CATALOG 2012-2014

TSTC
Texas State Technical College™

Institutional Purpose and Goals

Statement of Purpose

TSTC's purpose or mission is described in Vernon's Texas Education Code Section 135.01:

"The Texas State Technical College System is a co-educational two-year institution of higher education offering courses of study in technical-vocational education for which there is a demand within the state of Texas.

The Texas State Technical College System shall contribute to the educational and economic development of the State of Texas by offering occupationally-oriented programs with supporting academic coursework, emphasizing highly specialized advanced and emerging technical and vocational areas for certificates or associate degrees. The Texas State Technical College System is authorized to serve the State of Texas through excellence in instruction, public service, faculty and manpower research and economic development. The system's economic development efforts to improve the competitiveness of Texas business and industry include exemplary centers of excellence in technical program clusters on the system's campuses and support of educational research commercialization initiatives. Through close collaboration with business, industry, governmental agencies and communities, including public and private secondary and postsecondary educational institutions, and the system shall facilitate and deliver an articulated and responsive technical education system.

In developing and offering highly specialized technical programs with related supportive coursework, primary consideration shall be placed on industrial and technological manpower needs of the state. The emphasis of each Texas State Technical College System campus shall be on advanced or emerging technical programs not commonly offered by public junior colleges."

Expanded Statement of Purpose

TSTC Harlingen is a unique college which offers technical and academic programs and courses in statewide demand for the 21st century while emphasizing, in particular, the needs of the Rio Grande Valley. The college provides opportunities for both immediate employment and seamless transfer of credits to other colleges and universities. Programs include A.S. and A.A.S. degrees, a General Education Core with options for particular fields of study, certificates of completion, and workforce certificates.

TSTC Harlingen's open admissions policy makes higher education and training programs and courses available to all and results in diverse curriculum offerings. The college emphasizes study through multiple instructional delivery systems and actively seeks involvement of high school and non-traditional students in its programs. Appropriate assessment and placement into educational programs and innovative approaches to education are essential in meeting the needs of students and industry.

TSTC Harlingen recognizes that it must prepare students for the 21st century by providing for the holistic personal and professional development of our students through student services, organizations, and other activities. By utilizing a comprehensive master plan approach, TSTC Harlingen assures the vitality of its programs for today's industrial and academic demands and tomorrow's challenges.

Vision and Values

The Texas State Technical Colleges will be a leader in strengthening the competitiveness of Texas business and industry by building the state's capacity to develop the highest quality workforce.

Innovation	Creating and implementing new ideas and methods
Excellence	Achieving the highest quality in all we do
Leadership	Developing visions and strategies for a desired future, and aligning and energizing people to achieve those visions
Collaboration	Working cooperatively with other organizations and within our own system.
Responsiveness	Providing appropriate programs and services in a proactive, flexible, and timely manner
Accountability	Measuring our performance and using the results for improvement
Stewardship	Ensuring our programs and services add value to our students and communities throughout the state, and operate in accordance with the public trust for which we are responsible

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Welcome to TSTC Harlingen

Texas State Technical College is committed to providing students the knowledge and skills that are the basis of a world class education. The technical programs offered at TSTC are known nation-wide as delivering the science and critical thinking required for successful careers.

Global connectivity eliminates isolation and influences our educational programs, our career choices and our economy. TSTC's partnership with industry, coupled with our faculty's experience, high academic standards and our staff's commitment to service form ties that bind; strengthening our delivery of world-class education. Together with our students, we possess an amazing potential to build upon the traditions of TSTC Harlingen to assure continued success. Our three technology divisions - Industrial and Manufacturing, Computer Information Systems, and Allied Health - place more than 90 percent of graduates in rewarding careers. As emerging technologies surface, our programs will adapt to not only stay current with applications, but to expand opportunities for our graduates and strengthen relationships with our business partners.

We are also strong in our Academic Core program with an ever increasing number of articulation agreements with four-year universities. Our academic programs are an integral part of the college success we bring to our students. This provides more choices for our students regarding life-long learning. Another important component of our resources are the talent and programs available at TSTC Corporate College, TSTC Marshall, TSTC Waco and TSTC West Texas. I invite you to frequently check out their programs and developments online.

This is an exciting time for TSTC. I hope you take the time to learn more about opportunities for your success.

Dr. Cesar Maldonado, P.E.,
President, TSTC Harlingen

The TSTC System

Texas State Technical College (TSTC) was established in 1965 as the James Connally Technical Institute (JCTI) of Texas A & M University to meet the state's evolving workforce needs. This college was located in Central Texas at the former James Connally Air Force Base in Waco. At the time, Governor John Connally predicted that it would be "the most sophisticated technical-vocational institute in the country."

In 1967, JCTI expanded to include a South Texas campus in Harlingen. In 1969, the colleges separated from Texas A&M University and became an independent state system, with the name Texas State Technical Institute (TSTI) and its own Board of Regents. Additional campuses were created in 1970 in Amarillo in the Panhandle of Texas and in Sweetwater in West Texas. As the demand for quality technical education continued to grow, extension centers were established in McAllen (1983), Abilene (1985), Breckenridge (1989), Brownwood (1991), and Marshall (1991). In 1991, TSTI was renamed Texas State Technical College (TSTC). In 1999, the extension center in Marshall became an independent college of the system.

Today, serving as the corporate college for Texas, TSTC offers new, emerging and customized curriculum at four colleges: TSTC Harlingen, TSTC Marshall, TSTC Waco, and TSTC West Texas, which has campuses in Abilene, Breckenridge, Brownwood, and Sweetwater. In addition, programs and customized training are offered at partnership centers throughout the state.

TSTC is the only state-supported technical college system in Texas. TSTC's statewide role and mission is to efficiently and effectively help Texas meet the high-tech challenges of today's global economy, in partnership with business and industry, government agencies, and other educational institutions. TSTC has high graduation rates, exceptional postgraduate success rates, and an outstanding record in graduating individuals from diverse cultural and socioeconomic backgrounds. More than 30,000 students are served each year through traditional degree programs, short-term continuing education and corporate training programs.

Among TSTC's strengths are its emphasis on "learning by thinking and doing" and its strong relationships with business and industry, state-of-the-art laboratories, residential campuses, and student-centered philosophy:

"We believe in people. We believe people desire to be responsible and productive citizens. We believe technology is a force to be explored and channeled by people in a productive and responsible manner for the benefit of all humankind. Therefore, we believe all people should be provided with the educational opportunity to learn the skills necessary to perform meaningful work and, thereby, pursue their goals as responsible citizens contributing to the welfare and success of their families, communities, state, nation, and world."

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Governance and Accreditation

The TSTC System is governed by a nine-member Board of Regents and operated under the direction of a systemwide Chancellor. These Regents, who provide a statewide perspective, are appointed by the governor to six-year terms. The Board meets quarterly to provide leadership and enact policies for the successful management and operation of the system. The Colleges operate under the rules and regulations of the Texas Higher Education Coordinating Board.

The Texas State Technical College System Chancellor is
Mike Reeser, MBA

The TSTC System Board of Regents include:
Michael F. Northcutt, Chair of the Board;
Ellis M. Skinner II, Vice Chair;
Linda McKenna, Executive Committee Place 1;
Gene Seaman, Executive Committee Place 2;
Penny Forrest, Member;
Joe M. Gurecky, Member;
John Hatchel, Member;
Joe K. Hearne, Member;
J.V. Martin, Member.

Texas State Technical College Harlingen is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award Associate of Science and Associate of Applied Science degrees and certificates of completion. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404-679-4500 for questions about the accreditation of Texas State Technical College Harlingen. Students may review accreditation records in the TSTC Harlingen Office of the President.

Equal opportunity shall be afforded within the Texas State Technical College System to all employees and applicants for admission or employment regardless of race, color, gender, religion, national origin, age, or disability.

TSTC is a member of the American Association of Collegiate Registrars and Admissions Officers and is listed in that association's Report of Credit Given.

The following programs are accredited by the:
American Dental Association (ADA)
- Dental Assistant
- Dental Hygiene

Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM)
- Health Information Technology

Commission on Accreditation of Allied Health Education Programs (CAAHEP)
- Medical Assistant
- Surgical Technology

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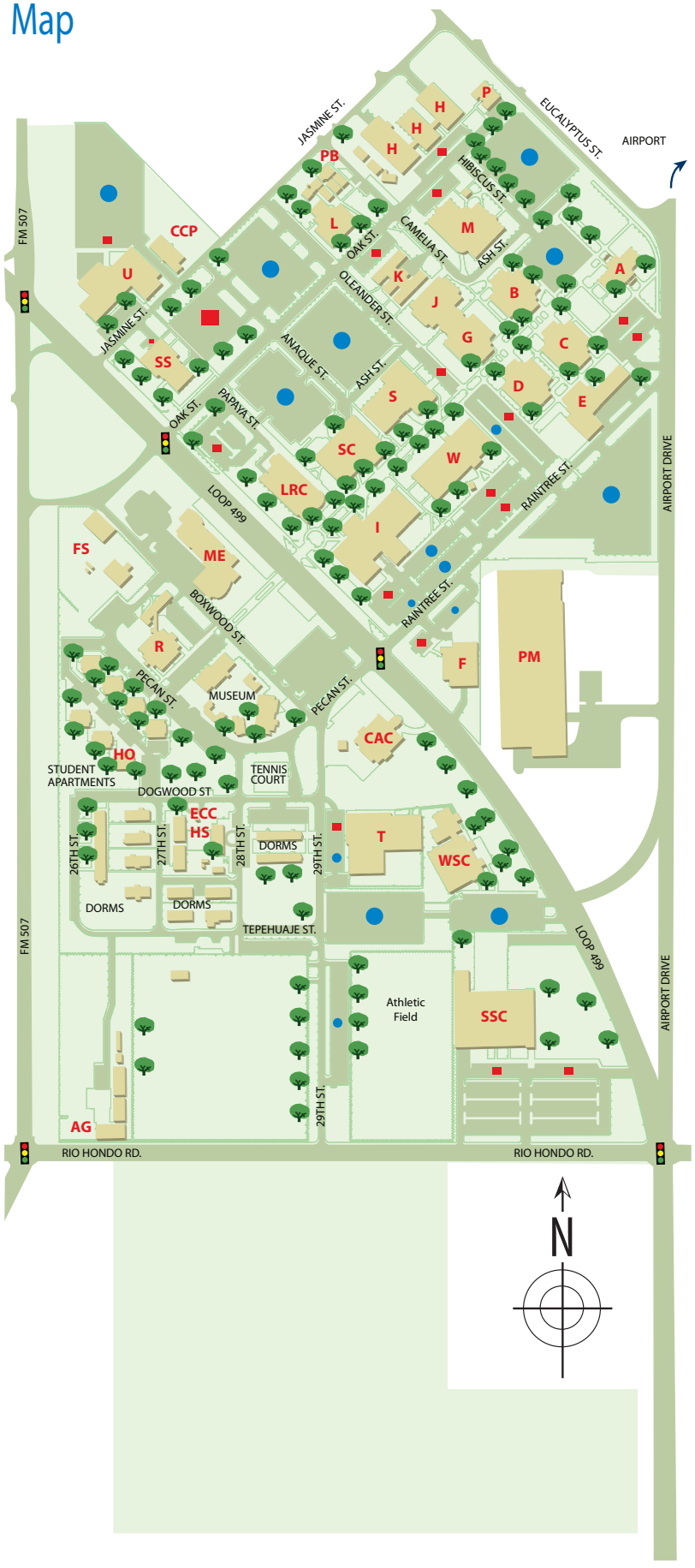
Map



College Buildings

A Auxiliary
TSTC Police / Emergency Medical Technology (EMT) / Fire Academy / Police Academy

AG Agricultural Technology
Agricultural Technology (AGT)

B Corporate College
High School Equivalency Program (HEP) / Upward Bound (UB) / Student Success / Educational Talent Search / Workforce Investment Act (WIA) / Adult Basic Education / Dual Enrollment / Center for Science & Math Education (CSME)

C Office Occupations
Business Management Technology (BMT) / Education and Training (ET)

D Biomedical/Dental Lab
Dental Laboratory Technology (DLT) / Biomedical Equipment Technology (BET) Student Success

E Transportation Technology
Automotive Technology (AUT)

F Autobody Collision Technology
Auto Collision Technology (AUB)

G Computer Science Programs
Computer Science Software Development (CSSD) / Computer Systems Management Technology (CSMT) / Game and Simulation Programming (GASP)

H Building Systems Technology
Air Conditioning & Refrigeration Technology (ACT) / Building Construction Science (BCS)

HO Housing Office

I Administration/Industrial Technology
Welding Technology (WLT) / Machining Technology (MGT) / HOD Office / President's Office / Curriculum Office

J Chemical/Environmental Technology
Chemical-Environmental Technology (CET)

K Workforce Development Programs

L Health Information Technology
Health Information Technology (HIT) / Medical Information Specialist/Transcriptionist (MIS/T)

LRC Dr. J. Gilbert Leal Learning Resource Center

M Advanced Manufacturing Technology
Telecommunications (TET) / Mechatronics (MT) / Adult Basic Education (ABE)

ME University Center
Continuing Education / Corporate Education / Corporate Testing Center

P Tech Prep
Support Services

PM Engineering Center

R Early College High School
Early College High School

S George F. Young Engineering Technology Center
Digital Media Design Technology (DMDT) / Computer Drafting & Design Technology (CDDT) / Computer Networking & Security Technology (CNST)

T Aviation Technology
Aviation Maintenance Technology (AER)

U Senator Eddie Lucio Health Science Technology
Culinary Arts (CA) / Dental Assistant (DEA) / Dental Hygiene (DEH) / Nurse Assistant (NA) / Medical Assistant (MEA) / Surgical Technology (ST) / Vocational Nursing (VN)

W State Rep. Irma Rangel Science and Technology
Nursing Preparatory Program (ADN) / EA

WSC Wellness & Sports Center

SC Student Center
Cafeteria / Student Government / Student ID Center & Game Room / Vice President of Student Development / Bookstore / Health Services / Career Services/ Testing Center / eSpace Cafe

SS Student Services
Financial Aid & Veteran Services / Admissions / College Information / Cashiers / Student Receivables/ Marketing Department / Counseling Center

SSC Service Support Center

Student Parking

Employee Parking

Admissions Information

Campus Tours

Prospective students and their families are strongly encouraged to visit TSTC before registering for classes. During a campus visit, each prospective student is assigned to an admissions advisor who serves as a personal contact to help in the transition to college and the admissions process. Contact the College Information Office to schedule an appointment with an admissions advisor and a campus tour.

Admission Requirements

General Admission Requirements

Students who apply for admission into college credit programs may be admitted to any college within the Texas State Technical College System under any of the following categories. These apply to students in college credit programs.

- Graduate from a high school accredited by a state department of education and/or a recognized regional accrediting association.
- Transfer from another college, university, or other higher education institution that is regionally accredited.
- Complete a GED Certificate (General Education Development), as certified by a state education agency.
- Meet international student criteria. Potential students who are not United States citizens must present proper documentation for an appropriate visa category. Additional information relating to academic background and financial support, as well as a personal interview, may be required for admission. See "International Students" under the Admission Procedures section for further information.
- Meet individual approval criteria. Potential students who do not meet any of the above requirements and are age 17 or older and no longer attending high school may be admitted through individual approval.
- Meet exceptional admission criteria. Potential students who are under age 17 may be admitted through the exceptional admission program under one of the following categories, provided they present sufficient evidence that they can do college-level work as determined by the institution.
  - Age 16 or older and currently enrolled in high school without a diploma or GED, or age 16 and a graduate of an unaccredited or home high school.
  - Age 16 and no longer attending high school, or age 15 or younger.
- Submit Proof of Bacterial Meningitis Vaccination: (For students under the age of 30). All new students, transfer students and students who have taken a leave of absence from school in either a fall or spring semester must have received the Bacterial Meningitis Vaccination during the five-year period immediately preceding and at least 10 days prior to the first day of the semester enrolled or re-enrolled.

In addition, all applicants must submit scores from an approved Texas Success Initiative (TSI) test, a TSTC-administered placement test, or provide appropriate documentation of TSI exemption or waiver.

Additional Program Admission Requirements

Some college credit programs have additional requirements that must be met before students may be admitted into those particular programs. These may include minimum scores on the admission placement test or other departmental tests, a physical standards statement assessing their physical capabilities for the program, letters of recommendation, or other program-specific requirements. Departments can provide additional requirements applicable to selected programs.

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Admission Procedures

General Admission Procedures

These procedures apply to students enrolling in college credit programs.

1. Complete an online admission application at www.tstc.edu.
2. Note that proof of Texas residency may be required to obtain resident tuition rates.
3. Depending on the category under which the applicant qualifies for admission, submit the following additional documents.
   a. High school graduate: an official copy of high school transcript
   b. College or university transfer: official transcripts from all institutions of higher education attended previously
   c. GED: a copy of GED certificate or official score report
   d. Individual approval students: individual approval form
   e. Exceptional admission students:
      - Age 16 or older and currently enrolled in high school without a diploma or GED, exceptional admission form signed by parent or guardian and high school representative; qualifying scores in writing and/or reading and/or mathematics on approved assessment instruments.
      - Age 16 or older and a graduate of a home high school or unaccredited high school: exceptional admission form (signed by parent or guardian if age 16).
      - Age 16 and no longer attending high school, or age 15 or younger: exceptional admission form signed by parent of guardian and high school representative; qualifying scores in writing, reading, and mathematics (Note: An information session with a TSTC official is also required. Contact the Office of Admissions and Records for more information.)
   f. International students: see "International Students" in this section for details
4. Submit Proof of Bacterial Meningitis Vaccination: (For students under the age of 30). All new students, transfer students and students who have taken a leave of absence from school in either a fall or spring semester must have received the Bacterial Meningitis Vaccination during the five-year period immediately preceding and at least 10 days prior to the first day of the semester enrolled or re-enrolled.
5. Submit scores from an approved TSI test, take a TSTC-administered placement test, or provide appropriate documentation of TSI exemption or waiver. If needed, make arrangements to take an assessment test by contacting the Counseling Office.
6. Attend Mandatory New Student Orientation. Pertains to TSTC Harlingen only. New Student Orientation is mandatory for all new students and is required prior to registration for classes.

All documents submitted by applicants who do not register for the term indicated on the admission application will be retained for one year in the Office of Admissions and Records. At the end of one year, all records are discarded unless the applicant has notified the Office of Admissions and Records of continued interest in attending TSTC. All documents become the property of TSTC and are not returned to the students.

Former TSTC Students

College credit students who were previously enrolled at TSTC but have not attended TSTC for more than one year must reapply by completing the admission enrollment procedures and providing the appropriate required documents.

International Students

College credit applicants who do not hold United States citizenship or permanent resident status should request a packet for international admissions. These applicants should also consult with the Registrar to identify their student status and to determine the specific documents they may need to provide. The following documentation may be required.

1. Application for admission and student health services form
2. College entrance testing, depending on major field of study
3. Immunization records
4. English translations of all secondary and/or postsecondary transcripts
5. Official TOEFL (Test of English as a Foreign Language) score report showing a minimum score of 15-30 in Reading, 14-30 in Listening, 22.5-4.0 in Speaking and 2.5-5.0 in Writing on a web-based exam (applies to applicants from countries where English is not the primary language)
6. Current affidavit of financial support to indicate ability to pay fees and reside in the United States while attending school
7. Valid visa, passport, and I-20 (applies to applicants already in the United States)

Due to delays in international communications, international applicants are encouraged to complete all admission requirements at least 90 days prior to the expected entry date. When TSTC receives all the required documents, the applicant will be issued an acceptance letter and an I-20MN.

International students must adhere strictly to United States Citizenship and Immigration Services laws. Therefore, they must:

1. be enrolled as full-time students and maintain satisfactory progress in their coursework;
2. maintain an I-94 on file in the Office of Admissions and Records;
3. carry medical and hospitalization insurance;
4. not obtain federal financial aid (except students holding to I-551 visas); and
5. comply with all TSTC regulations, laws of the State of Texas, and laws of the United States.

Failure to comply with any of the above regulations may result in termination from TSTC and deportation.

Academic Fresh Start

Texas Education Code 51.929 entitles residents of Texas to seek admission to public institutions of higher education without consideration of courses undertaken ten or more years prior to enrollment. This bill has been called the "right to academic fresh start" and it gives students the option of electing to have coursework taken ten or more years prior to the starting date of the semester in which the applicant seeks to enroll either counted as usual or ignored for admission purposes.

Applicants who elect to apply for admission under this law and who are admitted as students may not receive any course credit for courses undertaken ten or more years prior to enrollment. The Admissions Office may be contacted for further information regarding academic fresh start.

Academic fresh start can only be applied for and granted prior to initial enrollment. Applicants to TSTC who wish to apply for fresh start should complete the Academic Fresh Start form available at the TSTC Office of Admissions and Records.

Early Admission/Concurrent High School/Dual Enrollment

TSTC has agreements with many high school districts that permit eligible high school students to earn college credit while concurrently satisfying high school graduation requirements. Upon approval by the high school principal or designee and acceptance to TSTC through the exceptional admission program, a student may enroll in college courses taught either at the high school or at TSTC. Some fees may be waived in selected courses.

Students must earn passing grades in all college courses that they have attempted in order to maintain satisfactory academic progress. Enrollment in developmental courses is not permitted for a student enrolling under the exceptional admission program (concurrent high school or dual credit),

College credits earned through the exceptional admission program will be accepted by most institutions on the same basis as other college credit. There is a possibility, however, that a specific college may add additional requirements for transfer purposes.

Participation in the exceptional admission program may make some students ineligible for University Interscholastic League competition in certain areas, depending on the course taken.

Contact the TSTC Dual Enrollment Office or your high school counselor for more information.

Placement Testing

Prior to enrollment in credit courses, students must comply with placement testing requirements by submitting their scores on an approved Texas Success Initiative (TSI) test, by submitting documentation of TSI exemption or waiver, or by taking a TSTC-administered placement test. See "Testing and Placement Requirements" in the Scholastic Information section.

Assessment requirements for continuing education and workforce training programs are different from those described in this section. Contact the Continuing Education Office for more information.

Registration for Classes

After the above requirements are met and the required procedures completed, students may register for credit classes. Consult with your advisor or educational and career specialist and review the TSTC course schedule for more information on these classes. Contact Continuing Education Office for registration information for continuing education and workforce training programs.

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Tuition and Fees

A college education is one of the most important investments a person can make. TSTC is committed to providing access to everyone who can benefit from such an education.

The cost of attending TSTC varies depending on a variety of factors, such as a student's residency status, whether or not the students lives on campus, the program of study, and any other services that the student may need. The Financial Assistance section of this catalog defines the types of financial aid that may be available to help pay these costs. This assistance can help provide the financial support students need for tuition, housing, books, and other educational items. It is not intended to completely fund a student's education.

The tuition and fees information in this catalog is subject to change without notice.

Tuition

A student's tuition is determined by residency status, the number of hours taken, the type of course and/or program, and whether the courses are for college credit or for continuing education or workforce training.Tuition rates are subject to change on a semester by semester basis as approved by the Board of Regents.

State Tuition Rates Effective Fall 2011

- Resident of Texas: $82.00 per semester credit hour for academic courses
- Resident of Texas: $97.00 per semester credit hour for technical courses
- Resident of Texas: $254.00 per semester credit hour for technical courses in premium programs
- Non-resident of Texas: $254.00 per semester credit hour for all courses

Designated Tuition Rate Effective Fall 2011

- $46 per semester credit hour

As defined by the Texas Higher Education Coordinating Board, a resident of Texas is a citizen, national, or permanent resident of the United States or an alien (foreign or international student) who has been permitted by Congress to adopt the United States as his/her domicile while in this country and who has otherwise met the state requirements for establishing residency for tuition purposes. In Texas, students enrolling in an institution of higher education must have resided in Texas for the 12 months immediately preceding the time of enrollment to be classified as a resident for tuition purposes; otherwise, they are classified as non-residents. Certain non-U.S. citizens who have resided in Texas for at least 36 months and have graduated from a Texas high school may be considered for classification as a resident for tuition purposes. Contact the Office of Admissions and Records for more information regarding the residency of minors, dependents, members of the armed forces, or other special circumstances.

Tuition Rebate for Certain Undergraduates

In accordance with State law, a qualified student is eligible for a rebate of a portion of the undergraduate tuition the student has paid if the student:

1. is awarded a baccalaureate degree from a Texas public general academic teaching institution;
2. has attempted no more than three hours in excess of the minimum number of semester credit hours required to complete the degree, including transfer credits and course credit earned exclusively by examination; and
3. has been a resident of Texas and entitled to pay resident tuition at all times while pursuing the degree.

The amount of the rebate is $1,000 or the amount of undergraduate tuition paid by the student to the institution awarding the degree, whichever is less. If the student paid additional undergraduate tuition to other Texas public institutions of higher education, the student may qualify for an additional rebate by providing the degree-granting institution with proof of such payments. In any case, the amount of the rebate is a maximum of $1,000.

A student who has transferred from another institution of higher education must provide the degree-granting institution with an official transcript from each institution attended so that the total number of hours attempted by the student can be verified.

If the student has an outstanding student loan, including an emergency loan, owed or guaranteed by the State, including the Texas Guaranteed Student Loan Corporation, the degree-granting institution will apply the rebate to the student's loan. If a student has more than one outstanding loan, the institution will apply the rebate to the loans as directed by the student. If the amount of the rebate exceeds the amount of the loan indebtedness, the student will receive the excess amount.

Information pertaining to the Tuition Rebate Program is presented to students in New Student Orientation.

Additional information pertaining to the Tuition Rebate Program for undergraduate students may be found on the TSTC Harlingen Website or may be obtained from the Office of Admissions and Records.

The institutional contact for the Tuition Rebate Program is Paula Arredondo, Registrar at 956.364.4322.

Student Payments

Student charges for Tuition and Fees are due and payable on or before the first class day of the term or the first day for courses in which students are enrolled. All tuition and fees may be paid by cash, check or credit card at the cashier's office or online through the students' WebAdvisor account.

The Installment Payment Plan or Student Financial Aid constitute additional forms of payment; however all payment arrangements must be formally completed before the first class day to avoid de-registration from classes.

Past-Due Accounts

A student with a past-due unpaid balance is considered delinquent. Delinquent students may not register for subsequent terms, add classes in the current term, or receive an official transcript. Delinquent accounts may be turned over to a collection agency, potentially affecting students' personal credit ratings. Students with delinquent accounts are responsible for any charges associated with the collection of delinquent accounts.

Fees

Students' fees are determined by a variety of factors, as described in the accompanying table. Not all of these fees apply to continuing education and workforce training programs; contact Student Receivables for more information.

TYPE OF FEE	AMOUNT OF FEE (2011-13)	NOTES
Non-Resident E-Learning Fee	$300.00 per semester credit hour	For out-of-state residents enrolled in distance learning credit courses. Courses are exempt from all other state and designated tuition.
Testing Center Exam Fee	Cost of exam	Applies to tests taken at TSTC Testing Centers and to TSTC Challenge Exams; Includes fee for test administration
Program-specific Fees and Costs	Varies	For some credit programs
Continuing Education/Workforce Training Fees and Costs	Varies	For some continuing education/workforce training courses
Out-of-State Resident and Worker Continuing Education Tuition	At least twice the continuing education tuition rate for the associated course-section	For non-residents who are brought from outside the state by their employers to attend the course
Credit Award Evaluation Fee	$25 per evaluation	Applies to evaluation of CEUs and/or experiential learning for the purpose of awarding TSTC semester credit
External Certification of Specialty	Cost of exam	
Allied Health Malpractice Insurance	Cost of insurance	For students in allied health programs
Student Medical Health and Accident Insurance	Cost of insurance	Optional, unless required by program
Library Fines	Varies by College 10 cents per book or magazine per day $1 per video or DVD per day Lost Item – cost of replacement plus a 10% processing fee	
Mailbox Fee	$5 per semester	For TSTC West Texas, Sweetwater, students living off campus

Waivers and Exemptions

The tables in this section describe tuition waivers and exemptions for college credit courses.

Students classified as Texas Residents for purposes of tuition assessment may be eligible to have all or part of their state tuition and/or designated tuition waived if they qualify for one of the waivers or exemptions. Contact the appropriate office for additional information and to determine eligibility.

WAIVERS & EXEMPTIONS FOR RESIDENTS	OFFICE
For dependents of veterans that are considered unemployable by V.A. Hazlewood	Financial Aid, Student Services Bldg., 956.364.4330
Dependents whom received unused transfer of Hazlewood ??? from Veteran ??? Legacy	
Texas veterans or dependents of Texas veterans who were killed in action or died while in service (Hazlewood)	Financial Aid, Student Services Bldg., 956.364.4330
Children of POWs and MIAs as certified by the U.S. Department of Defense	Financial Aid, Student Services Bldg., 956.364.4330
Children of disabled Firefighters or Peace Officers as certified by the Texas Higher Education Coordinating Board	Financial Aid, Student Services Bldg., 956.364.4330
Blind or Deaf Students as certified by the Texas Rehabilitation Commission, The Texas Commission for the Blind, or the Texas Commission for the Deaf and Hard of Hearing (Blind or Deaf students are certified by the Department of Assistive and Rehabilitative Services – Rehabilitation Services, Blind and Deaf-Blind Services, and Deaf and Hard of Hearing Services.)	Support Services, Tech Prep Bldg., 956.364.4520
Students employed as Certified Educational Aides as authorized by the Texas Higher Education Coordinating Board	Financial Aid, Student Services Bldg., 956.364.4330
Students in foster or other residential care as certified by the Texas Department of Protective and Regulatory Services	Financial Aid, Student Services Bldg., 956.364.4330

Students classified as Residents or Non-residents for purposes of tuition assessment may be eligible to have all or part of their state tuition and/or designated tuition waived if they qualify for one of the waivers or exemptions listed. Contact the appropriate office for additional information and to determine eligibility.

WAIVERS & EXEMPTIONS FOR RESIDENTS OR NON-RESIDENTS	OFFICE
High school students enrolled in class sections for dual high school and college credit may have state and designated tuition waived or reduced.	Dual Enrollment, College Readiness & Advancement Bldg., 956.364.4321
Students enrolled in more than one Texas public institution of higher education at the same time may have a reduction in minimum state tuition charges.	Financial Aid, Student Services Bldg., 956.364.4330
Senior citizens 65 years of age or older may audit courses without payment of state and designated tuition	Student Receivable, Student Services Bldg., 956.364.4409
Citizens 55 years of age or older may have state tuition waived upon verification of age	Student Receivable, Student Services Bldg., 956.364.4409
TSTC employees, their spouses and/or dependents have a reduction in state tuition and a waiver of designated tuition.	Human & Organization Development, Industrial Technology Bldg., 956.364.4042

Students classified as Non-residents of Texas for purposes of tuition assessment may be eligible to pay resident rates if they qualify for one of the waivers or exemptions listed. Contact the appropriate office for additional information and to determine eligibility.

WAIVERS & EXEMPTIONS FOR NON-RESIDENTS	OFFICE
Military personnel stationed in Texas and their spouses and children	Financial Aid, Student Services Bldg., 956.364.4330
Individuals employed at least half time as teachers or professors at Texas institutions of higher education and their spouses and children	Financial Aid, Student Services Bldg., 956.364.4330
Students whose families transferred to Texas as a part of the State's plan for economic development. Employer company must be certified as eligible by the Texas Higher Education Coordinating Board	Student Receivables, Student Services Bldg., 956.364.4409
Students who receive a competitive scholarship of at least $1,000	Student Receivables, Student Services Bldg., 956.364.4409
Students who reside in a county or parish of Arkansas, Louisiana, New Mexico, or Oklahoma that is adjacent to Texas where a current reciprocity agreement is in effect with a college or university in the out-of-state county or parish.	Student Receivables, Student Services Bldg., 956.364.4409
Students from Mexico or Canada enrolled through a Texas Higher Education Coordinating Board approved Exchange Program	Student Receivables, Student Services Bldg., 956.364.4409
Students from Mexico who demonstrate financial need	Student Receivables, Student Services Bldg., 956.364.4409
Nonimmigrant aliens residing in Texas in accordance with NATO treaties and their spouses and children	Student Receivables, Student Services Bldg., 956.364.4409

Documentation should be submitted by the third class day of the semester.

Installment Payment Plan

College credit students may pay their registration charges (state tuition and designated tuition), campus housing, and meal plans on an installment payment plan. In accordance with State law, these students may pay their state and designated tuition in installments for the fall and spring semesters and for summer terms.

In order to validate the payment plan option, the initial payment and the signed Installment Agreement must be returned to Student Receivables at the time of registration.

The payments are due as follows:

Fifteen-Week Term:

⅓ prior to the beginning of the term plus the $25 installment plan fee
⅓ prior to the 6th class week
⅓ prior to the 11th class week

Twelve-Week or Longer Term:

⅓ prior to the beginning of the term plus the $25 installment plan fee
⅓ prior to the 5th class week
⅓ prior to the 9th class week

Less Than Twelve-Week Term:

½ prior to the beginning of the term plus the $25 installment plan fee
½ before the class week prior to the halfway point of the term

A student who elects to pay in installments will:

1. pay a $25 installment plan fee;
2. be responsible for making payments on or before the due dates established at the time of registration;
3. be charged a late fee of $25 for each payment made more than seven business days after the payment is due;
4. be unable to obtain official copies of his/her student records until the debt is paid in full;
5. be at the risk of being dropped or barred from attending classes until the debt is paid or acceptable arrangements are made with Student Receivables; and
6. be responsible for payment of any remaining balance if he/she withdraws from the College.

Emergency Tuition Loan

College credit students who are unable to pay their state and designated tuition at the time of registration because of financial hardship may be eligible for emergency tuition loans. Funds are limited and the student must meet several qualifications. Contact the Student Receivables Department for more information.

Meal Plans

70 meals per semester
(flexible Monday - Friday)
$475 per semester (includes tax)

140 meals per semester
(Monday - Friday)
$925 per semester (includes tax)

Housing

The Housing Application with a $150 deposit, the Release of Background Information Form and the non-refundable criminal background check fee of $8, and proof of bacterial meningitis vaccination ten days prior to move-in is required.

Single Students

Oak Tree Dorms
4 Students
$655 per semester per student
(2 bedrooms/each dbl occupancy)

Palo Blanco Dorms
2 Students
$725 per semester per student
Double occupancy w/kitchenette

Las Palmas Dorms
2 Students
$725 per semester per student
Double occupancy w/microwave & refrigerator

Families: Married/Single Parents

2 bedrooms
Maximum Occupancy
4 persons
$455 per month

** In family housing, at least one member of the household must be a full-time student (12 hours or more).*

Refunds

Refunds for Changes in Enrollment

The following definitions apply when calculating refunds for changes in course enrollments.

- Reduction in course load occurs when a student drops a course(s) having more credit hours than he/she adds, resulting in the student being enrolled in fewer credit hours overall.
- Withdrawal occurs when a student completely ends his/her enrollment at the College for the current term.
- Credit courses are courses for which a student is eligible to earn semester credit hours toward an institutional award, certificate or associate degree. Credit courses also include support courses required for the student's enrollment, such as developmental education, etc.

Refunds for Drops/Reduction in Course Load

Students who drop credit courses and reduce their course loads while remaining enrolled at the College will have their state and designated tuition refunded, based on the official drop date recorded by the Office of Admissions and Records. Students who concurrently add and drop the same number of credit hours will not be charged or refunded for these simultaneous transactions.

Refunds for semester credit courses are calculated using a formula based on the number of weeks scheduled for a term or class. Students who are enrolled in semester credit hour courses who drop a class or withdraw from school prior to the first class day will receive a 100% refund.

Students in semester credit hour courses who officially withdraw from school or drop a course after classes begin will have their state and designated tuition and fees refunded according to the following schedule unless the fees are specifically designated as non-refundable.

Class days are defined as calendar days during which classes are normally scheduled and not the specific days a particular class meets.

Notes:_____

_____

_____

_____

_____

_____

_____

_____

_____

Length of Class Term in Weeks	Last Class Day for 70 Percent Refund	Last Class Day for 25 Percent Refund
2 or less	2	n/a
3	3	4
4	4	5
5	5	6
6	5	7
7	7	9
8	8	10
9	9	11
10	9	12
11	10	14
12	12	15
13	13	16
14	13	17
15	14	19
16 or longer	15	20

Refunds for Federal Financial Aid Recipients

Special refund requirements apply to students who receive federal aid that is classified as "Title IV" funds. Title IV funds include awards such as Federal Pell grants, Federal Supplemental Educational Opportunity grants (SEOG), William D. Ford Federal Direct Loans, PLUS loans, and other federal awards. Students must attend classes to remain eligible for federal financial aid. Students who are considering withdrawing from all classes before completing 60% of the semester should contact the Financial Aid Office at 956.364.4330 to learn how this would affect their financial aid.

If a student reduces a course load or withdraws from TSTC, the College and/or the student may be required to return federal funds awarded to the student. The student may be eligible for a refund of a portion of the state and designated tuition paid to TSTC for that term. If the student received financial assistance, the refund is returned to the grant, scholarship, or loan sources from which the assistance was received.

A federal formula dictates the amount of Title IV aid that must be returned to the federal government by the College and the student. This formula applies to a student who is receiving Title IV funds if that student withdraws from the College on or before the 60% point in time in the term. The percentage of Title IV aid to be returned is equal to the number of calendar days remaining in the term divided by the number of calendar days in the term. Scheduled breaks of five consecutive days or more are excluded from this calculation.

If any funds are to be returned after the refund of Title IV aid, they are used to repay TSTC funds, state funds, and other private sources. If there is an unpaid balance, then all aid sources are repaid before any funds are returned to the student. Funds

released to a student due to a credit balance on the student's account do not relieve the student's obligation to repay Title IV funds when the student withdraws.

Order of Return of Title IV Funds

A school must return the Title IV funds to the programs for which the student received aid during the payment period or period of enrollment as applicable, in the following order, up to the net amount disbursed from each source:

1. Subsidized Federal Stafford loans
2. Unsubsidized Direct Stafford loans (other than PLUS loans)
3. Subsidized Direct Stafford loans
4. Federal Perkins loans
5. Direct PLUS loans
6. Federal Pell Grants for which a return of funds is required.
7. Federal Supplemental Educational Opportunity Grants (FSEOG) for which a return of funds is required.
8. Other Title IV aid
9. Other Federal, State, Private or Institutional Aid
10. The Student

For more detailed information on the entire refund procedures for Financial Aid students or about the calculation of refund amounts, contact the Financial Aid Office at 956.364.4330.

Bookstore Refunds

- Please visit or contact the bookstore for return and buy back policies.
- Continuing Education books must be returned 3 days from the first day of class. Textbooks returned for a full refund must be in sellable condition and packaging, if applicable, must not be broken.

Tools, supplies, and notions are non-refundable, unless they are defective. If they are defective, the items must be returned within two weeks of purchase and must be accompanied by the sales receipt in order to receive a refund.

Housing Refunds

Upon completion and authorization of College Housing clearance documents, refunds will be based on the following TSTC System approved fee schedule:

- $150 security deposit or remaining balance after charges
- No refunds of rental fee will be given during the last 10 school days of the semester
- Rent refunds are based on a pro-rated formula

Refund of Other Fees

No refunds are given for installment plan fees. No refunds are given for health insurance, malpractice insurance, and other miscellaneous student-requested fees after expenses have been incurred by the college.

Financial Assistance

TSTC's philosophy is to provide financial assistance to students who would otherwise be unable to pursue a postsecondary education. However, the primary responsibility for paying the cost of a college education rests with the student and his/her family. Funds are available through the Financial Aid Office to supplement those resources. TSTC Financial Aid Office staff members are available to assist students with financial aid questions and concerns.

Several types of financial assistance are available to TSTC students. These include grants, which are free money awarded to students with the most financial need and which do not have to be repaid; scholarships; part-time on-campus or community service employment; and loans, which must be repaid.

Applying for Financial Assistance

When to Apply

The key to obtaining financial assistance is to apply early. To ensure that an aid package is available and ready, TSTC recommends the completed file be received in the Financial Aid Office according to the following schedule:

To enroll in the:	**Apply for financial assistance by:**
Fall Term	March 29
Spring Term	October 1
Summer Term	March 1

Applications completed by these deadlines are processed for available funds on a first-come first-served basis. Late applicants may not have funds available on registration (payment) day, when payment for state and designated tuition is due.

Since financial assistance is not always available at registration, it is recommended that students make alternative arrangements to pay registration expenses. Contact the Business Office for information on emergency loans and installment plans.

How to Apply

These are the first steps in applying for financial assistance.

1. Complete the Free Application for Federal Student Aid (FAFSA), using the appropriate federal base-year tax forms.
2. Complete the FAFSA through the Internet at www.fafsa.ed.gov. For more information regarding this, contact FAFSA Customer Service at 1-800-433.3243 or TTY: 1-800-730-8913.

   or

   If you would like the TSTC Financial Aid Office to assist you in submitting your FAFSA electronically, please have the following available:

   (a.) You will need records of income earned in the year prior to when you will start school. You may also need records of your parent's income information if you are a dependent student.

(b.) For the 2011-2012 school year, you will need financial information from 2010. You will need to refer to:
   (i) Your Social Security Number (can be found on Social Security card)
   (ii) Your driver's license (if any)
   (iii) Your W-2 Forms and other records of money earned
   (iv) Your (and your spouse's, if you are married) 2010 Federal Income Tax Return - IRS Form 1040, 1040A, 1040EZ, 1040Telefile, foreign tax return, or tax return for Puerto Rico, Guam, American Samoa, the U.S. Virgin Islands, the Marshall Islands, the Federated States of Micronesia
   (v) Your parent's 2011 Federal Income Tax Return (if you are a dependent student)
   (vi) Your 2011 untaxed income records - Social Security, Temporary Assistance to Needy Families, welfare, or veterans benefits records
   (vii) Your current bank statements
   (viii) Your current business and investment mortgage information, business and farm records, stock, bond, and other investment records
   (ix) Your alien registration card (if you are not a U.S. citizen)

(c.) For the 2011-2012 school year, submit the 2010 income information.

4. Officially declare a major to the TSTC Admissions Office and complete the admissions process. Undeclared majors are not eligible for financial aid.
5. Pre-register according to College registration dates and guidelines. If your awards are cleared and you register early, your financial aid will be credited to your student account prior to the start of classes.

Additional steps may be required for some types of financial assistance. For example, loans need promissory notes. Certain programs require additional documentation before grant processing. Contact the Financial Aid Office for more information and assistance.

Types of Financial Assistance

A variety of resources are available for financial assistance at TSTC. Some of these are included in the following list. Visit the Financial Aid website for more complete information.

- **Federal Pell Grant**. This federal aid program provides financial assistance for obtaining a postsecondary education. It is intended to be the base of a student's financial aid package. Eligibility is based on a student's financial need.
- **Federal Supplemental Educational Opportunity Grant (FSEOG)**. This federal aid program helps college students who have exceptional need. The amount of the FSEOG varies according to the availability of other grants, scholarships, loans, and student employment. FSEOG funds are limited and are awarded on a first-come first-served basis.
- **Texas Public Education Grant (TPEG)**. This state program provides financial assistance in obtaining a postsecondary education. Eligibility is based on a student's financial need.
- **Toward EXcellence, Access & Success (TEXAS)**. These state awards pay state and designated tuition for certain students who have graduated from Texas public or accredited private high schools within the preceding 16 months. Students must have completed the recommended or advanced high school curriculum and be able to show financial need. Students who do not meet the criteria for the TEXAS Grant may be eligible for the TEOG. Students must apply early.
- **Texas Educatinal Opportunity Grant (TEOG)**. These state awards pay state and designated tuition for students who are Texas residents, show financial need and do not have an Estimated Family Contribution of more than $2,000. They must be enrolled in a TSTC certificate or degree seeking program (EA and non degree seeking students are not elibible). Students must be within the first 30 credit hours for considereation. Students must apply early.
- **Federal and State Work-Study Program (FWSP)**. Work-study programs are designed to stimulate and promote part-time on-campus employment of students, particularly those who need financial assistance. Funds are available to the College to help create job opportunities for eligible students; however, these funds are limited and students must apply early and submit a resume.
- **Federal Loans**. Various types of federal loans are available, including the Federal Direct Subsidized, Federal Direct Unsubsidized, and Federal Direct Parent Loan. To be certified for a loan, students must first apply for the Federal Pell Grant, as described earlier in the Financial Assistance section. Because changes occur frequently in federal regulations, call or visit the Financial Aid Office for details regarding loan amounts, eligibility criteria, repayment responsibilities, etc.
- **Veterans' Benefits (G.I. Bill)**. TSTC is approved for training veterans and their eligible dependents under the provisions of various laws commonly called the G.I. Bill. A veteran with remaining entitlement may receive a monthly check, which varies in amount based on class load and the type of eligibility that the veteran has. Fees and tuition are paid by the student at registration. A spouse or child of a veteran may receive benefits under certain conditions. The DD form 214 and all official college, university and military transcripts will be required. Veterans who are eligible for assistance under any of the Department of Veteran's Affairs programs should contact the Financial Aid Office. Veterans must also consent to a background check.

