.S., University of Texas at El Paso; M.S., New Mexico State University
Julie Goben, Assistant Professor Emeritus of Mathematics: B.A., St. Mary’s University; M.A., Texas Tech University
Irma M. Sanchez, Assistant Professor Emeritus of Learning Resources: B.A., St. Mary’s University; M.S.L.S., Our Lady of the Lake University
Roy Tucker, Professor Emeritus of Mathematics: B.A., Mercer University; M.Div., South-eastern Baptist Theological Seminary; M.S., Prairie View A&M University; M.Ed., Pan American University; Ph.D., Ohio Christian University; Ph.D., Baylor University

Full-Time & Adjunct Faculty By Departments

AGRICULTURE/HORTICULTURE

Full-Time Faculty
Kirk W. Williams, Instructor of Agriculture & Horticulture, Landscape & Turfgrass Management: B.S., Texas Tech University; M.S., Oklahoma State University
Weldon G. Riggs, Instructor of Agriculture: B.S., M.Ed., Texas A&M University

Adjunct Faculty
Paul William Cox, Turfgrass and Landscape Management: B.S., M.S., Stephen F. Austin State University
Richard George Hurd, Turfgrass and Landscape Management: B.A., University of Texas at Austin; M.A., Texas A&M University
Timothy Loesch, Agriculture/Horticulture: B.S., Texas A&M University
Billy Odam, Agriculture/Horticulture: B.S., M.Ed., Southwest Texas State University
Deborah Reid, Agriculture/Horticulture: B.S., M.S., Texas A&M University
Chad Stranahan, Agriculture/Horticulture: B.S., Purdue University

AVIATION TECHNOLOGY

Adjunct Faculty
Mario D. Mellum, Aviation Technology: B.S., United States Air Force Academy

BEHAVIORAL SCIENCES & HUMANITIES

Full-Time Faculty
Chairperson: Theresa Garfield, Assistant Professor of Education: B.A., M.A., Our Lady of the Lake University
Amie DeLeon, Instructor of Interdisciplinary Studies and Teacher Education: B.A., University of the Incarnate Word; M.S., Texas A&M University-Kingsville
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BUSINESS
Full-Time Faculty
Chairperson: Elsa A. Anaya, Assistant Professor of Business & Management: B.A., Texas A&M University; M.B.A., Our Lady of the Lake University.
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Mary Ann Bowman, Business Management & Human Resource Management: B.A., University of Texas at Austin; M.A. University of Texas at San Antonio
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Y’vondia Johnson, Business Management: B.A., Park University; M.A., Webster University
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Carol Medrano, Business Management & Marketing: B.S. Wayland Baptist University; M.A. Webster University
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Derek Miles, Business Administration, Business Management & Marketing: B.B.A., University of Texas at San Antonio; M.B.A., Our Lady of the Lake University
Dorothy Morris, Business Management & Marketing: B.S. Jacksonville State University; M.B.A., Troy State University
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COMPUTER SCIENCE & COMPUTER INFORMATION SYSTEMS

Full-Time Faculty
Chairperson: Joe J. Corrales, Assistant Professor of Computer Information Systems and Computer Science: B.S., Wayland Baptist University; M.A., Webster University
Duane F. Conley, Professor of Computer Information Systems and Computer Science: B.A., University of Texas at Austin; Ph.D., Yale University
John B. Dunn, Assistant Professor 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
Steven Hicks, Assistant Professor of Computer Information Systems and Computer Science: B.S., Corpus Christi State University; M.A., Webster University
John L. Jansma, Associate 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
Neven Jurkovic, Associate Professor of Computer Science: B.S.E.E., University of Zagreb; M.S., Southwest Texas State University; Ph.D., University of Zagreb
Lee Ming Ross, Assistant Professor of Computer Information Systems and Computer Science: B.A., National Taiwan University; M.S., Alabama A&M University
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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
Donna Ostaszewski, Computer Science & Computer Information Systems: M.A., Webster University
Charles N. Ritley, Computer Science & Computer Information Systems: B.S., Kent State University; M.S., Texas A&M University
Kevin R. Roark, Computer Science & Computer Information Systems: B.S., Southeastern Oklahoma State University; M.T., Southeastern Oklahoma State University

COUNSELING & SUPPORT SERVICES

Full-Time Faculty
Chairperson: Mary L. Apolinar, Assistant Professor of Counseling and Student Development: B.A., Southwest Texas State University; M.A., Our Lady of the Lake University
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ENGLISH/COMMUNICATIONS/FOREIGN LANGUAGES/ESOL/READING