Veterans Financial Aid and Veterans Benefits

Veteran interested in using their GI Bill benefits must submit the following documents to the Financial Aid & Veteran Services Office before enrollment certification can be submitted to the VA Education Department

- Certificate of Eligibility – Apply for benefits at www.gibill.va.gov. Submit VA Form 22-1990
- DD Form 214 (member 4)
- Official Military Transcripts and University/College transcripts (to the Admissions & Records Office)
- VA Form 22-1905 – required for Veterans using Chapter 31 (Vocational Rehabilitation & Employment Division)
- DD Form 2384 (NOBE) – required for Veterans using Chapter 1606 or REAP
- Transcript Evaluation Form
- VA Form 22-1995 – when changing major field of study or incoming transfer student

Dependents using GI Bill Chapter 35 or Chapter 33 must submit the following documents:

- Certificate of Eligibility – Apply for benefits at www.gibill.va.gov. Submit VA Form 22-1954
- DD Form 214 (member 4) – Chapter 33 exempt, if Veteran is on active duty
- Veteran's service-connected compensation claim, decision letter. (Chapter 35)
- University/College transcripts (to the Admissions & Records Office).
- Transcript Evaluation Form
- VA Form 22-5495 - (Chapter 35) when changing degree plan or incoming transfer student.

Veterans and Dependents are encouraged to review all benefits and "Road Map to Success" at www.gibill.va.gov before applying for educational benefits.

Texas Veterans and their dependents may be eligible for benefits under the Texas Hazlewood Act. The Texas Hazlewood Act encompasses many different tuition exemptions and/or waivers for eligible Veterans and their dependents. Please visit www.collegeforalltexans.com to view all eligibility requirements.

Texas Veterans interested in using the Hazlewood Tuition Exemption must submit the proper application and all supporting documentations to the Financial Aid & Veteran Services Office.

Attendance Policy for Veterans and Dependents using GI Bill or Tuition Exemption

This attendance policy is required for institutions offering courses for veterans or other eligible persons enrolled in undergraduate/certificate degree programs approved under Title 38, United States Code, 3676.

This policy is established to set minimum standards of attendance for student(s) enrolled in undergraduate degree/certificate programs receiving veteran education benefits. Wherever the word "veteran" is used, it is intended to include all persons receiving veteran education benefits.

Veterans enrolled in undergraduate degree/certificate programs will be interrupted for unsatisfactory attendance when accumulated absences, tardies, and class cuts exceed ten (10) percent of class contact hours or 5 consecutive class days. Veterans are responsible for submitting a Veterans Attendance Form (VACATT) to the school's VA Certifying Official on the twentieth (20th) day of each month. The form must be signed by the instructor for each class the Veteran has been certified. Failure to submit form VACATT in a timely manner will cause an interruption in benefits.

The interruption will be reported to the Veterans Administration within 30 days of the last date of attendance (use VA Form 22-1999b). Enrollment interruptions will cause an overpayment and the Veteran will be responsible for repayment to the VA Education Department.

No Show Status

Veterans reported as a No Show will have their enrollment certification interrupted and may lose their seat for one or all their courses. Overpayment due to a No Show Status is the Veteran's responsibility and money may be owed to TSTC and/or VA Education Department

Enrollment Certification

Only classes that earn credit toward the Veteran's signed degree plan will be certified to VA. It is the Veteran's responsibility to meet with their Program Advisor and register for the required classes. You may request a print out of your program evaluation from your Department Advisor or Financial Aid & Veterans Services Office.

Course Repeat

Veterans will not be certified for repeat courses that are considered completed. If an unacceptable grade has been assigned for the original course and again for the repeat course, an overpayment will be created for the original unacceptable grade.

For example: A student takes a math course two times and receives F and F grades. The first F must be reported to VA, because it is no longer calculated in the student's Cumulative GPA. An overpayment is created for the first F received in the math course.

TSTC Veteran's Affair – Educational Benefits Checklist

Follow these guidelines when applying for VA benefits at Texas State Technical College Harlingen

Eligibility

Students must be eligibility under on of the following programs:

1 Chapter 30 - Montgomery GI Bill
2. Chapter 31 - VA Vocational Rehabilitation
3. Chapter 32 - Post Vietnam Era VA benefits
4. Chapter 33 – Post 9/11 GI Bill
5. Chapter 35 - Survivors/Dependents education benefits
6. Chapter 1606 - Selective Reserve Montgomery GI Bill
7. Chapter 1607 (REAP) – Reserve Educational Assistance Program
8. Hazelwood Tuition Exemption

Documents Needed

Chapter 30 & Chapter 33 requires:

- Certificate of Eligibility – Apply for benefits at www.gibill.va.gov. Submit VA Form 22-1990 or contact 888-442-4551
- DD Form 214 (member 4)
- Official Military Transcripts and University/College transcripts (to the Admissions & Records Office).
- VA Form 22-1995 – when changing major field of study or incoming transfer student.
- Transcript Evaluation Form
- Parent Institution Letter – Students declaring a major field of study such as EA Core or prerequisites for a medical program that does not earn the student a degree/certificate at TSTC.

Chapter 31 requires:

- VA Form 22-1905 – required for Veterans using Chapter 31 (Vocational Rehabilitation & Employment Division)
- DD Form 214 (member 4)
- Official Military Transcripts and University/College transcripts (to the Admissions & Records Office).
- Transcript Evaluation Form
- Parent Institution Letter – Students declaring a major field of study such as EA Core or prerequisites for a medical program that does not earn the student a degree/certificate at TSTC.

Chapter 32 requires:

- Certificate of Eligibility – Apply for benefits at www.gibill.va.gov. Submit VA Form 22-1990.
- DD Form 214 (member 4)
- Official Military Transcripts and University/College transcripts (to the Admissions & Records Office).
- DD Form 2384 (NOBE) – required for Veterans using Chapter 1606 or REAP
- Transcript Evaluation Form
- VA Form 22-1995 – when changing major field of study or incoming transfer student.
- Parent Institution Letter – Students declaring a major field of study such as EA Core or prerequisites for a medical program that does not earn the student a degree/certificate at TSTC.

Chapter 35 requires:

- Certificate of Eligibility – Apply for benefits at www.gibill.va.gov. Submit VA Form 22-5490
- DD Form 214 (member 4) – Chapter 33 exempt, if Veteran is on active duty
- Veteran's service-connected compensation claim, decision letter. (Chapter 35)
- University/College transcripts (to the Admissions & Records Office).
- Transcript Evaluation Form
- VA Form 22-5495 - (Chapter 35) required when changing major field of study or incoming transfer student.
- Parent Institution Letter – Students declaring a major field of study such as EA Core or prerequisites for a medical program that does not earn the student a degree/certificate at TSTC.

Chapter 1606 and 1607 (REAP) requires:

- Certificate of Eligibility – Apply for benefits at www.gibill.va.gov. Submit VA Form 22-1990.
- DD Form 214 (member 4)
- Official Military Transcripts and University/College transcripts (to the Admissions & Records Office).
- DD Form 2384 (NOBE) – required for Veterans using Chapter 1606 or REAP
- Transcript Evaluation Form
- VA Form 22-1995 – when changing major field of study or incoming transfer student.
- Parent Institution Letter – Students declaring a major field of study such as EA Core or prerequisites for a medical program that does not earn the student a degree/certificate at TSTC.

Hazelwood benefits will be available for a maximum of 150 credit hours

- Certificate of Eligibility – required for veterans who served after September 10, 2011. Apply for benefits at www.gibill.va.gov. Submit VA Form 22-1990.
- DD Form 214 (member 4)
- Hazlewood application

o HE-V – Veterans who have never used the benefit
o HE-D – Dependents who have never used the benefit and are eligible due to the Veteran's service-connected disability.

Note:

- Chapter 33 Veterans who are eligible for Hazlewood can use Hazlewood to "stack" on top of their 33 benefits to pay any remainder of tuition and fees ONLY not paid by Chapter 33 benefits.
- All students must apply for Hazlewood each semester they intend to use the tuition exemption.
- You MUST be enrolled in classes in order for the exemption to be posted. Please do NOT submit the application before enrolling.

Hazlewood Hours Account

To create an account for your Hazlewood benefits, or to log in to your account to obtain your hours used, go to the College for All Texans website: www.collegeforalltexans.com

Scholarships

Each year a number of individuals, businesses, and organizations provide scholarships for TSTC students. These allow students to be recognized for their hard work, as well as for their need for assistance. Most of these scholarships, which vary in amount, can be available to students after they complete the TSTC scholarship application. A partial listing of TSTC scholarships is included in the accompanying table. Contact the Financial Aid Office for additional information and a complete list of available scholarships.

President's Scholarship

- Competitive
- Full Time $2,100 / $700 per semester

Majors Eligible:

- TSTC Associate Degree

Eligibility Requirements:

- Must be U.S. Citizen or eligible non-citizen
- 2012 High School Graduate
- Plan to enroll in the Fall 2012 semester
- Minimum 2.5 GPA
- Resident of Cameron, Hidalgo, Willacy or Starr County

Lozano Long Promise Opportunity Scholarship Full-time

- Need Based
- Full Time $2,000 / $666 per semester

Majors Eligible:

- All Technologies

Eligibility Requirements:

- Must be U.S. Citizen
- Enrolled at TSTC Harlingen
- Minimum 2.5 GPA
- Applicants 35 years of age and older must have a dependent child

Lozano Long Promise Opportunity Scholarship Part-time

- Need Based
- Part Time (6-11 credits) $1,000 / $333 per semester

Majors Eligible:

- All Technologies

Eligibility Requirements:

- Must be U.S. Citizen
- Enrolled at TSTC Harlingen
- Minimum 2.5 GPA
- Applicants 35 years of age and older must have a dependent child

Investment in Competitive Texas

- Need Based
- $500 per semester for two semesters

Majors Eligible:

- All Technologies

Eligibility Requirements:

- New and returning full-time students
- Technical programs only
- U.S. citizen or eligible non-citizen
- Minimum 2.5 GPA

Shell Merit / Incentive Scholarship

- Merit
- $250 for one semester

Majors Eligible:

- Chemical-Environmental Technology

Eligibility Requirements:

- Returning full-time student
- Selection made by Program
- Minimum 2.8 GPA

Texas Top 10 Percent Scholarship

- Need Based
- $2,000 - Fall semester only

Majors Eligible:

- All Technologies
- EA

Eligibility Requirements:

- New high school graduate attending full time in the fall semester
- Must be a Texas resident
- Must have a valid processed ISIR by the summer March 1 deadline
- Rank in Top 10 percent of the graduating class
- Be from an accredited Texas high school
- Selection by criteria (no application necessary)
- Minimum 3.25 GPA

South Texas Academic Rising Scholars (STARS)

- Need Based
- Full Time $2,100 ($700 per semester), Part Time $1,050 ($350 per semester)

Majors Eligible:

- All Technologies
- EA

Eligibility Requirements:

- Must be U.S. Citizen or legal permanent resident with a permanent resident cards or passport stamped I-551
- Have a permanent address with the 22 South Texas county areas
- Have earned/completed at least 12 undergraduate credit hours in a US accredited college or university by the application deadline.
- Minimum 2.7 GPA

NOTE: Scholarship qualifications, availability, and amounts are subject to change. For current listings, requirements, and changes, review the on-line scholarship information.
http://www.harlingen.tstc.edu/FinancialAid/Scholarships.aspx

Waivers and Exemptions

TSTC is authorized to grant tuition and fee waivers to qualified resident and non-resident students based on Texas Higher Education Coordinating Board rules. For details, see "Tuition Waivers and Exemptions" in the Tuition and Fees section of this catalog.

Maintaining Financial Aid Eligibility

The following Standards of Academics Progress (SAP) are adopted for the purpose of determining continuing student eligibility who are receiving or applying for financial aid. Academic progress will be reviewed at the end of each term to determine that the student is making satisfactory progress. This review will include all periods of the students enrollment, even those for which the student did not receive financial aid. Students are expected to be continually aware of their grades (Online GPA Calculator). A student who is placed on SAP warning or suspension may be notified in writing by the financial aid office, however, failure to receive notification will not change the students financial aid status.

Financial Aid Standards of Academic Progress

Students who receive financial aid must be enrolled in an eligible program and are required to maintain the following standards of satisfactory academic progress (SAP). These measurements shall be used to determine eligibility for all federal Title IV aid, state and institutional aid, and for other financial assistance unless the terms of a particular grant or funding source require additional terms. SAP is calculated at the end of each term. Some aid programs require higher standards, such as higher grade point averages (GPA) or specific enrollment statuses. Students receiving financial aid must have a declared major in a degree or eligible certificate program. Students are expected to be continually aware of their progress toward their completion. A student who fails to meet the standard of progress (SAP) will be notified by email at the email address on the student record; however, failure to receive notification will not change the SAP status.

Qualitative Progress Measure: Minimum Grade Point Average (GPA) achieved after each evaluation period or semester

To continue receiving financial aid, you are expected to successfully complete your classes with passing grades. You must have at least a 2.00 cumulative GPA (based on all terms of enrollment) and at least a 2.00 term GPA during each period of enrollment. All courses, including college level and developmental will be evaluated.

Quantitative Progress Measure #1: The Pace of Progression or Completion Rate each Semester

When you enroll in classes and receive financial aid to pay for those classes, you are expected to successfully complete those classes. Effective July 1, 2011, you must complete at least 67% of the credit hours in which you enrolled during each term. You must also achieve a minimum cumulative completion rate of 67% of all courses attempted during your enrollment. Only passing grades count as successful completions. Incomplete, in progress, failing grades, and drop/withdrawals are not considered completed courses, but are considered attempted courses, and will be calculated in the 67% completion requirement.

Quantitative Progress Measure #2: Maximum Time to Complete a Degree / Program

To ensure that you complete your program in a reasonable amount of time, a limit set by law has been placed on the number of hours that you can attempt. That limit is 150% of the minimum number of hours required to complete your program. For example, if your degree program requires 72 credit hours for completion, you must complete your degree or certificate program within a maximum of 108 attempted credit hours. Once you reach the 150 percent limit or we determine that you cannot complete your program within the 150% limit, you will no longer be able to receive financial aid. Several variables are considered when calculating the 150% limit and the satisfactory progression rules. These variables include, but are not limited to:

1. All attempted credit hours are counted even if you were not receiving aid to pay for them. Attempted hours are the hours in which you are enrolled in every semester.
2. Any transfer hours that are accepted from other colleges and applied toward the completion of your program are counted in the maximum time frame. If you have previously attended any college, you must submit official transcripts from all previous colleges prior to any financial aid being released.
3. If you repeat a course, both attempts will be counted in the maximum credit hours and progression calculation, even if you did not receive aid for both attempts. Financial aid will only pay for 2 attempts in a college

level course. Separate rules apply for developmental courses.

4. If you withdraw from a course(s) after the census date for that course, it is still counted as an attempted course and is included in the SAP calculation.
5. All periods of enrollment and attempted credits will be evaluated, as they apply to the current program of study, whether or not financial aid was awarded during prior enrollment periods.

When you receive financial aid to help pay for a program of study, you are expected to complete that program within the specified time frame for that program. You should not enroll in classes that are not required for your chosen program of study. Classes not required for your degree plan are not eligible for financial aid. Additionally, audit courses, continuing education courses, previously passed courses and courses for which you enroll after the census date are also not eligible for financial aid.

Change of Major and Transfer Credits

Students receiving financial aid must have a declared certificate or degree eligible program. Students should register for courses approved for their designated degree plan/catalog year. Change of Program requests will be considered. Change of Program request forms must be submitted to the Financial Aid Office. A program/major change will be documented to ensure that the student's new program is tracked for SAP. Students are responsible for notifying the Financial Aid Office and for completing the financial aid documents required, when a student changes their program/major at the Admissions and Records Office.

Transfer credits will be counted in the attempted credits and will be applied to the student's degree plan, if applicable.

Additional Certificates and Degrees

Additional certificates and degrees will be considered or reviewed on a case by case basis. The student must be meeting SAP requirements.

Additional SAP Rules: Remedial or Developmental Coursework

You may be able to take up to 27 hours of remedial or developmental course work and receive financial aid to pay for those costs. These courses will be included in the qualitative and quantitative measurements for SAP. All courses, including failures, incompletes, in progress, or drop/withdrawal are counted toward the maximum 27 credit hour limit. Once you have attempted 27 credit hours of remedial or developmental classes, you will not be able to receive additional financial aid to pay for those courses. Enrollment in these courses is indicated by testing or as recommended by counseling.

Financial aid will NOT pay for:

- Courses taken by audit
- Courses taken outside of your degree plan requirements
- Courses attempted more than two times (except remedial/developmental courses)
- Credits exceeding the 27 maximum credits for developmental courses
- Courses previously passed unless, the course grade failed the minimum grade requirement for the program of study. Starting July 1, 2011, only two attempts will be approved, if a course was previously passed. A third attempt will not be paid by financial aid. The student's degree plan must specify the minimum course grade required.
- Credit hours earned by placement tests
- Continuing education courses
- Courses for which you register after the official census date of the term.
- Timeframe and/or credit hours in excess of the 150% maximum program limit
- Courses taken without having a declared eligible program (enrolled as undeclared, undecided, or non-degree seeking

Failure to Meet the Financial Aid Standards of Academic Progress

Warning Status

This status is assigned to students, who fail to make Standards of Academic progress at the end of a semester. Students in a 'warning' status may receive financial aid, without completing an appeal.

The first time that a student fails to meet the qualitative (minimum 2.0 semester or Cumulative G.P.A.) or quantitative requirements (minimum 67% courses completed for the term or cumulatively), the student will be placed on financial aid warning. The only exception is for exceeding maximum hours, which results in immediate suspension. Failing to meet any one of the SAP measurements during the warning period will place a student on suspension.

Suspension

There are several conditions that may place a student on suspension. The student is responsible for paying all expenses during any enrollment period(s) while on suspension. Students can be placed on suspension after a warning or probation status. Reaching the maximum time frame for the program of study can also lead a student to suspension.

A student who fails to meet any of the standards of academic progress measures during a warning period will be placed on financial aid suspension and will lose eligibility for all financial aid until all SAP measures have been met.

Students, on probation, who fail to meet the academic or Success Plan measurements will be placed on suspension.

If the Financial Aid Office mathematically determines that a student cannot complete the program of study within the 150% limit, the student will immediately be placed on financial aid suspension. Once the 150% limit has been met, the student cannot regain satisfactory progress or financial aid eligibility.

Warning – Following Suspension status

A student who was placed on financial aid suspension and who regains eligibility for financial aid by achieving a cumulative GPA of 2.0 or higher, a term GPA of 2.0 or higher for their last term of enrollment, a 67% cumulative completion rate and a 67% term completion rate for their last term of enrollment will be placed on Warning status. While on warning after a suspension status, a student must meet all satisfactory academic progress requirements in order to retain aid eligibility

Probation- After Appeal Approval

This status is assigned to a student who fails to make SAP and who has appealed, due to mitigating circumstances, and has had eligibility for Title IV reinstated. While on probation status a student must be making progress according to an academic plan which dictates that a student must achieve a term GPA of 2.0 or higher and a term completion rate of at least 67% in order to continue to retain aid eligibility. Failure to meet the academic plan outlined will be cause for suspension.

Notification of Financial Aid Warning, Probation, or Suspension Status

Standards of Progress statuses will be updated at the end of each semester. All students, whether on financial aid or not, will be notified via email regarding warning, probation, or suspension statuses. However, failure to receive notification will not change the student's financial aid status. Not enrolling for one or more terms does not remove the probation or suspension status.

Reinstatement

If you are on financial aid suspension, for reasons other than reaching the maximum timeframe, you may have your aid reinstated in one of the following manners:

1. Continue to attend Texas State Technical College without financial aid until you are able to achieve both:
   - A cumulative GPA of 2.0 or higher along with 2.0 GPA for your last term of enrollment.
   - A 67% cumulative completion rate along with a 67% completion rate for your last term of enrollment.

   Once you have met both of these standards, you will be placed on continued financial aid warning and may receive aid as long as you continue to maintain academic progress. It may require multiple terms for students with an extremely low GPA and or completion rate to regain financial aid eligibility.
2. File an appeal demonstrating mitigating circumstances and be approved and be placed on warning status.

   Note: If you have reached the maximum time frame, you may not regain eligibility to receive additional financial aid.

Appeal Process

Note: Appeals submitted without documentation will be denied

The student is responsible for any payments and meeting payment deadlines, during the appeal process. The student should not miss payment deadlines, while waiting for a response. Failure to pay for tuition and fees may result in deregistration. The student is responsible for balances due, if the student withdraws before or after an appeal is denied.

Appeals will only be granted for conditions causing extreme hardship to the student, such as the death of a family member, illness or injury of the student, or other mitigating circumstances. The appeal must include supporting documentation regarding your mitigating circumstance, such as medical statements or death certificates, or other supporting documentation. Appeals for mitigating circumstances will be considered during a student's enrollment at TSTC, on a case by case basis. Submitting an appeal does not guarantee approval of the appeal. The Financial Aid Office will consider recommendations from counselors or advisors when reviewing appeals. The Financial Aid Office will review the appeal and approve or deny your appeal. The decision of the financial aid office appeal process is final.

- Level 1 Appeal - Financial Aid Officer/Representative
- Level 2 Appeal - Assistant Director
- Level 3 Appeal - Director
- Level 4 Appeal - Financial Aid Advisory, Appeals and Scholarship Committee (final appeal level)

An appeal must include the following:

- Your name, TSTC ID number and email address
- A written description of the mitigating circumstances
- Documentation to support any claims
- If appealing because you have exceeded the maximum hours limit or because of a change in major, a degree plan must be submitted showing the number of hours remaining until graduation.
- A description of the steps you have taken to remedy the situation (Success Plan)

Once you are notified of not being eligible for financial aid (financial aid suspension), you have (5) working days to submit an appeal or up to the subsequent semester census date, whichever comes first. If your appeal is denied at any level (with the exception of a level 4 appeal) and you wish to appeal to the next level, you must submit a written notice immediately to the next level. Note: Education and career planning tools such as Kuder and Discovery are tools available for students. The assessment may be required for students requesting reinstatement, appeals, or change of program.

Repayment of Federal Funds: Return of Title IV

If you receive federal financial aid and stop attending or withdraw from all courses at or before 60% of the term is completed, you will be required to repay all or a portion of the federal aid you received, including that used to pay for your college expenses. If you received a grade of F in all courses for any term, you will be required to repay a portion of the federal aid received, based on last date of participation, unless an instructor certifies and documents that you were participating in at least one class after the 60% point of the term or until the end of the term. A term may consist of one or more blocks or modules.

Refunds for Financial Aid Recipients

Refunds for financial aid recipients depend on the students' withdrawal dates. For example, students withdrawing before the 60% date of the semester may owe the College money. For more information, see "Refunds for Federal Financial Aid Recipients" in the Refunds section of this catalog.

Scholastic Information

Grading Standards

TSTC measures student achievement of skills, knowledge, and competencies through a system of grading standards. Four grades (A, B, C, D) indicate that credit was received and a grade was awarded. One mark (CR) indicates that credit was received but no grade was awarded. One grade (F) and various other marks indicate that no credit was received and no grade was awarded.

The following system of final grades and marks is used by TSTC to report student performance for each course attempted and/or credited toward graduation.

Grade	Interpretation	Grade Pts.
A	Excellent/Superior Performance Level	4
B	Above Required Performance Level	3
C	Minimum Required Performance Level	2
D	Below Required Performance Level	1
F	Failure to Meet Performance Requirements	0
P	Pass/Meets Required Performance Level (For use in a developmental course or a specialized course and may be used, at the discretion of a college, for up to six credit hours in a program)	NC
IP	In Progress (For use when a student has not had sufficient time to complete the course due to the registration date, extended illness, or other circumstances beyond the student's control. A grade of IP will be changed to a grade of F if the student does not complete the course requirements by a date specified by the faculty member or within one year, whichever is less.)	NC
IM	Incomplete-Military Leave (For use by students who are called to active military service near the end of a term. A grade of IM will be changed to a grade of W if the student does not complete the course requirements within two years of the date the IM grade was awarded.)	NC
W	Withdrawal	NC
CR	Credit (represents credit for courses that are accepted toward program completion and graduation as a result of transfer from other institutions or programs, advanced standing evaluation, credit by examination, articulation agreements, or other validations of course-required knowledge and skills)	NC
AUD	Audit of Course	NC
S	Satisfactory (for use in Continuing Education courses and programs)	NC
UN	Unsatisfactory (for use in Continuing Education courses and programs)	NC
X	No Grade Assigned	NC
FA	Failing (prior to September 1988)	0
I	Incomplete (prior to September 1988)	NC
U	Unsatisfactory (prior to September 1988)	0
WF	Withdrew Failing (prior to September 1988)	0
WP	Withdrew Passing (prior to September 1988)	NC

NC: Not Computed

Grade Point Averages

Grade points earned for each course are determined by multiplying the number of points for each grade by the number of credit hours the course carries. For example, a student who takes a three-hour course and earns an "A" accumulates 12 grade points for that course (3 hours X 4 points for an A = 12 points). A student's grade point average is computed by adding the grade point values for all college-level courses for which grade point values may be computed (A, B, C, D, F, FA, U, WF), and dividing this total by the number of credit hours attempted during the same period. Only hours for which grades are awarded are used in calculating the grade point average (GPA).

Term Grade Point Average

The Term GPA is computed for all TSTC college-level courses with grades of A, B, C, D, and F recorded during a specific term. Developmental education courses are excluded from the Term GPA calculation.

Cumulative Grade Point Average

The Cumulative GPA is computed for all TSTC college-level courses using all grades and grade points earned since enrolling at TSTC. Developmental education courses are excluded from the Cumulative GPA calculation. The Cumulative GPA is used to qualify students for graduation and for graduation honors.

Standards of Progress Grade Point Average

A Term and Cumulative Standards of Progress GPA is computed using all TSTC college-level and developmental education courses. The Standards of Progress GPAs are used for determining scholastic standing, term scholastic honors and financial aid eligibility. See 'Financial Aid Standards of Academic Progress" in the Financial Aid section for more information.

Scholastic Standing

TSTC's scholastic standards are based on a philosophy of advancing student progress toward successful course and program completion. The criteria for scholastic standing are designed to monitor student progress so that faculty and staff can intervene and assist students who have difficulty meeting minimum requirements.

Scholastic standing is computed at the end of each enrollment period and is based on the Standards of Progress (SOP) Term and Cumulative GPAs.

Good Standing

A student who maintains 2.00 or higher SOP Cumulative and Term GPAs at the end of each enrollment period is in good scholastic standing.

A student who does not maintain this minimum is placed on scholastic probation or scholastic suspension. These scholastic levels alert faculty and staff to problems in the student's scholastic performance so that appropriate intervention and assistance can be provided.

Scholastic Probation

A student whose SOP Cumulative or Term grade point average is below 2.00 at the end of an enrollment period is placed on scholastic probation. A student may continue on scholastic probation by achieving a SOP Term GPA of 2.00 or higher at the end of the enrollment period. A student is removed from scholastic probation when the SOP Cumulative and Term GPAs are 2.00 or higher.

Scholastic probation is a serious warning that the quality of the student's work must improve in order for the student to continue enrollment at TSTC. Students on scholastic probation are required to meet with a counselor or advisor prior to registration and may be required to enroll in special programs or courses. After counseling with appropriate college staff, the student may be permitted to enroll in a new program.

Scholastic Suspension

Scholastic suspension occurs when a student on scholastic probation fails to maintain minimum academic standards. A student on scholastic probation who fails to achieve a SOP Term GPA of 2.00 or higher will be suspended for one semester. At the end of the suspension period, the student will be permitted to reapply for admission. A suspended student may appeal for a waiver of a suspension to the Vice President for Student Learning or designee. A student who re-enters the college after having been suspended will be placed on scholastic probation status and will be subject to the minimum requirements governing scholastic probation.

Scholastic Honors

Full-time students (those enrolled for 12 or more credits) who earn SOP Term GPAs of 4.0 are placed on the President's List. Full-time students who earn SOP Term GPAs of 3.5 to 3.99 are placed on the Dean's List.

Grade Reports

Students are expected to monitor their academic progress. Final grade reports are provided to students at the end of each term on the TSTC Web site via WebAdvisor at http://my.tstc.edu. Students should review the grade reports for accuracy. All requests for review or correction must be submitted to the Office of Admissions and Records within 12 months of the close of the semester in which the course was taken.

Grade Changes

Student grades are among the most important records kept by the college. Policies and procedures ensure the privacy and integrity of student grade records and, at the same time, provide students a process to appeal final course grade decisions. The following policies and procedures must be followed to request a grade change.

- A grade change must be requested within one year of the issuance of a grade.
- A grade may be changed due to an error, a student completing course work previously graded "IP" (In Progress), or a fact-supported finding by appropriate members of the administration or appeal committee operating in accordance with established college procedures.
- A grade cannot be changed to a "W" (Withdrawal) unless doing so is in conjunction with an administrative drop or withdrawal from the College that is approved in accordance with college procedures.
- A change of grade form must be completed, noting the reason for the grade change, and signed by the student's instructor, Department Chair, and the Office of Admissions and Records.
- Upon receipt of the completed and signed grade change form, the Office of Admissions and Records makes the

official change to a student's transcript record.
- A copy of the change of grade form is placed in the student's permanent file for audit purposes.

Transcript of Credit

The transcript of credit is an official statement of the student's complete academic record accumulated at TSTC. Upon a written or Web request to any TSTC college, the Office of Admissions and Records will release official transcripts to the student or to a third-party that is authorized by the student to receive the transcript. Normally, the minimum time for processing such requests is 24 hours; however, transcripts requested at the end of a term require approximately one week for processing. Students who request transcripts prior to the end of a term, with current courses and grades to be included in the transcripts, must clearly note the current work as part of the request.

Official transcripts may be withheld if any financial obligations to TSTC have not been paid or if official transcripts have not been received from previously attended institutions. Students who have not complied with all exit requirements will not be provided with transcripts.

Classification

Students are classified as freshmen if they have earned less than 30 hours of college credit. They are classified as sophomores if they have earned 30 to 72 hours of college credit.

Course Load

Students in good standing may register for course loads equivalent to those specified in their instructional programs.

Students may register for less than normal loads but must register for a minimum of 12 credits to be considered full-time. Students who are making unsatisfactory progress or carrying excessive outside work may be required by department chairs or advisors to register for less than normal loads.

Students may register for up to 18 credits with the approval of the faculty advisor. Enrollment for more than 18 credits requires approval of the department chair.

Student Success Program

The TSTC Student Success Program is established to comply with the Texas Success Initiative (TSI) authorized by the State of Texas beginning in 1989 and revised in 2003. In administering this state-wide program, the Texas Higher Education Coordinating Board adopted rules that state, in part, that Texas public institutions of higher education use the flexibility and responsibility under the rules to improve individualized programs to ensure the success of students in higher education.

College Readiness Requirements

Before enrolling at TSTC, all students are evaluated for college readiness. College readiness means a student may enroll in college level classes providing prerequisites and other enrollment requirements have been met. Students are determined to be college ready based on:

- scores on an approved Texas Success Initiative (TSI) test,
- a college readiness designation on the official transcript from another Texas college or university,
- graduation with an associate or baccalaureate degree from a college or university,
- a grade of "C" or higher in a reading, writing and/or mathematics course in the list of college readiness courses.
- completion of an individualized learning plan and/or the capstone course for reading, writing, and/or mathematics, or
- documentation that they are exempt from the college readiness requirements (see "College Readiness Exemptions").

Additional placement testing may be required for entry into specific courses or programs. A determination of college readiness must be made before a student can receive an Associate Degree.

College Readiness Advising Programs

Students who do not meet the criteria for college readiness must meet with an advisor at the Office of Admissions and Records in the Student Services Building. College readiness advisors will work with students to establish an individualized learning plan. The learning plan is developed for each individual student according to the specific needs of the student and may include enrollment in developmental courses, tutorials, laboratories and/or other non-course based activities to prepare the student for college-level coursework. The plan will specify the appropriate measure for determining a student's college readiness. Learning plans may include provisions for students to retake an approved TSI test, subject to availability.

TSI Test Standards

The following table provides the minimum passing scores on approved TSI tests.

	Reading	Writing	Math
THEA	230	220	230
Accuplacer	78	80 with Essay Score = 5	63
Compass	81	59 with Essay Score = 5	39
Asset	41	40 with Essay Score = 5	38
Writing Essay		6	

Note: Test score information is subject to change. Confirm required scores at the Counseling Center, Student Services Room 144.

Non-native English speakers are required to be assessed in reading, writing, and math skills. An alternative test such as TOEFL may be used to determine the level of English proficiency. Depending upon scores, students will be enrolled in non-credit

English as a Second Language (ESL) courses, academic ESL courses, developmental courses in reading and math, and/or college-level courses as appropriate until such time as their English proficiency allows testing on an approved TSI instrument. Contact the Counseling Center, Student Services Room 144 for additional information.

TSI Testing Schedule for College Readiness

The THEA test and other approved TSI tests are administered at each TSTC college on a variety of schedules. Check with the Counseling Center, Student Services Room 144 for specific dates and times. Some tests may be available on computer, as well as on paper.

Special test accommodations are made for students with disabilities if such accommodations are requested at registration and before the appropriate deadline.

Exemptions from College Readiness Standards

1. Students who meet the following score standards for ACT, SAT, or TAKS tests may be exempt from college readiness standards in a specific skill area if the tests have been taken within the approved time frame. Students must provide official scores to the Counseling Center prior to enrollment in order to qualify for this exemption.
   - **ACT**: composite score of 23, combined with a minimum of 19 on the English and/or the mathematics tests; test date no more than five years prior to enrollment
   - **SAT**: combined verbal and math score of 1070, with a minimum of 500 on the verbal and /or mathematics tests; test date no more than five years prior to enrollment
   - **TAKS**: minimum score of 3 on the writing essay test and 2200 on the English Language Arts test, and/or 2200 on the math test, and ; test date no more than three years prior to enrollment.
2. Students enrolled in a certificate program of one-year or less with 42 or fewer semester credit hours.
3. Students who are retired or have been honorably discharged from active duty in the armed forces of the United States, the Texas National Guard or a reserve component of the armed forces of the United States on or after August 1, 1990 are exempt from testing requirements. Appropriate documentation of status is required.
4. Students currently serving on active duty in the armed forces of the United States, the Texas National Guard, or service in a reserve component of the armed forces of the United States with at least three years service prior to enrollment at TSTC are waived from testing requirements. Students on active duty must present a letter from their commanding officer or current duty papers for each semester of enrollment.

Testing and remediation policies are subject to change without notice. Contact the Counseling Center for more information.

College Readiness Courses

TSTC has designated the following courses to satisfy requirements college readiness standards. Students who transfer from regionally accredited institutions of higher education with grades of C or higher in these courses (or equivalents) are determined to be "college ready." Students must submit official transcripts indicating successful completion of the course(s).

Writing

ENGL 1301, 1302	Composition
ENGL 1207, 2308	Creative Writing
ENGL 2311, 2314, 2315	Technical & Business Writing
WRIT 0200	Writing Skills II (or equivalent capstone developmental writing course)

Reading

ENGL 2XXX	Any 2nd year English Literature Course
GOVT 2301, 2302	U.S. Government
HIST 1301, 1302	U.S. History
HIST 2301	Texas History
HUMA 1301	Introduction to Humanities
PSYC 2301	General Psychology
READ 0200	Reading Skills II (or equivalent capstone developmental reading course)
SOCI 1301	Introduction to Sociology

Mathematics

DMTH 0200	Intermediate Algebra (or equivalent capstone developmental math course)
MATH 1314	College Algebra
MATH 1316	Plane Trigonometry
MATH 1324, 1325	Mathematics for Business & Social Sciences
MATH 1332, 1333	Contemporary Mathematics
MATH 1350, 1352	Fundamentals of Mathematics
MATH 1342, 1442	Elementary Statistical Methods
MATH 1348	Analytic Geometry

Advising

TSTC believes advising is essential to student success, and, therefore, the College supports student progress with designated advisors. All new students are to contact an Admissions Advisor to begin the advising process, either prior to or upon completing the admissions requirements. Students are encouraged to call for appointments; however, admissions advisors are available for walk-ins on a first-come first-served basis.

TSTC provides advising assistance for the following:

- enrollment and financial aid processes;
- career counseling, assessment, and goal-setting;
- course selection and scheduling;
- degree planning;
- referrals to counselors, faculty advisors, and other student and instructional services; and
- job search and placement assistance.

TSTC also offers a variety of courses and programs that provide new students with a comprehensive introduction to TSTC, college life, and available advising opportunities. Admissions advisors and education and career specialists can provide information relating to these courses and programs.

New Student Orientation

New Student Orientation is designed to meet the needs of new students. Students will learn about the services and resources available to be a successful college student.

To register for this course, you will need to fulfill all new student admissions requirements. Contact the College Information Office or your admissions advisor to verify your admissions status and to register for New Student Orientation.

Degree and Program Planning

Credentials

TSTC offers programs of study leading to the Associate of Applied Science degree and the Certificate of Completion. All programs are approved by the Texas Higher Education Coordinating Board.

- Associate degree programs are designed to train technicians who work with professionals. Because technicians must be able to understand the profession and translate ideas into actual processes, the technical programs combine theory and laboratory classes with laboratory and shop experience. The curricula are usually based on mathematics and sciences. All graduates of associate degree programs show they are competent in oral communications and the use of computers by satisfactorily completing at least one course in which oral communication and basic computer skills are covered. Graduates of these programs receive Associate of Applied Science degrees.
- Certificate programs are designed to produce the skilled workers needed by modern industry. Skill programs emphasize laboratory and shop experience, rather than theory. All graduates of certificate programs show they are competent in oral communication and the use of computers by satisfactorily completing at least one course in which oral communications and basic computer skills are covered. Graduates of these programs receive Certificates of Completion.

Institutional Awards

TSTC offers technical training in defined skill sets which can be grouped in various combinations to meet specific job requirements for business or industry. These skills training pathways are designed to allow students and/or incumbent workers to enter, exit and re-enter TSTC training while they continue to work or pursue further training. Credits earned in these pathways may be applied to a college credit Certificate of Completion and/or Associate of Applied Science degree. Completers in these training pathways receive the Marketable Skills Achievement Award or a Technical Skills Mastery Certificate.

Degree and Certificate Plans

A degree or certificate plan includes a set of courses that are required to earn a specific degree or certificate. Electives are approved by the student's faculty advisor and indicated in the plan. Course credit may be earned at TSTC, transferred from another college or university, or awarded through examination.

Courses may be substituted if they are approved by the chairperson of the student's major field of study, and the Curriculum Coordinator and the Vice President for Student Learning. No condition guarantees that a course substitution will be approved. Each request is decided on its own merit.

Credits earned at other colleges and universities must be approved for transfer credit by the chairperson in the student's major field of study. Credit for courses in related areas may also require approval from the chairperson of that program area. Before consideration of transfer credit can begin, the student must be eligible to return to the last institution in which he or she was enrolled, official transcripts from all the institutions the student attended must be in the Office of Admissions and Records, and a grade of C or better must have been earned in the course(s).

A student is certified for graduation only when credit has been earned for all courses in the degree or certificate plan and any appropriate course substitution and/or transfer credit authorizations are on file.

Although advisors are available to assist them, students are responsible for keeping track of their progress toward meeting program requirements. Contact the faculty advisor for assistance.

Change of Major

Students who wish to change programs should meet with an advisor. Students must meet the entry requirements if specified. Students receiving financial aid should check with the Financial Aid Office before changing their major.

To change majors, students must follow these procedures.

1. Complete the change of major form, including obtaining all required signatures. Students may be required to meet additional admission criteria for the new major.
2. Return the completed form and all supporting documentation to the Office of Admissions and Records for processing.

Additional Degrees and Certificates

Credit hours may be applied toward more than one degree and/or certificate, as long as those hours meet requirements of those credentials.

Graduation and Commencement

Graduation Requirements

Within five years of initial enrollment in credit courses at Texas State Technical College, a student may graduate with a degree or certificate according to the catalog requirements in effect at the time of first enrollment at Texas State Technical College provided the degree, certificate, the program, and requisite courses are still being offered. If a student fails to complete within five years all requirements of the catalog in effect at the time of initial enrollment, the student will be required to graduate under a catalog not older than five years. Exception to this requirement may be approved in extenuating circumstances by the Vice President for Student Learning.

To obtain a diploma, a student must apply for graduation and satisfy all financial obligations to the college. Diplomas are issued after final grades have been recorded on the student's permanent record and the student is certified as a graduate.

Students are notified of their eligibility for graduation when they achieve the following requirements for the applicable degree or certificate.

1. All TSI-related requirements are met (Associate degrees only).
2. All required course work is satisfactorily completed.
3. At least 25% of the total required credit hours are earned at the college granting the degree or certificate.
4. The student's cumulative grade point average is 2.00 or higher.
5. The student's grades in all major courses are C or better.
6. All transfer credits accepted by TSTC and applied to the degree or certificate are approved by the faculty of the program.
7. The student has no pending disciplinary issues as defined in the college student handbook.

Commencement Ceremonies

Since graduation ceremonies and receptions are generally held before graduate certification occurs, students are permitted to participate in these events only upon the recommendation by faculty. Students are required to wear the regalia designated by TSTC during commencement ceremonies.

Graduation Honors

Students receiving associate degrees or certificates of completion who earn Cumulative GPAs of 4.0 receive TSTC Board of Regents' Honors.

Students receiving associate degrees or certificates of completion who earn Cumulative GPAs of 3.50 to 3.99 receive Honors.

Graduate Guarantee

If an associate degree, certificate of completion graduate or marketable skills achievement award or technical skills or technical skills mastery completer is judged by his/her employer to be lacking in technical job skills identified as exit competencies for the program under which the student graduated or completed, TSTC will provide the graduate with up to 12 tuition-free semester credit hours of additional skill training, in accordance with the following.

1. The graduate must have earned the degree, certificate or award since May 1992 in a technical or occupational program or pathway published in the TSTC catalog.
2. The graduate must have earned at least 75% of the total credits of the associate degree or certificate of completion at TSTC, and must have completed the degree or certificate of completion within five years of initial enrollment.
3. The graduate must be employed full-time in an area directly related to the program concentration, as certified by the Vice President of Academic Affairs.
4. The employment must have commenced within twelve months of graduation or completion.
5. The Graduate Guarantee process must be initiated in writing to the TSTC Office of the President, by either the graduate or the employer.
6. The employer must certify in writing that the employee is lacking entry-level skills identified by TSTC as program exit competencies and must specify the areas of deficiency within 90 days of the graduate's initial employment.
7. The employer, the graduate, career counselor, and appropriate chairperson will develop a written educational plan for retraining.
8. Retraining will be limited to 12 semester credit hours related to the identified skill deficiency and to those classes regularly scheduled during the period covered by the retraining plan.
9. All retraining must be completed within one calendar year from the time the educational plan is agreed upon.
10. The graduate and/or employer will be responsible for the cost of books, insurance, uniforms, fees, and/or other course-related expenses.
11. The guarantee does not imply that the graduate will pass any licensing or qualifying examination for a particular career.

A student's sole remedy against TSTC and its employees for skill deficiencies shall be limited to 12 semester credit hours of tuition-free education, as described above.

Curriculum

Developmental Studies

TSTC provides courses and learning activities for students who need assistance with basic academic skills. As part of the Student Success Program at TSTC, services in Developmental Studies include preparation for TSI testing, diagnostic testing of students'

basic skill levels, and training in the basic skills of reading, writing, and mathematics for each program's entry-level standards and other areas requested by department chairpersons.

Developmental education courses are not counted as credit toward graduation. However, they are used along with the credit courses for determining course load and satisfactory academic progress for financial aid.

The following developmental education courses are offered at TSTC. Additional non-course based developmental activities may be offered by colleges in lieu of these courses.

Course	Course Title
Mathematics	
DMTH 0050	Basic Mathematics
DMTH 0100	Introductory Algebra (*DMTH 0050 or Required Placement Scores**)
DMTH 0200	Intermediate Algebra (*DMTH 0100 or Required Placement Scores**)
Reading	
READ 0050	Basic Reading Skills
READ 0100	Reading Skills I (*READ 0050 or Required Placement Scores**)
READ 0200	Reading Skills II (*READ 0100 or Required Placement Scores**)
Writing	
WRIT 0050	Basic Writing Skills
WRIT 0100	Writing Skills I (*WRIT 0050 or Required Placement Scores**)
WRIT 0200	Writing Skills II (*WRIT 0100 or Required Placement Scores**)

*(*Course Prerequisites)*

General Education Courses

TSTC has been accredited since 1971 by the Commission on Colleges of the Southern Association of Colleges and Schools. Under this accreditation, associate degree programs must contain a basic core of general education courses. This basic core must contain a minimum of 15 semester credit hours and include at least one course from each of the following areas: humanities/fine arts, social/behavioral sciences, and natural sciences/mathematics. Specific core course requirements are included within each associate degree plan.

General education courses are an integral part of a student's preparation for work, and along with the technical course requirements, form the basis of a student's program of study at TSTC.

Purpose

The general education courses are basic to the purpose of TSTC Harlingen and represent a commitment to offer breadth as well as depth to a student's technical education program of study. TSTC Harlingen's inventory of general education courses offers a comprehensive general education program because:

1. Employers are interested in hiring technically trained graduates, who with an appropriate grounding in science (natural, behavioral, and social), mathematics, and technology, can communicate effectively, work well with others, make appropriate decisions, adapt to change, and in many cases, continue their education.
2. The general education courses provide the necessary mathematical, scientific, and communication skills required to succeed in major programs of study, in the workplace, and in life.
3. General education courses assist in developing the ability to think critically, use logical reasoning in analyzing and solving problems, and appreciate cultural diversity.
4. Many of our students need assistance in becoming prepared for college studies in the technical and the general education components of their studies.
5. The general education courses are required to meet accrediting standards of regional, state, and occupational groups requiring a broad range of knowledge when obtaining a degree or certification, and they fulfill the requirements agreed upon in articulation agreements with other colleges and universities.

General Education and Transfer

General education is an integral part of the college's programs of instruction. The general education departments strive toward delivering courses that impart common knowledge, intellectual concepts, and attitudes every person should have for career and life roles in addition to providing some of the basic competencies needed by technical students. Through establishing a common group of required and elective courses, through cognitive experiences, and through the demonstration of skills, TSTC Harlingen seeks to provide students in:

- Degree programs with instruction in knowledge and skills designed to impart common knowledge, intellectual concepts, and appropriate attitudes for work and life. These courses assist the student's participation in social, technological, and cultural environments. They also assist the student's participation in social, technological, and cultural environments. These courses contain college-level content in areas of communication, social and behavioral sciences, humanities, business, mathematics, and natural science. Their common course numbers are recognized by the Texas Higher Education Coordinating Board in the Lower Division Academic Course Guide Manual and meet all requirements for transfer to other accredited colleges and universities.
- Certificate programs with instruction in knowledge, skills, and attitudes appropriate for and that support the technical programs of study. These college-level courses are in the areas of communications, human relations, mathematics, natural science, social and behavioral sciences, business, and humanities. These related studies courses in the certificate programs have numbers from the Workforce Education Course Manual as recognized by the Texas Higher Education Coordinating Board and typically are transferable for courses in occupational programs of study at other colleges or as part of an articulation agreement with another college. Additional courses come from the Lower Division Academic Course

Guide Manual and meet all requirements for transfer to other accredited colleges and universities.

- Developmental education with courses that strengthen academic skills, teach positive study habits, develop basic skill competencies necessary for major program success, and allow students to explore career options of the college's major programs. These courses seek to make students better prepared to complete their studies in their major programs of study. Finally, these courses support skills that must be acquired for students to successfully meet the requirements of TSTC's Texas Success Initiative.

Humanities Electives

Credits for Humanities and Fine Arts Electives are based upon the definition of the Shared Vision Task Force of the National Council for Occupational Education and the Community College Humanities Association:

"Humanities in Associate Degree occupational programs are studies which expand the student's awareness of the human condition and appreciation of human needs, values, and achievements. The Humanities assist in developing insights, capacities, and well-reasoned convictions essential for a fulfilled public and private life, as well as a success in a career. They include studies of literature and all languages, history, philosophy and religion, and the history and appreciation of the fine arts. They do not include the development of basic communication skills in any human language."

More Information

Anyone having any questions regarding transfer credit or special partnership agreements should contact the Curriculum Office, the Counseling Department, or the Collaborative Projects Office.

Additional courses may be accepted on transfer from other colleges. Questions on the transferability of outside courses to meet the Humanities/Fine Arts elective or the Natural Sciences/Mathematics elective requirements should be addressed to the chairs of the respective academic departments.

General Education Courses

The following is a list General Education courses offered by TSTC Harlingen:

Course	Course Title	Prerequisite(s)
Humanities/Fine Arts		
ANTH 2346	General Anthropology	
ARTS 1301	Art Appreciation	
ARTS 1303	Art History I	
ARTS 1304	Art History II	
ARTS 1316	Drawing I	
COMM 2311*	News Gathering & Writing I	ENGL 1301
ENGL 1301*	Composition I	READ 0200/WRIT 0200 or required placement scores
ENGL 1302*	Composition II	ENGL 1301
ENGL 2307	Creative Writing	ENGL 1301
ENGL 2314*	Technical & Business Writing I	ENGL 1301
ENGL 2321	British Literature	ENGL 1301
ENGL 2326	American Literature	ENGL 1301
ENGL 2331	World Literature	ENGL 1301
MUSI 1306	Music Appreciation	
PHIL 1301	Introduction to Philosophy	
PHIL 1304	Introduction to World Religions	
PHIL 2306	Introduction to Ethics	
SOCI 2319	Minority Studies I	
SPAN 1311*	Beginning Spanish I	
SPAN 1312*	Beginning Spanish II	SPAN 1311
SPAN 1411	Beginning Spanish I (for Non-native Speakers)	
SPAN 1412	Beginning Spanish II (for Non-native Speakers)	SPAN 1411
SPAN 2311*	Intermediate Spanish I	SPAN 1313 or SPAN 1412 or equivalent
SPAN 2323	Introduction to Latin American Literature	SPAN 2311 or SPAN 1312
SPAN 2324	Spanish Culture	SPAN 2311 or SPAN 1312
SPCH 1311*	Introduction to Speech Communication	
SPCH 1315*	Public Speaking	
SPCH 1318*	Interpersonal Communication	
SPCH 2333*	Discussion & Small Group Communication	

* May not be used to fulfill requirements for Humanities/Fine Arts Elective in AAS degrees.

Course	Course Title	Prerequisite(s)
Math/Natural Sciences:		
BIOL 1306	Biology for Science Majors I	
BIOL 1307	Biology for Science Majors II	
BIOL 1308	Biology for Non-Science Majors I	
BIOL 1309	Biology for Non-Science Majors II	
BIOL 2301	Anatomy & Physiology I	
BIOL 2302	Anatomy & Physiology II	BIOL 2301
BIOL 2421	Microbiology for Science Majors	BIOL 2301
CHEM 1305	Introductory Chemistry I	
CHEM 1311	General Chemistry I	MATH 1314 or required placement scores
CHEM 1312	General Chemistry II	CHEM 1311
CHEM 2323	Organic Chemistry I	CHEM 1312
CHEM 2325	Organic Chemistry II	CHEM 2323
MATH 1314	College Algebra	DMTH 0200 or required placement scores
MATH 1316	Plane Trigonometry	MATH 1314
MATH 1332	Contemporary Mathematics I	DMTH 0200 or required placement scores
MATH 1350	Fundamentals of Mathematics I	DMTH 0200 or required placement scores
MATH 1351	Fundamentals of Mathematics II	MATH 1350
MATH 2305	Discrete Mathematics	MATH 2413
MATH 2312	Precalculus Math	MATH 1314
MATH 2318	Linear Algebra	MATH 1314
MATH 2320	Differential Equations	MATH 2414
MATH 2342	Elementary Statistical Methods	MATH 1314
MATH 2413	Calculus I	MATH 1316 or MATH 2312
MATH 2414	Calculus II	MATH 2413
MATH 2415	Calculus III	MATH 2414
PHYS 1401	College Physics I	MATH 1316
PHYS 1402	College Physics II	PHYS 1401
PHYS 1415	Physical Science I	
PHYS 1417	Physical Science II	
PHYS 2425	University Physics I	MATH 2413
PHYS 2426	University Physics II	PHYS 2425
Behavioral/Social Sciences:		
ECON 2301	Principles of Macroeconomics	
ECON 2302	Principles of Microeconomics	
GOVT 2301	American Government I	READ 0200 or required placement scores
GOVT 2302	American Government II	READ 0200 or required placement scores
HIST 1301	United States History I	READ 0200 or required placement scores
HIST 1302	United States History II	READ 0200 or required placement scores
PSYC 2301	General Psychology	READ 0200 or required placement scores
PSYC 2314	Lifespan Growth & Development	READ 0200 or required placement scores
SOCI 1301	Introductory Sociology	
SOCI 1306	Social Problems	

General Education Academic Core

TSTC offers a core package of tranferable academic courses that will transfer to any college or university in the state of Texas. More information on course content and lecture and lab hours is included in the Course Descriptions section of this catalog.

Selection of courses within each category must be based upon the student's demonstrated abilities, desired major, and intentions for graduation. Not all courses are offered every semester. Additional hours may be taken beyond the minimum shown. The categories and minimum hours for the basic core are as follows:

Course	Title
English Rhetoric and Composition (6 hours)	
ENGL 1301	Composition
ENGL 1302	Composition II
Mathematics (3 hours)	
MATH 1314	College Algebra
MATH 1316	Plane Trigonometry
MATH 1332	Contemporary Mathematics
MATH 1350	Fundamentals of Math I
MATH 2312	Precalculus Math
MATH 2318	Linear Algebra
MATH 2320	Differential Equations
MATH 2342	Elementary Statistical Methods
MATH 2413	Calculus I
MATH 2414	Calculus II
MATH 2415	Calculus III
Natural Science (6 hours)	
Courses may come from different disciplines.	
BIOL 1306	Biology for Science Majors I (no lab)
BIOL 1307	Biology for Science Majors II (no lab)
BIOL 1308	Biology for Non-Science Majors I (no lab)
BIOL 1309	Biology for Non-Science Majors II (no lab)
BIOL 2301	Anatomy & Physiology I (no lab)
BIOL 2302	Anatomy & Physiology II (no lab)
BIOL 2321	Microbiology for Science Majors
CHEM 1305	Introductory Chemistry I
CHEM 1311	General Chemistry I
CHEM 1312	General Chemistry II
PHYS 1401	College Physics I
PHYS 1402	College Physics II
PHYS 1415	Physical Science I
PHYS 1417	Physical Science II
PHYS 2425	University Physics
PHYS 2426	University Physics II

** SOCI 2319 (Minority Studies) may count as a Social/Behavioral Science course or as a Humanities course, but it cannot count for both groups

Course	Title
Government and U.S. History (12 hours)	
GOVT 2301	American Government I
GOVT 2302	American Government II
HIST 1301	U.S. History I (to 1877)
HIST 1302	U.S. History II (since 1877)
Social/Behavioral Science (3 hours)	
ECON 2301	Principles of Macroeconomics
ECON 2302	Principles of Microeconomics
PSYC 2301	General Psychology
PSYC 2314	Life Span Growth & Development
SOCI 1301	Introductory Sociology
SOCI 1306	Social Problems
SOCI 2319	Minority Studies**
Fine Arts (3 hours)	
ARTS 1301	Art Appreciation
ARTS 1303	Art History I
ARTS 1304	Art History II
MUSI 1306	Music Appreciation
Humanities (3 hours)	
*Must include one literature course marked with an **	
ANTH 2346	General Anthropology
ENGL 2321	British Literature *
ENGL 2326	American Literature *
ENGL 2331	World Literature *
PHIL 1301	Introduction to Philosophy
PHIL 1304	Introduction to World Religions
PHIL 2306	Introduction to Ethics
SOCI 2319	Minority Studies**
SPAN 2323	Introduction to Latin American Literature *
SPAN 2324	Spanish Culture *
Speech Communication (3 hours)	
SPCH 1311	Introduction to Speech Communication
SPCH 1315	Public Speaking
SPCH 1318	Interpersonal Communication
SPCH 1321	Business and Professional Communication
SPCH 2333	Discussion & Small Group Communication
Modern Language (6 hours)	
Choose one of the following	
SPAN 1311	Beginning Spanish I
SPAN 1411	Beginning Spanish I (for Non-native Speakers)
and choose one of the following	
SPAN 1312	Beginning Spanish II
SPAN 1412	Beginning Spanish II (for Non-native Speakers)

ADN Nursing Academic Courses:

Texas State Technical College Harlingen is participating with Valley Baptist Medical Center and the University of Texas at Brownsville/Texas Southmost College (UTB/TSC) in offering academic courses for the RN Nursing program.

Students completing academic courses at TSTC Harlingen can then apply to UTB/TSC, and, upon acceptance, take the NURS courses at Valley Baptist Medical Center taught by UTB/TSC faculty.

Upon completion of the ADN program, an Associate of Applied Science Degree is awarded by UTB/TSC and the student may sit for the Registered Nurse (RN) test administered by the State Board of Nurse Examiners.

These academic courses completed at TSTC are also transferable to other Texas public universities under the common course numbering system of the Texas Higher Education Coordinating Board.

TSTC Harlingen is proud to be a participant in the Associate Degree Nursing program, which reflects the cooperation of the Texas Higher Education Coordinating Board, UTB/TSC, TSTC, Valley Baptist Medical Center, and the Rio Grande Valley community.

The following academic courses may be taken at TSTC for transfer credit to UTB/TSC for the ADN program:

Course	Title
BIOL 2401	Anatomy & Physiology I
BIOL 2402	Anatomy & Physiology II *(BIOL 2401*)*
BIOL 2421	Microbiology *(BIOL 2401*)*
PSYC 2301	General Psychology *(READ 0200 or Required Placement Scores*)*
PSYC 2314	Life Span Growth & Development (*READ 0200 or Required Placement Scores*)*
ENGL 1301	Composition I (*READ 0200 and WRIT 0200 or Required Placement Scores*)*
SPCH 1318	Interpersonal Communication
MATH 1314 or 1332	College Algebra or Contemporary Math I *(DMTH 0200 or Required Placement Scores*)*

Three hours of Humanities (ARTS, MUSI, PHIL, foreign language, or any 2000 level English).

Allied Health Prerequisite Courses

The following courses offered by TSTC Harlingen are prerequisite courses required for Allied Health programs offered at UTB/TSC. Developmental courses to assist students to pass the THEA are also offered.

Course	Title
HPRS 1101	Introduction to Health Professions
HPRS 1204	Basic Health Profession Skills
HPRS 1205	Medical Law/Ethics for Health Professions
HPRS 2300	Pharmacology for Health Professions
HITT 1305	Medical Terminology

Other Academic Transfer Courses

The Texas Higher Education Coordinating Board approves the following courses for academic credit. However, these courses are not part of the General Education Academic Core and will not satisfy the core requirements for graduation. Certain programs require these courses as part of their curricula, and the course may also be taken as an elective beyond requirements of the General Education Academic Core.

Course	Title
ACCT 2401	Principles of Accting I - Financial
ACCT 2402	Principles of Accting II - Managerial *(ACCT 2401*)*
BCIS 1305	Business Computer Applications
BUSI 1301	Business Principles
BUSI 2301	Business Law
COMM 2311	News Gathering & Writing
COSC 1301	Microcomputer Applications
ENGL 2314	Technical & Business Writing
ENGL 2307	Creative Writing
ENGR 1201	Introduction to Engineering
ENGR 1204	Engineering Graphics
ENGR 2301	Engineering Mechanics I - Statics
ENGR 2304	Programming for Engineers
ENGR 2305	Circuit Analysis I
ENGR 2105	Circuit Analysis I Lab
ENVR 1401	Environmental Science I
MATH 2305	Discrete Mathematics *(MATH 2413*)*
SPAN 2311	Intermediate Spanish
TECA 1354	Child Growth and Development

*(*Course Prerequisites)*

Prerequisites and Co-requisites

Students must complete designated prerequisite courses before registering for certain courses and must take co-requisite courses during the same term. Such requirements are indicated as part of the course descriptions. Students are responsible for taking courses in sequence and at the proper level. Failure to adhere to prerequisite and co-requisite requirements may result in the students being withdrawn from the courses.

Credit Award for Assessments and Training

Credit awards for Texas State Technical College (TSTC) courses based on credit by examination or non-traditional training and experiences is available to students who plan to enroll at TSTC and to currently enrolled students. TSTC awards credit for various examinations published by the College Board, including the College Board Advanced Placement Program (AP) and the College Level Examination Program Subject Exams (CLEP-S). TSTC also awards credit for training received while in the United States Armed Services, for credit earned through the International Baccalaureate Diploma Program and, for credit earned in high school dual credit courses. Students may also be eligible to receive credit awards for other types of training and experience subject to review and approval by the appropriate college official.

General Rules and Regulations

The total number of semester credit hours awarded for Credit Awards may vary depending upon the student's program of study; however, the total credit awarded (including transfer credits) cannot exceed 75% of the total credits required for the student's declared program of study. At least 25% of the total credits in a TSTC student's certificate or AAS degree plan must be earned through regular SCH instruction at a TSTC college college or at another institution of higher education in partnership with TSTC.

To receive Credit Awards, students must be enrolled at TSTC and have completed a minimum of six semester credit hours of non-developmental coursework at TSTC. New students who request and meet the standards for Credit Awards will be granted credit pending completion of six non-developmental semester credit hours at TSTC.

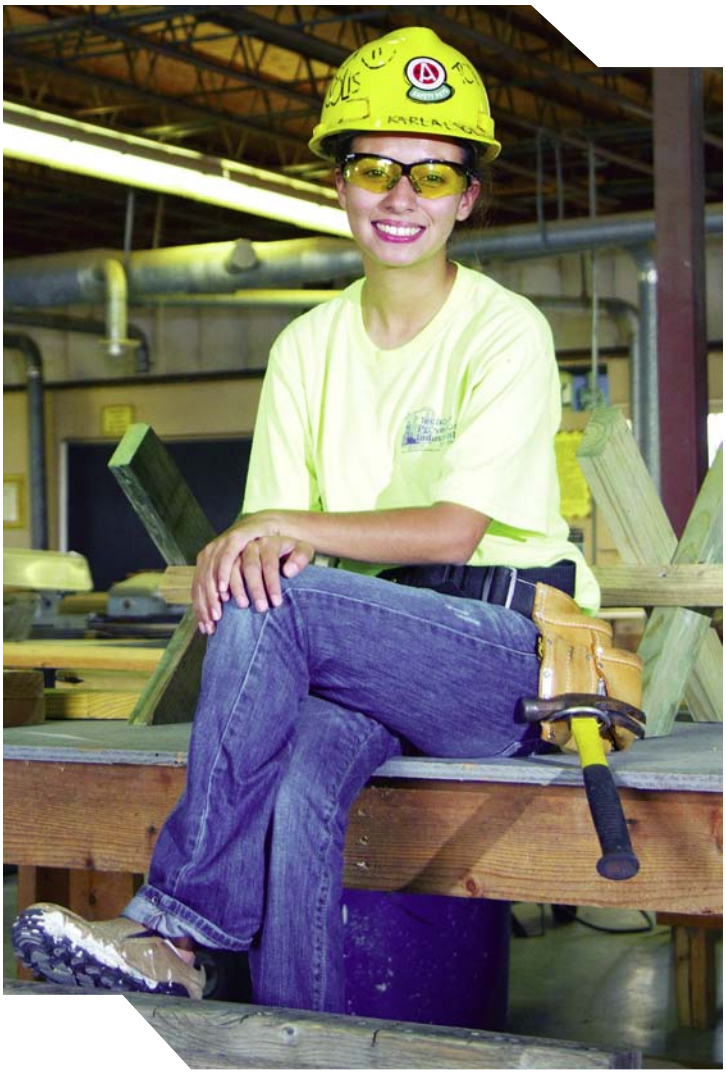
While credit may be awarded by TSTC for external exams and training, this credit may not satisfy requirements for a specific program of study. Students should check with program advisors to determine if accepted Credit Awards will meet program requirements.

A grade of CR (credit) will be assigned for any course in which Credit Awards are received. This grade is not computed in the grade point average, and the credit does not count toward calculation of student load for a term.

The student is responsible for obtaining documentation of external exam scores and/or other training and submitting it to the Registrar's Office at a TSTC College. Scores for the College Examination Program (CLEP) and Advanced Placement (AP) examinations, as well as other Credit Award documentation, should be received prior to enrollment for use in course advisement and placement.

Students must complete the appropriate Credit Award Request form with appropriate documentation to initiate the Credit Award process.

Payment of any fees associated with Credit Award program must be received before credit can be posted to the student's transcript.



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CLEP Subject Area Exams

The College Level Examination Program (or CLEP) is a series of tests offered by College Board. The tests cover a variety of subject areas including business, science and mathematics, history and social sciences, foreign languages, and composition and literature. CLEP exams are offered on most college and university campuses.

TSTC awards course credit for the following CLEP Subject Exams providing the minimum score has been obtained on the specific test. TSTC does not award credit for the CLEP General Exams. CLEP Scores are valid for ten (10) years from the test date.

CLEP Subject Test Name	Score	Minimum Credits	TSTC Course(s)
Principles of Accounting	50	6	ACCT 2301, 2302, 2401, 2402
General Biology	50	8	BIOL 1406, 1407
Introductory Business Law	50	3	BUSI 2301
General Chemistry	50	8	CHEM 1411, 1412
Principles of Macroeconomics	50	3	ECON 2301
Principles of Microeconomics	50	3	ECON 2302
English Composition with Essay	50	6	ENGL 1301, 1302
English Literature	50	6	ENGL 2322, 2323
American Literature	50	6	ENGL 2327, 2328
American Government	50	3	GOVT 2305
History of U.S. I	50	3	HIST 1301
History of U.S. II	50	3	HIST 1302
Humanities	50	6	HUMA 1301, 1302
College Algebra	50	3	MATH 1314
Trigonometry	50	3	MATH 2413
Calculus w/ Elementary Functions	50	4	MATH 2413
Pre Calculus	50	3	MATH 2312
Introductory Psychology	50	3	PSYC 2301
Human Growth and Development	50	3	PSYC 2314
Introductory Sociology	50	3	SOCI 1301
Spanish Language	50	3	SPAN 1311
Spanish Language	53	6	SPAN 1311, 1312
Spanish Language	64	12	SPAN 1311, 1312, 2311, 2312

Advanced Placement

Advanced Placement (AP) exams are offered by the College Board to students who complete AP courses while enrolled in high school. The exams cover a variety of subject areas including business, science and mathematics, history and social sciences, foreign languages, and composition and literature.

TSTC awards course credit for the following AP Exams providing the minimum score has been obtained on the specific test. AP scores are valid ten (10) years from the test date.

AP Subject Test Name	Score	Minimum Credits	TSTC Course(s)
Art, History of	3	3	ARTS 1303
Art, History of	4	6	ARTS 1303, 1304
Biology	3	4	BIOL 1406
Biology	4	8	BIOL 1406,1407
Chemistry	3	4	CHEM 1411
Chemistry	4	8	CHEM 1411, 1412

AP Subject Test Name	Score	Minimum Credits	TSTC Course(s)
Computer Science A	3	3	COSC 1301, ITSC 1302, 1307
Macroeconomics	4	3	ECON 2301
Microeconomics	4	3	ECON 2302
English Language	3	3	ENGL 1301
English Language	4	6	ENGL 1301, 1302
English Literature	3	3	ENGL 2322,
English Literature	4	6	ENGL 2322, 2323
U. S. Government & Politics	3	3	GOVT 2305
U. S. History	3	3	HIST 1301
History of U. S.	4	6	HIST 1301, 1302
Music Theory	3	3	MUSI 1306
Statistics	3	3	MATH 1342
Calculus AB	3	3	MATH 2312
Calculus AB	4	4	MATH 2413
Calculus BC	3	4	MATH 2414
Physics B	3	8	PHYS 1401, 1402
Physics C	3	8	PHYS 2425, 2426
Psychology	3	3	PSYC 2301
Spanish Language	3	3	SPAN 1311
Spanish Language	4	6	SPAN 1311, 1312
Spanish Language	5	12	SPAN 1311, 1312, 2311, 2312
Spanish Literature	4	3	SPAN 2323
Spanish Literature	5	6	SPAN 2323, 2324

Credit for Military Training

Students who received training while in the United States Armed Services may receive credit for that training, provided appropriate documentation is provided and the training is equivalent to a course or courses offered by TSTC. Credit awarded for military training is based on the recommendations from the American Council on Education (ACE) in its Guide to the Evaluation of Educational Experiences in the Armed Services and must be approved by the appropriate TSTC department chair for the specific subject area.

"The Military Registries provide quality assurance and policy guidance to the U.S. Army, Navy, and Marine Corps in support of the Army/ACE Registry Transcript Service (AARTS) and the Sailor/Marine/ACE Registry Transcript (SMART). More than 2,300 colleges and universities recognize these ACE-endorsed transcripts as official documentation of military experiences and accurate records of applicable ACE credit recommendations."

Students who wish to receive credit for military training should obtain a transcript from the Defense Activity for Non-Traditional Education Support (DANTES). This agency maintains the educational records of the service members who have completed DANTES Subject Standardized Tests (DSSTs), CLEP examinations, USAFI (United States Armed forces Institute), and GED tests.

Before July 1, 1974, the results of courses and tests taken under the auspices of USAFI (United States Armed Forces Institute, disestablished 1974) are also available from the DANTES Program:

DANTES Program
The Chauncey Group International
P. O. Box 6605
Princeton, NJ 08541-6605

There is a $10.00 fee charged for each transcript from DANTES.

International Baccalaureate Diploma Program (IBD)

Students who have received an International Baccalaureate Diploma (IB) may receive TSTC course credit for the following exams with scores of four (4) or higher on either standard level (SL) or higher level (HL) examinations. Students who have taken IB exams but do not have an IB diploma may receive credit for scores of five (5) or higher on higher level (HL) examinations only.

IBD Exam Name	Minimum Score with IB Diploma	Minimum Score without IB Diploma	Credits	TSTC Course(s)
Biology (HL)	4	5	8	BIOL 1406, 1407
Biology (SL)	4	N/A	8	BIOL 1406, 1407
Chemistry (HL)	4	5	8	CHEM 1411, 1412
Chemistry (SL)	4	N/A	8	CHEM 1411, 1412
Economics (HL)	4	5	6	ECON 2301, 2302
Economics (SL)	4	N/A	6	ECON 2301, 2302
English Language A1 (HL)	4	5	6	ENGL 2322, 2323
English Language A1 (SL)	4	N/A	6	ENGL 2322, 2323
Mathematics (HL)	4	N/A	6	MATH 1314, 1316
Math Methods (SL)	4	N/A	3	MATH 1314
Math Studies (SL)	4	N/A	3	MATH 1324 or 1325
Philosophy (HL)	4	5	3	PHIL 1301
Philosophy (SL)	4	N/A	3	PHIL 1301
Physics (HL)	4	5	4	PHYS 1401
Physics (SL)	4	N/A	4	PHYS 1401
Psychology (HL)	4	5	3	PSYC 2301
Psychology (SL)	4	N/A	3	PSYC 2301

Credit Award for Continuing Education Units and Experiential Learning

Students who have successfully completed continuing education (CEU) courses offered by a TSTC college are eligible to apply for semester credit hour technical course credit. CEU coursework must be demonstrated to be substantially the same as the equivalent semester credit coursework. Students must sign and submit a Continuing Education Hours (CEU) Course Equivalency Evaluation form to the instructional administrator of the appropriate technical program in which the course(s) are managed.

Experiential learning allows students to receive college credit for equivalent educational experiences acquired through earlier schooling situations, work/on-the-job training or life experiences. Upon approval of the appropriate department chair and/or dean, a student may develop a petition for a course or courses offered by TSTC to gain college-level credit. Petitions are reviewed by the appropriate department chair and/or dean and submitted to the Vice President of Student Learning for approval.

Students with applicable skills and knowledge may also receive credit for technical courses in which proficiency is determined by examination. These challenge exams are designed and written by qualified faculty and may be administered in the technical department or testing center.

More specific information on credit award for continuing education units and experiential learning may be obtain from the Continuing Education Office. Testing center and/or evaluation fees may apply.

Audited Courses
Students may audit courses with permission from the course instructors. Students auditing courses must adhere to the same class requirements as those students taking the courses for credit. Audited courses are not considered when determining a credit hour load, and a grade of "AUD" is shown on the students' grade reports. Students may take courses for credit after auditing them but may not receive credit by examination or use audited courses as course substitutions in degree or certificate plans. Students who audit courses will be charged state and designated tuition as specified in the Tuition and Fees section of this catalog. Contact the Office of Admissions and Records for more information.

Cooperative Education
Most certificate and degree programs offer students opportunities to participate in cooperative training with industry for at least one semester. Students in cooperative experiences earn up to 12 credit hours working off-campus at jobs related to their fields of study. This phase of training is a cooperative effort between the student, industry, and TSTC to provide valuable work experience. Cooperative education is competitive, enabling some qualified students to earn income to help support their education. Students who are interested in participating in cooperative experiences should discuss the opportunities with their department chairpersons.

Individualized Instruction
Some programs of study offer individualized instruction. In these programs, students may complete course requirements without attending regularly-scheduled lecture or laboratory sessions. Students enroll in an agreed-upon number of contact hours and are awarded credit when course objectives are met. This allows students to advance through program requirements at a comfortable speed, which may be slower or faster than the more traditional approach. Students should talk with their department chairpersons about the availability of individual instruction in their programs of study.

Dual Credit Courses
High school students who have completed their sophomore year may enroll for dual credit academic and technical courses at TSTC while still in high school through the exceptional admission program. Students receive either transcripted credit for regular college credit courses or articulated credit that is based upon agreements with school districts. Contact the Dual Enrollment Office for more information.

Early College High School
Early college high schools (ECHS) are small high schools designed to allow students to earn both a high school diploma and an associate's degree or up to two years of credit toward a bachelor's degree. Early college high schools may be located on or associated with the TSTC colleges. Students attending ECHS enroll in TSTC courses as part of their high school curriculum. While similar to dual credit programs, students in ECHS are subject to additional requirements for admission and participation in classes. Contact an admissions advisor or education and career specialist at a TSTC college for more information.

Day/Evening Weekend Courses
The majority of college credit courses are taught on weekdays during the day, with selected courses offered during the evenings and/or on Saturdays. Continuing education and workforce training courses are scheduled throughout these time periods; contact the Continuing Education Office for details.

Distance Learning
TSTC offers instruction through a variety of electronic media, including videoconferencing and the Internet. Through videoconferencing labs, TSTC sends and receives classes to and from various colleges and schools. Internet classes offer students the opportunity to complete college courses using personal computers and Internet connections. Each TSTC program that offers distance learning courses has requirements specific to that department.

Distance learning courses are not self-paced. However, depending on the nature of the instructional method, students may complete course requirements as their schedules permit. Students enrolled in distance learning courses must meet deadlines, take scheduled tests, etc., but typically they do not have to be in classrooms at specific times, except when required by the instructors. Those students who take courses via the Internet complete assignments using computers and communicate with instructors through e-mail, fax, and by telephone. Some distance learning courses require proctored testing.

Admission requirements are the same as those for on-campus students. Students planning to take only distance learning courses should notify the Distance Learning Office so that appropriate information and advising can be arranged. Advising is accomplished by e-mail and telephone.

In most cases, tuition for distance learning courses is the same as on-campus courses. The Tuition and Fees section of this catalog provides more details. The cost of proctored exams, if any, is paid by the students. Students may order books and materials from the TSTC Bookstore or purchase them locally.

Enrollment

Registration
Registration dates are published in the college calendar. Returning students and new students who have completed admission procedures should contact their local TSTC campus for specific registration information.

Schedule Changes
Currently enrolled students may add courses, drop courses, or change sections before classes begin by contacting their program

advisors. After classes begin, all students may change their schedules by obtaining course schedule change forms available from the Office of Admissions and Records, instructors and/or department chairs. The completed forms must be submitted to the Office of Admissions and Records by the deadline published in the TSTC college calendar. Changes are effective only when this process has been completed.

Drops and Withdrawals

Students may drop courses or withdraw from the College by completing a course schedule change form, obtaining the appropriate approval signatures, and submitting the form to the Office of Admissions and Records. The effective date is the date the course schedule change form is received in the Office of Admissions and Records. Deadlines for course drops and withdrawals from the college are published in the TSTC college calendar.

Students who concurrently drop and add the same number of credit hours in a simultaneous transaction do not incur additional charges or receive refunds. See "Refunds for Changes in Enrollment" in the Refunds section for more information.

Courses that are dropped prior to the official census dates do not appear on the student's transcript. After the official census dates, students who drop courses or withdraw from the institution receive marks of "W" (Withdrawal), provided the forms are received on or before the published deadline.

Under section 51.907 of the Texas Education Code, "an institution of higher education may not permit a student to drop more than six courses, including any course a transfer student has dropped at another institution of higher education." This statute was enacted by the state of Texas in spring 2007 and applies to students who enroll in a public institution of higher education as first-time freshmen in fall 2007 or later. Any course that a student drops is counted toward the six-course limit if "the student was able to drop the course 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; and the student is not dropping the course in order to withdraw from the institution." Some exemptions for good cause could allow a student to drop a course without having it counted toward this limit, but it is the responsibility of the student to establish that good cause.

Students who have completed at least 75% of the term and who are called to active military service may request an excused absence rather than withdrawal from their courses. Students who request leave based on military service will be given grades of "IM" in all courses and will have two years from the end of the term to complete course work. Grades of "IM" awarded to students called to military service will be changed to "W" grades if the required course work is not completed by the end of the two-year period.

Students who withdraw from the College must ensure that all library books and laboratory equipment are returned and all financial obligations are settled before they leave.

Student Participation

Students are responsible for their own class attendance and participation. Faculty members may establish requirements for student participation in specific learning activities both in and out of the classroom and may consider these requirements when determining final grades.

Student Absence and Religious Holy Days

Under Texas Education Code 51.911, a student who is absent from class for the observance of a religious Holy Day is allowed to take an examination or complete an assignment scheduled for that day within a reasonable time period, as established by the faculty member. The student must give written notice by submitting a completed absence request form to the instructor within the first 10 days of the term.

Articulation Agreements

Tech Prep

Tech Prep is part of a national education initiative to transform technical education. A Tech-Prep program, as defined in the Technical Education Program Guidelines of the Texas Higher Education Coordinating Board, is a cooperatively developed six-year program of study that begins in the ninth grade and leads to an associate of applied science degree from a public community or technical college. This cooperative arrangement involves business, industry, labor, and secondary and higher education. A Tech Prep Bridge is available for students who do not take the Tech-Prep program in high school. For more information, contact a high school counselor, TSTC department chair, or TSTC Tech Prep representative.

High School Articulation Agreements

TSTC has established articulation agreements with various high schools throughout the state. These agreements allow entering students to use their work in pre-determined high school courses for credit in TSTC programs. To determine if a particular high school is participating in this program, contact the high school counselor and appropriate TSTC department chairperson.

Transfer of Credit

The transfer of course credit from TSTC to other Texas colleges and universities is facilitated by the Texas Higher Education Coordinating Board (THECB) Academic Course Guide Manual and Workforce Education Course Manual. In general, students may submit an official TSTC transcript to another college or university for consideration of transfer credits. Acceptance of credits is at the discretion of the receiving institution. Contact the appropriate department chair for more information.

Resolution of Transfer Disputes for Lower Division Courses

The following procedures specified in Texas Higher Education Coordinating Board Rules (Chapter 4, Subchapter B, Section 4.27) 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 paragraph (1) 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.

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.

Each institution of higher education shall publish in its course catalogs the procedures specified in all subsections of Section 4.27 in the Texas Higher Education Coordinating Board rules.

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.

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.

Scholastic Integrity

TSTC expects all students to engage in scholastic pursuits in a manner that is beyond reproach. Students are expected to maintain complete honesty and integrity. Any student found guilty of scholastic dishonesty is subject to disciplinary action. Scholastic dishonesty includes, but is not limited to, cheating on academic work, plagiarism, and collusion.

- *Cheating on academic work* includes, but is not limited to:
  - copying from another student's test paper or other academic work;
  - using materials during a test that have not been authorized by the individual giving the test;
  - collaborating with another student, without authorization, during an examination or in preparing academic work;
  - bribing another person to obtain an unadministered test;
  - knowingly using, buying, selling, stealing, transporting, or soliciting, in whole or in part, the contents of an unadministered test; and
  - substituting for another student, or permitting another student to substitute for oneself, to take a test or prepare other academic work.
- *Plagiarism* means claiming another's work as one's own without acknowledging its origin and doing so for credit.
- *Collusion* means unauthorized collaboration with another person in preparing a written work offered for credit.

Discipline for scholastic dishonesty follows the same course as other disciplinary actions, except the appropriate faculty member considers and reviews the case first. The student may appeal the faculty member's decision to the Department Chair and then to the Vice President of Academic Affairs. If the student is not satisfied with the Vice President of Academic Affairs' decision, he/she may follow the normal disciplinary appeal procedures. Students are not suspended from class or from the College until they have received due process.

Continuing Education and Corporate Workforce Training

TSTC offers a range of continuing education and workforce training courses and programs. Credit in these courses and programs is awarded as "Continuing Education Units" (CEUs) upon successful completion of course and program objectives. Courses may be offered to the general public or in a customized format for businesses and industries to meet specific workplace needs. Typical curriculum offerings include:

- Training and retraining programs that respond to requests or needs of business or other institutions and agencies
- Specialized customized training courses, workshops, seminars, and clinics

- Training for industrial start-up or expansion programs
- Continuing education to train for new careers and to provide skill updates, professional development, personal improvement and recreation.

Admission and Registration

The majority of CEU courses and programs have no admission requirements; however, all participants are required to complete a registration form with basic demographic information. Some specialized programs may require demonstrated skills or competencies prior to enrollment.

Tuition and Fees

CEU courses vary in price depending on the length of the course, special equipment or labs used in training and other factors. Customized CEU training courses may be billed directly to the sponsoring business or industry or employers may reimburse students for approved CEU training courses.

Unless the course or student is sponsored by a business or agency, payment of all tuition and fees is required prior to the first class meeting.

Class Records and Certificates

Students completing CEU courses receive one (1) CEU for every 10 hours of participation in a continuing education course or program. Grades of Satisfactory "S" or Unsatisfactory "U" are typically awarded in CEU classes. Other types of grades may be awarded depending on the requirements of the course sponsor. Students who successfully complete CEU courses receive a certificate certifying the number of CEUs awarded.

CEUs earned in classes taught by TSTC may be converted to semester hour (college) credit that is applicable to a certificate of completion or associate degree. Refer to the Credit Award for Assessments and Training section of this catalog for more information.

Customized Training for Business and Industry

TSTC Harlingen has a corporate college representative to respond to requests from businesses and other institutions or agencies to develop and offer specialized training for employees. Training may be provided at the college or at the sponsor's site of choice. For more information on specialized business and industry training contact Industrial Training.

Student Services

Student Housing

The College considers housing an added service for its students. Occupancy in student apartments is purely voluntary on a first-come, first-served basis. The facilities are conveniently located at the College within walking distance of classroom buildings, laboratories and recreation facilities.

Housing and cafeteria facilities are owned and operated by the College on a self-sustaining basis to offer its students room and board accommodations at the lowest possible cost.

Housing Reservations

Because facilities are limited, the prospective student should complete a campus housing application as soon as possible, at least one semester in advance of the expected enrollment date. The application must be completed and returned with $150 deposit, the Release of Background Information Form and the non-refundable criminal background check fee of $8. A proof of bacterial meningitis vaccination is also needed ten days prior to move-in. The deposit can be made by check or money order payable to Texas State Technical College.

The deposit must be paid before the student is placed on the housing assignment list. If the student decides not to enroll or live in campus housing, the deposit will be refunded. The deposit will be retained until the student properly clears/vacates housing. Family apartments do not require a deposit until the scheduled move-in date.

Housing Assignments

Returning students have priority in housing assignments. However, they must reserve their own rooms for future occupancy at least 30 days before the end of the current semester.

Confirmation of housing reservations for available housing will be made in writing to each applicant. When capacity is reached, additional applicants will be notified in writing that rooms are not available.

The student may request a certain apartment and/or roommate, and all possible consideration will be given to each request. The college reserves the right to assign students to specific apartments.

Students must remain in the facilities assigned to them unless permission for change is obtained from the Housing Office. Moving without permission may result in permanent dismissal from campus housing. The Housing Office reserves the right to move students to another dorm in order to conserve energy, for safety reasons, to conduct repairs or remodel and for other reasons that are in the best interest of the college.

Housing Regulations

Housing regulations are posted in the Housing Office. Tenants may move into their assigned apartments on the first day of regular registration only if advance rent and room deposits have been paid and the lease agreement has been signed. The tenant will terminate the lease and must vacate the dorm if he/she ceases to be a TSTC student.

When the student properly vacates his or her assigned apartment, the unused portion of advance rent will be refunded following inspection by Housing Office staff and return of all room keys. However, no refunds will be made during the last 10 school days of the semester.

A portion of the housing deposit will be withheld to defray costs of apartment repair or replacement of lost items where tenant liability is obvious. Remaining portions of the housing deposit will be withheld to defray the cost of apartment rental due.

All rental rates are based on the TSTC System approved fee schedule.

All rates are subject to change without notice due to economic conditions beyond the control of the college.

Counseling and Testing Services

Counseling and testing services assist students in obtaining maximum results from their educational opportunities. Services are provided by a Licensed Professional Counselor as well as experienced advisors. Students are encouraged to make appointments; however, walk-ins are welcomed and accommodated, based on counselor availability.

Counseling services promotes positive mental health for improved personal, career, and academic growth. These services include individual and group counseling, scholastic and financial counseling, workshops, mediation, and referral to outside agencies. Information disclosed during counseling sessions is strictly confidential, except when it involves potential danger to oneself or others, child abuse, or criminal conduct.

A Behavior Intervention Team has been established in order to support student success and to assist in protecting the health, safety and welfare of the students and members of the college community.

Testing services provides TSI tests, and departmental tests. Selected TSTC colleges may offer GED testing. Other instruments are offered that provide information and guidance in academic and career areas and help in understanding personal strengths and weaknesses.

Student Activities

Social Activities

Campus life at TSTC includes a variety of social activities, such as movies, dances, parties, and other special events.

Intramural and Recreational Sports

TSTC sponsors a variety of team and individual sports throughout the year. These programs contribute to students' general education by providing experiences that are available only through sports, athletic competition, and recreation. Intramural and recreational sports help create well-balanced and happy individuals by developing physical skills, good health, mental alertness, and social well being. These programs strive to reach as many students as possible and develop permanent interests in sports and lifetime fitness. These programs include team sports, such as flag football, basketball, softball, and volleyball, as well as other activities, such as tennis, racquetball, and group fitness classes.

The Wellness and Sports Center consists of a gymnasium, cardio room, weight room, and two racquetball courts in side, and two athletic fields, a walking trail, basketball courts and two tennis courts outside. Fitness Rewards and Weight Loss incentive programs are offered each semester.

Student Government

The Student Government Association (SGA) is the governing body that represents students and advises the college administration on issues of student interest and concern. Each Spring, five Division Senators are elected by the student body to serve on the SGA. Contact the Office of Student Life for more information.

Student Clubs and Organizations

Student clubs and organizations provide many opportunities for students to get involved in campus activities. Some clubs and organizations focus on particular professional fields, while others relate to more general interests, hobbies, and support services. Each club or organization must have a faculty/staff advisor and must be approved annually by the TSTC Board of Regents. Students are encouraged to visit the Student Life Office to learn more about student clubs and organizations.

Student Publications

Students who are interested in writing, photography, or journalistic projects are encouraged to become involved with the various college publications. Contact the Marketing Department for more information.

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Student Identification Cards

All new college credit students are required to obtain TSTC identification (ID) cards when they register; ID cards are optional for students in continuing education and workforce training programs. Students should carry these cards at all times because they must be presented for various purposes, such as cashing checks, paying fees, and checking out library books. Misuse of ID cards may result in disciplinary action.

Learning Resource Center

The Learning Resource Center (LRC) provides print and non-print resources and services for students and faculty, including access to the Internet. Materials are selected to serve the curricular, vocational, and recreational needs of the college community. A trained staff of professional librarians is available to aid students in locating and using these materials.

Students must clear their LRC records before the end of each semester. Official transcripts are not released and registration for subsequent semesters may not be allowed until all obligations are met.

College Bookstore

The TSTC Bookstore maintains a wide selection of books and supplies required for classes and labs. The bookstore also offers an assortment of educational materials, health care products, stamps, cards, envelopes, and snacks, as well as an array of college sportswear, hats, and novelties.

Food Service

Breakfast 7:00-10:30am

Lunch 11:00am-2:00pm

Meals may be purchased individually using cash. Meal plans are also available. Please note that meals furnished under this contract are not transferable from one person to another, nor will credit (extra meal) be given for meals missed by the participant.

Student Health

Health Services

Student Health Services offers first aid, limited health care, and counseling regarding personal health needs. If you are required to see a physician, you will be referred to your private physician or to a local physician in the Harlingen area.

Medical Fees

In the case of an emergency, students are responsibile for all medical fees incurred, including ambulance transfers, hospitalizations, emergency room visits, or medical facility usage. Students are encouraged to carry school or private insurance to help defray medical costs.

Immunization Vaccines

Student Health Services administers the tuberculosis test and the bacterial meningitis vaccine throughout the school year. All vaccination fees must be paid at the Cashier's Window and a receipt presented to the Nurse prior to receiving any vaccination. Contact the College Nurse for vaccination schedules. All other immunizations must be obtained from a private physician.

Health Insurance

Student Health Services offers a low-cost plan that provides limited medical coverage in the event of an illness or accident. This policy may not cover pre-existing medical conditions. Information on health insurance is provided in the "Student Insurance" section of this catalog.

HIV Policy and Procedures

TSTC does not discriminate against students who are HIV-positive. The College works to increase awareness and educate its students and employees about HIV infection and the AIDS virus with the express purpose of preventing infection and limiting the consequences of infection. Copies of TSTC's policy and procedures relating to HIV infection are available in the Student Nurse's Office. Additional information and referral services for testing are available in the Student Nurse's Office.

Bacterial Meningitis Notification

State law requires that information regarding bacterial meningitis be provided to new college students. Bacterial meningitis is a serious, potentially deadly disease that can progress extremely fast. It is an inflammation of the membranes that surround the brain and spinal cord and can infect the blood. The disease can be treated, but those who survive may develop severe health problems and severe disabilities. Vaccinations that are effective against 70% of the most common types of bacterial meningitis are available and should be considered by those living in close quarters and by college students aged 25 or younger. For more information, contact your health care provider, the TSTC Student Nurse's Office, the local or regional Texas Department of Health Office, or www.cdc.gov/meningitis/about/faq.html.