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<table>
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<tr>
<th>Name</th>
<th>Field</th>
<th>Degrees</th>
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<tr>
<td>Marialice Lozano</td>
<td>Reading</td>
<td>B.S., Southwest Texas State University; M.A., University of Texas at San Antonio</td>
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<tr>
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<td>B.A., Incarnate Word College; M.F.A., California Institute of the Arts</td>
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<td>B.A., Pan American University; M.A., University of Texas-Pan American</td>
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<td>Earl McDonald</td>
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<td>B.A., St. Mary’s University; M.A., Our Lady of the Lake University</td>
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<td>Joan McMillian</td>
<td>Foreign Languages</td>
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<td>Gerardo A. Mechler</td>
<td>Reading</td>
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<td>Luis Mercado</td>
<td>Communications</td>
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<td>Diana L. Montejano</td>
<td>English</td>
<td>B.A., Incarnate Word College; M.A., University of Texas at El Paso</td>
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<td>John O. Morris</td>
<td>English</td>
<td>B.A., Schreiner College; M.A., Boston College</td>
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<td>Nancy Mortensen</td>
<td>English</td>
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<td>Ellis K. Mullins</td>
<td>English</td>
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<td>Kenneth Neumann</td>
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<td>Ellsworth Norcross Jr.</td>
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<td>David Ochoa</td>
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<td>Rosita Palacios</td>
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<td>Oscar Perez</td>
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<td>Velma Perez-Perry</td>
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<td>Tracy M. Price</td>
<td>English</td>
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<td>David Pryor</td>
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<td>B.A., Loyola University; M.A., St. Mary’s University</td>
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<td>Jacqueline L. Reynolds</td>
<td>English</td>
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<td>B.A., University of Houston; M.A., University of Texas at San Antonio</td>
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<td>English</td>
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<td>Lyle D. Rosdahl</td>
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<tr>
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<tr>
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<tr>
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<tr>
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<td>B.A., Laredo State University; M.A., University of Texas at San Antonio</td>
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liam & Mary
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University
David Woods, English: B.A., M.A., Quinnipiac University
Mary Joyce Young, English: B.A., M.A., Southwest Texas State University

FINE & PERFORMING ARTS/SPEECH COMMUNICATION

Full-Time Faculty

Chairperson: Karen Mahaffy, Assistant Professor of Art: B.A., Hope College; M.F.A., Uni-
versity of Texas at San Antonio
Cakky Brawley, Assistant Professor of Art: B.F.A., Texas Tech University; M.F.A. Indiana
University
Carolyn DeLecour, Assistant Professor of Speech: B.S., Texas A&I University; M.A., Uni-
versity of Texas at Austin
Alba De Leon, Professor of Art: B.A., Bennington College; M.F.A., University of Alabama
at Tuscaloosa; M.A., University of Texas at San Antonio; Ph.D., University of the
Incarnate Word
Kenneth E. Harris, Assistant Professor of Speech: B.A., Western Kentucky University;
M.A., Mid-American Baptist Seminary; Ph.D., Indiana University
Mark Hogensen; Associate Professor of Art: B.S., B.F.A., Oregon State University; M.F.A.,
University of Texas at San Antonio
Armin Marmolejo, Assistant Professor of Music: B.A., North Texas State University; M.M.,
Southwest Texas State University; D.M.A., University of Texas at Austin
Juan Ortiz, Instructor of Music: Director of Campanas de América and Mariachi Palomi-
nos, Artist in Residence
Brent Osner, Professor of Music: B.M.Ed., Abilene Christian University; M.M.Ed., Angelo
State University
Chuck Squier, Assistant Professor of Drama and Speech: A.A., Kilgore Jr. College; B.F.A.,
M.A., Stephen F. Austin State University
Juan Tejeda, Instructor of Music: B.A., M.A., University of Texas at San Antonio
Ann Turner, Professor of Drama and Speech: B.A., Fresno State College; M.A., Univer-
sity of Texas at El Paso; M.F.A, Memphis State 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

Adjunct Faculty

Tony L. Anderson, Speech: B.S., East Central State University; M.A., Oklahoma State
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Justin Boyd, Art: M.F.A., California Institute of the Arts; B.F.A., University of Texas at San
Antonio
Monica Camero, Visual Art: B.F.A., University of Texas at San Antonio; M.F.A., California College of Arts
Cynthia Castillo, Music: B.A., University of Texas at Austin; M.M., Southwest Texas State University
John E. Clifford, Speech: B.S.S., John Carroll University; M.A., St. Louis University; Ph.D., Michigan State University
Joseph Coppola, Speech: B.A., M.A., Baylor University
Judity Cottrell, Art: B.F.A., University of Houston; M.F.A.; University of Texas at San Antonio
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