Student Health Insurance

Students are required to adhere to stringent safety precautions and to make provisions for the cost of medical treatment in the event of an accident or emergency illness. Students in allied health and other specified technical programs are required to show proof of health insurance. Other students are required to:

1. show proof of having health insurance coverage; or
2. enroll in the TSTC student health insurance plan; or
3. be personally responsible for expenses incurred in receiving medical treatment.

The student health insurance offered for a fee at TSTC is a low-cost group plan that provides financial protection in the event of an accident or illness requiring emergency medical treatment and/or hospitalization. Students are responsible for expenses not covered by insurance. Contact the Student Nurse for more information.

Some TSTC programs require student medical health and accident insurance. Contact the program advisor for more information

Support Services Office

Services for Students with Disabilities

The Support Services Office reflects the college's commitment to meeting the special needs of individual students. This office coordinates with community assistance programs and serves as a resource for services to Special Population Students. This department also provides awareness and sensitivity training for faculty and staff regarding topics affecting special populations.

Reasonable accommodations are provided to persons with disabilities. Individuals requesting services need to identify with the Support Services Office as soon as possible. Support Services requires that all requests for accommodations be accompanied by professional assessments/reports from individuals qualified to diagnose the disability disclosed. Support Services Office collaborates with both college personnel and students with disabilities to develop appropriate accommodations that ensure equal access and promote accessible programs and facilities at Texas State Technical College Harlingen.

Non-Traditional Services

Non-Traditional occupations for females and males are defined as "a field in which either gender comprises less than 25% of the current enrollment". Support Services assists qualifying students that are enrolled full-time in a declared non-traditional program of study leading to an Associate Degree or Certificate of Completion at TSTC Harlingen with the following services: child care referrals, textbook assistance, community referrals, and sensitivity and personal developmental workshops.

Single Parent/Displaced Homemaker Services

Support Services assists qualifying Single Parents, Displaced Homemakers, and Single Expectant Mothers that are enrolled full-time in a declared technical program of study leading to an Associate Degree or Certificate of Completion at TSTC Harlingen with the following services: childcare referrals, textbook assistance, community referrals, and sensitivity and developmental workshops.

Students applying for Single Parent, Displaced Homemaker, and Single Expectant Mother Services must submit documentation to determine eligibility.

Textbook Assistance

Support Services assists qualifying Non-Traditional, Single Parent, and Displaced Homemaker students with Textbook Assistance. To be eligible for this service, you must meet the following guidelines:

- be enrolled full-time in a technical program of study that can be completed at TSTC Harlingen,
- complete an application for Non-Traditional, Single Parent and Displaced Homemaker services program,
- submit documentation verifying status for qualifying program.
- be enrolled in at least one technical course in the declared program of study. (Course must be noted in the program of study degree plan.)

Services are funded through the Carl D. Perkins Vocational & Applied Technology Act and are contingent upon the availability of funds during the pertinent semester and the adherence to program policies. Textbook Assistance is provided on a first-come/first -served basis.

Lending Library

Support Services offers a Lending Library that is comprised of many commonly used textbooks. The Lending Library is available for students who do not qualify for the Non-Traditional, Single Parent or Displaced Homemaker services program. The Lending Library offers books at no purchase or rental cost to students. Contact Support Services for a schedule and book availability.

For more information regarding any of the services available through the Support Services Office, please call 956.364.4520 [voice], 956.364.4526 [TDD], 1.800.852.8784, stop by the office located in the Tech Prep Building P, or visit our website at www.harlingen.tstc.edu/supportservices.

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Child Care Services

The Support Services Office makes referrals to the following agencies to aid students in securing reliable child care assistance: Cameron Works Child Care Management Services (serves Cameron County residents), NINO'S Head Start Center at TSTC, TSTC Early Childhood Head Start Center, and Workforce Solutions Child Care Services (serves Starr, Hidalgo & Willacy County residents).

TSTC Support Services also assists a limited number of qualifying students with subsidized child care. Students must complete an application every semester, and selections are made based on need. **Contingent upon the availability of funds.*

Services are contingent to meeting the qualifications for each respective child care servicing agency.

Student Transportation

Students operating motorized vehicles on campus must register those vehicles with the TSTC Police Department. TSTC traffic rules and regulations and a valid parking decal will be provided to all motorists. All TSTC Housing students who operate motor vehicles must also register their vehicles with the Housing Office.

Students with valid parking permits who bring a different vehicle onto campus must contact the TSTC Police Department to request and obtain a temporary parking permit.

Campus Security

The Student Right-to-Know and Campus Security Act (Public Law 101-542), the Crime Awareness and Campus Security Act (Public Law 102-26), the Higher Education Technical Amendments of 1991, and the Higher Education Technical Amendments of 1992 require institutions of higher education to prepare, publish, and distribute to all employees, prospective students, and students an Annual Security Report by September 1 of each year. This report contains data about specific criminal offenses that occurred on campus during the most recent calendar year and the two preceding calendar years, as well as the number of arrests for crimes occurring on campus. TSTC's Annual Security Report is available in the College Police Department.

Information provided by the State of Texas concerning registered sex offenders may be obtained through the Web site that is maintained by the TSTC Harlingen College Police Department. Additional information relating to state- or federally-mandated public information requirements is also available on that Web site.

Student Success

The Student Success Office helps students successfully complete their studies. The Student Success Office coordinates the campus-wide student retention efforts. Programs that are administered by this office include the College Success course, supplemental instruction, tutoring and mentoring initiatives, TSI academy, career exploration, learning strategy sessions, Helping a TSTC Student Succeed (HATSS) on financial aid and academic suspension, and learning communities.

Career Services

TSTC Harlingen provides job placement services to all students, graduates and former students. Every effort is made to assist registered candidates as they seek full-time and part-time employment in business, industry and government. Career Services maintains information on employers, job listings, and salaries. The staff schedules interview sessions, hosts special career fairs for employers and coordinates communication between industry and the college.

Students are able to search for jobs, communicate directly with employers and post their resumes by registering with the Career Services Office at https://www.myinterfase.com/tstc/student. Students may register as early as their first semester.

The college places a high priority on helping graduating students find employment in their chosen field of study. The philosophy of the college is that its job is not complete when the student finishes his or her studies, but continues through assistance in securing employment. Career Services conducts follow-up studies which help to determine the effectiveness of education and training and overall student success.

Career Services is committed to equal opportunity in employment and does not discriminate on the grounds of race, color, creed, religion, national origin, sex, age or handicap. Facilities and placement services are available only to employers whose practices are consistent with this policy.

Some of the companies and government agencies which routinely employ TSTC Harlingen graduates include: Sematech, Texas Instruments, Shell Oil, Bayer Corporation, Intel, Alcoa Aluminum, 3M, American Airlines, Office of The Attorney General, Texas Workers Compensation, Chevron, Ethyl Corporation, Exxon Corporation, United Launch Alliance, Phillips Petroleum, Valley Baptist Medical Center, Motorola, Trico Industries, Southwestern Bell Telephone, Turner Collie and Braden, Zenith Corporation, Samsung, TwinStar, Eastman Kodak, Arco Chemical, Dell Computers and Southwest Research Institute.

Student Conduct and Discipline

Student Conduct

The general morale of the student body is dependent upon many factors; among these are the success of its graduates, the attitude of faculty and administration, the general behavior of individual students, and the reputation of the College. TSTC believes a primary factor in strong student morale is an overall regard for

good citizenship on the part of the student body. TSTC assumes that students eligible to perform on the college level are familiar with the ordinary rules governing proper conduct and that they will observe these rules as a matter of training and habit.

TSTC regulations forbid gambling, the use of controlled substances and alcoholic beverages, and the appearance of anyone under the influence of any of these on the campus or when attending or participating in activities sponsored by the college. All TSTC buildings are tobacco free, with the exception of specifically-designated housing facilities.

Possession of firearms, illegal knives, and other prohibited weapons on TSTC facilities, including parking areas and publicly accessed facilities, is a violation of criminal law and TSTC policies. Persons who violate the law and these policies will be subject to serious consequences, including referral for criminal prosecution and dismissal from College.

Racial and/or sexual harassment of employees or students is not tolerated and is expressly prohibited at TSTC. Activities constituting 'hazing' are also prohibited. No person or organization may engage in, solicit, encourage, direct, aid, permit, or condone hazing, regardless of consent or acquiescence in any hazing activity.

No person or group of people acting in concert may willfully engage in disruptive activity or disrupt a lawful assembly on any campus or property of the TSTC System; further, the administration is charged with keeping the colleges free of disruptive activities and may take whatever disciplinary action is deemed necessary in instances of disruption or threat of disruption.

Students are expected to dress and groom themselves in an appropriate manner while on campus and while participating in activities sponsored by the College. Students whose conduct casts an unfavorable reflection upon the College, and thereby upon all students, are subject to disciplinary action.

Additional information on student conduct is available in the Student Handbook.

Student Discipline Procedures

Any alleged violation or flagrant disregard of TSTC rules and regulations will be brought to the attention of the Vice President of Student Development or designated student disciplinary officer who will initiate an investigation of the situation. After a complete and thorough investigation, the Vice President of Student Development or designated disciplinary officer will determine the course of action. The Vice President of Student Development or disciplinary officer's decision may be appealed through the appropriate college appeals process.

Additional information regarding policies and procedures relating to student conduct and discipline are available in the TSTC Student Handbook, which is available from the Office of Student Success.

General Information

Buildings and Facilities

TSTC Harlingen is a modern 167.8-acre campus consisting of 24 instructional facilities equipped for learning.

Students may choose a total residential life in college housing at TSTC Harlingen. Other buildings include the Student Services Building and the Student Center (Recreation, Counseling, Bookstore, Cafeteria and Student Nurse). Recreational facilities include tennis courts, softball diamonds, flag football fields, outdoor basketball courts, soccer fields and Wellness and Sports Center complete with basketball court, aerobics room, weight room, racquetball courts and locker/shower rooms.

Instructional Philosophy

TSTC trains employees for tomorrow's careers, helping to strengthen the economic competitiveness of Texas and improve the lives of its people. TSTC believes in "learning by thinking and doing." Its curriculums give students the technical knowledge, skills, and abilities they need to be successful in their chosen careers. Its faculty members are highly qualified, with years of business and industry experience in their respective fields. And its facilities and equipment provide students with significant opportunities to apply what they learn.

Industry Advisory Committees

Industry Advisory Committees are an essential component of TSTC's graduate success. Their members guide curriculum development by advising faculty on the skills, knowledge, and abilities that employees need. They help to create and equip facilities so students gain experiences that enhance their value to employers. Their on-going involvement ensures that TSTC students receive the right kind of education.

Institutional Research

Institutional research supports planning, evaluation, and improvement initiatives. Using paradigms from the social sciences and organizational and management theory, institutional research deals with a wide range of topics and issues critical to the health and advancement of the College. Institutional research collects and analyzes data; designs and implements studies dealing with students, personnel, facilities, equipment, programs, and services; develops databases suitable for longitudinal studies; and disseminates the results to be used for the betterment of TSTC and those that it serves.

Educational Foundations

Two non-profit organizations have been created for the purpose of benefiting TSTC and its students. The Rolling Plains Technical Foundation, founded in 1973, is composed of West Central Texas leaders who focus their activities on supporting TSTC West Texas. The TSTC Regents Circle, founded in 2000, includes community and business leaders from throughout Texas whose work supports all the Colleges of the TSTC System. These two foundations provide invaluable financial assistance to TSTC students, as well as to TSTC as a whole.

Release of Student Records

In compliance with the "Family Education Rights and Privacy Act of 1974" (FERPA), TSTC gives notice that the following directory information will be released upon request and with the approval of the appropriate administrator, unless the student desires to withhold it: student's name, address, email address, telephone number, major field of study, classification of coursework level, enrollment status, extracurricular participation in officially recognized activities, achievement and academic awards or honors, weight and height of members of athletic teams, dates of attendance, photographic image, and most recent previous institution attended.

Release of additional student record information not defined as "directory information" must be specifically authorized by the student. Students may prohibit the release of directory information by completing the appropriate form available at the Office of Admissions and Records during registration or prior to the official census day of the term. This request remains in effect until revoked in writing by the student. Minors (under 18 years of age) attending TSTC have the same right to the privacy of their records as adult students.

Student academic records information, other than directory information, may be released to appropriate school officials without consent of the student. A school official can be:

1. an individual employed by TSTC in an administrative, supervisory, academic, research, or support staff position (including law enforcement and health staff personnel)
2. an individual elected to the TSTC Board of Regents,
3. an individual or company employed by or under contract to TSTC to perform a special task such as an attorney, auditor, or collection agency,
4. 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.

Students have the right to inspect and review their academic record. Students may petition TSTC to amend or correct any part of their academic record which is believed to be inaccurate, misleading, or in violation of the privacy or other rights of the students. When the college decides it will not amend or correct a student's record, the student has a right to a hearing to present evidence that the record is inaccurate, misleading, or in violation of the privacy or other rights of the student. Contact the Office of Admissions and Records for more information regarding FERPA and student records.

Compact with Texans

Texas State Technical College (TSTC) is a public coeducational institution of higher education offering courses of study in technical education leading to the award of Certificates and Associate of Applied Science Degrees. TSTC also provides technical education and training to business and industry, continuing education to the public, and training programs for community and state economic development. TSTC colleges are located in Harlingen, Marshall, Sweetwater, and Waco, with extension centers in Abilene, Brownwood, and Breckenridge. TSTC serves students from more than 220 counties in Texas, and TSTC graduates begin their careers in high-paying jobs across the state or continue their education at colleges and universities. TSTC graduates are highly valued by business and industry for their work ethic, knowledge, and workplace skills. Texas State Technical Colleges are fully accredited by the Southern Association of Colleges and Schools.

TSTC's Vision

The Texas State Technical College System will be a leader in strengthening the competitiveness of Texas business and industry by building the state's capacity to develop the highest quality workforce.

TSTC's Values

Innovation	Creating and implementing new ideas and methods
Excellence	Achieving the highest quality in all we do
Leadership	Developing visions and strategies for a desired future, and aligning and energizing people to achieve those visions
Collaboration	Working cooperatively with other organizations and within our own system.
Responsiveness	Providing appropriate programs and services in a proactive, flexible, and timely manner
Accountability	Measuring our performance and using the results for improvement
Stewardship	Ensuring our programs and services add value to our students and communities throughout the state, and operate in accordance with the public trust for which we are responsible

TSTC's Customer Service Goal

It is the goal of Texas State Technical College faculty and staff to provide a level of customer service that is beyond expectation. We pledge to be . . .

Friendly	to all we meet in our work,
Helpful	in all that we do,
Courteous	in all of our dealings,
Responsive	to customers' needs, and
Accountable	for our actions.

We will deliver the highest quality services possible with the highest regard for honesty, integrity, and ethical behavior.

For more information, please call or write to:

Texas State Technical College Harlingen
1902 North Loop 499
Harlingen, Texas 78550
1.800.852.8784
956.364.4000
www.harlingen.tstc.edu

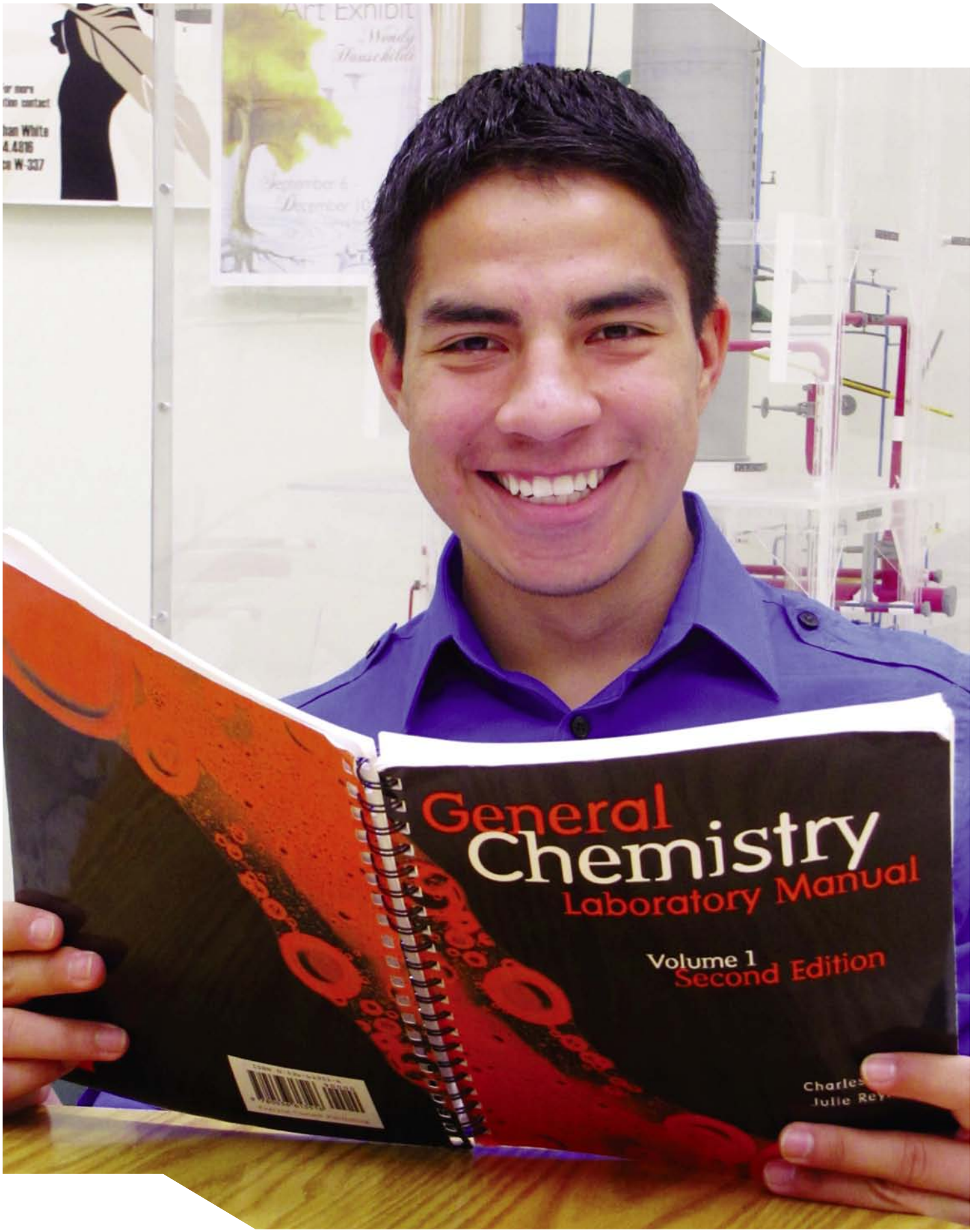
TSTC's Formal Written Complaint Handling Procedure

Most questions or complaints can be addressed through routine college channels. If additional assistance is needed, you are encouraged to file a formal written complaint. TSTC is committed to your satisfaction. The Customer Service Representative for our college is Catherine Maples, Vice President for Student Development.

1. Submit your complaint in writing by filling out the Effective Customer Relations form. This form may be downloaded at www.harlingen.tstc.edu. Alternatively, you may communicate verbally to TSTC's Customer Service Representative at 956.364.4300.
2. The TSTC Customer Service Representative will acknowledge your complaint and let you know the matter is receiving attention. You will be notified in writing within five working days of receiving the complaint as to the length of time it will take to resolve the issue.
3. The TSTC Customer Service Representative will investigate the complaint.
4. A solution that is consistent with TSTC policies, as well as applicable local, state, and federal laws, will be proposed to you in writing in the time frame specified in step 2.
5. You will be contacted by the Customer Service Representative within ten days of the written response to determine your satisfaction with the proposed solution and to be sure that the provisions of the solution have been implemented.
6. If you are not satisfied with the proposed solution, you may request that your complaint be considered by a Dispute Resolution Committee appointed by the college president. This committee will review all available documentation and render a decision as to the resolution of the complaint. All decisions of the committee are final and are not open to further review.

Texas Higher Education Coordinating Board Complaint Procedure

Students have the right to complain to the Texas Higher Education Coordinating Board regarding the institution's management of Title IV, HEAF (Higher Education Assistance Fund) programs, or its advertising or promotion of its educational programs. Complaints regarding the institution must be made in writing to: Texas Higher Education Coordinating Board, P.O. Box 12788, Austin, TX 78711.


General
Chemistry
Laboratory Manual
Volume 1
Second Edition

ASSOCIATE OF APPLIED SCIENCE DEGREE

ASSOCIATE OF SCIENCE DEGREE

CERTIFICATE OF COMPLETION

FIELD OF STUDY

MARKETABLE SKILLS AWARD

TSTC

Texas State Technical College™

Associate of Applied Science Degree Programs

General Information

Technical programs of study offered at TSTC award the Associate of Applied Science degree. These programs train technicians who are needed in today's industrial world to work on a level between engineers and skilled craftsmen.

The key concept in technical programs is "applied science." Students learn theories of related technical and scientific fields then apply those theories in hands-on laboratories and fieldwork. Most lab and fieldwork relates directly to skills that graduates can apply to entry-level jobs. The majority of courses required are in the major program field, and they equip the student with specific abilities needed in that career field.

The general education core accounts for a minimum of 15 semester credit hours of the associate degree curriculum. This core is designed to provide students a general education in the humanities and fine arts, social and behavioral sciences, and mathematics and natural sciences. From this, students develop the understanding, attitudes and values that are necessary for effective, responsible and productive living in today's society. The remainder of the courses are in the major program or support programs.

Most programs of study include cooperative education courses. Students generally alternate attendance at TSTC with one or more periods of employment in a business- or industry-related field of study.

General Requirements

The following information outlines the requirements for an Associate of Applied Science degree. Additional information can be found in the Admissions and Records and the Scholastic Regulations sections of this catalog.

1. Complete admission requirements.
2. Complete curriculum requirements.
   a. The student must complete the minimum credit hours as specified for the program of study. Requirements are listed with the program of study descriptions in this catalog.
   b. The student must complete a minimum of 15 semester hours of general education courses. These include:
      - ENGL 1301
      - a SPCH course
      - a math or natural science course
      - a social or behavioral science course
      - a humanities or fine arts course
      - any courses specified by the student's major program (these will be listed with the program of study descriptions in this catalog)
      - any remaining general education hours may be satisfied by taking elective courses in the humanities and fine arts, social and behavioral sciences or mathematics and natural sciences.
3. Students must meet all scholastic guidelines and specific program requirements. Additional information is included in the Scholastic Regulations section of this catalog. Some programs of study have specific requirements. More information is listed in the respective program of study description.
4. Discharge all financial obligations to TSTC.
5. Complete an Application for Graduation and payment of graduation fees.

General Education

TSTC offers general education and developmental courses approved by the Texas Higher Education Coordinating Board to support students seeking the Associate of Applied Science degree. More information on course content and lecture and lab hours is included in the Course Descriptions section of this catalog. Course credit for all general education courses are given in semester hours to facilitate transferability under the common college numbering system

Student Success

TSTC Harlingen, given the parameters of our resources, is committed to providing students with opportunities to assist them in achieving their personal-social, educational and career goals. To this end, the Student Success Office exists to enhance the probability of students successfully completing their goals. This is accomplished by collaborating with other departments to identify impediments, recommend specific programs and services, refer students to established offices and evaluate the college's retention efforts. The primary responsibilities of this office include:

- Recognition of students achieving academic excellence through the President's and Vice President's Honor Rolls.
- Development and implementation of a student success course (HRPO 1311)
- Development and implementation of supplemental instruction programs and traditional, as well as on-line, tutorial resources.
- Development and implementation of a peer-mentoring program.
- Development and implementation of a strategic learning/ mentoring program for students on academic and financial aid suspension.
- Development and implementation of a learning strategies program, which include sessions on multiple intelligence, learning styles, time management, essentials of note-taking, techniques for reading textbooks, critical thinking, and other resources for classroom success.
- Development and implementation of career exploration program for non-technical program students
- Coordination of Learning Communities.
- Seminars and workshops on faculty development for student success.
- Monitoring the college's retention goals.

Student Success Course (HRPO 1311)

The student success course (HRPO 1311 - Human Relations) was instituted in all technical program degree plans because of the

success similar courses have had in assisting students to persist and complete their programs in a timely manner. The course addresses two major themes of student development. The first is the ability for students to adjust to college life and, thus, equip them with knowledge and skills for continued life-long learning. The second is the importance of students to apply and learn the appropriate computer skills to demonstrate how life-long learning is an ongoing part of one's development, especially in this rapidly changing technology and information age.

Since TSTC's mission is directed toward providing the state of Texas with a competent workforce in the varied areas of traditional and emerging technologies, an introduction to the benefits of technical education is an underlying assumption of the HRPO 1311 course. In keeping with the college's mission, HRPO 1311 is already available to technical program students as a result of their degree plan requirements. In addition, to extend the college's commitment to promoting the benefits of technical education to students and assisting with successful completion of student goals, those students seeking transfer to another college, or who are undecided, and registered for at least one developmental studies course because of non-completion of the Texas State Initiative (TSI) will be required to take the HRPO 1311 course preferably in their first semester of enrollment. Non-technical program students (see note below) may be exempt from HRPO 1311 for any one of the following reasons:

- Student is enrolled for 6 or less college credit hours.
- Student is classified as a non-degree/certificate student.

Transfer credit may be given for HRPO 1311 if the submitted course(s) meet the course description listed under Behavioral/Social Sciences.

Note: Non-technical program students who later declare a technical program will be required to take HRPO 1311.

Notes:

Agricultural Technology

Agricultural professionals, including farmers and ranchers, must be highly knowledgeable in all aspects of agricultural operations, including business and finance, to be successful in today's global agricultural economy.

The successful farmer will continue to be a key person in the U.S. economy, with the advantages of outdoor living and working independently that few people are privileged to enjoy. The agriculture industry requires skilled managers and workers in its many areas, such as farms, ranches, feed services, and government agencies. In this program, students will learn modern techniques essential to profitable operation.

In this program, students will learn to:

- Process and handle livestock using up-to-date equipment and livestock holding facilities
- Plant, cultivate and harvest crops, such as cotton, grain, corn and vegetables
- Operate farm implements
- Supervise agricultural operations

Admissions Requirements

Students must complete the admissions requirements listed under "Admissions Information."

COURSE NAME		CREDIT HOURS
Semester 1		
AGAH 1401	Animal Science †	4
AGMG 1300	Agricultural Policies, Safety & Codes †	3
BIOL 1406	General Biology I*	4
HRPO 1311	Human Relations †	3
	Total Hours	**14**
Semester 2		
AGAH 1347	Animal Reproduction	3
AGAH 2413	Principles of Feeds & Feeding	4
AGCR 1403	Crop Science	4
ENGL 1301	Composition I †	3
	Behavioral/Social Science Elective †	3
	Total Hours	**17**
Semester 3		
AGCR 2305	Entomology	3
AGCR 2313	Soil & Water Conservation Management	3
AGMG 1318	Introduction to Agricultural Economics	3
SPCH 1318	Interpersonal Communications***	3
	Humanities/Fine Arts Elective	3
	Total Hours	**15**
Semester 4		
BIOL 1407	General Biology II † ‡	4
CHEM 1405	Introductory Chemistry I (or CHEM 1411) † §	4
EPCT 1211	Introduction to Environmental Science (or AGCR 1341)	2
TECM 1303	Technical Mathematics (or MATH 1314)	3
	Total Hours	**13**
Semester 5		
ACCT 2401	Principles of Accounting I - Financial ¤	4
AGMG 1311	Introduction to Agribusiness	3
AGMG 1344	Agricultural Records Management° **	3
AGMG 2312	Marketing of Agricultural Products	3
	Total Hours	**13**
	GRAND TOTAL	**72**

° This course is designated as the capstone course.
† Courses articulated with high school
*** AGMG 2382 or AGMG 2682 (Co-op) may be taken in place of AGMG 1344.*
**BIOL 1306 and BIOL 1106 may be taken in place of BIOL 1406*
****SPCH 1311 or SPCH 2333 may be taken in place of SPCH 1318.*
‡ BIOL 1307 and BIOL 1107 may be taken in place of BIOL 1407.
§ CHEM 1305 and CHEM 1105 may be taken in place of CHEM 1405.
¤ ENGL 1302 or ENGL 2314 may be taken in place of ACCT 2401.

Notes:_____

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Air Conditioning and Refrigeration Technology

Employment in the field of air conditioning and refrigeration technology is expected to increase as more homes and commercial and industrial buildings are built. Installations of energy saving heating and air conditioning systems in older homes and buildings will also contribute to an increase in employment. This field offers a wide variety of career opportunities dealing with the technology of refrigeration, air conditioning and heating techniques in homes, work environments, transportation, food preservation and health.

Course topics include:

- Applied electricity and electronics
- Basic drafting
- Design and control systems
- Air movement and balancing

Admissions Requirements

In addition to admissions requirements listed under the Admissions Information, it is recommended that the student have completed two units of high school math, including one unit of algebra and one unit of high school science, preferably physical science.

Students successfully completing the course(s) of study of the Air Conditioning and Refrigeration Technology program are eligible to take the EPA 410 Refrigerant certification examination administered by the Environmental Protection Agency.

COURSE NAME	CREDIT	HOURS
Semester 1		
HART 1310	HVAC Shop Practices and Tools	3
HART 1401	Basic Electricity for HVAC †	4
HART 1407	Refrigeration Principles †	4
HRPO 1311	Human Relations †	3
	Total Hours	**14**
Semester 2		
HART 1300	Duct Design and Fabrication	3
HART 1441	Residential Air Conditioning	4
MAIR 1449	Refrigerators, Freezers, Window Air Conditioners	4
	Humanities/Fine Arts Elective †	3
	Total Hours	**14**
Semester 3		
DFTG 1313	Drafting for Specific Occupations	3
HART 1403	Air Conditioning Control Principles	4
HART 2442	Commercial Refrigeration	4
	Math/Natural Science Elective †	3
	Total Hours	**14**
Semester 4		
ENGL 1301	Composition I	3
HART 1445	Gas & Electric Heating	4
HART 2438	Air Conditioning Installation & Startup ** ‡	4
HART 2441	Commercial Air Conditioning	4
	Total Hours	**15**
Semester 5		
HART 2436	Air Conditioning Troubleshooting °	4
HART 2445	Residential Air Conditioning Systems Design	4
	Behavioral/Social Science Elective †	3
SPCH	Speech Elective †	3
	Total Hours	**14**
	GRAND TOTAL	**71**

° This course is designated as the capstone course.

† High school articulated courses.

‡ Courses with external experience.

*** HART 2380, HART 2381 or HART 2680 (Co-op) may be taken in place of HART 2438.*

Notes:_____

Auto Collision Technology

Advances in the auto body repair industry reflect the complexity and sophistication of today's automobile. The auto collision technician is a professional who artistically blends technical skills with advanced practical knowledge to repair automobiles to pre-accident condition. With the high cost of automobiles today, restoration to pre-accident safety and value is very important. The Auto Collision department is modeled after top repair shops in the industry and meets the standards for National Institute for Automotive Service Excellence certification in non-structural analysis and damage repair, structural analysis and damage repair, plastics and adhesives, and painting and refinishing.

In this program, students will learn to:

- Perform major collision repairs
- Gauge and measure
- Repair plastic and fiberglass
- Apply learned skills in the laboratory

All Auto Collision Technology students are required to take a comprehensive departmental exam during the last semester of instruction.

Admissions Requirements

Students must complete the admissions requirements as listed under "Admissions Information."

COURSE NAME		CREDIT HOURS
Semester 1		
ABDR 1331	Basic Refinishing †	3
ABDR 1349	Automotive Plastic & Sheet Molded Compound Repair	3
ABDR 1419	Basic Metal Repair †	4
HRPO 1311	Human Relations †	3
	Total Hours	**13**
Semester 2		
ABDR 1207	Auto Body Welding	2
ABDR 1458	Intermediate Refinishing	4
ABDR 2449	Advanced Refinishing	4
MATH 1332	Contemporary Mathematics (or MATH 1314) †	3
	Total Hours	**13**
Semester 3		
ABDR 1311	Vehicle Measurement & Damage Repair Procedures	3
ABDR 1441	Structural Analysis & Damage Repair I	4
ABDR 2353	Color Analysis & Paint Matching	3
ENGL 1301	Composition I †	3
	Behavioral/Social Science Elective †	3
	Total Hours	**16**
Semester 4		
ABDR 1442	Structural Analysis & Damage Repair II	4
ABDR 1455	Minor Metal Repair ‡	4
ABDR 2345	Vehicle Safety Systems	3
ABDR 2370	Collision Damage Analysis & Reporting Systems	3
SPCH	Speech Elective †	3
	Total Hours	**17**
Semester 5		
ABDR 2257	Collision Repair Shop Management º **	2
ABDR 2431	Structural Analysis & Damage Repair III	4
ABDR 2441	Major Collision Repair & Panel Replacement	4
	Humanities/Fine Arts Elective †	3
	Total Hours	**13**
	GRAND TOTAL	**72**

º This course has been designated as a capstone course
† High School Articulated Courses
‡ Courses with external learning experience
*** ABDR 2380 or ABDR 2680 (Co-op) may be taken in place of the capstone course*

Notes:_____

Automotive Technology

The AAS Degree in Automotive Technology provides students a comprehensive theory, web-based, and hands on training experience to serve industry demand. Students will learn to service all automotive systems including Advanced Diesel Engine Performance. Academic credits may be applied to any other public college or university in Texas. The curriculum was designed based on advisory, curriculum, and departmental recommendations focused on enhancing student's critical thinking and problem solving skills.

In this program, through active learning, the student will:

- Diagnose, service and repair all automotive systems including diesel fuels
- Exercise critical thinking problem solving diagnostic skills

Sytems include:

Electrical/Electronics, Engine Performance, Transmissions, Suspension and Steering, ABS Brakes, Engines, & Air Conditioning

Additional Subjects:

Shop Management, ASE Certification and Workplace Soft Skills.

Admissions Requirements:

Students must complete the admissions requirements listed under "Admissions Information."

COURSE NAME		CREDIT HOURS
Semester 1		
AUMT 1201	Introduction & Theory of Automotive Technology †	2
AUMT 1407	Automotive Electrical Systems †	4
AUMT 1416	Automotive Suspension & Steering Systems †	4
HRPO 1311	Human Relations † (or PSYC 2301)	3
	Total Hours	**13**
Semester 2		
AUMT 1410	Automotive Brake Systems †	4
ENGL 1301	Composition I †	3
MATH 1314	College Algebra (or MATH 1332) †	3
AUMT 1445	Automotive Heating & Air Conditioning	4
	Total Hours	**14**
Semester 3		
AUMT 2417	Automotive Engine Performance Analysis I †	4
AUMT 2421	Automotive Electrical Lighting & Accessories	4
AUMT 1419	Automotive Engine Repair †	4
	Total Hours	**12**
Semester 4		
AUMT 2270	Automotive Technician Certification Standards	2
AUMT 2413	Automotive Drive Train & Axles	4
AUMT 2425	Automotive Automatic Transmission & Transaxle	4
AUMT 2434	Automotive Engine Performance Analysis II	4
	Total Hours	**14**
Semester 5		
AUMT 2301	Automotive Management° **	3
DEMR 2434	Advanced Diesel Tune-Up and Troubleshooting	4
SPCH	Speech Elective †	3
	Humanities/Fine Arts Elective †	3
	Social/Behavioral Sciences Elective †	3
	Total Hours	**16**
	GRAND TOTAL	**69**

° This course has been designated as a capstone experience
† High School Articulated Courses
‡ Courses with external experience
*** AUMT 1380 or AUMT 2680 (Co-Op) may be taken in place of the capstone course.*

Notes:_____

Aviation Maintenance Technology

Aviation maintenance technicians are a vital part of the aerospace industry workforce, a group comprised of airframe and power plant technicians, aircraft technicians, sheet-metal workers and aircraft electricians. These skilled workers are employed by aircraft manufacturers, contract maintenance operations, corporate aviation operations, general aviation operations and regional and major airlines. In the last several years, the aerospace industry in Texas has expanded through contract maintenance and is expected to continue to grow.

Students successfully completing the course(s) of study of the Aviation Maintenance Technology program are eligible to take the Aviation Maintenance Technicians licensing examination administered by the Federal Aviation Administration.

Admissions Requirements

Students must complete admissions requirements listed under the "Admissions Information."

TSTC is certified by the Federal Aviation Administration as an Aviation Maintenance Training Facility under Part 147 of the Federal Aviation Regulations. To meet FAA requirements, students must complete all aviation maintenance courses with a minimum numerical average of 70 in each course and attend a required number of hours in each course.

COURSE NAME		CREDIT HOURS
Semester 1		
AERM 1203	Shop Practices †	2
AERM 1205	Weight & Balance †	2
AERM 1208	Federal Aviation Regulations	2
AERM 1210	Ground Operations †	2
AERM 1314	Basic Electricity †	3
AERM 1315	Aviation Science †	3
	Total Hours	**14**
Semester 2		
AERM 1240	Aircraft Propellers	2
AERM 1357	Fuel Metering & Induction Systems	3
AERM 1456	Aircraft Powerplant Electrical	4
AERM 2341	Power Plant & Auxiliary Power Units	3
HRPO 1311	Human Relations †	3
	Total Hours	**15**
Semester 3		
AERM 1344	Aircraft Reciprocating Engines	3
AERM 1351	Aircraft Turbine Engine Theory	3
ENGL 1301	Composition I †	3
MATH 1314	College Algebra (or MATH 1332) †	3
	Behavioral/Social Science Elective †	3
	Total Hours	**15**
Semester 4		
AERM 1241	Wood, Fabric and Finishes †	2
AERM 1243	Instruments & Navigation/ Communication	2
AERM 1247	Airframe Auxiliary Systems	2
AERM 1253	Aircraft Welding	2
AERM 1254	Aircraft Composites †	2
	Humanities/Fine Arts Elective †	3
	Total Hours	**13**
Semester 5		
AERM 1345	Airframe Electrical Systems	3
AERM 1349	Hydraulic, Pneumatic & Fuel Systems	3
AERM 1350	Landing Gear Systems	3
AERM 2233	Assembly & Rigging	2
SPCH	Speech Elective †	3
	Total Hours	**14**
	AAS TOTAL	**71**
Enhanced Skills Certificate*		
AERM 1352	Aircraft Sheet Metal	3
AERM 2231	Airframe Inspection °	2
AERM 2351	Aircraft Turbine Engine Overhaul	3
AERM 2352	Aircraft Powerplant Inspection	3
AERM 2447	Aircraft Reciprocating Engine Overhaul	4
	Total Hours	**15**
	GRAND TOTAL	**86**

° This course has been designated as a capstone experience.

† High school articulated course.

** Enhanced Skills courses are required for an AAS in Aviation Maintenance Technology and may be taken concurrently with degree or certificate courses. To complete FAA requirements for Airframe licensing exams, the Enhanced Skills Certificate must be taken.*

*** AERM 2380, AERM 2381 or AERM 2680, Co-op, may be taken as an additional course to enhance the overall objectives of the program.*

Biomedical Equipment Technology

Due to the increase in medical knowledge, the dependence on technology has also increased because advances in medicine are directly linked to advances in technology. The increasing use of medical electronic devices and other sophisticated biomedical equipment has created a great demand for skilled and industry-qualified equipment technicians. The Biomedical Engineering Technology Program offers extensive hands-on training with medical equipment. Biomedical equipment technicians are responsible for maintaining safe and effective operating equipment used to diagnose, prevent and treat disease and illness.

Admissions Requirements

In addition to admissions requirements listed under "Admissions Information," high school courses in algebra, trigonometry, biology, physics, chemistry or physiology are helpful in preparing for this program.

Internship/Co-op Entry Requirements

Before enrolling in internship or cooperative study, a student must have on file with the department the following materials:

1. Proof of tuberculosis test.
2. Proof of liability insurance of at least $1 million, health and accident insurance and needlestick insurance (available through TSTC).

All BET students have the opportunity to take the comprehensive exam to prepare them for becoming a Certified BioMedical Equipment Technician (CBET). The comprehensive exam will cover the following subject areas: electronic fundamentals, circuit analysis and troubleshooting, safety for health care facilities, medical equipment applications, and anatomy and physiology.

COURSE NAME		CREDIT HOURS
Semester 1		
BIOM 1201	Biomedical Equipment Technology†	2
RBTC 1305	Robotics Fundamentals	3
CETT 1303	DC Circuits †	3
HRPO 1311	Human Relations†	3
MATH 1314	College Algebra (or MATH 2312) †	3
BIOM 1205	Soldering Skills and Shop Safety	2
	Total Hours	**16**
Semester 2		
BIOM 1309	Application Biomedical Equipment Technology (OR BIOL 2401 and BIOL 2101)	3
CETT 1305	AC Circuits †	3
CETT 1325	Digital Fundamentals	3
INTC 1357	AC/DC Motor Controls	3
	Total Hours	**12**
Semester 3		
BIOM 2301	Safety in Health Care Facilities	3
ITNW 1325	Fundamentals of Networking Technologies	3
BIOM 1391	Special Topics in Biomedical Engineering-Related Technology/Technician	3
ELMT 2333	Industrial Electronics	3
	Total Hours	**12**
Semester 4		
BIOM 1355	Medical Electronic Applications	3
BIOM 2315	Physiological Instruments I	3
BIOM 2288	Internship: Biomedical Technology/Technician**	2
PSYC 2301	General Psychology † (or SOCI 1301)	3
	Humanities/Fine Arts Elective †	3
	Total Hours	**14**
Semester 5		
BIOM 1341	Medical Circuits/Troubleshooting	3
BIOM 2319	Fundamentals of X-Ray and Medical Imaging Systems	3
BIOM 2343	General Medical Equipment II	3
ENGL 1301	Composition I †	3
SPCH	Speech Elective †	3
	Total Hours	**15**
Semester 6		
BIOM 2380	Cooperative Education – Biomedical Technology/Technician	3
	Total Hours	**3**
	GRAND TOTAL	**72**

° Course designated as capstone course.
† High School articulated course.

Notes:_____

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Building Construction Science

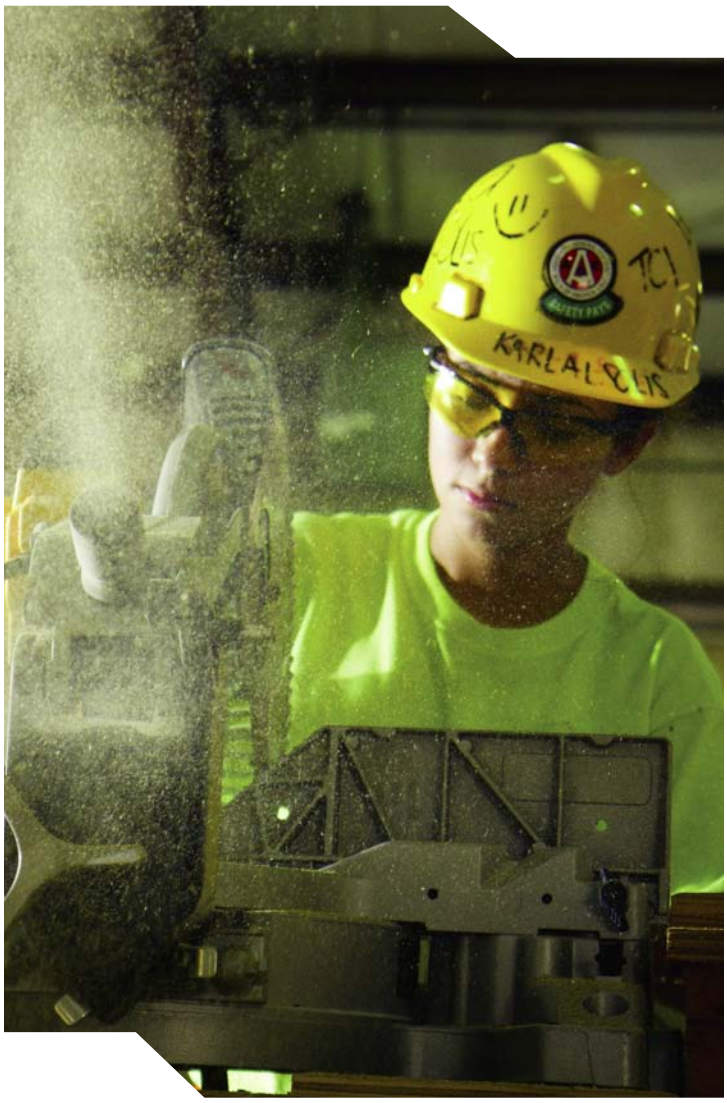
Anticipated growth in business investment for new factories, office buildings, stores, hotels, power plants and other structures should continue to stimulate the demand for workers in the building construction field. Maintenance and repair work on all types of structures will also contribute to this demand. Workers in the field build, repair, and modernize all types of buildings, including homes, offices and commercial structures.

In this program, students will learn to:

- Prepare building sites, construct foundations and structures
- Frame and finish various building systems
- Estimate cost and inspect construction jobs
- Supervise other construction workers

Admissions Requirements

In addition to admissions requirements listed under "Admissions Information," it is recommended students complete two units of high school mathematics, preferably one unit of algebra and one unit of geometry.



COURSE NAME		CREDIT HOURS
Semester 1		
CNBT 1416	Construction Technology I	4
CNBT 1300	Residential and Light Commercial Blueprint Reading	3
OSHT 1405	OSHA Regulations - Construction Industry	4
HRPO 1311	Human Relations †	3
	Total Hours	**14**
Semester 2		
CNBT 1449	Concrete II	4
CRPT 1315	Conventional Wall Systems	3
CRPT 2339	Specialty Exterior Finish Systems †	3
MATH 1332	Contemporary Mathematics I †	3
	(or MATH 1314)	
	Total Hours	**13**
Semester 3		
CRPT 1341	Conventional Exterior Finish Systems **	3
CRPT 1345	Conventional Interior Finish Systems	3
CRPT 1411	Conventional Roof Systems	4
ENGL 1301	Composition I †	3
	Total Hours	**13**
Semester 4		
CNBT 1346	Construction Estimating I	3
WDWK 1413	Cabinet Making I	4
	Humanities/Fine Arts Elective †	3
	Behavioral/Social Science Elective †	3
	Total Hours	**13**
Semester 5		
CNBT 1342	Building Codes & Inspections ° ‡	3
CNBT 2437	Construction Estimating II	4
CNBT 2310	Commercial and Industrial Blue Print Reading	3
SPCH	Speech Elective †	3
	Total Hours	**13**
	GRAND TOTAL	**66**

° This course has been designated as a capstone course.
† High School Articulated Courses.
‡ Course with external experience.
*** CNBT 2380 or CNBT 2680 (Co-op) may be taken in place of CRPT 1341.*

Notes:_____

Business Management Technology
Office Administration

This program prepares individuals to support business information operations by using computer equipment to enter, process, and retrieve data for administrative purposes and includes instruction in using basic business software and hardware; business computer networking; principles of desktop publishing; preparing mass mailings; compiling and editing spreadsheets; list maintenance; preparing tables and graphs; receipt control; and preparing business performance reports.

Graduates of this program qualify for employment in a wide range of areas such as Office Manager, Computer Operator, Help Desk Staff, and Executive Secretary.

Admissions Requirements

Students must complete admissions requirements listed under "Admissions Information."

COURSE NAME		CREDIT HOURS
Semester 1		
ACNT 1303	Introduction to Accounting I †	3
ITSC 1309	Integrated Software Applications I †	3
POFT 1329	Beginning Keyboarding	3
LAWT 1301	Copyright and Ethical Issues	3
HRPO 1311	Human Relations †	3
	Total Hours	**15**
Semester 2		
ACNT 1311	Introduction to Computerized Accounting	3
ITSC 2301	Integrated Software Applications II	3
POFT 1301	Business English †	3
POFT 1319	Records and Information Management	3
	Humanities/Fine Arts Elective †	3
	Total Hours	**15**
Semester 3		
ITSW 1307	Introduction to Database	3
POFI 2331	Desktop Publishing †	3
POFT 1309	Administrative Office Procedures I †	3
	Approved Technical Elective*	3
	Social/Behavioral Science Elective †	3
	Total Hours	**15**
Semester 4		
BMGT 1327	Principles of Management †	3
MRKG 1301	Customer Relationship Management	3
ENGL 1301	Composition I †	3
MATH 1314	College Algebra (or MATH 1332) †	3
	Total	**12**
Semester 5		
BMGT 2309	Leadership	3
HRPO 2301	Human Resources Management	3
POFT 2331	Administrative Systems° †	3
SPCH	Speech Elective †	3
	Total Hours	**12**
	GRAND TOTAL	**69**

° This course has been designated as a capstone course.

† High School articulated courses.

**Approved Technical Electives: POFT 1321, ITSE 1331, ITNW 1325, HITT 1305, POFL 1305*

Notes:_____

Chemical-Environmental Technology

The demand for chemical/environmental technicians is expected to rise due to an anticipated growth in scientific research and development and production of technical products. Chemical/environmental technicians are employed in research, testing and quality control of a wide range of products, including petroleum, plastics, pharmaceuticals and semi-conductors.

In this program, students will learn to:

- Analyze various materials using standard procedures and instrumental procedures
- Calculate and report chemical analyses
- Use computerized testing procedures, such as atomic absorption, gas chromatography, infrared and mass spectroscopy

Admissions Requirements

In addition to admissions requirements listed under "Admissions Information," completion of one unit of high school algebra and chemistry is recommended.

COURSE NAME		CREDIT HOURS
Semester 1		
CTEC 1205	Chemical Calculations I	2
EPCT 1211	Intro. to Environmental Science (or ENVR 1401) ‡	2
HRPO 1311	Human Relations †	3
SCIT 1414	Applied General Chemistry I †	4
	Total Hours	**11**
Semester 2		
CTEC 1206	Chemical Calculations II	2
EPCT 1344	Environmental Sampling & Analysis ‡	3
MATH 1314	College Algebra †	3
SCIT 1415	Applied General Chemistry II	4
	Total Hours	**12**
Semester 3		
ENGL 1301	Composition I †	3
SCIT 1543	Applied Analytical Chemistry I ‡	5
SCIT 2401	Applied Organic Chemistry I	4
	Humanities/Fine Arts Elective †	3
	Total Hours	**15**
Semester 4		
CTEC 1441	Applied Instrumentation Analysis I	4
CTEC 2441	Polymers I	4
CTEC 2445	Unit Operations	4
PSYC 2301	General Psychology †	3
	Total Hours	**15**
Semester 5		
CTEC 2250	Unit Operations II	2
CTEC 2443	Polymers II	4
EPCT 2335	Advanced Environmental Instrumental Analysis ‡	3
SPCH	Speech Elective †	3
	Total Hours	**12**
Semester 6		
CTEC 2333	Comprehensive Studies in Chemical Technology ° ** ‡	3
EPCT 1203	24-Hour Emergency Response Training	2
EPCT 1251	Quality Assurance & Quality Control	2
	Total Hours	**7**
	GRAND TOTAL	**72**

° This course has been designated as a capstone course.
*** CTEC 1380 or CTEC 1680 (Co-op) may be taken in place of the capstone course.*
† High School Articulated Course.
‡ Course with external experience.

Notes:_____

Computer Drafting and Design Technology

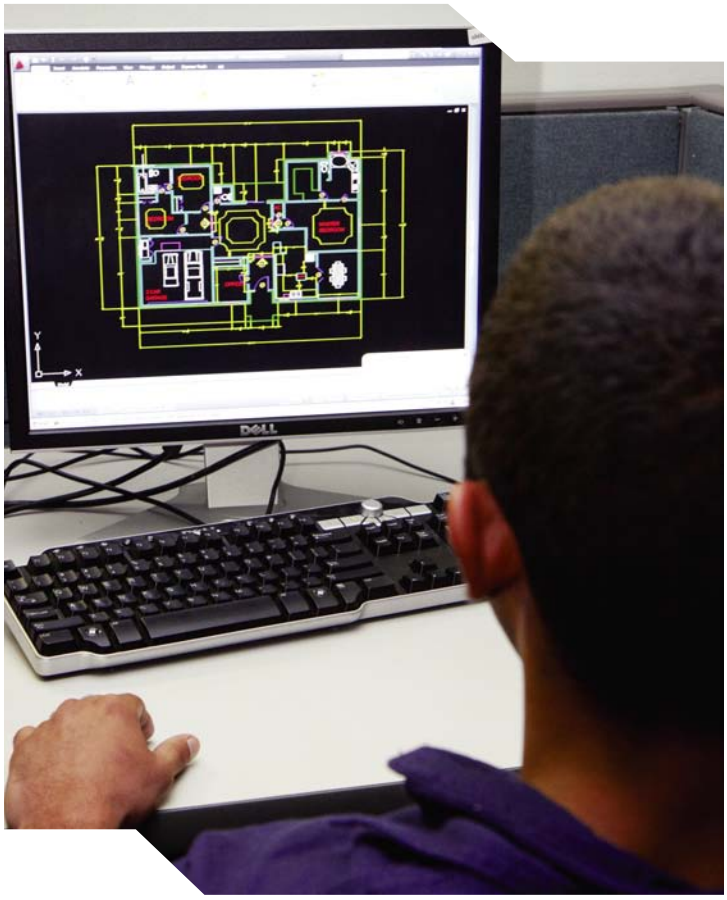
Industrial growth and increasingly complex design problems linked to new products and processes will greatly increase the demand for drafting services in the future. Drafters prepare detailed drawings used to manufacture or build any object or structure. These drawings are prepared from sketches, notes and discussions with other designers, architects and engineers. Neatness and the ability to pay close attention to details are important qualities for drafters.

In this program, students will:

- Utilize computer graphics equipment to produce drawings and solve problems in mechanical, electronic, civil, and architectural drafting
- Learn principles of computer-aided drafting on various types of industry-quality graphics systems
- Learn basic principles of design as applied to printed circuit board production, electrical-mechanical packaging, structural steel construction, architectural and civil engineering and other areas.

Admissions Requirements

In addition to admissions requirements listed under "Admissions Information," it is recommended students complete two units of high school mathematics, including one unit of algebra.



COURSE NAME		CREDIT HOURS
Semester 1		
ENGL 1301	Composition I †	3
DFTG 1305	Technical Drafting †	3
DFTG 1309	Basic Computer-Aided Drafting †	3
HRPO 1311	Human Relations †	3
	Total Hours	**12**
Semester 2		
DFTG 2312	Technical Illustration and Presentation	3
DFTG 1333	Mechanical Drafting	3
DFTG 2350	Geometric Dimensioning & Tolerancing	3
PSYC 2301	General Psychology †	3
MATH 1314	College Algebra †	3
	Total Hours	**15**
Semester 3		
DFTG 1317	Architectural Drafting-Residential †	3
DFTG 2340	Solid Modeling/Design	3
SRVY 2348	Plane Surveying	3
GISC 1311	Introduction to Geographic Information Systems (GIS)	3
MATH 1316	Plane Trigonometry	3
	Total Hours	**15**
Semester 4		
DFTG 2328	Architectural Drafting-Commercial ‡	3
DFTG 2332	Advanced Computer-Aided Drafting	3
DFTG 2330	Civil Drafting	3
GISC 2320	Intermediate Geographic Information Systems (GIS)	3
SPCH	Speech Elective †	3
	Total Hours	**15**
Semester 5		
DFTG 2331	Adv. Technologies in Architectural Drafting-Commercial ° ‡	3
DFTG 2306	Machine Design ° **	3
DFTG 2321	Topographical Drafting °	3
GISC 1301	Cartography and Geography in GIS & GPS	3
	Humanities/Fine Arts Elective ° †	3
	Total Hours	**15**
	GRAND TOTALS	**72**

° This course is designated as a capstone course.
† High School Articulated Courses.
‡ Courses with External Experience.
*** DFTG 2380 or DFTG 2680 (Co-op) may be taken in place of the capstone course.*

Notes:_____

Computer Networking and Security Technology
Computer Network Specialist

Network administrators and network security specialists are expected to be among the fastest growing occupations through 2010. In order to maintain a competitive edge and operate more cost effectively, firms will continue to demand computer-networking professionals who are knowledgeable in the latest technologies and able to apply them to meet the needs of business.

The expanding integration of Internet technologies by businesses has resulted in a rising demand for networking professionals who can develop and support Internet, Intranet and web applications. This translates into a need for computer-networking professionals who can help organizations use technology to communicate with employees, clients, and consumers. Explosive growth in these areas is also expected to fuel demand for specialists knowledgeable in network security.

Network management, network security and other growing specialty occupations reflect the increasing emphasis on client-server applications, the growth of the Internet, the expansion of World Wide Web applications and Intranets, and the demand for more end-user support. In addition, growth of the Internet and expansion of the World Wide Web have generated a variety of occupations relating to design, development, and maintenance of websites and their servers. (Source: U.S. Department of Labor-Job Outlook Statistics).

The Computer Networking & Security Technology program will provide students with the skills needed to compete in a high technology job market that continues to expand rapidly.

CNST graduates are successfully employed as:

Network and Computer Systems Administrators or Network Specialists who:

- Design, install, and support an organization's local area network (LAN), wide area network (WAN), network segment, or Internet systems
- Maintain network hardware and software, analyze problems, and monitor the network to ensure availability to system users
- Plan, coordinate, and implement network security measures

Computer Security Specialists who:

- Manage the organization's information security

Webmasters who:

- Administer all technical aspects of a website, including performance issues, such as speed of access

COURSE NAME		CREDIT HOURS
Semester 1		
ITNW 1325	Fundamentals of Networking Technologies †	3
CPMT 1303	Introduction to computer Technology †	3
ITNW 1354	Implementing & Supporting Servers	3
ITSC 1309	Integrated Software Applications I †	3
HRPO 1311	Human Relations †	3
	Total Hours	**15**
Semester 2		
CPMT 1304	Microcomputer System Software†	3
ITSE 1331	Introduction to Visual Basic Programming (or ITNW 2305)	3
ITNW 2321	Networking with TCP/IP	3
ITNW 2309	Network Administration for Intranet	3
MATH 1314	College Algebra †	3
	Total Hours	**15**
Semester 3		
ITSY 1342	Information Technology Security	3
ITNW 2354	Internet/Intranet Server	3
ITNW 2313	Networking Hardware	3
ENGL 1301	Composition I †	3
	Total Hours	**12**
Semester 4		
ITSY 2301	Firewalls & Network Security	3
ITSY 2330	Intrusion Detection	3
ITNW 2359	Web Server Support & Maintenance	3
SPCH 1318	Interpersonal Communication †	3
	Approved Technical Elective **	2
	Total Hours	**14**
Semester 5		
ITNW 2350	Enterprise Network ° **	3
ITNW 1392	Special Topics in Computer Systems and Telecomunications	3
ITSY 2359	Security Assessment & Auditing	3
	Humanities/Fine Arts Elective †	3
	Social/Behavioral Sciences Elective †	3
	Total Hours	**15**
	GRAND TOTAL	**71**

° This course is designated as a capstone course.

† Courses Articulated with High School.

‡ Course includes external experience.

**** Approved Electives: ITNW 1380, ITNW 1680, ITSC 2380, ITSC 2680, ITNW 1337, ITNW 2302, ITSC 1325, ITSC 2339, ITSE 1331 or Department approval*

Computer Systems Management Technology

Computer Systems Management Technicians have a strong background in the diagnostics, repair and maintenance of computer and computer related equipment, which includes preventative maintenance, licensing renewals, upgrades, and recommendations for purchasing new computer systems; appropriate safety training effective oral and written communication skills, effective teamwork experience; and proper record-keeping techniques.

Instruction within the program includes the skills and procedures necessary to:

- Understand hardware and software
- Troubleshoot defective computer or computer related devices
- Recommend computer and/or computer related solutions or purchases to the end user.

Admissions Requirements

In addition to admissions requirements listed under "Admissions Information," completion of one unit of algebra is recommended.

COURSE NAME		CREDIT HOURS
Semester 1		
CPMT 1303	Introduction to Computer Technology †	3
MATH 1314	College Algebra †	3
HRPO 1311	Human Relations †	3
ITNW 1325	Fundamentals of Networking Technology	3
ITSC 1309	Integrated Software Applications †	3
	Total Hours	**15**
Semester 2		
CPMT 1304	Microcomputer Software Systems †	3
CPMT 1307	Electronic and Computer Skills (or CETT 1307)	3
CPMT 1311	Introduction to Computer Maintenance †	3
GAME 1301	Computer Ethics	3
ITNW 2321	Networking TCP/IP	3
	Total Hours	**15**
Semester 3		
CPMT 1343	Microcomputer Architecture	3
CPMT 1345	Computer Systems Maintenance	3
ITSC 2339	Personal Computer Help Desk Support	3
ITSE 1331	Introduction to Visual BASIC Program (or ITSC 1321)	3
ENGL 1301	Composition I †	3
	Total Hours	**15**
Semester 4		
CPMT 1347	Computer System Peripherals	3
SPCH	Speech Elective †	3
ITSC 1307	UNIX Operating System I (or ITNW 2309)	3
	Humanities/Fine Arts Elective †	3
ITSE 1350	Systems Analysis and Design	3
	Total Hours	**15**
Semester 5		
CPMT 2345	Computer System Troubleshooting °	3
CPMT 2350	Industry Certification Preparation	3
	Social/Behavioral Science Elective †	3
CPMT 2302	Home Technology Integration	3
	Total Hours	**12**
	GRAND TOTAL	**72**

° This course has been designated as the capstone course.
† High school articulated course.
‡ Course with external experience.

Notes:_____

Culinary Arts

Employment in the field of culinary arts is expected to increase rapidly due to population growth, higher family and personal incomes and more leisure time that will allow people to dine out more often. Professionals in this field must have a wide range of skill and expertise in preparing appetizing, appealing foods. This program emphasizes perfection of cooking techniques through specialized training in planning and preparation.

In this program, students will learn to:

- Follow recipes using standard weight and measures
- Prepare a wide variety of foods
- Maintain quality in all cookery
- Utilize industry-standard kitchen tools and equipment

Admissions Requirements

Students must complete the admissions requirements listed under "Admissions Information."

COURSE NAME		CREDIT HOURS
Semester 1		
CHEF 1205	Sanitation and Safety †	2
CHEF 1301	Basic Food Preparation †	3
IFWA 1205	Food Service Equipment & Planning	2
RSTO 1204	Dining Room Service	2
HRPO 1311	Human Relations †	3
	Total Hours	**12**
Semester 2		
CHEF 2301	Intermediate Food Preparation	3
FDNS 1305	Nutrition †	3
IFWA 1219	Meat Identifying & Processing	2
RSTO 2301	Principles of Food & Beverage Controls	3
SOCI 1301	Introduction to Sociology (or Social Behavior Elective) †	3
	Total Hours	**14**
Semester 3		
CHEF 1314	A la Carte Cooking	3
RSTO 1325	Purchasing for Hospitality Operations	3
PSTR 1401	Fundamentals of Baking	4
POFT 1321	Business Math (or MATH 1314) †	3
ENGL 1301	Composition I †	3
	Total Hours	**16**
Semester 4		
IFWA 2437	Special Projects & Field Work ‡	4
RSTO 1313	Hospitality Supervision	3
RSTO 2307	Catering	3
BIOL 1408	General Biology I † *	4
	Humanities/Fine Arts Elective †	3
	Total Hours	**17**
Semester 5		
IFWA 2341	Specialized Food Preparation º ** ‡	3
RSTO 1221	Menu Management	2
SPCH	Speech Elective †	3
RSTO 1201	Beverage Management	2
BMGT 1327	Principles of Management (or HRPO 2301) †	3
	Total Hours	**13**
	GRAND TOTAL	**72**

º This course has been designated as the capstone course.
† High School articulated course.
‡ Courses include external experience.
*** CHEF 2480 or CHEF 2680 (Co-op) may be taken in place of IFWA 2341.*
** BIOL 1308 and BIOL 1108 may be taken in place of BIOL 1408.*

Notes:_____

Dental Hygiene

As the state's population grows and the average age of its residents increases, more demands are being placed on existing health service providers to satisfy clients' needs. One health service area in need of additional support is dental services. With an aging population and increased emphasis being placed on preventive dentistry, the skills of dental hygienists are increasingly needed.

This program is accredited by the American Dental Association.

The dental hygiene program follows the TSTC health professions program grading scale. The student must maintain a numerical average of 78 or better in each required major course to receive the AAS degree.

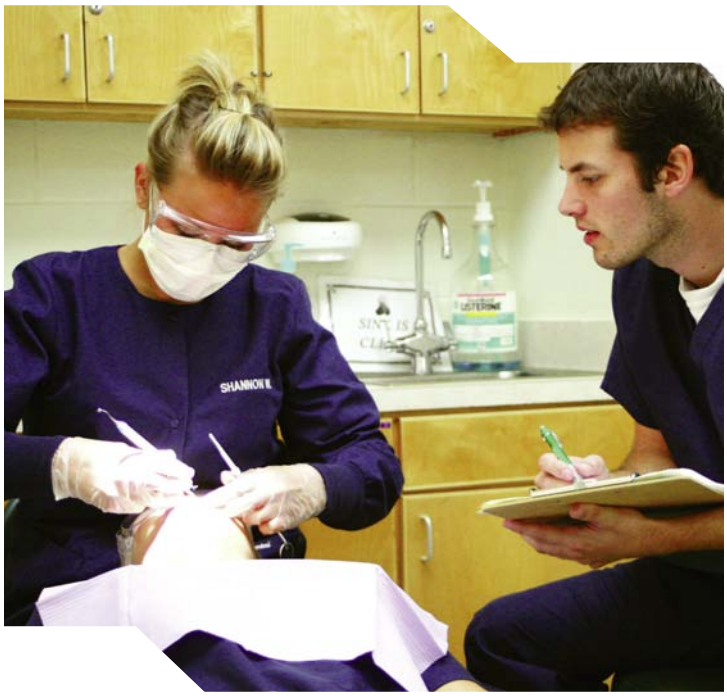
Admissions Requirements

In addition to the admissions requirements listed under "Admissions Information," all applicants are required to take the Health Occupations Basic Entrance Test. Applicants will be notified of testing dates. Program applications may be obtained from the dental hygiene program and are due March 1st.

Clinical Entry Requirements

Before enrolling in clinical courses, a student must have on file with the department the following materials:

1. Results of prescribed physical examination.
2. Proof of required immunizations.
3. Proof of liability insurance of at least $1 million, health and accident insurance and needlestick insurance (available through TSTC).



COURSE NAME		CREDIT HOURS
Semester 1		
CHEM 1411	General Chemistry	4
BIOL 2401	Anatomy and Physiology I † *	4
	Total Hours	**8**
Semester 2		
BIOL 2402	Anatomy and Physiology II † ***	4
DHYG 1227	Preventive Dental Hygiene Care	2
DHYG 1301	Orofacial Anatomy, Histology & Embryology	3
DHYG 1331	Preclinical Dental Hygiene	3
HRPO 1311	Human Relations †	3
	Total Hours	**15**
Semester 3		
BIOL 2421	Microbiology for Science Major † §	4
DHYG 1235	Pharmacology for the Dental Hygienist	2
DHYG 1260	Clinical-Dental Hygiene/Hygienist I	2
DHYG 1304	Dental Radiology	3
	Humanities/Fine Arts Elective †	3
	Total Hours	**14**
Semester 4		
DHYG 1211	Periodontology	2
DHYG 1261	Clinical-Dental Hygiene/Hygienist II	2
DHYG 1319	Dental Materials	3
SOCI 1301	Introductory Sociology †	3
	Total Hours	**10**
Semester 5		
DHYG 1215	Community Dentistry ‡	2
DHYG 1239	General & Oral Pathology	2
DHYG 2301	Contemporary Dental Hygiene Care I	3
DHYG 2360	Clinical: Dental Hygiene/Hygienist III	3
PSYC 2301	General Psychology †	3
	Total Hours	**13**
Semester 6		
DHYG 1123	Dental Hygiene Practice	1
DHYG 1207	General & Dental Nutrition	2
DHYG 2361	Clinical: Dental Hygiene/Hygienist IV °	3
ENGL 1301	Composition I †	3
SPCH	Speech Elective †	3
	Total Hours	**12**
	GRAND TOTAL	**72**

° This course is designated as a capstone course.
‡ Course with external experience.
† High school articulated course
** BIOL 2301 and BIOL 2101 may be taken in place of BIOL 2401.*
**** BIOL 2302 and BIOL 2102 may be taken in place of BIOL 2402.*
§ BIOL 2321 and BIOL 2121 may be taken in place of BIOL 2421

Dental Laboratory Technology

The level of public awareness of dental health and preventive dentistry has increased significantly in recent years. Because of this fact and relatively widespread dental insurance coverage, it is expected that the demand for dental laboratory technicians will continue to grow. Dental laboratory technicians make dentures, retainers, crowns, inlays, bridges and orthodontic appliances using written instructions from dentists. This field is an exacting science, as well as an art, which requires attention to precise details.

In this program, students will learn to:

- Work with wire, plaster, porcelain, wax, plastic, gold and other metals
- Use specialized tools to carve and shape dental materials
- Match color and placement of teeth for natural look and comfortable fit

Admissions Requirements

In addition to admissions requirements listed under "Admissions Information," students are required to complete special tests in manual dexterity, dimensional abilities and use of tools. Applicants will be notified of testing dates.

COURSE NAME		CREDIT HOURS
Semester 1		
DLBT 1201	Dental Anatomy & Tooth Morphology	2
DLBT 1209	Removable Partial Denture Techniques I	2
DLBT 1213	Complete Denture Techniques I	2
DLBT 1217	Fixed Restorative Techniques I	2
HRPO 1311	Human Relations †	3
	Total Hours	**11**
Semester 2		
DLBT 1205	Dental Materials	2
DLBT 2204	Removable Partial Denture Techniques II	2
DLBT 2207	Complete Denture Techniques II	2
DLBT 2211	Fixed Restorative Techniques II	2
ENGL 1301	Composition I †	3
SPCH	Speech Elective †	3
	Total Hours	**14**
Semester 3		
DLBT 2215	Removable Partial Denture Techniques III	2
DLBT 2217	Complete Denture Techniques III	2
DLBT 2241	Dental Ceramics I	2
DLBT 2244	Introduction to Orthodontic Procedures	2
DLBT 2321	Fixed Restorative Techniques III	3
MATH 1314	College Algebra (or CHEM 1411) †	3
	Total Hours	**14**
Semester 4		
DLBT 1291	Special Topics in Dental Laboratory Technician	2
DLBT 2233	Complete Denture Techniques IV	2
DLBT 2235	Fixed Restorative Techniques IV	2
DLBT 2242	Dental Ceramics II	2
PSYC 2301	General Psychology †	3
	Total Hours	**11**
Semester 5		
DLBT 2430	Special Projects in Dental Lab Procedures	4
DLBT 2446	Practical Laboratory Procedures °	4
	Humanities/Fine Arts Elective †	3
	Total Hours	**11**
	GRAND TOTAL	**61**

° These courses are designated as capstone courses.
† High school articulated course

Notes:_____

Digital Media Design Technology

This program will provide training in desktop publishing, photography, graphic design, imaging editing, 3-D solids modeling, Flash and 3-D animation, sound editing, non-linear video editing and effects, web page design and multimedia development. Graduates of this program will find employment as desktop publishers, web site designers, multimedia producers, graphic artists, advertising specialists, commercial computer artists, educational software developers, electronic game developers, and 3D animation specialists.

In this program, students will learn to create illustrations, design page layout, manipulate sound and video, create and edit computer images, design 3-D modeling and animation, create web pages, and incorporate interactivity and related media applications.

Admissions Requirements

Students must complete the admissions requirements listed under "Admissions Information."

COURSE NAME		CREDIT HOURS
Semester 1		
ARTC 1302	Digital Imaging I †	3
ARTC 1305	Basic Graphic Design †	3
ENGL 1301	Composition I †	3
PHTC 1311	Fundamentals of Photography	3
HRPO 1311	Human Relations †	3
	Total Hours	**15**
Semester 2		
ARTC 1313	Digital Publishing I †	3
ENGL 2307	Creative Writing (or ENGL 2314)	3
GRPH 1359	Object Oriented Computer Graphics	3
MATH 1314	College Algebra (or MATH 1332) †	3
	Humanities/Fine Arts Elective †	3
	Total Hours	**15**
Semester 3		
ARTC 2305	Digital Imaging II	3
ARTC 2313	Digital Publishing II	3
ARTV 1343	Digital Sound	3
ARTV 1351	Digital Video	3
SPCH 1311	Intro to Speech Communication (or Speech Elective) †	3
	Total Hours	**15**
Semester 4		
ARTV 1341	3-D Animation I	3
ARTV 2341	Advanced Digital Video	3
IMED 1316	Web Page Design I	3
IMED 1345	Interactive Multimedia I	3
	Total Hours	**12**
Semester 5		
IMED 2311	Portfolio Development º **	3
ARTC 2341	3-D Animation II	3
IMED 2345	Interactive Digital Media II	3
IMED 2315	Web Design II (or IMED 2345)	3
	Behavioral/Social Science Elective †	3
	Total Hours	**15**
	GRAND TOTAL	**72**

º This course has been designated as the capstone course.

† High School Articulated Course.

‡ Course with external experience.

*** GRPH 1380, GRPH 2380, GRPH 2680 may be taken instead of the capstone course.*

Notes:_____

Education & Training

The Education & Training program is designed to prepare students to meet the demands of an increasingly competitive and intellectually challenging future through educational and personal growth, practical skills development, academic courses, and career preparation.

The Associate of Applied Science degree is a 69-semester hour program. This program is unique to the Rio Grande Valley in two ways. It allows students to gain specialized training in one of five developed educational areas of emphasis. Secondly, the program is comprised of educational classes with technical labs for hands-on learning. The students will create and develop instructional materials ready to be used in the school setting utilizing a variety of state-of-the-art media and technical resources. The Associate Degree provides students with the opportunity to continue their education towards a Bachelor Degree and teacher certification.

Admissions Requirements

Students must complete the admissions requirements listed under "Admissions Information."

COURSE NAME		CREDIT HOURS
Semester 1		
EDTC 1301	Educational Systems	3
EDTC 1341	Instructional Technology and Computer Applications	3
HRPO 1311	Human Relations †	3
ENGL 1301	Composition I †	3
HIST 1301	United States History I †	3
	Totals	**15**
Semester 2		
CDEC 1359	Children with Special Needs	3
EDTC 2311	Instructional Practices & Effective Learning Environments	3
HIST 1302	United States History II †	3
	General Education Elective †	3
SPCH	Speech Elective (suggested SPCH 1315) †	3
	Totals Hours	**15**
Semester 3		
EDTC 1307	Introduction to Teaching Reading	3
TECA 1354	Child Growth & Development	3
GOVT 2301	American Government I †	3
MATH 1314	College Algebra (or BIOL 1408 or BIOL 1409) †	3
	Area of Emphasis Course #1	3
	Totals Hours	**15**
Semester 4		
EDTC 1394	Special Topics: Teaching Math and Science in the Elementary School	3
EDTC 2317	Guiding Student Behavior	3
GOVT 2302	American Government II	3
	General Education Elective †	3
	Area of Emphasis Course #2	3
	Totals Hours	**15**
Semester 5		
EDTC 1364	Practicum: Teacher Assistant/Aid (or EDTC 1164 & 1264) ° ‡	3
	Humanities/Fine Arts Elective †	3
	Social/Behavioral Sciences Elective †	3
	Totals Hours	**9**
	GRAND TOTAL	**69**

AREAS OF EMPHASIS:

COURSE NAME		CREDIT HOURS
Emphasis in Bilingual Education		
EDTC 1321	Bilingual Education	3
EDTC 1325	Principles and Practices of Multicultural Education	3
Emphasis in Early Childhood Education		
CDEC 1321	Infant and Toddler	3
CDEC 1356	Emergent Literacy for Early Childhood	3
Emphasis in General Education		
EDTC 1393	Special Topics: Writing Problems	3
EDTC 2305	Reading Problems	3
Emphasis in Students with Special Needs		
CDEC 2340	Instructional Techniques for Children with Special Needs	3
EDTC 1395	Special Topics Course: Behavior Management for Students with Special Needs	3

° This course has been designated as the capstone course
† High school articulated course
‡ Course with external experience

Game and Simulation Programming

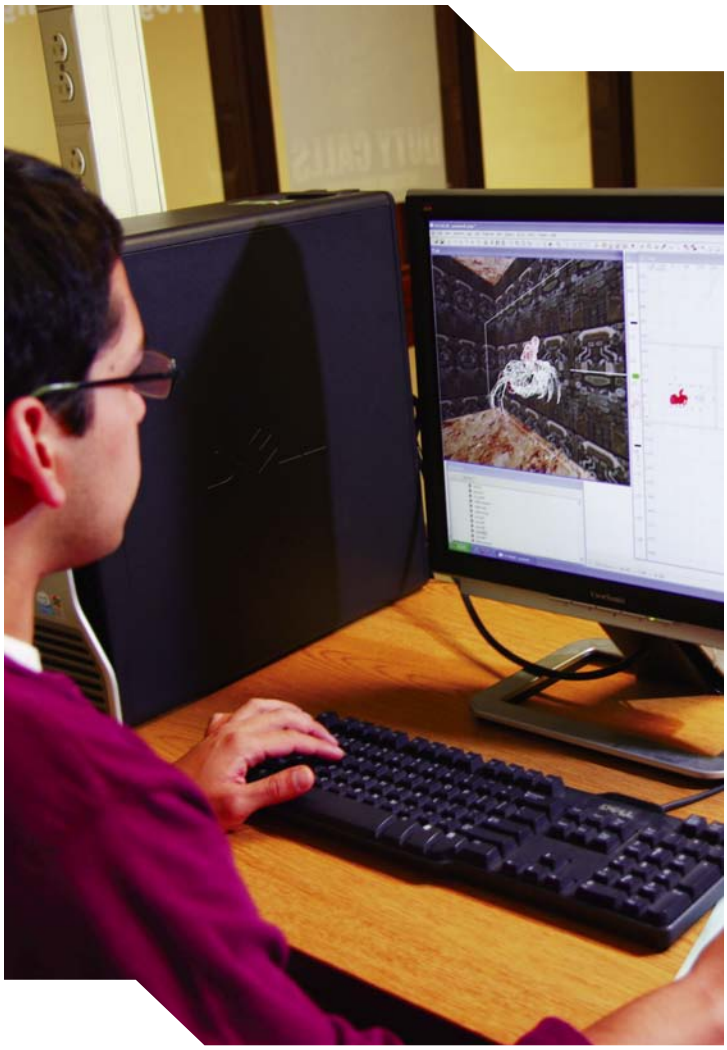
Due to the extensive use of computers in business and industry, a great demand for computer programmers exists. Computer programs, or software, are the series of instructions that tell the computer what operations to perform. Graduates from the game and simulation programming specialty will have a strong background in game design, software development tools and techniques, and graphics programming.

In this program, students will learn to:

- Develop computer games and simulations using appropriate tools and techniques. Examine best practices for entering the industry.

Admissions Requirements

Students must complete the admissions requirements listed under "Admissions Information."



COURSE NAME		CREDIT HOURS
Semester 1		
GAME 1303	Introduction to Game Design and Development	3
MATH 1314	College Algebra †	3
HRPO 1311	Human Relations †	3
GAME 1306	Design and Creation of Games	3
	Total Hours	**12**
Semester 2		
GAME 1301	Computer Ethics	3
MATH 1316	Plane Trigonometry	3
GAME 1304	Level Design	3
ITSE 1307	Introduction to C++ Programming	3
	Total Hours	**12**
Semester 3		
GAME 1343	Graphics and Simulation Programming I	3
MATH 2318	Linear Algebra	3
ITSE 2331	Advanced C++ Programming	3
GAME 1309	Introduction to Animation Programming	3
	Total Hours	**12**
Semester 4		
GAME 1349	OpenGL Programming I	3
GAME 1353	Multi-User Game Programming I	3
GAME 1359	Game and Simulation Programming II	3
ITSE 2345	Data Structures	3
	Total Hours	**12**
Semester 5		
GAME 2353	OpenGL Programming II	3
GAME 2303	Artificial Intelligence	3
GAME 2333	Game and Simulation Programming III	3
ENGL 1301	Composition I †	3
	Total Hours	**12**
Semester 6		
GAME 2359	Game and Simulation Group Project º	3
	Social/Behavioral Science Elective †	3
	Humanities/Fine Arts Elective †	3
SPCH	Speech Elective †	3
	Total Hours	**12**
	GRAND TOTAL	**72**

º This course has been designated as the capstone course.
† High School articulated course.
‡ Course includes external experience.

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Health Information Technology

According to the US Department of Labor, the demand for well-trained health information technicians is expected to grow much faster than average for all occupations due to the rapid increase in the number of medical tests, treatments, and procedures that will be increasingly scrutinized by health insurance companies, regulators, courts, and consumers. Health information technicians will also be needed for data entry of patient information into computer databases to comply with Federal legislation mandating the use of the electronic health record.

This program is accredited by the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM).

In this program, students will develop skills to collect, assemble, organize and maintain health information for completeness and accuracy, using computer programs to chart and analyze health information data for patient care improvement, budget planning, documentation for use in legal actions and/or for use in research studies. Students will demonstrate proficiency of these skills during their practicum experience.

Numerous opportunities await the HIT graduate in a variety of medical facilities. Experienced, credentialed technicians may also advance to management and supervisory positions, overseeing the work of various departments within the medical facility.

The student must maintain a numerical average of 78 or better in each required major course to receive the AAS degree.

Upon completion of this program the graduate receives an Associate of Applied Science Degree and is eligible to take the national certification examination to become a Registered Health Information Technician.

Admissions Requirements

In addition to the admissions requirements listed under "Admissions Information," it is recommended that a student has maintained a 2.0 grade point average on a 4.0 scale in high school or previous post-secondary studies, or has a score of 45 on the GED. An interview with the Department Chair is also required.

Clinical/PracticumEntry Requirements

Before enrolling in practicum courses, a student must have on file with the department the following materials:

- The ability to satisfy the industry standards for the program.
- Proof of required immunizations.
- Proof of liability insurance of at least $1 million (available through TSTC).
- Proof of health and accident insurance (available through TSTC).
- Proof of auto liability.
- Proof of current driver's license.
- Passage of a criminal background check (available through TSTC).
- Passage of a drug and alcohol screening (required by various medical facilities)

COURSE NAME		CREDIT HOURS
Semester 1		
BIOL 2401	Anatomy & Physiology I †	4
ITSC 1309	Integrated Software Applications I †	3
HITT 1305	Medical Terminology †	3
HRPO 1311	Human Relations †	3
	Total Hours	**13**
Semester 2		
BIOL 2402	Anatomy & Physiology II	4
HITT 1301	Health Data Content and Structure	3
HITT 1253	Legal & Ethical Aspects of Health Information	2
HITT 1345	Health Care Delivery Systems	3
HITT 1255	Health Care Statistics	2
	Total Hours	**14**
Semester 3		
MDCA 1321	Administrative Procedures	3
MDCA 1402	Human Disease/Pathophysiology	4
HPRS 2300	Pharmacology for Health Professions	3
HITT 1341	Coding & Classification Systems	3
	Total Hours	**13**
Semester 4		
HITT 2166	Practicum - Health Info/Medical Records ‡	1
HITT 2239	Health Information Organization & Supervision	2
HITT 2343	Quality Assessment & Performance Improvement	3
HITT 1211	Computers in Health Care	2
HITT 1342	Ambulatory Coding	3
	Total Hours	**11**
Semester 5		
HITT 2149	RHIT Competency Review	1
HITT 2335	Coding & Reimbursement Methodologies	3
HITT 2266	Practicum - Health Info/Medical Records °	2
SPCH X3XX	Speech Elective †	3
	Humanities/Fine Arts Elective †	3
	Total Hours	**12**
Semester 6		
ENGL 1301	Composition I †	3
PSYC 2301	General Psychology †	3
	Math/Natural Science Elective †	3
	Total Hours	**9**
	GRAND TOTAL	**72**

° This course is a designated capstone course.

† High school articulated course.

‡ Course with external experience.

Machining Technology
Mold, Tool and Die Making

Tool and die maker trainees learn to operate milling machines, lathes, grinders, wire electrical discharge machines, and other machine tools. They also learn to use hand tools for fitting and assembling gauges, and other mechanical and metal-forming equipment. In addition, they study metalworking processes, such as heat treating. Tool and die makers increasingly must have good computer skills to work with CAD/CAM technology, CNC machine tools, and computerized measuring machines.

Because tools and dies must meet strict specifications—precision to one ten-thousandth of an inch is common—the work of tool and die makers requires skill with precision measuring devices and a high degree of patience and attention to detail. Persons entering this occupation also should be mechanically inclined, able to work and solve problems independently, have strong mathematical skills, and be capable of doing work that requires concentration and physical effort.

Tool and die makers play a key role in building and maintaining advanced automated manufacturing equipment. The number of workers receiving training in this occupation is expected to continue to be fewer than the number of openings created each year by tool and die makers who retire or transfer to other occupations. Students that earn the Associate of Applied Science Degree in Tool & Die / Mold Making are excellent candidates for mid management positions.

Median hourly earnings of tool and die makers, according to the Bureau of Labor Statistics, were $20.55 in May 2004. The middle 50 percent earned between $16.70 and $25.93. The lowest 10 percent had earnings of less than $13.57, while the top 10 percent earned more than $31.19. Machining Technology students are currently being placed in the median range stated above.

Admissions Requirements
Students must complete the admissions requirements listed under "Admissions Information."

COURSE NAME		CREDIT HOURS
Semester 1		
MCHN 1302	Print Reading For Machining Trades	3
MCHN 1338	Basic Machine Shop I †	3
MCHN 1343	Machine Shop Mathematics	3
HRPO 1311	Human Relations †	3
	Total Hours	**12**
Semester 2		
MCHN 1308	Basic Lathe	3
MCHN 1313	Basic Milling Operation	3
MCHN 1320	Precision Tools & Measurement	3
MCHN 2303	Fundamentals of CNC Machine Controls	3
	Total Hours	**12**
Semester 3		
MCHN 1305	Metals & Heat Treatment	3
MCHN 1358	Intermediate Lathe Operations	3
MCHN 2302	Intermediate Milling Operations	3
MCHN 2335	Advanced CNC Machining	3
	Total Hours	**12**
Semester 4		
MCHN 1335	Grinders, Outside, Internal, Surface	3
MCHN 2337	Advanced Milling Operation	3
MCHN 2370	Mold Making/Repair	3
MATH 1314	College Algebra †	3
	Total Hours	**12**
Semester 5		
ENGL 1301	Composition I †	3
MCHN 2372	Tool & Die Making & Repair	3
MCHN 2447	Specialized Tools & Fixtures °	4
WLDG 1206	Fundamentals of Gas Tungsten	2
	Total Hours	**12**
Semester 6		
	Behavioral/Social Science Elective †	3
	Humanities/Fine Arts Elective †	3
MATH 1316	Plane Trigonometry	3
SPCH	Speech Elective †	3
	Total Hours	**12**
	GRAND TOTAL	**72**

° This course has been designated as the capstone course
† High school articulated course
‡ Course with external experience

Mechatronics Technology

Mechatronics is a new and exciting interdisciplinary field dealing with the integration of mechanical and electronic components which require computer control.

Mechatronics is centered on the disciplines of mechanics, electronics, controls and computers which combined, make possible the generation of simpler, more economical, reliable and versatile commercial and industrial products. The combination of words "Mechatronics" was first coined by Mr. Tetsuro Mori, a senior engineer of the Japanese company Yaskawa, in 1969.

Industrial applications are becoming increasingly multidisciplinary requiring engineers and technicians to develop skills in a variety of disciplines including mechanics, electronics, computer science, and automation.

Many existing jobs categories currently or will soon require Mechatronics skills and problem solving abilities. Mechatronics courses combine various disciplines to teach students a holistic approach to developing solutions for engineering applications.

Mechatronics technicians are employed in the following sub-industries: Electrical equipment & appliances, electrical power plant & power distribution, computers & electronics products, chemicals, food & beverage, furniture, machinery, plastics & rubber, printing, textile, apparel & leather, wood & paper, primary & fabricated metals, petroleum, and transportation.

There is a high demand for bilingual engineers and technicians with Mechatronics knowledge and experience in companies in the Rio Grande Valley and surrounding regions including Austin, Dallas, Houston, Laredo, San Antonio, and in industrial "Maquiladoras" on both sides of the U.S./Mexico border.

Admissions Requirements

Students must complete admissions requirements listed under "Admissions Information."

COURSE NAME		CREDIT HOURS
Semester 1		
CETT 1303	DC Circuits (or IEIR 1302) †	3
MATH 1314	College Algebra (or MATH 2312) †	3
RBTC 1305	Robotic Fundamentals	3
HRPO 1311	Human Relations †	3
	Total Hours	**12**
Semester 2		
CETT 1305	AC Circuits (or IEIR 1304) †	3
CETT 1325	Digital Fundamentals	3
INTC 1357	AC/DC Motor Controls	3
PHYS 1401	College Physics I (or CHEM 1411)	4
	Total Hours	**13**
Semester 3		
ELMT 1301	Programmable Logic Controllers	3
ELMT 1305	Basic Fluid Power	3
ELMT 2333	Industrial Electronics	3
ENGL 1301	Composition I †	3
	Total Hours	**12**
Semester 4		
ELMT 2339	Advanced Programmable Logic Controllers	3
INTC 1341	Principles of Automatic Control	3
MCHN 1338	Basic Machine Shop I	3
	Social/Behavioral Sciences Elective †	3
	Total Hours	**12**
Semester 5		
EECT 1307	Convergent Technologies	3
FCEL 1305	Introduction to Fuel Cell & Alternative/Renewable Energy	3
SPCH	Speech Elective †	3
	Humanities/Fine Arts Elective †	3
	Total Hours	**12**
Semester 6		
ELMT 2341	Electromechanical Systems °	3
ELPT 2231	AC/DC Drives	2
INMT 1319	Manufacturing Processes	3
QCTC 1303	Quality Control	3
	Total Hours	**11**
	GRAND TOTAL	**72**

° This course has been designated as the capstone course.
† High school articulated course
‡ Course with external experience.

Notes:_____

Medical Assistant

Medical Assisting is a multi-skilled allied health profession. Medical assistants function as members of the health care delivery team performing both administrative and clinical procedures. Administrative duties may include scheduling and receiving patients, preparing and maintaining medical records, performing basic secretarial skills, insurance processing and billing, medical transcribing, handling telephone calls and writing correspondence, serving as a liaison between the physician and other individuals and managing practice finances. Clinical duties may include asepsis and infection control, taking patient histories and vital signs, performing first aid and CPR, preparing patients for procedures, assisting the physician with examination and treatments, collecting and processing specimens, performing selected diagnostic tests, and preparing and administering medications as directed by the physician.

Students must maintain a numerical average of 78 or better in each Medical Assisting curriculum course to graduate from the program and receive the Associate Degree according to plan.

Admissions Requirements

In addition to admissions requirements listed under "Admissions Information," the applicant must complete an application to the program, interview with the Department Chair, and submit TASP and Health Placement Test Scores.

Clinical/PracticumEntry Requirements

Before enrolling in clinical or practicum, a student must have on file with the department the following materials:

1. Results of prescribed physical examination.
2. Proof of required immunizations.
3. Proof of liability insurance of at least $1 million, health and accident insurance and needlestick insurance (available through TSTC).

COURSE NAME		CREDIT HOURS
Semester 1		
BIOL 2401	Anatomy & Physiology I *	4
HITT 1305	Medical Terminology †	3
MDCA 1417	Procedures in a Clinical Setting	4
HRPO 1311	Human Relations †	3
	Total Hours	**14**
Semester 2		
BIOL 2402	Anatomy & Physiology II ***	4
HITT 1301	Health Data Content & Structure	3
MDCA 1348	Pharmacology & Administration of Medications	3
MDCA 1352	Medical Assistant Laboratory Procedures	3
	Total Hours	**13**
Semester 3		
MDCA 1343	Medical Insurance	3
MDCA 1402	Human Disease/Pathophysiology	4
MDCA 1321	Administrative Procedures	3
PLAB 1323	Phlebotomy	3
	Total Hours	**13**
Semester 4		
ENGL 1301	Compostion I †	3
HITT 1211	Computers in Health Care	2
MDCA 1205	Medical Law & Ethics	2
MDCA 1460	Clinical: Medical/Clinical Assistant ‡	4
PSYC 2301	General Psychology	3
	Total Hours	**14**
Semester 5		
CHEM 1411	General Chemistry I (or BIOL 2421) † §	4
MATH 1314	College Algebra (or MATH 1332) †	3
MDCA 2266	Practicum: Medical/Clinical Assistant° ‡	2
SPCH	Speech Elective †	3
	Humanities/Fine Arts Elective †	3
	Total Hours	**15**
	GRAND TOTAL	**69**

° This course has been designated as the capstone course.

† High school articulated course

‡ Course with external experience.

** BIOL 2301 and BIOL 2101 may be taken in place of BIOL 2401.*

**** BIOL 2302 and BIOL 2102 may be taken in place of BIOL 2402.*

§ CHEM 1311 and CHEM 1111 or BIOL 2321 and BIOL 2121 may be taken in place of CHEM 1411

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Surgical Technology

The Surgical Technologist is a vital member of the surgical team. Surgical technologists also called surgical or operating room technologists, assist in operations under the supervision of surgeons, registered nurses, or other surgical personnel. Before an operation, surgical technologists help set up the operating room with surgical instruments and equipment, and sterile solutions. They assemble, adjust, and check nonsterile equipment to ensure that all is working properly. Technologists also prepare patients for surgery by washing, shaving, and disinfecting incision sites. They transport patients to the operating room and help position them on the operating table. Technologists also observe patient's vital signs and check charts. The technologist helps the surgical team don sterile gowns and gloves, and apply the sterile surgical "drapes" prior to the start of the surgical procedure.

During surgery, technologists pass instruments and other sterile supplies to surgeons and surgeon assistants. They may hold retractors, cut sutures, and help count sponges, needles, supplies, and instruments. Surgical technologists help prepare, care for, and dispose of specimens taken for laboratory analysis and may help apply dressings. They may operate sterilizers, lights, or suction machines, and help operate diagnostic equipment. After an operation, surgical technologists may help transfer patients to the recovery room, and clean and restock the operating room.

This program provides classroom education and supervised clinical experience. Students take courses in anatomy and physiology, microbiology, pharmacology, professional ethics, medical terminology, speech, computers and psychology. Other studies cover the care and safety of patients during surgery, aseptic techniques and surgical procedures. Students also learn to sterilize instruments, prevent and control infection, and handle special drugs, solutions, supplies and equipment.

Surgical Technologists must possess manual dexterity to handle instruments efficiently and quickly. They also must be conscientious, orderly, and emotionally stable to handle the demands of the operating room environment. Technologists must respond quickly and have a full understanding of the procedures so that they may anticipate the needs of the surgeons without having to be asked for instruments or supplies. They are expected to keep abreast of new developments in the field. Certified surgical technologists with additional specialized education or training also may act in the role of the surgical first assistant or circulator.

Surgical technologist work in a clean, well-lighted, cool environment. They must stand for long periods and remain alert during operations. At times, they may be exposed to communicable diseases and unpleasant sights, odors, and materials. Most surgical technologists work a regular 40-hour week, although they may be on call or work nights, weekends, and holidays on a rotating basis.

- This program is offered only during the day.
- Graduates are eligible to take the national certification examination to become a Certified Surgical Technologist.
- Texas State Technical College Harlingen's Surgical Technology Program is a CAAHEP-accredited program.
- The student must maintain a numerical average of 78 or better in each required major course to receive the Associate of Applied Science degree.

Clinical Entry Requirements

Before enrolling in clinical study, a student must have on file with the department the following materials:

1. Results of prescribed physical examination.
2. Completion of Hepatitis B and A prior to being accepted into program.
3. Proof of liability insurance of at least $1 million, health and accident insurance and needlestick insurance (available through TSTC).
4. Must have a criminal background check done through Campus Police.
5. Drug screen test done prior to acceptance into program.
6. Completion of TEAS test prior to acceptance into program.

COURSE NAME		CREDIT HOURS
Semester 1		
BIOL 2401	Anatomy & Physiology I †	4
HITT 1305	Medical Terminology †	3
MATH 1314	College Algebra (or MATH 1332) †	3
HRPO 1311	Human Relations †	3
	Total Hours	**13**
Semester 2		
BIOL 2402	Anatomy & Physiology II †	4
ENGL 1301	Composition I †	3
HPRS 2300	Pharmacology for Health Professions	3
PSYC 2301	General Psychology †	3
	Total Hours	**13**
Semester 3		
BIOL 2421	Microbiology for Science Majors	4
PSYC 2314	Life Span Growth and Development	3
	Humanities/Fine Arts Elective †	3
SPCH	Speech Elective †	3
	Total Hours	**13**
Semester 4		
SRGT 1405	Introduction to Surgical Technology	4
SRGT 1409	Fund. of Perioperative Concepts & and Techniques	4
SRGT 1460	Clinical I: Surgical Technology/Technologist ‡	4
	Total Hours	**12**
Semester 5		
SRGT 1441	Surgical Procedures I	4
SRGT 1461	Clinical II: Surgical Technology/Technologist ‡	4
SRGT 1244	Technological Sciences for the Surgical Technologist	2
	Total Hours	**10**
Semester 6		
SRGT 1442	Surgical Procedures II	4
SRGT 2462	Clinical III: Surgical Technology/ Technologist ° ‡	4
	Total Hours	**8**
	GRAND TOTAL	**69**

° This course has been designated as the capstone course
†High school articulated course
‡Course with external experience

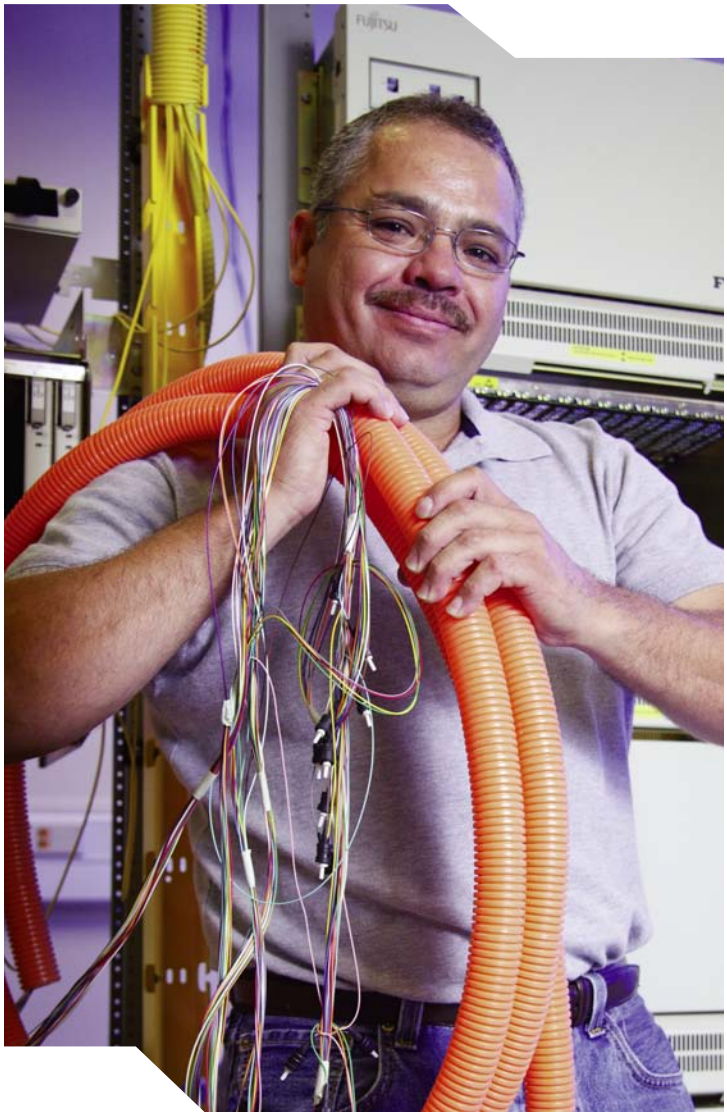
Telecommunications Technology

Driven by a demand for instantly accessible information, the telecommunications industry is profoundly transforming the world. Voice, data and video communications across a worldwide network are creating opportunities that did not exist a decade ago. Preparing a workforce to compete in this global marketplace is today's major challenge for the telecommunications industry.

The Telecommunications Technology program is designed to prepare students for the communications industry through educational training in the installation, operation and maintenance of communications systems using the full range of communication transport systems. The technologies include underground, above ground, cellular, fiber-optics, microwave systems, computer networks and satellites for communicating information.

Admissions Requirements

Students must complete the admissions requirements listed under "Admissions Information."



COURSE NAME		CREDIT HOURS
Semester 1		
CETT 1303	DC Circuits † (or IEIR 1302)	3
EECT 1303	Introduction to Telecommunications †	3
ENGL 1301	Composition I †	3
MATH 1314	College Algebra (or MATH 1332) †	3
HRPO 1311	Human Relations †	3
	Total Hours	**15**
Semester 2		
CETT 1305	AC Circuits † (or IEIR 1304)	3
CETT 1325	Digital Fundamentals	3
CSIR 1303	Telecommunications System Installer	3
EECT 1300	Technical Customer Service	3
	Humanities/Fine Arts Elective	3
	Total Hours	**15**
Semester 3		
CSIR 1359	Digital Data Communication	3
CSIR 1391	Special Topics: Communications System Installer & Repairer	3
CSIR 2351	Fiber Optic Comm Sys Install. & Rep	3
EECT 1307	Convergence Technologies	3
EECT 1342	Telecommunications Outside Plant	3
	Total Hours	**15**
Semester 4		
CSIR 1355	Industry Certifications	3
EECT 2337	Wireless Telephony Systems	3
	Behavioral/Social Science Elective †	3
SPCH	Speech Elective †	3
	Total Hours	**12**
Semester 5		
CSIR 2350	Telecommunications Maintenance	3
EECT 1344	Telecommunications Broadband Systems	3
EECT 2330	Telecommunications Switching	3
EECT 2435	Telecommunications º **	4
	Total Hours	**13**
	GRAND TOTALS	**70**

º This course has been designated as the capstone course
† High school articulated course
‡ Course with external experience
*** EECT 2680 (Co-op) may be taken in place of EECT 2435*

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Welding Technology

The Welding Technology Program at TSTC Harlingen offers an Associate of Applied Science Degree that focuses on the theory and application of Oxy/Acetylene and Plasma Cutting Processes, Shielded Metal Arc, Gas Metal Arc, Flux Cores Arc, Gas Tungsten Arc, and Submerged Arc Welding Processes used in industry today.

With 120 welding stations and 40 oxyacetylene stations, our faculty fully utilizes laboratory time by emphasizing industrialized training as you master the welding of different joint designs with fillet and grove welds in all positions on plate and pipe, and plan, design, fabricate, and weld projects using blueprint reading and layout skills.

Companies often send employees to our program for training because our instructors are thoroughly familiar with quality control standards and are exceptional welders in all the processes. The student will learn from instructors that have spent many years in industry perfecting their welding skills.

Graduates of the Welding Technology Department can look forward to exceptional career opportunities in ship building, oil refinement and processing, manufacturing, nuclear and wind energy, aerospace, and motorsports industries.

According to the 2006 United States Bureau of Labor Statistics, the median hourly earnings for welders and cutters were $15.10 with high earnings over $25.44 per hour. Because of the shortage of skilled welders that is reported from industry, excellent job opportunities and earnings exist today.

The student services office at TSTC Harlingen offer expert advice about career placement, financial aid to pay for education, scholarship availability and guidelines on improving your academic skills. We welcome prospective students and companies interested in our training program to stop by for a close-up look at our faculty and have our instructors answer any questions they may have.

In this program, students will learn to:

- Use various welding processes, including oxyacetylene welding, gas tungsten arc, gas metal arc and other sophisticated welding processes
- Perform welding in all positions, with fillet and groove welds
- Plan, design and fabricate welded projects

Admissions Requirements:

Students must complete the admissions requirements listed under "Admissions Information."

COURSE NAME		CREDIT HOURS
Semester 1		
WLDG 1430	Introduction to Gas Metal Arc (GMAW) Welding	4
WLDG 1313	Introduction to Blueprint Reading for Welders	3
WLDG 1323	Welding Safety, Tools and Equipment	3
WLDG 1421	Welding Fundamentals †	4
	Total Hours	**14**
Semester 2		
HRPO 1311	Human Relations †	3
WLDG 1434	Introduction to Gas Tungsten Arc (GTAW) Welding	4
WLDG 1317	Introduction to Layout and Fabrication	3
WLDG 1457	Intermediate Shielded Metal Arc Welding (SMAW)	4
	Total Hours	**14**
Semester 3		
SPCH	Speech Elective †	3
WLDG 2443	Advanced Shielded Metal Arc Welding (SMAW)	4
WLDG 1312	Introduction to Flux Cored Arc Welding (FCAW)	3
WLDG 1435	Introduction to Pipe Welding	4
	Total Hours	**14**
Semester 4		
ENGL 1301	Composition I †	3
WLDG 1337	Introduction to Welding Metallurgy	3
WLDG 2453	Advanced Pipe Welding	4
MATH 1332	Contemporary Mathematics I (or MATH 1314)	3
	Total Hours	**13**
Semester 5		
NDTE 2311	Preparation for Welding Inspection	3
WLDG 2413	Intermediate Welding Using Multiple Processes °	4
WLDG 2435	Adv Layout and Fabrication **	4
	Humanities/Fine Arts Elective †	3
	Social Behavioral Elective †	3
	Total Hours	**17**
	GRAND TOTAL	**72**

° This course has been designated as a capstone course.

† Course Articulated with High School.

*** WLDG 2480 or WLDG 2680 (Co-op) may be taken in place of WLDG 2435*

Wind Energy Technology

In the Wind Energy Technology Program, you'll learn to operate and maintain the systems that make a wind turbine function whether it's an electrical, pneumatic, communications, computer, control or hydraulic system.

Your instructors will emphasize the safety aspects of working in the wind energy industry and you'll be able to practice those principles throughout the program. Examples of courses you'll take include:

You'll also learn all about SCADA (that stands for Supervisory Control and Data Acquisition). It's the utility industry standard computerized system that controls the wind tower network. You'll also find that knowledge of all the systems you'll learn in the Wind Energy Technology Program is important not only to wind energy but also to many other types of companies in the utility industry. That means that as a graduate you will have varied career options.

Many well-known companies are involved in the wind energy field whether they are owner/operators, manufacturers or service providers and these companies are looking for employees with the skills and training you can gain in the Wind Energy Program. Your choices for a career span Texas or if you are interested in travel, the wind energy field offers opportunities throughout the world. A few wind energy companies include Shell Wind, Beyond Petroleum, GE Energy, Siemens Wind Power, Mitsubishi, Vestas, TECO/Westinghouse, DEWIND and more.

Generating a workforce to power the wind energy industry will bring growth for the Wind Energy Technology Program at Texas State Technical College Harlingen at a training center near Corpus Christi.

The Ingleside renewable energy training center for TSTC offers a Certificate of Completion Level I diploma. Renewable energy resources, particularly land and off-shore wind energy, will be the focus for technical education opportunities at the 8,600-square-foot building reserved for TSTC

In this program, students will learn to:

- Operate and maintain the systems that make a wind turbine function
- Focus on the electrical, pneumatic, communications, computer, control and hydraulic systems of wind turbines.
- Learn about SCADA, the utility industry standard computerized system that controls the wind tower network

Admissions Requirements:

Students must complete the admissions requirements listed under "Admissions Information."

COURSE NAME		CREDIT HOURS
Semester 1		
WIND 1302	Wind Safety	3
CETT 1303	DC Circuits †	3
POFT 1120	Job Search Skills	1
HRPO 1311	Human Relations †	3
ENGL 1301	Composition I †	3
MATH 1314	College Algebra †	3
	Total Hours	**16**
Semester 2		
WIND 1300	Introduction to Wind Energy	3
WIND 2310	Wind Turbine Materials and Electro-Mechanical Equipment	3
CETT 1305	AC Circuits	3
CETT 1325	Digital Fundamentals	3
	Humanities/Fine Arts Elective †	3
	Total Hours	**15**
Semester 3		
WIND 2459	Wind Power Delivery System	4
ELMT 1305	Basic Fluid Power	3
INTC 1357	AC/DC Motor Control	3
	Behavioral/Social Sciences Elective †	3
	Total Hours	**13**
Semester 4		
WIND 1470	Wind Turbine SCADA and Networking	4
WIND 2455	Wind Turbine Troubleshooting and Repair	4
CPMT 2250	Industry Certification Preparation	2
ELMT 1301	Programmable Logic Controllers	3
	Speech Elective †	3
	Total Hours	**16**
Semester 5		
ELMT 2380	Cooperative Education - Electromechanical Technology/ Electromechanical Engineering Technology (or ELMT 1391) *	3
	Total Hours	**3**
	GRAND TOTAL	**63**

° This course has been designated as a capstone course.

† Course Articulated with High School.

** ELMT 2380 or ELMT 1391 may be taken in place of ELMT 2380*

Associate of Science Degree Programs

General Information

Associate of Science (A.S.) degree programs are intended for students who plan to transfer to a four-year college or university and for students who need an academic two-year degree in order to find work in their fields of study. These degrees provide a broad understanding of general education with in-depth studies of related academic areas.

TSTC Harlingen specializes in A.S. degrees in health along with science, technology, engineering, and mathematics (STEM). There is a critical need throughout the state and nation for persons with these skills in business, research, and instruction. Students completing their studies will have the opportunity to transfer to other colleges and universities in order to complete their bachelor's and other advanced degrees.

The General Education Core accounts for a minimum of 48 semester credit hours of the A.S. degree curriculum. The core curriculum guidelines from the Texas Higher Education Coordinating Board "are predicated on the judgment that a series of basic intellectual competencies – reading, writing, speaking, listening, critical thinking, and computer literacy – are essential to the learning process in any discipline and thus should inform any core curriculum." This core is designed to provide students a general education in communication, humanities and fine arts, social and behavioral sciences, and mathematics and natural sciences. From this group of classes, students develop the understanding, attitudes and values that are necessary for effective, responsible, and productive living in today's society. Details about the General Education Core can be found in the Curriculum – General Education section.

General Requirements

The following information outlines the requirements for an Associate of Science degree. Additional information can be found in the Admissions and Records and the Scholastic Regulations sections of this catalog.

1. Complete admission requirements.
2. Be eligible for admission into a particular degree program. Some A.S. programs require completion of key basic courses before students can be admitted into the program itself. See the program descriptions for details.
3. Complete curriculum requirements:
   a. The student must complete the minimum credit hours as specified for the program of study. Requirements are listed with the program of study descriptions in this catalog.
   b. The student must complete the General Education Core. Be sure to consult the particular degree plan, the catalog of the university you wish to transfer to, and an advisor to see which particular General Education Core courses are appropriate for a particular area of study or university curriculum.
4. Students must meet all scholastic guidelines and specific program requirements. Additional information is included in the Scholastic Regulations section of this catalog. Some programs of study have specific requirements. More information is listed in the respective program of study description.
5. Discharge all financial obligations to TSTC.
6. Complete an Application for Graduation and payment of graduation fees.

General Education

TSTC offers general education and developmental courses approved by the Texas Higher Education Coordinating Board to support students seeking the Associate of Science degree. More information on course content and lecture and lab hours is included in the Course Descriptions section of this catalog. Academic courses are part of the Texas Common Course Numbering System (TCCNS) and are transferable individually to other public colleges and universities in the state. Completion of the General Education Core at TSTC Harlingen will allow students to transfer the core as a block of classes and replace the General Education Core at another Texas public college or university.

Learning Framework Course (EDUC 1100 or PSYC 1100)

The student success course (EDUC 1100 or PSYC 1100 – Learning Framework) is a college requirement and is part of all A.S. degree plans. Students may take either the EDUC 1100 or the PSYC 1100 course in order to satisfy this college requirement. The course is intended to help students to persist in their studies and complete their degrees in a timely manner. It provides models of strategic learning, cognition, and motivation as the basis for the introduction of academic learning strategies. Ultimately, students are expected to integrate and apply these learning skills to become effective learners in their own academic programs. Also, students will be able to learn and apply the appropriate computer skills to demonstrate how life-long learning is an ongoing part of one's development, especially in this rapidly changing age of technology and information. Students are urged to take this course as early as possible in their college studies.

Allied Health and Nursing

The Associate of Science (A.S.) degree in Allied Health and Nursing is designed to offer students interested in healthcare careers a broad knowledge base curriculum from which they may further pursue their allied health professional goals. Successful completion of the degree, would allow the student to be a competitive candidate in various allied health programs.

This program is intended for most students intending to pursue studies in the following areas:

- Nursing (Bachelor of Science in Nursing - BSN)
- Pre-Occupational Therapy
- Pre-Physician Assistant
- Pre-Physical Therapy
- Pre-Clinical Lab
- And similar allied health programs

Admissions Requirements

Students wishing to pursue studies in doctoral preparation programs should follow the A.S. Health Profession – Pre-Medical degree plan.

COURSE NAME		CREDIT HOURS
Semester 1		
ENGL 1301	Composition I	3
BIOL 1306	Biology for Science Majors I (Lecture)	3
BIOL 1106	Biology for Science Majors I (Lab)	1
HIST 1301	U. S. History I (to 1877)	3
SPCH	Approved Speech Course (SPCH 1311 or SPCH 1315 or SPCH 1318 or SPCH 1321 or SPCH 2333)	3
EDUC 1100	Frameworks Course (or PSYC 1100)	1
	Total Hours	**14**
Semester 2		
ENGL 1302	Composition II	3
CHEM 1411	General Chemistry I	4
HIST 1302	U. S. History II (since 1877)	3
PSYC 2301	General Psychology	3
	Total Hours	**13**
Semester 3		
MATH 1314	College Algebra	3
	Approved Elective (BIOL 1307/1107 or BIOL 1411 or BIOL 1413 or BIOL 2301/2101 or BIOL 2302/2102 or BIOL 2421 or CHEM 1405 or CHEM 1407 or CHEM 1412 or CHEM 2423 or CHEM 2425 or COSC 1301 or ENGL 2314 or MATH 1342 or MATH 1348 or MATH 2312 or MATH 2413 or MATH 2414 or MATH 2342 or PHYS 1401 or PHYS 1402 or PHYS 2425 or PHYS 2426 or PSYC 2314 or SOCI 1301)	4
	Approved Elective (BIOL 1407 or BIOL 1411 or BIOL 1413 or BIOL 2401 or BIOL 2402 or BIOL 2421 or CHEM 1405 or CHEM 1407 or CHEM 1412 or CHEM 2423 or CHEM 2425 or COSC 1301 or ENGL 2314 or MATH 1342 or MATH 1348 or MATH 2312 or MATH 2413 or MATH 2414 or MATH 2342 or PHYS 1401 or PHYS 1402 or PHYS 2425 or PHYS 2426 or PSYC 2314 or SOCI 1301)	3
	Fine Arts Course (ARTS 1301 or ARTS 1303 or ARTS 1304 or MUSI 1306)	3
	Total Hours	**13**
Semester 4		
	Humanities Course (ENGL 2321 or ENGL 2326 or ENGL 2331 or SPAN 2323 or SPAN 2324)	3
GOVT 2301	American Government I	3
	Approved Elective (BIOL 1307/1107 or BIOL 1411 or BIOL 1413 or BIOL 2301/2101 or BIOL 2302/2102 or BIOL 2421 or CHEM 1405 or CHEM 1407 or CHEM 1412 or CHEM 2423 or CHEM 2425 or COSC 1301 or ENGL 2314 or MATH 1342 or MATH 1348 or MATH 2312 or MATH 2413 or MATH 2414 or MATH 2342 or PHYS 1401 or PHYS 1412 or PHYS 2425 or PHYS 2426 or PSYC 2314 or SOCI 1301	4
SPAN 1311	Beginning Spanish I (or SPAN 1411)	3
	Total Hours	**13**
Semester 5		
GOVT 2302	American Government II	3
SPAN 1312	Beginning Spanish II (or SPAN 1412)	3
	Humanities Course (ANTH 2346 or ENGL 2321 or ENGL 2326 or ENGL 2331 or PHIL 1301 or PHIL 1304 or PHIL 2306 or SOCI 2319* or SPAN 2323 or SPAN 2324)	3
	Approved Elective (BIOL 1407 or BIOL 1411 or BIOL 1413 or BIOL 2401 or BIOL 2402 or BIOL 2421 or CHEM 1405 or CHEM 1407 or CHEM 1412 or CHEM 2423 or CHEM 2425 or COSC 1301 or ENGL 2314 or MATH 1342 or MATH 1348 or MATH 2312 or MATH 2413 or MATH 2414 or MATH 2342 or PHYS 1401 or PHYS 1402 or PHYS 2425 or PHYS 2426 or PSYC 2314 or SOCI 1301)	4
	Total Hours	**13**
	GRAND TOTAL	**66**

** SOCI 2319 (Minority Studies) may count either as a Social/Behavioral Science class or a Humanities class, but it cannot count for both groups*

Biology

The Associate of Science (A.S.) Degree in Biology is intended for students who require an immediate professional degree in biology or who wish to transfer to a four-year institution and major in a biological science. A vast diversity of educational and employment opportunities exist in the area of the biological sciences. Biologists can pursue careers in teaching, conduct research related to disease, or work for government agencies like the Department of Agriculture, Fish and Wildlife Service, or the National Park Service.

COURSE NAME		CREDIT HOURS
Semester 1		
ENGL 1301	Composition I	3
BIOL 1306	Biology for Science Majors I	4
HIST 1301	U. S. History II (since 1877)	3
SPCH	Approved Speech Course (SPCH 1311 or SPCH 1315 or SPCH 1318 or SPCH 1321 or SPCH 2333)	3
EDUC 1100	Frameworks Course (or PSYC 1100)	1
	Subtotal	**14**
Semester 2		
ENGL 1302	Composition II	3
BIOL 1306	Biology for Science Majors I (Lecture)	3
BIOL 1106	Biology for Science Majors I (Lab)	1
HIST 1302	U. S. History II (since 1877)	3
	Social/Behavioral Course (ECON 2301 or PSYC 2301 or PSYC 2314 or SOCI 1301 or SOCI 1306 or SOCI 2319*)	3
	Total Hours	**13**
Semester 3		
MATH 1314	College Algebra	3
	Approved Elective (BIOL 1411 or BIOL 1413 or BIOL 2306 or BIOL 2416 or BIOL 2401 or BIOL 2421 or BIOL 2428)	4
	Humanities Course (ENGL 2321 or ENGL 2326 or ENGL 2331 or SPAN 2323 or SPAN 2324)	3
	Fine Arts Course (ARTS 1301 or ARTS 1303 or ARTS 1304 or MUSI 1306)	3
	Total Hours	**13**
Semester 4		
CHEM 1411	General Chemistry I	4
GOVT 2301	American Government I	3
	Humanities Course (ANTH 2346 or ENGL 2321 or ENGL 2326 or ENGL 2331 or PHIL 1301 or PHIL 1304 or PHIL 2306 or SOCI 2319* or SPAN 2323 or SPAN 2324	3
SPAN 1311	Beginning Spanish I (or SPAN 1411)	3
	Total Hours	**13**
Semester 5		
CHEM 1412	General Chemistry II	4
GOVT 2302	American Government II	3
SPAN 1312	Beginning Spanish II (or SPAN 1412)	3
	Total Hours	**10**
	GRAND TOTAL	**63**

** SOCI 2319 (Minority Studies) may count either as a Social/Behavioral Science class or a Humanities class, but it cannot count for both groups*

Computer Science

The Associate of Science (A.S.) degree in Computer Science is intended for students planning to transfer to a college or university in order to obtain a bachelor's degree in Computer Science. Students enrolled in this degree plan are prepared with fundamental principles of Computer Science. Courses offered cover theoretical concepts and essential programming skills. Software development procedures are implemented throughout the courses so students develop the necessary skill of a professional programmer. Study of computer organization and assembly language are also included as part of the curriculum.

Admissions Requirements

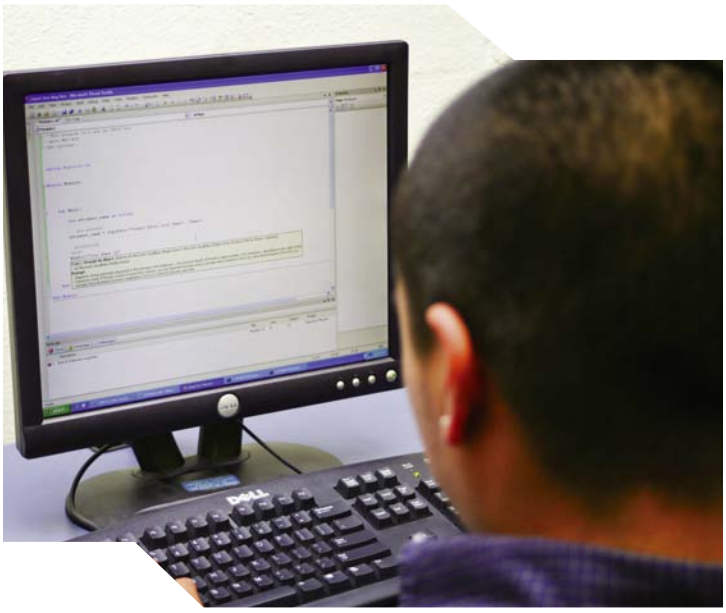
Students must show an ability to benefit in order to enter into the A.S. Computer Science program. Students may take all courses in the degree plan for which they meet course prerequisites without being admitted into the program. However, the following requirements must be met in order to be admitted into the program.

Ability to benefit prerequisites to admission into the program

- Grade of C or better in Trigonometry (MATH 1316) or Pre-Calculus (MATH 2312) or equivalent, and
- Grade of C or better in all developmental courses or equivalent (TSI complete)

COURSE NAME		CREDIT HOURS
Semester 1		
HIST 1301	U. S. History I (to 1877)	3
ENGL 1301	Composition I	3
MATH 2413	Calculus I	4
	Fine Arts Course (ARTS 1301 or ARTS 1303 or ARTS 1304 or MUSI 1306)	3
EDUC 1100	Frameworks Course (or PSYC 1100)	1
	Total Hours	**14**
Semester 2		
COSC 1436	Programming Fundamentals I	4
ENGL 1302	Composition II	3
HIST 1302	U. S. History II (since 1877)	3
GOVT 2301	American Government I	3
	Total Hours	**13**
Semester 3		
COSC 1437	Programming Fundamentals II	4
SPAN 1311	Beginning Spanish I (or SPAN 1411)	3
GOVT 2302	American Government II	3
	Science Course (BIOL 1308 or BIOL 1309 or BIOL 1406 or BIOL 1407 or BIOL 1408 or BIOL 1409 or BIOL 2301 or BIOL 2302 or BIOL 2401 or BIOL 2402 or BIOL 2421 or CHEM 1405 or CHEM 1411 or PHYS 1401 or PHYS 24253)	3
	Total Hours	**13**
Semester 4		
SPAN 1312	Beginning Spanish II (or SPAN 1412)	3
	Humanities Course (ENGL 2321 or ENGL 2326 or ENGL 2331 or SPAN 2323 or SPAN 2324)	3
	Science Course (BIOL 1308 or BIOL 1309 or BIOL 1406 or BIOL 1407 or BIOL 1408 or BIOL 1409 or BIOL 2301 or BIOL 2302 or BIOL 2401 or BIOL 2402 or BIOL 2421 or CHEM 1405 or CHEM 1411 or CHEM 1412 or PHYS 1401 or PHYS 1402 or PHYS 2425 or PHYS 2426	3
	Approved Elective (ACCT 2401 or BCIS 1432 or BIOL 1406 or COSC 1315 or COSC 1319 or COSC 1420 or COSC 1430 or COSC 2430 or COSC 2417 or COSC 2418 or COSC 2425 or COSC 2330 or COSC 2436 or CHEM 1411 or MATH 1342 or MATH 1348 or MATH 2305 or MATH 2318 or MATH 2414 or MATH 2342 or PHIL 2303 or PHYS 2426)	3
	Total Hours	**12**
Semester 5		
	Social/Behavioral Course (ECON 2301 or PSYC 2301 or PSYC 2314 or SOCI 1301 or SOCI 1306 or SOCI 2319*)	3
SPCH	SPCH 1311 or SPCH 1315 or SPCH 1318 or SPCH 1321 or SPCH 2333)	3
	Humanities Course (ANTH 2346 or ENGL 2321 or ENGL 2326 or ENGL 2331 or PHIL 1301 or PHIL 1304 or PHIL 2306 or SOCI 2319 or SPAN 2323 or SPAN 2324)	3
	Approved Elective (ACCT 2401 or BCIS 1432 or BCIS 2432 or BIOL 1406 or BIOL 1407 or COSC 1315 or COSC 1319 or COSC 1420 or COSC 1430 or COSC 2430 or COSC 2417 or COSC 2418 or COSC 2425 or COSC 2330 or COSC 2436 or CHEM 1411 or CHEM 1412 or MATH 1342 or MATH 1348 or MATH 2305 or MATH 2318 or MATH 2414 or MATH 2342 or PHIL 2303 or PHYS 2426)	3
	Total Hours	**12**
	GRAND TOTAL	**64**

**SOCI 2319 (Minority Studies) may count either as a Social/Behavioral Science class or a Humanities class, but it cannot count for both groups*



Engineering

The Associate of Science (A.S.) degree in Engineering is intended for students planning to transfer to a college or university in order to obtain a bachelor's degree in engineering or a related area such as mathematics. Students in this area are preparing to complete their studies in any one of 200 types of engineering professions in six areas:

- Chemical
- Civil
- Electrical
- Management
- Science
- Mechanical

Admissions Requirements

Students must show an ability to benefit in order to be admitted into the A.S. Engineering program. Students may take all courses in this degree plan for which they meet course prerequisites without being admitted into the program.

Ability to benefit prerequisites to admission into the program

- Grade of C or better in Trigonometry (MATH 1316) or Pre-Calculus (MATH 2312) or equivalent, and
- Grade of C or better in (Frameworks) EDUC / PSYC 1100 or PSYT 1313 or HPRO 1311, and
- Be TSI complete

COURSE NAME		CREDIT HOURS
Semester 1		
ENGL 1301	Composition I	3
MATH 2413	Calculus I	4
CHEM 1311	General Chemistry I	3
CHEM 1111	General Chemistry I Lab	1
ENGR 1201	Introduction to Engineering	2
EDUC 1100	Frameworks Course (or PSYC 1100)	1
	Total Hours	**14**
Semester 2		
ENGR 1204	Engineering Graphics	2
ENGL 1302	Composition II	3
MATH 2414	Calculus II †	4
PHYS 2325	University Physics I	3
PHYS 2125	University Physics I Lab	1
	Total Hours	**13**
Semester 3		
ENGR 2304	Programming for Engineers	3
HIST 1301	U. S. History I	3
GOVT 2306	Texas Politics	3
	Fine Arts Course (ARTS 1301 or ARTS 1303 or ARTS 1304 or MUSI 1306)	3
	Total Hours	**12**
Semester 4		
ECON	Economics Course (ECON 2301 or ECON 2302)	3
ENGR 2301	Engineering Mechanics - Statics	3
MATH 2415	Caculus III	4
PHYS 2326	University Physics II	3
PHYS 2126	University Physics II Lab	1
	Total Hours	**14**
Semester 5		
ENGR 2305	Circuit Analysis I	3
ENGR 2105	Circuit Analysis I Lab	1
MATH 2320	Differential Equations	3
ENGR	Engineering Course	3
ENGL	English Course (ENGL 2331 or ENGL 2321)	
	Total Hours	**13**
	GRAND TOTAL	**65**

*** Required elective for all students.*

** SOCI 2319 (Minority Studies) may count either as a Social/Behavioral Science class or a Humanities class, but it cannot count for both groups*

† *Course expected to be taken by almost all Engineering majors.*

‡ *A student may take either or both MATH 2318 and 2320, or a student may take MATH 2321. MATH 2321 may not be combined for credit with either MATH 2318 or 2320.*

§ *A student may take either or both ENGR 2301 and 2302, or a student may take ENGR 2303. ENGR 2303 may not be combined for credit with either ENGR 2301 or 2302.*

Health Professions

The Associate of Science (A.S.) Degree in Health Professions will allow students to embark on their education for a future in a medical profession. An emphasis is placed on biology, chemistry, and physics to prepare students who intend on transferring to a four-year college or university and ultimately to medical school.

This program is intended for most students intending to pursue studies in the following areas:

- Pre-Medical
- Pre-Dental
- Pre-Pharmacy
- Pre-Optometry
- And other programs eventually leading to a doctoral degree in a medical field.

Students wishing to pursue studies in Nursing or Allied Health should follow the A.S. Health Profession – Allied Health and Nursing degree plan.

Admissions Requirements

Students must show an ability to benefit in order to be admitted into the A.S. Health Professions program. Students may take all courses in this degree plan for which they meet course prerequisites without being admitted into the program.

Ability to benefit prerequisites to admission into the program

- Grade of C or better in Trigonometry (MATH 1316) or Pre-Calculus (MATH 2312) or equivalent, and
- Grade of C or better in (Frameworks) EDUC / PSYC 1100 or PSYT 1313 or HPRO 1311, and
- Be TSI complete

COURSE NAME		CREDIT HOURS
Semester 1		
ENGL 1301	Composition I	3
BIOL 1306	Biology for Science Majors I (Lecture)	3
BIOL 1106	Biology for Science Majors I (Lab)	1
HIST 1301	U. S. History I (to 1877)	3
MATH 2413	Calculus I	4
	Total Hours	**14**
Semester 2		
ENGL 1302	Composition II	3
HIST 1302	U. S. History II (since 1877)	3
BIOL 1307	Biology for Science Majors II	4
PSYC 2301	General Psychology	3
	Total Hours	**13**
Semester 3		
	Humanities Course (ENGL 2321 or ENGL 2326 or ENGL 2331 or SPAN 2323 or SPAN 2324)	3
SPCH	Approved Speech Course (SPCH 1311 or SPCH 1315 or SPCH 1318 or SPCH 1321 or SPCH 2333)	3
	Humanities Course (ANTH 2346 or ENGL 2321 or ENGL 2326 or ENGL 2331 or PHIL 1301 or PHIL 1304 or PHIL 2306 or SOCI 2319* or SPAN 2323 or SPAN 2324	3
	Fine Arts Course (ARTS 1301 or ARTS 1303 or ARTS 1304 or MUSI 1306)	3
	Total Hours	**12**
Semester 4		
GOVT 2301	American Government I	3
SPAN 1311	Beginning Spanish I (or SPAN 1411)	3
	Approved Elective (BIOL 1411 or BIOL 1413 or BIOL 2301/2101 or BIOL 2302/2102 or BIOL 2416 or BIOL 2421 or CHEM 1411 or CHEM 1412 or CHEM 2423 or CHEM 2425 or ENGL 2314 or MATH 1342 or MATH 1348 or MATH 2414 or MATH 2342 or PHYS 1401 or PHYS 1402 or PHYS 2425 or PHYS 2426	4
	Approved Elective (BIOL 1411 or BIOL 1413 or BIOL 2301/2101 or BIOL 2302/2102 or BIOL 2416 or BIOL 2421 or CHEM 1411 or CHEM 1412 or CHEM 2423 or CHEM 2425 or ENGL 2314 or MATH 1342 or MATH 1348 or MATH 2414 or MATH 2342 or PHYS 1401 or PHYS 1402 or PHYS 2425 or PHYS 2426)	4
	Total Hours	**14**
Semester 5		
GOVT 2302	American Government II	3
SPAN 1312	Beginning Spanish II (or SPAN 1412)	3
	Approved Elective (CHEM 1412BIOL 1411 or BIOL 1413 or BIOL 2301/2101 or BIOL 2302/2102 or BIOL 2416 or BIOL 2421 or CHEM 1411 or CHEM 1412 or CHEM 2423 or CHEM 2425 or ENGL 2314 or MATH 1342 or MATH 1348 or MATH 2414 or MATH 2342 or PHYS 1401 or PHYS 1402 or PHYS 2425 or PHYS 2426)	4
	Approved Elective (BIOL 1411 or BIOL 1413 or BIOL 2301/2101 or BIOL 2302/2102 or BIOL 2416 or BIOL 2421 or CHEM 1411 or CHEM 1412 or CHEM 2423 or CHEM 2425 or ENGL 2314 or MATH 1342 or MATH 1348 or MATH 2414 or MATH 2342 or PHYS 1401 or PHYS 1402 or PHYS 2425 or PHYS 2426	3
	Total Hours	**13**
	GRAND TOTAL	**66**

** SOCI 2319 (Minority Studies) may count either as a Social/Behavioral Science class or a Humanities class, but it cannot count for both groups*

Mathematics

The Associate of Science (A.S.) degree in Mathematics is intended for students planning to transfer to a college or university in order to obtain a bachelor's degree in Mathematics or any related discipline, such as Physics, Computer Science, Geophysics, Economics, Business and a variety of engineering fields. Students will complete 48 hours of TSTC core requirement. In addition, they will be required to take 18 hours of upper level Mathematics courses for a total of 66 hours. Employment opportunities exist with the government and private industries. Students should consult with their receiving institution for maximum transferability of these courses.

Admissions Requirements

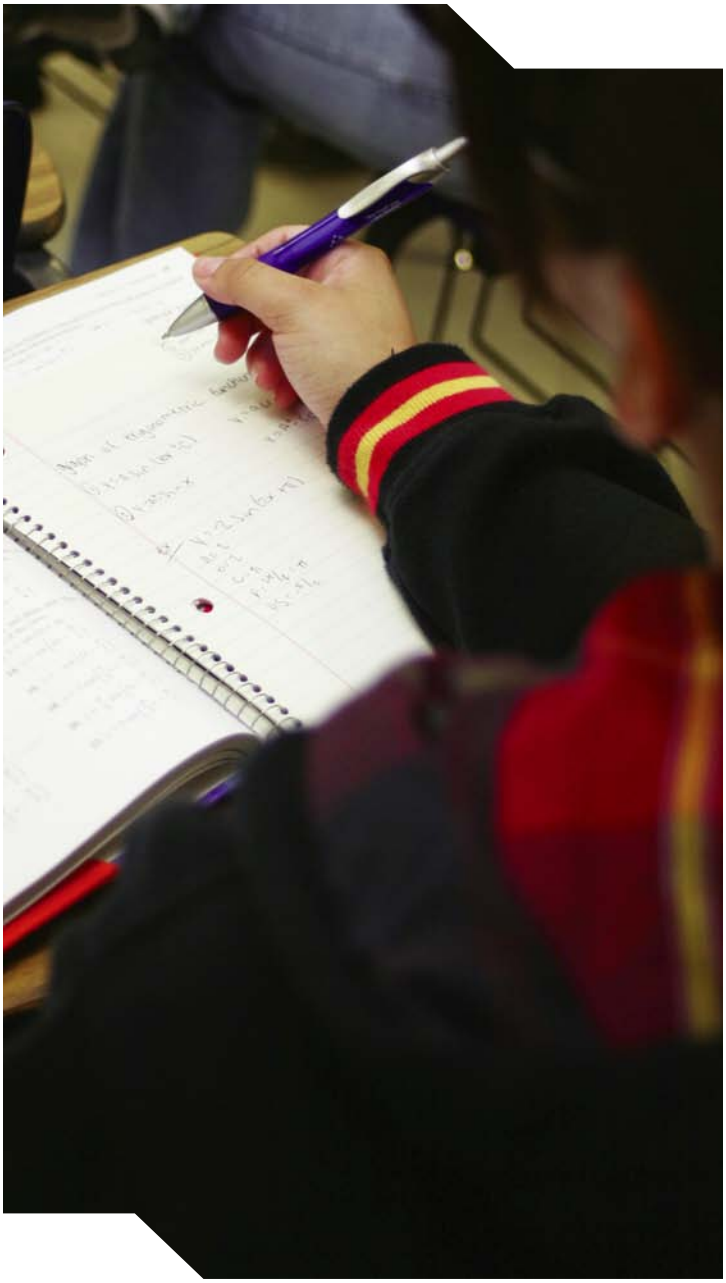
Students may take all courses in this degree plan for which they meet course prerequisites without being admitted into the program.

Prerequisites to admission into the program

- Grade of C or better in Trigonometry (MATH 1316) or Pre-Calculus (MATH 2312) or equivalent, and
- Be TSI complete

COURSE NAME		CREDIT HOURS
Semester 1		
MATH 2413	Calculus I	4
MATH 2318	Linear Algebra	3
ENGL 1301	Composition I	3
HIST 1301	U. S. History I	3
EDUC 1100	Frameworks Course (or PSYC 1100)	1
	Total Hours	**14**
Semester 2		
MATH 2414	Calculus II	4
PHYS 2325	Universitiy Physics I	3
PHYS 2125	Universitiy Physics I Lab	1
ENGL 1302	Composition II	3
HIST 1302	U. S. History II	3
	Total Hours	**14**
Semester 3		
GOVT 2301	American Government I	3
	Fine Arts Course (ARTS 1301 or ARTS 1303 or ARTS 1304 or MUSI 1306)	3
	Humanities Course (ENGL 2321 or ENGL 2326 or ENGL 2331 or SPAN 2323 or SPAN 2324)	3
	Social/Behavioral Course (ECON 2301 or PSYC 2301 or PSYC 2314 or SOCI 1301 or SOCI 1306 or SOCI 2319*)	3
	Total Hours	**12**
Semester 4		
MATH 2415	Calculus III	4
PHYS 2326	University Physics II	3
PHYS 2126	University Physics II Lab	1
GOVT 2302	American Government II	3
	Modern Language Course	3
	Total Hours	**14**
Semester 5		
MATH 2320	Differential Equations	3
SPCH	Approved Speech Course (SPCH 1311 or SPCH 1315 or SPCH 1318 or SPCH 1321 or SPCH 2333)	3
	Modern Language Course	3
	Humanities Course (ANTH 2346 or ENGL 2321 or ENGL 2326 or ENGL 2331 or PHIL 1301 or PHIL 1304 or PHIL 2306 or SOCI 2319* or SPAN 2323 or SPAN 2324)	3
	Total Hours	**12**
	GRAND TOTAL	**66**

*** SOCI 2319 (Minority Studies) may count either as a Social/Behavioral Science class or a Humanities class, but it cannot count for both groups*



Physics

The Associate of Science (A.S.) degree in Physics is intended for students planning to transfer to a college or university in order to obtain a bachelor's degree in Physics or a Physics related disciple, such as Astronomy, Geophysics, or any engineering field. Students will complete 48 hours of core requirement. In addition, they will be required to take 12 hours of upper level Mathematics and 8 hours of Physics courses for a total of 68 hours. For Physics graduates the employment opportunities exist in semi conductors, information technology, Aviation and other applied sciences. Students should consult with their receiving institutions for maximum transferability of these courses.

Admissions Requirements

Students may take all courses in this degree plan for which they meet course prerequisites without being admitted into the program.

Prerequisites to admission into the program

- Grade of C or better in Trigonometry (MATH 1316) or Pre-Calculus (MATH 2312) or equivalent, and
- Grade of C or better in all developmental courses or equivalent (TSI complete)

COURSE NAME		CREDIT HOURS
Semester 1		
MATH 2413	Calculus I	4
	Humanities Course (ENGL 2321 or ENGL 2326 or ENGL 2331 or SPAN 2323 or SPAN 2324)	3
ENGL 1301	Composition I	3
HIST 1301	U. S. History I	3
EDUC 1100	Frameworks Course (or PSYC 1100)	1
	Subtotal	**14**
Semester 2		
MATH 2414	Calculus II	4
PHYS 2325	University Physics I	3
PHYS 2125	University Physics I Lab	1
ENGL 1302	Composition II	3
HIST 1302	U. S. History II	3
	Total Hours	**14**
Semester 3		
GOVT 2301	American Government I	3
	Fine Arts Course (ARTS 1301 or ARTS 1303 or ARTS 1304 or MUSI 1306)PHYS 2426	3
	Humanities Course (ENGL 2321 or ENGL 2326 or ENGL 2331 or SPAN 2323 or SPAN 2324)	3
	Social/Behavioral Course (ECON 2301 or PSYC 2301 or PSYC 2314 or SOCI 1301 or SOCI 1306 or SOCI 2319*)	3
	Total Hours	**12**
Semester 4		
PHYS 2326	University Physics II	3
PHYS 2126	University Physics II Lab	1
CHEM 1311	General Chemistry I	3
CHEM 1111	General Chemistry I Lab	1
GOVT 2302	American Government II	3
	Modern Language Course	3
	Total Hours	**14**
Semester 5		
CHEM 1312	General Chemistry II	3
CHEM 1112	General Chemistry II Lab	1
SPCH	Approved Speech Course (SPCH 1311 or SPCH 1315 or SPCH 1318 or SPCH 1321 or SPCH 2333)	3
	Modern Language Course	3
	Total Hours	**10**
	GRAND TOTAL	**64**

** SOCI 2319 (Minority Studies) may count either as a Social/Behavioral Science class or a Humanities class, but it cannot count for both groups.*

Certificate of Completion Programs

General Information

Skill development programs offered at TSTC award certificates of completion. These programs are designed to teach students specific skills needed for entry-level jobs. This is accomplished through specialized training in the particular technical areas.

Generally, three-fourths of the courses are in the student's major program of study, with the remainder in general education and support courses. The majority of the student's class time is spent in the laboratory or field, applying the skills he or she has learned in class. This emphasis on hands-on experience is the major strength of TSTC's skill development programs.

General Requirements

The following information is an outline of requirements for the certificate of completion, including requirements listed under the Admissions and Records and Scholastic Regulations sections of this catalog.

1. Completion of admission requirements.
2. Completion of curriculum requirements.
   a. Students must complete the minimum credit hours as specified for the program of study.
   b. The curriculum will generally include general education and support courses.
3. Meet all scholastic guidelines and specific program requirements. Additional information is included in the Scholastic Regulation section of this catalog. Some programs have specific requirements. More information is listed in the respective program of study description.
4. Discharge of all financial obligations to TSTC.
5. Completion of an Application for Graduation and payment of graduation fees.

Notes:_____

Student Success

TSTC Harlingen, given the parameters of our resources, is committed to providing students with opportunities to assist them in achieving their personal-social, educational and career goals. To this end, the Student Success Office exists to enhance the probability of students successfully completing their goals. This is accomplished by collaborating with other departments to identify impediments, recommend specific programs and services, refer students to established offices and evaluate the college's retention efforts. The primary responsibilities of this office include:

- Recognition of students achieving academic excellence through the President's and Vice President's Honor Rolls.
- Development and implementation of a student success course (HRPO 1311)
- Development and implementation of supplemental instruction programs and traditional, as well as on-line, tutorial resources.
- Development and implementation of a peer-mentoring program.
- Development and implementation of a strategic learning/mentoring program for students on academic and financial aid suspension.
- Development and implementation of a learning strategies program, which include sessions on multiple intelligence, learning styles, time management, essentials of note-taking, techniques for reading textbooks, critical thinking, and other resources for classroom success.
- Development and implementation of career exploration program for non-technical program students
- Coordination of Learning Communities.
- Seminars and workshops on faculty development for student success.
- Monitoring the college's retention goals.

Student Success Course (HRPO 1311)

The student success course (HRPO 1311 - Human Relations) was instituted in all technical program degree plans because of the success similar courses have had in assisting students to persist and complete their programs in a timely manner. The course addresses two major themes of student development. The first is the ability for students to adjust to college life and, thus, equip them with knowledge and skills for continued life-long learning. The second is the importance of students to apply and learn the appropriate computer skills to demonstrate how life-long learning is an ongoing part of one's development, especially in this rapidly changing technology and information age.

Since TSTC's mission is directed toward providing the state of Texas with a competent workforce in the varied areas of traditional and emerging technologies, an introduction to the benefits of technical education is an underlying assumption of the HRPO 1311 course. In keeping with the college's mission, HRPO 1311 is already available to technical program students as a result of their degree plan requirements. In addition, to extend the college's commitment to promoting the benefits of technical education to students and assisting with successful completion of student goals, those students seeking transfer to another college, or who are undecided, and registered for at least one developmental studies course because of non-completion of the Texas State Initiative (TSI) will be required to take the HRPO 1311 course preferably in their first semester of enrollment. Non-technical program students (see note below) may be exempt from HRPO 1311 for any one of the following reasons:

- Student is enrolled for 6 or less college credit hours.
- Student is classified as a non-degree/certificate student.

Transfer credit may be given for HRPO 1311 if the submitted course(s) meet the course description listed under Behavioral/Social Sciences.

Note: Non-technical program students who later declare a technical program will be required to take HRPO 1311.

Notes:

Agricultural Operations

The successful farmer will continue to be a key person in the U.S. economy, with the advantages of outdoor living and working independently that few people are privileged to enjoy. The agriculture industry needs trained workers in its many areas, such as farms, ranches, feed services, and government agencies. Employees must have proper training in order to assist in the various aspects of a successful operation.

In this program, students will learn to:

- Operate farm equipment
- Process and handle livestock using up-to-date equipment and livestock holding facilities
- Plant, cultivate and harvest crops, such as cotton, grain, corn and vegetables

Admissions Requirements

Students must complete the admissions requirements listed under "Admissions Information."

Notes:_____

COURSE NAME		CREDIT HOURS
Semester 1		
AGAH 1401	Animal Science †	4
AGMG 1300	Agricultural Policies, Safety & Codes †	3
AGCR 1341	Forage and Pasture Management	3
HRPO 1311	Human Relations †	3
	Total Hours	**13**
Semester 2		
AGAH 1347	Animal Reproduction	3
AGAH 2413	Principles of Feeds & Feeding	4
AGCR 1403	Crop Science	4
POFT 1301	Business English (or ENGL 1301) †	3
	Total Hours	**14**
Semester 3		
AGCR 2305	Entomology	3
AGCR 2313	Soil & Water Conservation Management	3
AGMG 1318	Introduction to Agricultural Economics	3
BIOL 1406	General Biology I †*	4
	Total Hours	**13**
AGRICULTURAL OPERATIONS CERTIFICATE		**40**

° This course is designated as the capstone course
† Courses Articulated with High School
*** AGMG 2382 or AGMG 2682 (Co-op) may be taken in place of AGMG 1318*
**BIOL 1306 and BIOL 1106 may be taken in place of BIOL 1406*

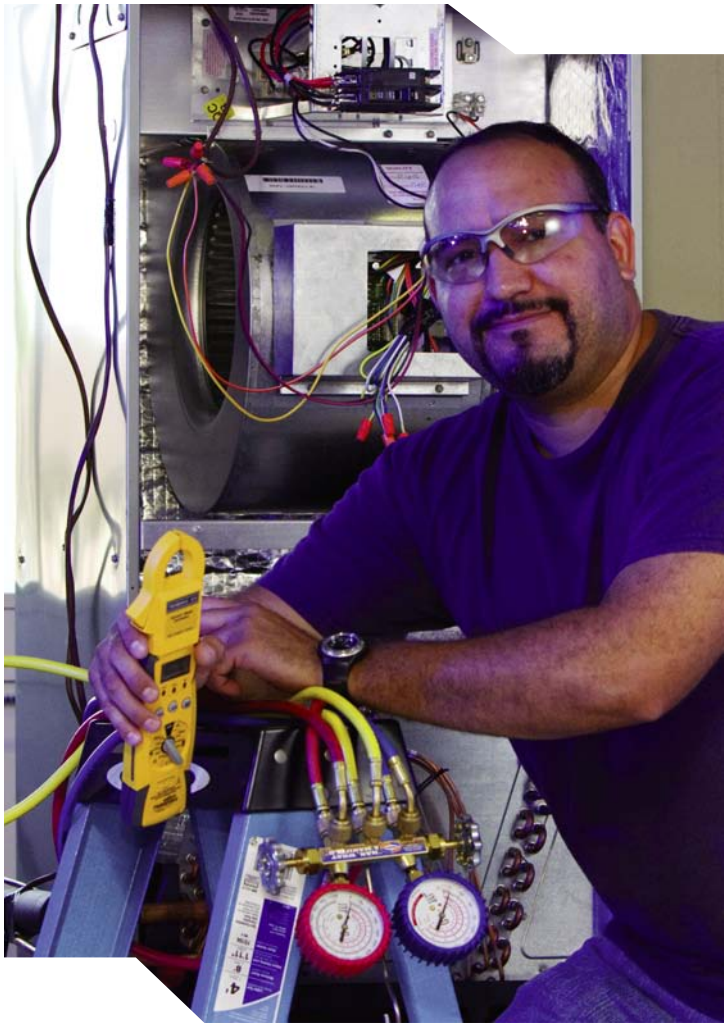
Air Conditioning & Refrigeration

Employment in the field of air conditioning and refrigeration technology is expected to increase as more homes and commercial and industrial facilities are built. Installations of energy-saving heating and air conditioning systems in older homes and buildings will also contribute to an increase in employment. This field offers a wide variety of career opportunities dealing with the technology of refrigeration, air conditioning and heating techniques in homes, work environment, transportation, food preservation and health.

Admissions Requirements:

In addition to admissions requirements listed under "Admissions Information," it is recommended that the student have completed two units of high school math and one unit of high school science, preferably physics or chemistry.

Students successfully completing the course(s) of study of the Air Conditioning and Refrigeration Technology program are eligible to take the EPA 410 Refrigerant certification examination administered by the Environmental Protection Agency.



COURSE NAME		CREDIT HOURS
Semester 1		
HART 1310	HVAC Shop Practices and Tools	3
HART 1401	Basic Electricity for HVAC †	4
HART 1407	Refrigeration Principles †	4
HRPO 1311	Human Relations †	3
	Total Hours	**14**
Semester 2		
HART 1300	HVAC Duct Fabrication	3
HART 1441	Residential Air Conditioning	4
MAIR 1449	Refrigerators, Freezers, Window Air Conditioners	4
POFT 1301	Business English †	3
	Total Hours	**14**
Semester 3		
DFTG 1313	Drafting for Specific Occupations	3
HART 1403	Air Conditioning Control Principles	4
HART 2442	Commercial Refrigeration	4
TECM 1303	Technical Calculations †	3
	Total Hours	**14**
Exit Point: REFRIGERATION MECHANIC CERTIFICATE		**42**

º This course is designated as the capstone course.
† High School Articulated Courses.
‡ Courses with external experience.

Notes:_____

Auto Collision Technology

As the number of motor vehicles in operation increases with the population, so will the number of cars damaged in accidents. This in combination with new, lighter weight automotive designs which are prone to greater collision damage than older, heavier designs should continue to create a need for trained auto body repair personnel. These repair personnel must have a broad knowledge of auto construction and repair techniques using a wide variety of tools and machines

In this program, students will learn to:

- Perform major collision repairs
- Applications of top coats
- Repair plastic and fiberglass
- Apply learned skills in the laboratory

All Auto Body Repair students are required to take a comprehensive departmental exam during the last semester of instruction.

Admissions Requirements:

Students must complete the admissions requirements as listed under "Admissions Information."

COURSE NAME		CREDIT HOURS
CERTIFICATE I		
Semester 1		
ABDR 1331	Basic Refinishing †	3
ABDR 1349	Automotive Plastic & Sheet Molded Compound Repair	3
ABDR 1419	Basic Metal Repair †	4
HRPO 1311	Human Relations †	3
	Total Hours	**13**
Semester 2		
ABDR 1207	Auto Body Welding	2
ABDR 1458	Intermediate Refinishing	4
ABDR 2449	Advanced Refinishing	4
TECM 1301	Industrial Mathematics (or MATH 1332/MATH1314) †	3
	Total Hours	**13**
Semester 3		
ABDR 1311	Vehicle Measurement & Damage Repair Procedures º **	3
ABDR 1441	Structural Analysis & Damage Repair I	4
ABDR 2353	Color Analysis & Paint Matching	3
ABDR 2451	Specialized Refinishing Techniques	4
	Total Hours	**14**
	GRAND TOTAL	**40**
AUTO BODY REPAIR CERTIFICATE		

CERTIFICATE II		
Semester 1		
ABDR 1331	Basic Refinishing †	3
ABDR 1349	Automotive Plastic & Sheet Molded Compound Repair	3
ABDR 1419	Basic Metal Repair †	4
HRPO 1311	Human Relations †	3
	Total Hours	**13**
Semester 2		
ABDR 1207	Auto Body Welding	2
ABDR 1458	Intermediate Refinishing	4
ABDR 2449	Advanced Refinishing	4
TECM 1301	Industrial Mathematics (or MATH 1332/MATH1314) †	3
	Total Hours	**13**
Semester 3		
ABDR 1311	Vehicle Measurement & Damage Repair Procedures	3
ABDR 1441	Structural Analysis & Damage Repair I	4
ABDR 2353	Color Analysis & Paint Matching	3
ABDR 2451	Specialized Refinishing Techniques	4
POFT 1301	Business English (or ENGL 1301) †	3
	Total Hours	**17**
Semester 4		
ABDR 1442	Structural Analysis & Damage Repair II	4
ABDR 1455	Minor Metal Repair ‡	4
ABDR 2345	Vehicle Safety Systems	3
ABDR 2370	Collision Damage Analysis & Reporting Systems º **	3
	Total Hours	**14**
	GRAND TOTAL	**57**
AUTO COLLISION TECHNICIAN CERTIFICATE		

º This course has been designated as a capstone experience
† High School Articulated Courses
‡ Course with external learning experience
*** ABDR 2380 or ABDR 2680 (Co-op ‡) may be taken in place of the capstone cours*

Automotive Technician

Job opportunities in the automotive industry are expected to be plentiful for those who complete training programs in technical schools. The increasing use of electronics in an expanding variety of automotive components requires students in this program to master a wide scope of repairs and adjustments. Today's technician must be ready to handle a more diversified range of repairs.

In this program, students will learn to:

- Diagnose and repair problems in all systems of the automobile
- Apply skills in the laboratory using up-to-date automotive equipment
- The Automotive Technician Program is NATEF certified.

Admissions Requirements:

Students must complete the admissions requirements listed under "Admissions Information."

COURSE NAME		CREDIT HOURS
Semester 1		
AUMT 1201	Introduction & Theory of Automotive Technology †	2
AUMT 1407	Automotive Electrical Systems †	4
AUMT 1416	Automotive Suspension & Steering Systems †	4
HRPO 1311	Human Relations (or PSYC 2301) †	3
	Total Hours	**13**
Semester 2		
AUMT 1410	Automotive Brake Systems †	4
POFT 1301	Business English (or ENGL 1301) †	3
AUMT 1445	Automotive Heating & Air Conditioning	4
TECM 1301	Industrial Mathematics (or MATH 1314/MATH 1332) †	3
	Total Hours	**14**
Semester 3		
AUMT 2417	Automotive Engine Performance Analysis I †	4
AUMT 2421	Automotive Electrical Lighting & Accessories	4
AUMT 1419	Automotive Engine Repair †	4
	Total Hours	**12**
Exit Point: AUTOMOTIVE MECHANIC		**39**
Semester 4		
AUMT 2270	Automotive Technician Certification Standards °	2
AUMT 2413	Automotive Drive Train & Axles	4
AUMT 2425	Automotive Automatic Transmission & Transaxle	4
AUMT 2434	Automotive Engine Performance Analysis II	4
	Approved Elective ** †	2
	Total Hours	**16**
Exit Point: AUTOMOTIVE TECHNICIAN		**55**

° This course has been designated as a capstone course
† High school articulated courses
*** Approved Electives: AUMT 1380, AUMT 1381, AUMT 2301, AUMT 2680*

Notes:

Automotive Technician
Ford Maintenance & Light Repair Specialty Certificate

In the Ford Maintenance and Light Repair program, students will learn the skills required to perform regular maintenance, light repairs and parts installation on all types of Ford, Lincoln and Mercury automobiles and light trucks.

Successful students in this program will achieve Ford Motor Company and Light Repair certification, which includes:

- Electrical systems
- Brakes
- Climate control
- Steering and suspension alignment

This 12-month program was initiated by Ford Motor Company and its dealers to address the national shortage of trained dealer technicians industry-wide. Dealers in partnership with this program offer co-op opportunities and full-time employment opportunities upon completion.

Admissions Requirements:
Students must complete the admissions requirements listed under "Admissions Information."

Notes:_____

COURSE NAME		CREDIT HOURS
Semester 1		
AUMT 1201	Introduction and Theory of Automotive Technology †	2
AUMT 1407	Automotive Electrical Systems †	4
AUMT 1416	Automotive Suspension & Steering Systems †	4
HRPO 1311	Human Relations (or PSYC 2301) †	3
	Total Hours	**13**
Semester 2		
AUMT 1410	Automotive Brake Systems †	4
AUMT 1445	Automotive Heating and Air Conditioning	4
POFT 1301	Business English (or ENGL 1301) †	3
TECM 1301	Industrial Mathematics (or MATH 1314/MATH 1332) †	3
	Total Hours	**14**
Semester 3		
AUMT 2680	Cooperative Education - Automotive Technician º ‡	6
	Total Hours	**6**
	GRAND TOTAL	**33**

º This course has been designated as a capstone course
† High school articulated course
‡ Courses with external experience

Aviation Maintenance Technology
Airframe Option

Aviation maintenance technicians are a vital part of the aerospace industry workforce, inspecting, servicing and maintaining aircraft worldwide. This Airframe specialty certificate trains students specifically in major airframe components and structures such as, hydraulics/pneumatics, landing gear systems, sheet metal, and composite technology.

Upon completion of the Airframe certificate, students are eligible to take the Federal Aviation Administration Airframe licensing examinations.

Airframe technicians are employed by repair stations, contract maintenance facilities, general aviation maintenance and regional and national airlines.

Admissions Requirements:
Students must complete admissions requirements listed under "Admissions Information."

Notes:_____

COURSE NAME		CREDIT HOURS
Semester 1		
AERM 1203	Shop Practices †	2
AERM 1205	Weight & Balance †	2
AERM 1208	Federal Aviation Regulations	2
AERM 1210	Ground Operations †	2
AERM 1314	Basic Electricity †	3
AERM 1315	Aviation Science †	3
	Total Hours	**14**
Semester 2		
AERM 1241	Wood, Fabric and Finishes †	2
AERM 1243	Instruments & Navigation/ Communication	2
AERM 1247	Airframe Auxiliary Systems	2
AERM 1253	Aircraft Welding	2
AERM 1254	Aircraft Composites †	2
AERM 1345	Airframe Electrical Systems	3
	Total Hours	**13**
Semester 3		
AERM 1349	Hydraulic, Pneumatic & Fuel Systems	3
AERM 1350	Landing Gear Systems	3
AERM 1352	Aircraft Sheet Metal †	3
AERM 2231	Airframe Inspection º	2
AERM 2233	Assembly & Rigging	2
	Total Hours	**13**
	GRAND TOTAL	**40**

º This course has been designated as a capstone experience.

† Courses articulated with high schools

*** AERM 2380, AERM 2381 or AERM 2680, Co-op, may be taken as an additional course to enhance the overall objectives of the program.*

Aviation Maintenance Technology
Powerplant Option

Aviation maintenance technicians are a vital part of the aerospace industry workforce, inspecting, servicing and maintaining aircraft worldwide. Engine maintenance facilities, contract maintenance, general aviation operators, and regional and national airlines employ technicians specializing in powerplant accessories, components and reciprocating and turbine engine technology.

Upon completion of this Powerplant specialty curriculum, students are eligible to take the Federal Aviation Administration Powerplant licensing examinations.

Admissions Requirements:
Students must complete admissions requirements listed under "Admissions Information."

Notes:_____

COURSE NAME		CREDIT HOURS
Semester 1		
AERM 1203	Shop Practices †	2
AERM 1205	Weight & Balance †	2
AERM 1208	Federal Aviation Regulations	2
AERM 1210	Ground Operations †	2
AERM 1314	Basic Electricity	3
AERM 1315	Aviation Science †	3
	Total Hours	**14**
Semester 2		
AERM 1240	Aircraft Propellers †	2
AERM 1357	Fuel Metering & Induction Systems	3
AERM 1456	Aircraft Powerplant Electrical	4
AERM 2341	Power Plant & Auxiliary Power Units	3
	Total Hours	**12**
Semester 3		
AERM 1344	Aircraft Reciprocating Engines	3
AERM 1351	Aircraft Turbine Engine Theory	3
	Total Hours	**6**
Semester 4		
AERM 1351	Aircraft Turbine Engine Overhaul	3
AERM 2352	Aircraft Powerplant Inspection º	3
AERM 2447	Aircraft Reciprocating Engine Overhaul	4
	Total Hours	**10**
	GRAND TOTAL	**42**

º This course has been designated as a capstone experience.

*** AERM 2380, AERM 2381 or AERM 2680, Co-op, may be taken as an additional course to enhance the overall objectives of the program*

Building Construction Science

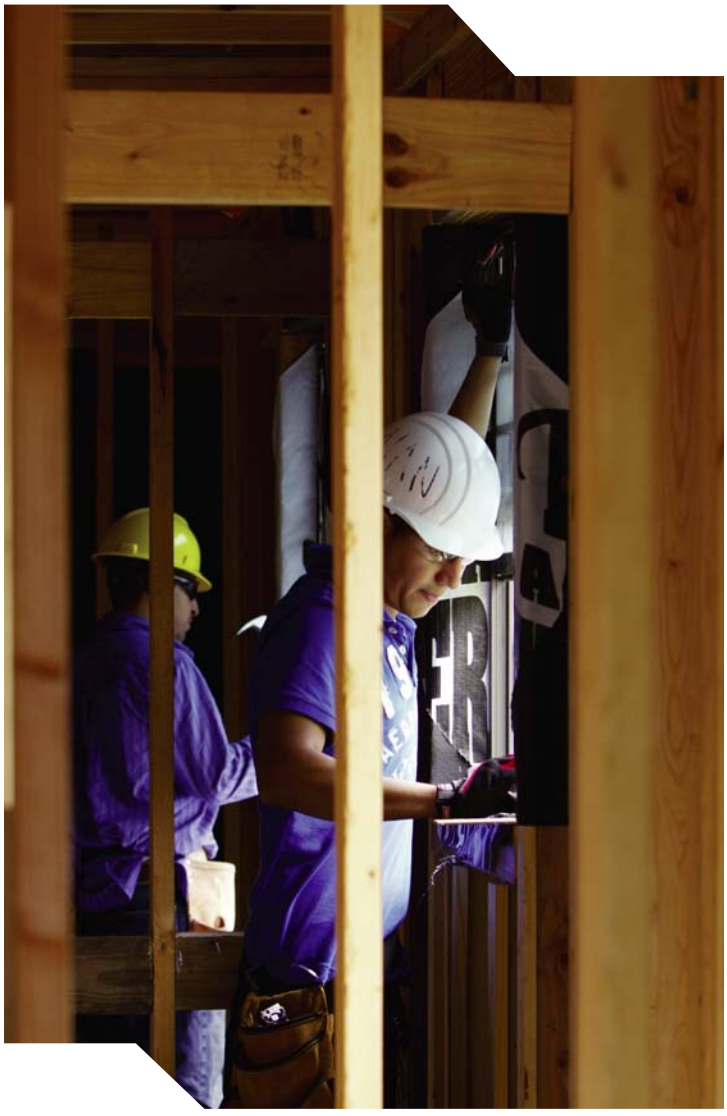
Anticipated growth in business investment for new factories, office buildings, stores, hotels, power plants and other structures should continue to stimulate the demand for workers in the building construction field. Maintenance and repair work on all types of structures will also contribute to this demand. Workers in this field build, repair and modernize all types of buildings, including homes, office and commercial structures.

In this program, students will learn to:

- Prepare building sites, construct foundations and finish structures, frame and finish various buildings systems
- Apply learned skills through construction of residential buildings

Admissions Requirements:

Students must complete the admissions requirements listed under "Admissions Information."



COURSE NAME		CREDIT HOURS
Semester 1		
CNBT 1416	Construction Technology I	4
CNBT 1300	Residential and Light Commercial Blueprint Reading	3
OSHT 1405	OSHA Regulations - Construction Industry	4
HRPO 1311	Human Relations †	3
	Total Hours	**14**
Semester 2		
CNBT 1449	Concrete - Commercial and Industrial	4
CRPT 1315	Conventional Wall Systems	3
CRPT 2339	Specialty Exterior Finish Systems †	3
TECM 1301	Industrial Mathematics †	3
	Total Hours	**13**
Semester 3		
CRPT 1341	Conventional Exterior Finish Systems ° **	3
CRPT 1345	Conventional Interior Finish Systems	3
CRPT 1411	Conventional Roof Systems	4
POFT 1301	Business English †	3
	Total Hours	**13**
BUILDING CONSTRUCTION CRAFTSMAN CERTIFICATE		**40**

° This course has been designated as a capstone course.
† High School Articulated Courses.
‡ Course with external experience.
*** CNBT 2380 or CNBT 2680 (Co-op) may be taken in place of CRPT 1341.*

Notes:_____

Business Management Technology
Office Assistant

Technology, information, and computers continue to impact the daily operations of businesses and emerging technologies. It is critical for companies to identify, process, and transmit information quickly and accurately if they are to keep pace with their competition.

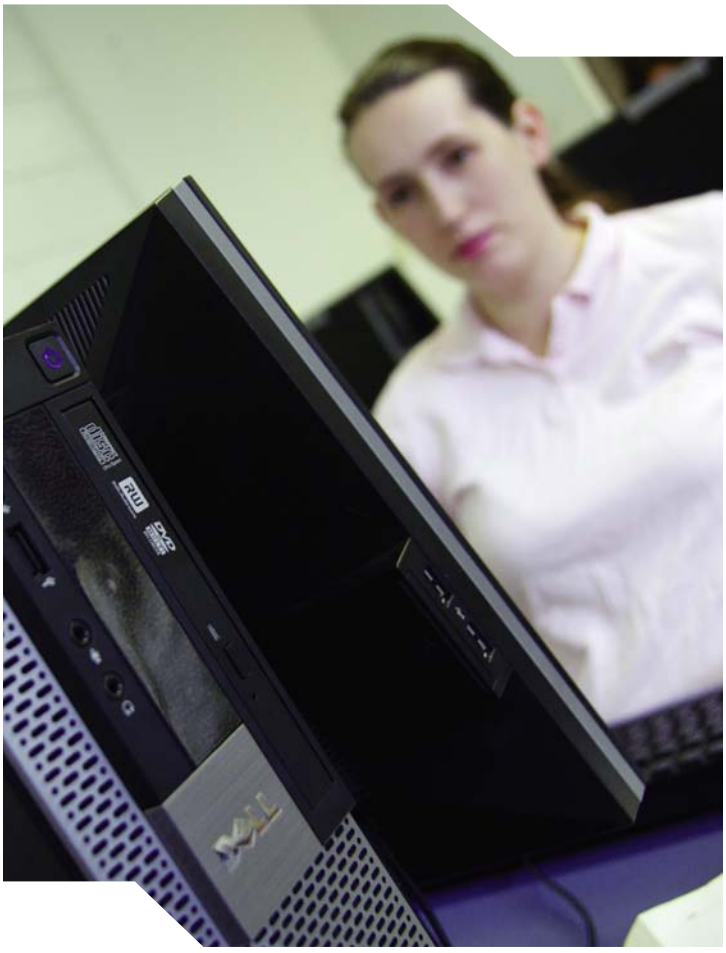
Office Assistant Specialists usually fill the role of a General Business Clerk. Their duties vary according to the place of employment, but they usually perform such tasks as keying information, inputting and extracting data in various forms, maintaining office records of accounts, and performing business transactions.

Admissions Requirements:
Students must complete the admissions requirements listed under "Admissions Information."

Notes:_____

COURSE NAME		CREDIT HOURS
Semester 1		
ACNT 1303	Introduction to Accounting I †	3
ITSC 1309	Integrated Software Applications I †	3
POFT 1329	Beginning Keyboarding	3
LAWT 1301	Copyright and Ethical Issues	3
HRPO 1311	Human Relations †	3
	Total Hours	**15**
Semester 2		
ACNT 1311	Introduction to Computerized Accounting	3
ITSC 2321	Integrated Software Applications II	3
POFT 1301	Business English	3
POFT 1319	Records and Information Management	3
POFT 1309	Administrative Office Procedures I	3
	Total Hours	**15**
Semester 3		
ITSW 1307	Introduction to Database	3
POFI 2331	Desktop Publishing †	3
POFT 1321	Business Math	3
MRKG 1301	Customer Relationship Management	3
	Total Hours	**12**
	GRAND TOTAL	**42**

† High School articulated courses.



Computer Networking and Security Technology
Network Technician

As the business world moves into the "information age," the combination of technology and information in modern businesses requires trained technicians to effectively utilize automated office technology and increase business productivity and profit. Students in this program will become involved with all facets of business computers. Emphasis will be place on installing and troubleshooting systems, training other employees on software, researching and recommending new equipment, networking and many other areas of business computer usage.

Course topics include:

- Installing and maintaining software programs
- Mainframe and microcomputer operating systems and communications
- Components and integration of automated work stations
- Training techniques; professional services
- Usage of software, including word processing, databases and spreadsheets
- Networking

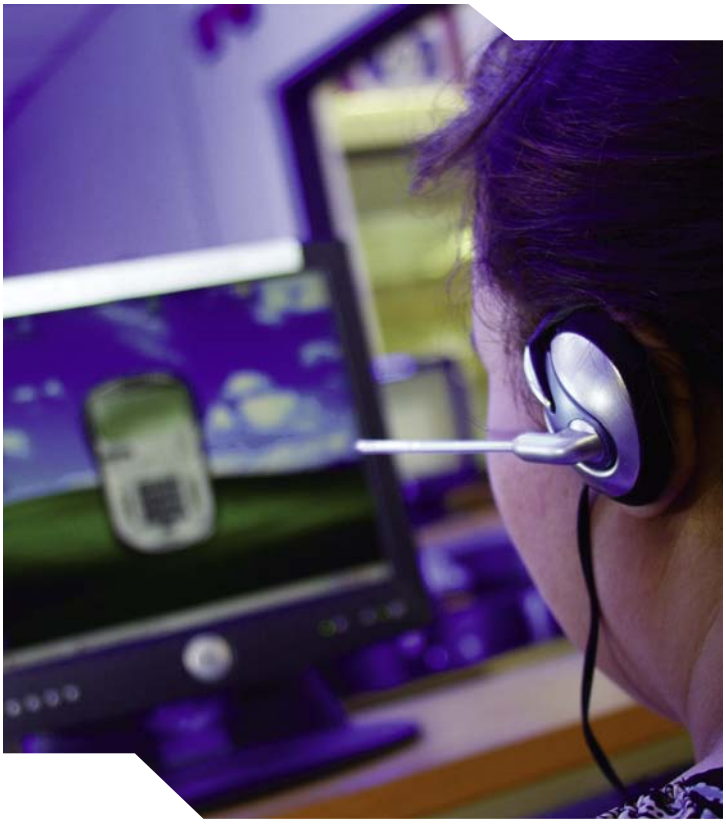
Admissions Requirements:

Students must complete the admissions requirements listed under "Admissions Information."

COURSE NAME		CREDIT HOURS
Semester 1		
CPMT 1303	Introduction to Computer Technology	3
ITNW 1325	Fundamentals of Networking Technologies †	3
ITNW 1354	Implementing & Supporting Servers	3
ITSC 1309	Integrated Software Applications I †	3
HRPO 1311	Human Relations †	3
	Total Hours	**15**
Semester 2		
CPMT 1304	Microcomputer System Software †	3
ITNW 2309	Network Administration for Intranet	3
ITNW 2321	Networking with TCP/IP E2	3
TECM 1303	Technical Calculations (or MATH 1314) †	3
ITSE 1331	Introduction to Visual Basic Programming (or ITNW 2305)	3
	Total Hours	**15**
Semester 3		
ITNW 2313	Networking Hardware	3
ITNW 2354	Internet/Intranet Server	3
ITSY 1342	Information Technology Security E1	3
POFT 1301	Business English (or ENGL 1301 †)	3
	Total Hours	**12**
	GRAND TOTAL	**42**

° This course is designated as a capstone course.
† Courses Articulated with High School.
‡ Course includes external experience.

Notes:_____



Computer Systems Management Technology
Computer Services Option

Computer Systems Management Technicians have a strong background in the diagnostics, repair and maintenance of computer and computer related equipment, which includes preventative maintenance, licensing renewals, upgrades, and recommendations for purchasing new computer systems; appropriate safety training, effective oral and written communication skills, effective teamwork experience; and proper record-keeping techniques.

Instruction within the program includes the skills and procedures necessary to:

- Understand hardware and software and
- Troubleshoot defective computer or computer related devices.

Admissions Requirements:

In addition to admissions requirements listed under "Admissions Information," completion of one unit of algebra is recommended.

COURSE NAME		CREDIT HOURS
Semester 1		
CPMT 1303	Introduction to Computer Technology †	3
TECM 1303	Technical Calculations (or MATH 1314) †	3
ITNW 1325	Fundamentals of Networking Technology	3
ITSC 1309	Integrated Software Applications †	3
HRPO 1311	Human Relations †	3
	Total Hours	**15**
Semester 2		
CPMT 1304	Microcomputer System Software †	3
CPMT 1307	Electronic and Computer Skills (or CETT 1307)	3
CPMT 1311	Introduction to Computer Maintenance †	3
GAME 1301	Computer Ethics	3
	Total Hours	**12**
Semester 3		
CPMT 1343	Microcomputer Architecture	3
CPMT 1345	Computer Systems Maintenance	3
CPMT 1347	Computer System Peripherals	3
ITSC 2339	Personal Computer Help Desk	3
ITSE 1331	Introduction to Visual BASIC Programming (or ITSC 1321)	3
	Total Hours	**15**
	GRAND TOTAL	**42**

º *This course has been designated as the capstone course.*
† *High school articulated course.*
‡ *Course with external experience.*

Notes:_____

Culinary Arts

Employment in the field of culinary arts is expected to increase rapidly due to population growth, higher family and personal incomes and more leisure time that will allow people to dine out more often. Professionals in this field must have a wide range of skill and expertise in preparing appetizing, appealing foods. This program emphasizes perfection of cooking techniques through specialized training in planning and preparation.

In this program, students will learn to:

- Follow recipes using standard weight and measures
- Prepare a wide variety of foods
- Maintain quality in all cookery
- Utilize industry-standard kitchen tools and equipment

Admissions Requirements:

Students must complete the admissions requirements listed under "Admissions Information."

Notes:_____

COURSE NAME		CREDIT HOURS
Semester 1		
CHEF 1205	Sanitation and Safety †	2
CHEF 1301	Basic Food Preparation †	3
IFWA 1205	Food Service Equipment & Planning	2
RSTO 1204	Dining Room Service	2
HRPO 1311	Human Relations †	3
	Total Hours	**12**
Semester 2		
CHEF 2301	Intermediate Food Preparation	3
FDNS 1305	Nutrition †	3
IFWA 1219	Meat Identifying & Processing	2
RSTO 2301	Principles of Food & Beverage Controls	3
POFT 1321	Business Math †	3
	Total Hours	**14**
Semester 3		
CHEF 1314	A la Carte Cooking º ‡	3
RSTO 1325	Purchasing for Hospitality Operations	3
PSTR 1401	Fundamentals of Baking	4
POFT 1301	Business English †	3
	Total Hours	**13**
Exit Point: FOOD SERVICE SPECIALIST		**39**

º This course has been designated as the capstone course.
† High School articulated course.
‡ Courses include external experience.

Dental Assistant

As the Rio Grande Valley continues to grow, the demand for health care services is growing just as rapidly. Dental health care is one area of health care that has grown the most, requiring increased utilization of dental assistants to keep up with the demand. A dental assistant performs a variety of chairside assisting duties and related office and laboratory procedures under the supervision of the dentist. The U.S. Department of Labor predicts a shortage of dental assistants through the year 2020.

This program is accredited by the American Dental Association which allows graduates to take the Dental Assisting National Board Examination to become certified dental assistants.

Admissions Requirements:

In addition to admissions requirements listed under "Admissions Information," applicants may be required to take the Health Occupations Basic Entrance Test if the number of candidates greatly exceeds the number of openings in the new class, in addition to an interview with the Department Chair of Dental Assistant. Students must complete the Dental Assistant Program Application two months prior to the enrollment date.

The Dental Assistant program follows the TSTC health professions program grading scale. The student must maintain a numerical average of 78 or better in each required major course to receive the Certificate of Completion.

Clinical Entry Requirements:

Before enrolling in clinical study, a student must have on file with the department the following materials:

1. Results of prescribed physical examination.
2. Proof of required immunizations.
3. Proof of liability insurance of at least $1 million, health and accident insurance and needlestick insurance (available through TSTC).

Notes:_____

COURSE NAME		CREDIT HOURS
Semester 1		
DNTA 1305	Dental Radiology I	3
DNTA 1315	Chairside Assisting	3
DNTA 1113	Emergency Management	1
DNTA 1251	Dental Office Management	2
HRPO 1311	Human Relations †	3
	Total Hours	**12**
Semester 2		
DNTA 1245	Preventive Dentistry	2
DNTA 1353	Dental Assisting Applications	4
DNTA 1660	Clinical - Dental Assistant ° ‡	6
	Total Hours	**12**
	GRAND TOTAL	**24**

° Course designated as capstone course.
‡ Course with external learning experience.
† High School articulated course.

Dental Laboratory Technology

The level of public awareness of dental health and preventative dentistry has increased significantly in recent years. Because of this fact and more extensive dental insurance coverage, it is expected that the demand for dental laboratory technicians will continue to grow. Dental Laboratory technicians make dentures, retainers, crowns, inlays, bridges, and orthodontic appliances using written instructions from dentists. This field is an exacting science, as well as an art, which requires attention to precise details.

In this program, students will learn to:

- Work with wire, plaster, porcelain, wax, plastic, gold and other metals
- Use specialized tools to carve and shape dental materials
- Match color and placement of teeth for natural look and comfortable fit.

Admissions Requirements:

In addition to admissions requirements listed under "Admissions Requirements," students are required to complete special tests in manual dexterity, dimensional abilities and use of tools. Applicants will be notified of testing dates

COURSE NAME		CREDIT HOURS
Semester 1		
DLBT 1201	Dental Anatomy & Tooth Morphology	2
DLBT 1209	Removable Partial Denture Techniques I	2
DLBT 1213	Complete Denture Techniques I	2
DLBT 1217	Fixed Restorative Techniques I	2
HRPO 1311	Human Relations †	3
	Total Hours	**11**
Semester 2		
DLBT 1205	Dental Materials	2
DLBT 2204	Removable Partial Denture Techniques II	2
DLBT 2207	Complete Denture Techniques II	2
DLBT 2211	Fixed Restorative Techniques II	2
	Total Hours	**8**
Semester 3		
DLBT 2215	Removable Partial Denture Techniques III	2
DLBT 2217	Complete Denture Techniques III	2
DLBT 2241	Dental Ceramics I	2
DLBT 2244	Introduction to Orthodontic Procedures	2
DLBT 2321	Fixed Restorative Techniques III	3
TECM 1303	Technical Calculations †	3
	Total Hours	**14**
Semester 4		
DLBT 1291	Special Topics in Dental Laboratory Technician	2
DLBT 2233	Complete Denture Techniques IV	2
DLBT 2235	Fixed Restorative Techniques IV	2
DLBT 2242	Dental Ceramics II	2
	Total Hours	**8**
Semester 5		
DLBT 2430	Special Projects in Dental Lab Procedures	4
DLBT 2446	Practical Laboratory Procedures °	4
POFT 1301	Business English †	3
	Total Hours	**11**
	GRAND TOTAL	**52**

° These courses are designated as capstone courses.
† High school articulated course

Notes:_____

Digital Media Design Technology

This program will provide entry level training in illustration, desktop publishing, graphic design, imaging editing, sound and video, and web page design. Graduates in this program will find employment as graphic artists, desktop publishers, video and web production with an emphasis on illustration and pre-press.

Admissions Requirements:

Students must complete the admissions requirements listed under "Admissions Information."

Notes:_____

COURSE NAME		CREDIT HOURS
Semester 1		
ARTC 1302	Digital Imaging I †	3
ARTC 1305	Basic Graphic Design †	3
PHTC 1311	Fundamentals of Photography	3
HRPO 1311	Human Relations †	3
	Total Hours	**12**
Semester 2		
ARTC 1313	Digital Publishing I †	3
ARTV 1343	Digital Sound	3
ARTV 1351	Digital Video	3
GRPH 1359	Object-Oriented Computer Graphics	3
TECM 1303	Technical Calculations †	3
	Total Hours	**15**
Semester 3		
ARTC 2313	Digital Publishing II	3
POFT 1301	Business English (or ENGL 1301) †	3
IMED 1316	Web Page Design I º	3
	Approved Elective **	3
	Total Hours	**12**
	GRAND TOTAL	**39**

º This course has been designated as the capstone course.

† High School Articulated Courses.

*** Approved Electives: ARTC 2305, ARTV 1341, ARTV 2341, COMM 2311, ENGL 2314*

Education & Training

This 49-semester hour program leads to a Certificate of Completion and most courses in this certificate program can be applied toward the Associate of Applied Science degree.

Students completing the certificate program will have enough semester hours of credit under current rulings by the State Board for Educator Certification (SBEC) in order to obtain employment with a school district under the No Child Left Behind Act of 2001.

Admissions Requirements:

Students must complete the admissions requirements listed under "Admissions Information."

Notes:_____

COURSE NAME		CREDIT HOURS
Semester 1		
EDTC 1301	Educational System	3
EDTC 1341	Instructional Technology and Computer Applications	3
HIST 1301	U.S. History I †	3
HRPO 1311	Human Relations†	3
	Speech Elective (suggested SPCH 1315)	3
	Totals	**15**
Semester 2		
CDEC 1359	Children with Special Needs	3
EDTC 1311	Instructional Practices and Effective Learning Environment	3
HIST 1302	U.S. History II †	3
ENGL 1301	Composition I †	3
	Social / Behavioral Sciences Elective †	3
	Totals	**15**
Semester 3		
GOVT 2301	American Government I †	3
EDTC 2317	Guiding Student Behavior	3
TECA 1354	Child Growth & Development	3
MATH 1314	College Algebra * †	3
	Humanities/Fine Arts Elective †	3
	Totals	**15**
Semester 4		
EDTC 1164	Practicum: Teacher Assistant/Aide º ‡	1
GOVT 2302	American Government II †	3
	Totals	**4**
	GRAND TOTAL	**49**

º This course has been designated as the capstone course
† High school articulated course
‡ Course with external experience

Game and Simulation Programming
Game Testing Technology

Due to the extensive use of computers in business and industry, a great demand for computer programmers exists. Computer programs, or software, are the series of instructions that tell the computer what operations to perform. Graduates from the game and simulation programming specialty will have a strong background in game design, software development tools and techniques, and graphics programming.

In this program, students will learn to:

- Develop computer games and simulations using appropriate tools and techniques.
- Examine best practices for entering the industry.

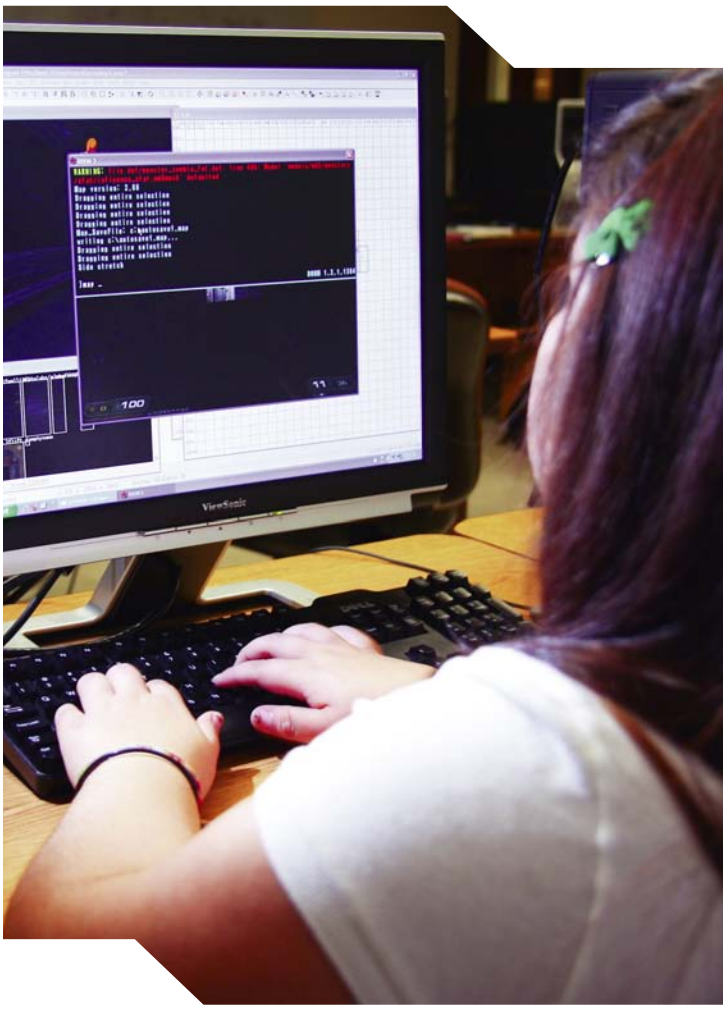
Admissions Requirements

Students must complete the admissions requirements listed under "Admissions Information."

Notes:_____

COURSE NAME		CREDIT HOURS
Semester 1		
ITSE 1331	Introduction to Visual Basic Programming	3
GAME 1303	Introduction to Game Design and Development	3
GAME 1306	Design and Creation of Games	3
HRPO 1311	Human Relations †	3
	Total Hours	**12**
Semester 2		
GAME 1301	Computer Ethics	3
TECM 1303	Technical Calculations †	3
GAME 1304	Level Design	3
ITSE 1307	Introduction to C++ Programming	3
ITSC 1309	Integrated Software Applications I	3
	Total Hours	**15**
Semester 3		
GAME 2338	Game Testing	3
POFT 1301	Business English †	3
QCTC 1301	Total Quality Management	3
GAME 1309	Introduction to Animation Programming	3
	Total Hours	**12**
	GRAND TOTAL	**39**

† High School articulated course.



Machining Technology
Machinist

Machinists use machine tools, such as lathes, milling machines, and machining centers, to produce precision metal parts. Although they may produce large quantities of one part, precision machinists often produce small batches or one-of-a-kind items. They use their knowledge of the working properties of metals and their skill with machine tools to plan and carry out the operations needed to make machined products that meet precise specifications. Persons interested in becoming machinists should be mechanically inclined, have good problem-solving abilities, be able to work independently, and be able to do highly accurate work that requires concentration and physical effort.

The number of workers obtaining the skills and knowledge necessary to fill machinist jobs is expected to be less than the number of job openings arising each year from the need to replace experienced machinists who transfer to other occupations or retire, and from job growth.

Due to modern production techniques, employers prefer machinists who have a wide range of skills and are capable of performing almost any task in a machine shop. Machinists can advance in several ways. Experienced machinists may become CNC programmers, tool and die makers, or mold makers. A few open their own shops.

Median hourly earnings of machinists were $16.33 in May 2004. The middle 50 percent earned between $12.84 and $20.33. The lowest 10 percent earned less than $10.08, while the top 10 percent earned more than $24.34. Machining Technology students are currently being placed in the median range stated above.

Admissions Requirements:
Students must complete the admissions requirements listed under "Admissions Information."

Notes:_____

COURSE NAME		CREDIT HOURS
Semester 1		
MCHN 1302	Print Reading For Maching	3
MCHN 1338	Basic Machine Shop I †	3
MCHN 1343	Machine Shop Mathematics	3
HRPO 1311	Human Relations †	3
	Total Hours	**12**
Semester 2		
MCHN 1308	Basic Lathe	3
MCHN 1313	Basic Milling Operation	3
MCHN 1320	Precision Tools & Measurement	3
MCHN 2303	Fundamentals of CNC Machine Controls	3
	Total Hours	**12**
Semester 3		
MCHN 1305	Metals & Heat Treatment	3
MCHN 1358	Intermediate Lathe Operations	3
MCHN 2302	Intermediate Milling Operations	3
MCHN 2335	Advanced CNC Machining °	3
	Total Hours	**12**
Exit Point: MACHINIST CERTIFICATE		**36**

° This course has been designated as the capstone course
† High school articulated course
‡ Course with external experience

Machining Technology
Toolmaker

Toolmaker trainees learn to operate milling machines, lathes, grinders, wire electrical discharge machines, and other machine tools. They also learn to use hand tools for fitting and assembling gauges, and other mechanical and metal-forming equipment. In addition, they study metalworking processes, such as heat treating. Toolmakers makers must have good computer skills to work with CAD/CAM technology, CNC machine tools, and computerized measuring machines.

Because toolmakers must meet strict specifications—precision to one ten-thousandth of an inch is common—the work requires skill with precision measuring devices and a high degree of patience and attention to detail. Persons entering this occupation also should be mechanically inclined, able to work and solve problems independently, have strong mathematical skills, and be capable of doing work that requires concentration and physical effort.

Toolmakers play a key role in building and maintaining advanced automated manufacturing equipment. The number of workers receiving training in this occupation is expected to continue to be fewer than the number of openings created each year by toolmakers who retire or transfer to other occupations. Students that earn the Toolmaker Certificate are excellent candidates for Tool and Die apprenticeships.

Median hourly earnings of tool and die makers, according to the Bureau of Labor Statistics, were $20.55 in May 2004. The middle 50 percent earned between $16.70 and $25.93. The lowest 10 percent had earnings of less than $13.57, while the top 10 percent earned more than $31.19. Machining Technology students are currently being placed in the median range stated above.

Admissions Requirements:
Students must complete the admissions requirements listed under "Admissions Information."

COURSE NAME		CREDIT HOURS
Semester 1		
MCHN 1302	Print Reading For Machining Trades	3
MCHN 1338	Basic Machine Shop I †	3
MCHN 1343	Machine Shop Mathematics	3
HRPO 1311	Human Relations †	3
	Total Hours	**12**
Semester 2		
MCHN 1308	Basic Lathe	3
MCHN 1313	Basic Milling Operation	3
MCHN 1320	Precision Tools & Measurement	3
MCHN 2303	Fundamentals of CNC Machine Controls	3
	Total Hours	**12**
Semester 3		
MCHN 1305	Metals & Heat Treatment	3
MCHN 1358	Intermediate Lathe Operations	3
MCHN 2302	Intermediate Milling Operations	3
MCHN 2335	Advanced CNC Machining º	3
	Total Hours	**12**
Semester 4		
MCHN 1335	Grinders, Outside, Internal, Surface	3
MCHN 2337	Advanced Milling Operation	3
MCHN 2370	Mold Making/Repair	3
SPCH	Speech Elective †	3
	Total Hours	**12**
Semester 5		
MCHN 2372	Tool & Die Making and Repair	3
MCHN 2447	Specialized Tools & Fixtures º	4
WLDG 1206	Fundamentals of Gas Tungsten Processes	2
	Total Hours	**9**
Exit Point: TOOLMAKER CERTIFICATE		**57**

º This course has been designated as the capstone course
† High school articulated course
‡ Course with external experience

Notes:_____

Medical Assistant

Medical Assisting is a multi-skilled allied health profession. Medical assistants function as members of the health care delivery team, performing both administrative and clinical procedures.

Administrative duties may include scheduling and receiving patients, preparing and maintaining medical records, performing basic secretarial skills, insurance processing and billing, medical transcribing, handling telephone calls and writing correspondence, serving as a liaison between the physician and other individuals and managing practice finances. Clinical duties may include asepsis and infection control, taking patient histories and vital signs, performing first aid and CPR, preparing patients for procedures, assisting the physician with examination and treatments, collecting and processing specimens, performing selected diagnostic tests, and preparing and administering medications as directed by the physician.

Students must maintain a numerical average of 78 or better in each Medical Assisting curriculum course.

Admissions Requirements:

In addition to admissions requirements listed under "Admissions Information," the applicant must complete an application to the program, interview with the Department Chair, and submit TASP & Health Placement Test Scores.

Clinical Entry Requirements:

Before enrolling in clinical study, a student must have on file with the department the following materials:

1. Results of prescribed physical examination.
2. Proof of required immunizations.
3. Proof of liability insurance of at least $1 million, health and accident insurance and needlestick insurance (available through TSTC).

Notes:_____

COURSE NAME		CREDIT HOURS
Semester 1		
BIOL 2401	Anatomy & Physiology I *	4
HITT 1305	Medical Terminology I †	3
MDCA 1417	Procedures in a Clinical Setting	4
HRPO 1311	Human Relations †	3
	Total Hours	**14**
Semester 2		
BIOL 2402	Anatomy & Physiology II **	4
HITT 1301	Health Data Content & Structure	3
MDCA 1348	Pharmacology & Administration of Medications	3
MDCA 1352	Medical Assistant Laboratory Procedures	3
	Total Hours	**13**
Semester 3		
MDCA 1343	Medical Insurance	3
MDCA 1402	Human Disease/Pathophysiology	4
MDCA 1321	Administrative Procedures	3
PLAB 1323	Phlebotomy	3
	Total Hours	**13**
Semester 4		
HITT 1211	Computers in Health Care	2
MDCA 1205	Medical Law & Ethics	2
MDCA 1460	Clinical: Medical/Clinical Assistant º ‡	4
PSYC 2301	General Psychology †	3
POFT 1301	Business English (or ENGL 1301) †	3
	Total Hours	**14**
	GRAND TOTAL	**54**

º This course has been designated as the capstone course
† High school articulated course
‡ Course with external experience
** BIOL 2301 and BIOL 2101 may be substituted for BIOL 2401*
*** BIOL 2302 and BIOL 2102 may be substituted for BIOL 2402*
º This course has been designated as the capstone course

Medical Information Specialist/Transcriptionist

As the reliance on technology continues to expand in medical facilities, the role of the medical information specialist has greatly evolved. Because of this technology surge, the demand for well-trained medical information specialists continues to exceed the supply.

In this program, students will develop skills required of a medical information specialist, such as assembling, analyzing, coding, filing, indexing, and billing of health records, as well as developing skills essential to the medical transcriptionist. Students will demonstrate proficiency of these skills during their practicum experience.

A multitude of opportunities await the MIST graduate in various medical facilities, including the opportunity of working from home, once experience is obtained. Medical information specialists focus on the data entry, collection, and maintenance of patient health information, while medical transcriptionists accurately transcribe dictated medical reports documenting the patient's condition as well as treatment.

The student must maintain a numerical average of 78 or better in each required Medical Information Specialist/Transcriptionist course to receive the Certificate of Completion.

Admissions Requirements:

In addition to admissions requirements listed under "Admissions Information," manual dexterity for typing, handling records, files and other documents is also necessary. An interview with the Department Chair is required, as well as completion of the MIS/T program orientation prior to registration of classes.

Practicum Entry Requirements:

Before enrolling in practicum courses, a student must have on file with the department the following materials:

1. The ability to satisfy the industry standards for the program.
2. Proof of required immunizations.
3. Proof of liability insurance of at least $1 million (available through TSTC).
4. Proof of health and accident insurance (available through TSTC).
5. Proof of auto liability.
6. Proof of current driver's license.
7. Passage of a criminal background check (available through TSTC).
8. Passage of a drug and alcohol screening (required by various medical facilities)

Notes:_____

_____

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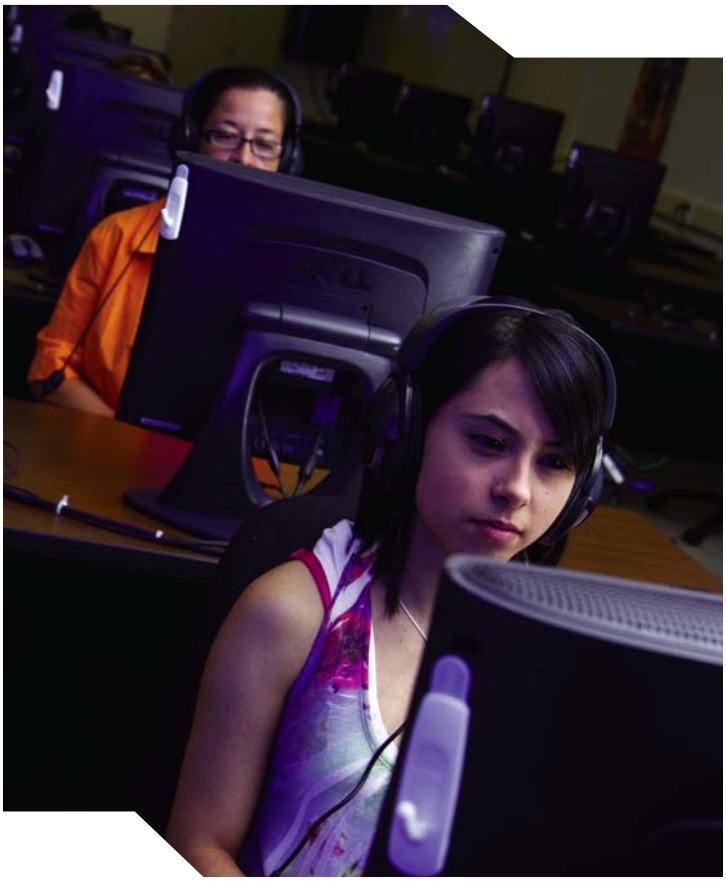
_____

COURSE NAME		CREDIT HOURS
Semester 1		
HITT 1305	Medical Terminology †	3
HITT 1301	Health Data Content and Structure	3
HITT 1211	Computers in Health Care	2
MDCA 1321	Administrative Procedures	3
HRPO 1311	Human Relations †	3
	Total Hours	**14**
Semester 2		
BIOL 2301	Anatomy & Physiology I †	3
BIOL 2101	Anatomy & Physiology Laboratory I	1
HITT 1342	Ambulatory Coding	3
MDCA 1343	Medical Insurance	3
MRMT 1307	Medical Transcription I	3
	Total Hours	**13**
Semester 3		
MDCA 1402	Human Disease/Pathophysiology	4
MRMT 2333	Medical Transcription II	3
HITT 1166	Practicum - Health Info/Medical Records º ‡	1
	Speech Elective	3
	Total Hours	**11**
	GRAND TOTAL	**38**

º This course has been designated as the capstone course
†High school articulated course
‡Course with external experience



Nurse Assistant

Employment of nurse assistants is expected to grow at an extremely rapid rate in response to the long-term care needs of a growing and aging population. Modern medical technology has also increased the need to provide care to those who never fully recover. Nurse assistants provide a variety of support services for other health-care professionals. Their primary responsibility is to provide basic bedside care, such as bathing, making beds, taking vital signs, assisting in feeding, serving trays, answering call lights and ambulating patients.

Students successfully completing the first semester of this program are eligible to take the Texas Department of Aging and Disability Services Certified Nurse Assistant skills and written exam to be listed on the Texas Registry as a Texas certified Nurse Assistant.

In this program, students will learn to:

- Provide basic bedside nursing care
- Work with nurses, doctors and other coworkers
- Apply skills in clinical practice at a hospital or nursing home

Students must maintain a numerical average of 78 or better in each Nurse Assistant curriculum course to graduate from the program and receive the Certificate of Completion.

The Nurse Assistant program certificate is offered only through dual enrollment or continuing education.

Admissions Requirements:

In addition to admissions requirements listed under "Admissions Information," the applicant must complete an application to the programs and interview with the Department Chair.

Clinical Entry Requirements:

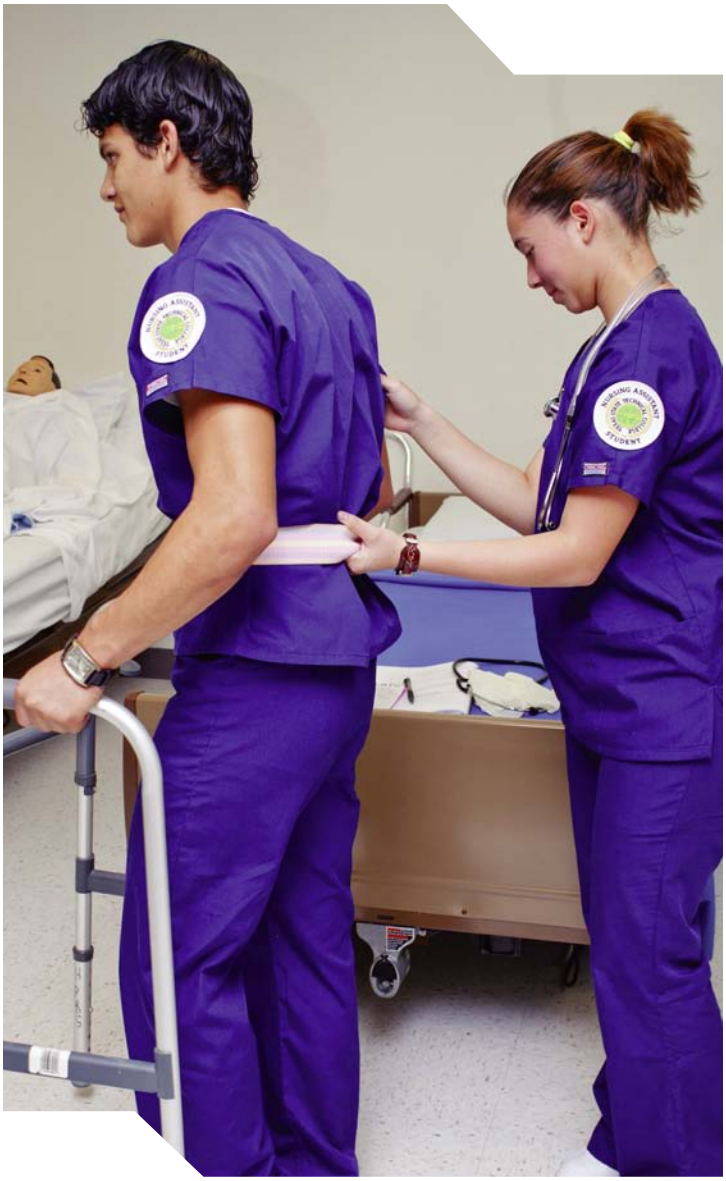
Before enrolling in clinical or cooperative study, a student must have on file with the department the following materials:

1. Results of prescribed physical examination.
2. Proof of required immunizations.
3. Proof of liability insurance of at least $1 million, health and accident insurance and needlestick insurance (available through TSTC).

Notes:_____

COURSE NAME		CREDIT HOURS
Semester 1		
HITT 1305	Medical Terminology †	3
NURA 1301	Nurse Aide for Health Care †	3
TECM 1301	Industrial Mathematics (or MATH 1314) †	3
HRPO 1311	Human Relations †	3
	Total Hours	**12**
Semester 2		
NURA 1360	Clinical - Nursing Assistant / Aide and Patient Care Assistant º ‡†	3
POFT 1301	Business English (or ENGL 1301) †	3
	Total Hours	**6**
	GRAND TOTAL	**18**

º This course has been designated as the capstone course
†High school articulated course
‡Course with external experience



Telecommunications Technology
Specialist

Driven by a demand for instantly accessible information, the telecommunications industry is profoundly transforming the world. Voice, data and video communications across a worldwide network are creating opportunities that did not exist a decade ago. Preparing a workforce to compete in this global marketplace is today's major challenge for the telecommunications industry.

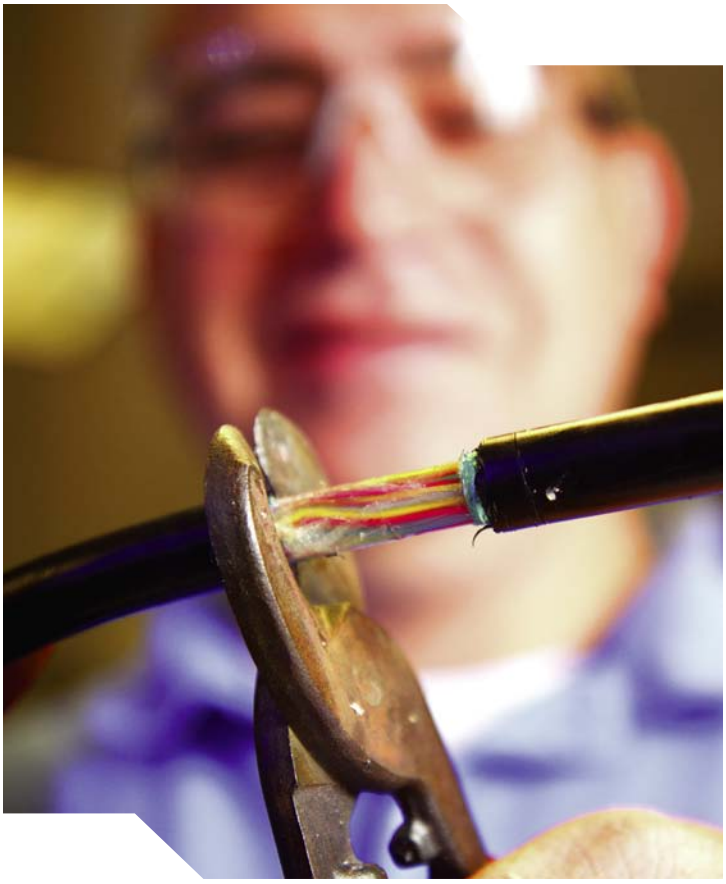
The Telecommunications Technology program is designed to prepare students for the communications industry through educational training in the installation, operation and maintenance of communications systems using the full range of communication transport systems. The technologies include underground, above ground, cellular, fiber-optics, microwave systems, computer networks and satellites for communicating information.

Admissions Requirements:
Students must complete the admissions requirements listed under "Admissions Information."

Notes:_____

COURSE NAME		CREDIT HOURS
Semester 1		
CETT 1303	DC Circuits (or IEIR 1302) ‡	3
EECT 1303	Introduction to Telecommunications †	3
TECM 1303	Technical Calculations (or MATH 1314) †	3
HRPO 1311	Human Relations †	3
	Total Hours	**12**
Semester 2		
CETT 1305	AC Circuits (or IEIR 1304) †	3
CETT 1325	Digital Fundamentals	3
CSIR 1303	Telecommunications System Installer	3
EECT 1300	Technical Customer Service	3
POFT 1301	Business English (or ENGL 1301)	3
	Total Hours	**15**
Semester 3		
CSIR 1359	Digital Data Communication	3
CSIR 1391	Special Topics: Communications System Installer & Repairer	3
CSIR 2351	Fiber Optic Comm. System Installation & Repair	3
EECT 1307	Convergence Technologies	3
EECT 1342	Telecommunications Outside Plant º **	3
	Total Hours	**15**
	GRAND TOTALS	**42**

º This course has been designated as the capstone course
†High school articulated course
‡Course with external experience
***EECT 1380 or EECT 1680 (Co-op) may be taken in place of the capstone course*



Vocational Nursing

The licensed vocational nurse (LVN), an important member of the medical team, may gather information, access and provide direct care for the sick, injured, convalescent, and disabled under the direction of physicians and registered nurses. LVNs generally work in acute and long-term care facilities or they may work in clinics, be employed as utilization reviewers who evaluate medical records in hospitals and doctors' offices, plus many other health-related areas.

LVNs care for patients in many ways. Often, they provide basic bedside care. Experienced LVNs may supervise nursing assistants and aides.

As part of their work, LVNs collect samples for testing, perform routine laboratory tests, and record food and fluid intake and output. They clean and monitor medical equipment. Sometimes, they help physicians and registered nurses perform tests and procedures. Some LVNs help to deliver, care for, and feed infants.

LVNs also monitor their patients and report adverse reactions to medications or treatments. LVNs gather information from patients, including their health history and how they are currently feeling. They may use this information to complete insurance forms, pre-authorizations, and referrals, and they share information with registered nurses and doctors to help determine the best course of care for a patient. LVNs often teach family members how to care for a relative or teach patients about good health habits. Most LVNs are generalists and work in all areas of health care. However, some work in a specialized setting, such as a nursing home, a doctor's office, or in home health care. LVNs in nursing care facilities help to evaluate residents' needs, assist in developing care plans, and supervise the care provided by nursing aides.

In Texas, LVNs are permitted to administer prescribed medicines, start intravenous fluids, and provide care to ventilator-dependent patients. According to the Bureau of Labor Statistics, employment of LVNs is expected to grow 14 percent between 2006 and 2016, faster than the average for all occupations, in response to the long-term care needs of an increasing elderly population and the general increase in demand for health care services.

Nursing has always been emotionally rewarding; now with signing bonuses of up to $5,000 and average annual salaries of $42,620, it is also financially rewarding.

Admissions Requirements:

Students must complete the admissions requirements listed under "Admissions Information."

Immunizations must be complete, All developmental courses must be complete and all prerequisite courses must be complete. Students must be able to complete a criminal background check with L-1 Enrollment.

COURSE NAME		CREDIT HOURS
Prerequisite Courses		
HPRS 1204	Basic Health Profession Skills	2
BIOL 2301	Anatomy & Physiology I	3
BIOL 2101	Anatomy & Physiology I Lab	1
BIOL 2302	Anatomy & Physiology II	3
BIOL 2102	Anatomy & Physiology II Lab	1
PSYC 2314	Lifespan Growth & Development	3
ENGL 1301	Composition I* (or FDNS 1341)	3
HITT 1305	Medical Terminology I †	3
HRPO 1311	Human Relations †	3
	Total Hours	**22**
Semester 1		
RNSG 1301	Pharmacology & Administration of Meds	3
VNSG 1402	Applied Nursing Skills I	4
VNSG 1304	Foundations of Nursing	3
VNSG 1261	Introductory Clinical-Practical Nurse	2
	Total Hours	**12**
Semester 2		
VNSG 1230	Maternal Neonatal Nursing	2
VNSG 1329	Medical/Surgical Nursing	3
VNSG 2413	Applied Nursing Skills II	4
VNSG 1462	Intermediate Clinical – Practical Nurse	4
	Total Hours	**13**
Semester 3		
VNSG 1119	Professional Development	1
VNSG 1334	Pediatric Nursing	3
VNSG 1432	Medical Surgical Nursing II °	4
VNSG 2463	Advanced Clinical Practical Nurse °	4
	Total Hours	**12**
	GRAND TOTAL	**59**

° This course has been designated as a capstone course.
† Course Articulated with High School.

Welding Technology
Combination Welding

The variety of jobs available to welding technicians is increasing due to the number of new inventions and technical advances using a wide variety of metal alloys and non-metallic materials that can be joined through the welding process. Students in this program will develop knowledge of metal properties and the different welding techniques used to join metals.

In this program, students will learn to:

- Use various welding processes, including oxyacetylene welding, gas tungsten arc, gas metal arc and other sophisticated welding processes
- Perform welding in all positions, with fillet and groove welds
- Plan, design and fabricate welded projects

Admissions Requirements:

Students must complete the admissions requirements listed under "Admissions Information."

Notes:_____

COURSE NAME		CREDIT HOURS
Semester 1		
WLDG 1313	Introduction to Blueprint Reading for Welders	3
WLDG 1430	Introduction to Gas Metal Arc Welding (GMAW)	4
WLDG 1323	Welding Safety, Tools and Equipment	3
WLDG 1421	Introduction to Welding Fundamentals †	4
	Total Hours	**14**
Semester 2		
WLDG 1317	Introduction to Layout and Fabrication	3
WLDG 1434	Introduction to Gas Tungsten Arc Welding (GTAW)	4
WLDG 1457	Intermediate Shielded Metal Arc Welding (SMAW)	4
HRPO 1311	Human Relations †	3
	Total Hours	**14**
Semester 3		
WLDG 1312	Introduction to Flux Cored Welding (FCAW)	3
WLDG 1435	Introduction to Pipe Welding	4
WLDG 2443	Advanced Shielded Metal Arc Welding (SMAW) ° **	4
SPCH	Speech Elective †	3
	Total Hours	**14**
	GRAND TOTAL	**42**

° This course has been designated as a capstone course.

† Course Articulated with High School.

*** WLDG 2480 (Co-op ‡) may be taken in place of the capstone course*

Wind Energy Technology

In the Wind Energy Technology Program, you'll learn to operate and maintain the systems that make a wind turbine function whether it's an electrical, pneumatic, communications, computer, control or hydraulic system.

Your instructors will emphasize the safety aspects of working in the wind energy industry and you'll be able to practice those principles throughout the program. Examples of courses you'll take include:

You'll also learn all about SCADA (that stands for Supervisory Control and Data Acquisition). It's the utility industry standard computerized system that controls the wind tower network. You'll also find that knowledge of all the systems you'll learn in the Wind Energy Technology Program is important not only to wind energy but also to many other types of companies in the utility industry. That means that as a graduate you will have varied career options.

Many well-known companies are involved in the wind energy field whether they are owner/operators, manufacturers or service providers and these companies are looking for employees with the skills and training you can gain in the Wind Energy Program. Your choices for a career span Texas or if you are interested in travel, the wind energy field offers opportunities throughout the world. A few wind energy companies include Shell Wind, Beyond Petroleum, GE Energy, Siemens Wind Power, Mitsubishi, Vestas, TECO/Westinghouse, DEWIND and more.

Generating a workforce to power the wind energy industry will bring growth for the Wind Energy Technology Program at Texas State Technical College Harlingen at a training center near Corpus Christi.

The Ingleside renewable energy training center for TSTC offers a Certificate of Completion Level I diploma. Renewable energy resources, particularly land and off-shore wind energy, will be the focus for technical education opportunities at the 8,600-square-foot building reserved for TSTC

In this program, students will learn to:

- Operate and maintain the systems that make a wind turbine function
- Focus on the electrical, pneumatic, communications, computer, control and hydraulic systems of wind turbines.
- Learn about SCADA, the utility industry standard computerized system that controls the wind tower network

Admissions Requirements:

Students must complete the admissions requirements listed under "Admissions Information."

COURSE NAME		CREDIT HOURS
Semester 1		
WIND 1302	Wind Safety	3
CETT 1303	DC Circuits †	3
POFT 1120	Job Search Skills	1
HRPO 1311	Human Relations †	3
TECM 1303	Technical Calculations	3
	Total Hours	**13**
Semester 2		
WIND 1300	Introduction to Wind Energy	3
ELMT 1305	Basic Fluid Power	3
CETT 1305	AC Circuits	3
CETT 1325	Digital Fundamentals	3
	Total Hours	**12**
	GRAND TOTAL: CERTIFICATE I	**25**

Semester 1		
WIND 1302	Wind Safety	3
CETT 1303	DC Circuits †	3
POFT 1120	Job Search Skills	1
HRPO 1311	Human Relations †	3
MATH 1314	College Algebra	3
	Total Hours	**13**
Semester 2		
WIND 1300	Introduction to Wind Energy	3
WIND 2310	Wind Turbine Materials and Electo-Mechanical Equipment	3
ELMT 1305	Basic Fluid Power	3
CETT 1305	AC Circuits	3
CETT 1325	Digital Fundamentals	3
	Total Hours	**15**
Semester 3		
WIND 2455	Wind Turbine Troubleshooting and Repair	4
WIND 2459	Wind Power Delivery System	4
CPMT 2250	Industry Certification Preparation	2
ELMT 1301	Programmable Logic Controllers	3
INTC 1357	AC/DC Motor Control	3
	Total Hours	**16**
	GRAND TOTAL: CERTIFICATE II	**25**

° This course has been designated as a capstone course.

† Course Articulated with High School.

‡ Course with external learning experience

Field of Study

General Information

Fields of Study are provided for students who plan to transfer to a four-year college or university in academic areas for which TSTC Harlingen does not offer Associate of Science (A.S.) transfer degrees. Students completing a field of study here will have the opportunity to transfer to other public colleges and universities in the state in order to complete their bachelor's and other advanced degrees.

According to the rules of the Texas Higher Education Coordinating Board: "If a student successfully completes a field of study curriculum developed by the Board, that block of courses may be transferred to a [state] general academic teaching institution and must be substituted for that institution's lower-division requirements for the degree program for the field of study into which the student transfers, and the student shall receive full academic credit toward the degree program for the block of courses transferred." *§4.32(b) Field of Study Curricula*

The General Education Core accounts for a minimum of 48 semester credit hours of the field of study curriculum. The core curriculum guidelines from the Texas Higher Education Coordinating Board "are predicated on the judgment that a series of basic intellectual competencies – reading, writing, speaking, listening, critical thinking, and computer literacy – are essential to the learning process in any discipline and thus should inform any core curriculum." This core is designed to provide students a general education in communication, humanities and fine arts, social and behavioral sciences, and mathematics and natural sciences. From this group of classes, students develop the understanding, attitudes and values that are necessary for effective, responsible, and productive living in today's society. Details about the General Education Core can be found in the Curriculum – General Education section.

General Requirements

The following information outlines the requirements for an Associate of Science degree. Additional information can be found in the Admissions and Records and the Scholastic Regulations sections of this catalog.

1. Complete admission requirements.
2. Complete curriculum requirements:
   a. The student must complete the minimum credit hours as specified for the field of study. Requirements are listed with the field of study descriptions in this catalog.
   b. The student must complete the General Education Core. Be sure to consult the particular degree plan, the catalog of the university you wish to transfer to, and an advisor to see which particular General Education Core courses are appropriate for a particular field of study or university curriculum.
3. Students must meet all scholastic guidelines and specific field of study requirements. Additional information is included in the Scholastic Regulations section of this catalog. Some fields of study have specific requirements. More information is listed in the respective field of study description.
4. Discharge all financial obligations to TSTC.

General Education

TSTC offers general education and developmental courses approved by the Texas Higher Education Coordinating Board to support students. More information on course content and lecture and lab hours is included in the Course Descriptions section of this catalog. Academic courses are part of the Texas Common Course Numbering System (TCCNS) and are transferable individually to other public colleges and universities in the state. Completion of the General Education Core at TSTC Harlingen will allow students to transfer the core as a block of classes and replace the General Education Core at another Texas public college or university.

Learning Framework Course (EDUC 1100 or PSYC 1100)

The student success course (EDUC 1100 or PSYC 1100 – Learning Framework) is not a college requirement for a field of study. However, students are urged to take the course to help better prepare them to succeed in their college studies. Students may take either the EDUC 1100 or the PSYC 1100 course. The course is intended to help students to persist in their studies and complete them in a timely manner. It provides models of strategic learning, cognition, and motivation as the basis for the introduction of academic learning strategies. Ultimately, students are expected to integrate and apply these learning skills to become effective learners in their own academic programs. Also, students will be able to learn and apply the appropriate computer skills to demonstrate how life-long learning is an ongoing part of one's development, especially in this rapidly changing age of technology and information. Students are urged to take this course as early as possible in their college studies.

Field of Study in Business

Together the Academic Core with the Field of Study in Business is designed for students who intend to major in Business or a related field at another college or university.

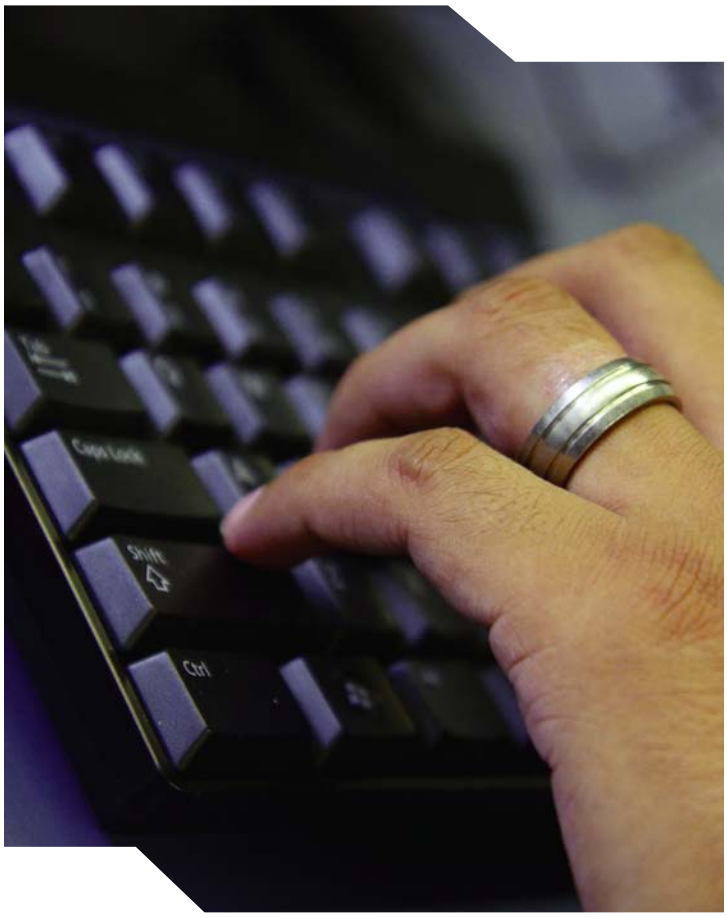
Students in this field of study are preparing for experiences in administration, accounting, marketing and sales, management, and internal auditing.

The Field of Study in Business includes additional courses in accounting, economics, business computer literacy, and business mathematics.

Admissions Requirements:

Students must complete all the requirements for the Academic Core before they can qualify for the Field of Study in Business designation. Field of study courses can be taken while students are taking Academic Core classes.

Students seeking to complete this Field of Study should consult with an academic advisor to avoid taking unnecessary courses as part of the Academic Core.



COURSE NAME		CREDIT HOURS
Semester 1		
ENGL 1301	Composition I	3
BUSI 1301	Introduction to Business (or MATH 1325)	3
BCIS 1305	Business Computer Applications	3
ECON 2301	Principles of Macroeconomics	3
	Total Hours	**12**
Semester 2		
ENGL 1302	Composition II	3
	Science Course (BIOL 1308/1108 or BIOL 1309/1109 or BIOL 1406 or BIOL 1407 or BIOL 1408 or BIOL 1409 or BIOL 2301 or BIOL 2302 or BIOL 2401 or BIOL 2402 or BIOL 2421 or CHEM 1405 or CHEM 1411 or PHYS 1401 or PHYS 2425)	4
GOVT 2301	American Government I	3
	Fine Arts Course (ARTS 1301 or ARTS 1303 or ARTS 1304 or MUSI 1306)	3
	Math Course (MATH 1314 or MATH 1316 or MATH 1332 or MATH 1350 or MATH 2312 or MATH 2318 or MATH 2320 or MATH 2342 or MATH 2413 or MATH 2414 or MATH 2415)	3
	Total Hours	**16**
Semester 3		
	Science Course (BIOL 1308/1108 or BIOL 1309/1109 or BIOL 1406 or Biol 1407 or BIOL 1408 or BIOL 1409 or BIOL 2301 or BIOL 2302 or BIOL 2401 or BIOL 2402 or BIOL 2421 or CHEM 1405 or CHEM 1411 or CHEM 1412 or PHYS 1401 or PHYS 1402 or PHYS 2425 or PHYS 2426)	4
GOVT 2302	American Government II	3
ACCT 2401	Principles of Accounting I	4
HIST 1301	U. S. History I (to 1877)	3
	Total Hours	**14**
Semester 4		
ECON 2302	Principles of Microeconomics	3
HIST 1302	U. S. History II (since 1877)	3
ACCT 2402	Principles of Accounting II	4
SPAN 1311	Beginning Spanish I (or SPAN 1411)	3
	Total Hours	**13**
Semester 5		
SPAN 1312	Beginning Spanish II (or SPAN 1412)	3
	Humanities Course (ENGL 2321 or ENGL 2326 or ENGL 2331 or SPAN 2323 or SPAN 2324)	3
SPCH	Speech Course (SPCH 1315 or SPCH 1318 or SPCH 13213)	3
	Humanities Course (ANTH 2346 or ENGL 2321 or ENGL 2326 or ENGL 2331 or PHIL 1301 or PHIL 1304 or PHIL 2306 or SOCI 2319 or SPAN 2323 or SPAN 2324)	3
	Total Hours	**12**
	GRAND TOTAL	**67**

Field of Study in Communication

Together the Academic Core with the Field of Study in Communication is designed for students who intend to major in General Communication or a related field at another college or university.

Students in this field of study are preparing for experiences in any one of the following four areas: advertising and public relations, journalism and mass communication, radio and television broadcasting and broadcast journalism, and general speech communication.

The Field of Study in Communication includes additional courses in intrapersonal communication, business and professional communication, small group communication and public speaking.

Admissions Requirements:

Students must complete all the requirements for the Academic Core before they can qualify for the Field of Study in Communication designation. Field of study courses can be taken while students are taking Academic Core classes.

Students seeking to complete this Field of Study should consult with an academic advisor to avoid taking unnecessary courses as part of the Academic Core.

COURSE NAME		CREDIT HOURS
Semester 1		
	Fine Arts Course (ARTS 1301 or ARTS 1303 or ARTS 1304 or MUSI 1306)	3
ENGL 1301	Composition I	3
SPAN 1311	Beginning Spanish I (or SPAN 1411)	3
SPCH 1311	Introduction to Speech	3
	Total Hours	**12**
Semester 2		
ENGL 1302	Composition II	3
GOVT 2301	American Government I	3
SPAN 1312	Beginning Spanish II (or SPAN 1412)	3
SPCH 1318	Interpersonal Communication	3
	Total Hours	**12**
Semester 3		
	Humanities Course (ENGL 2321 or ENGL 2326 or ENGL 2331 or SPAN 2323 or SPAN 2324)	3
GOVT 2302	American Government II	3
HIST 1301	U. S. History I (to 1877)	3
	Science Course (BIOL 1308 or BIOL 1309 or BIOL 1406 or BIOL 1407 or BIOL 1408 or BIOL 1409 or BIOL 2301 or BIOL 2302 or BIOL 2401 or BIOL 2402 or BIOL 2421 or CHEM 1405 or CHEM 1411 or PHYS 1401 or PHYS 2425)	3
	Total Hours	**12**
Semester 4		
HIST 1302	U. S. History II (since 1877)	3
	Science Course (BIOL 1308 or BIOL 1309 or BIOL 1406 or BIOL 1407 or BIOL 1408 or BIOL 1409 or BIOL 2301 or BIOL 2302 or BIOL 2401 or BIOL 2402 or BIOL 2421 or CHEM 1405 or CHEM 1411 or CHEM 1412 or PHYS 1401 or PHYS 1402 or PHYS 2425 or PHYS 24263)	3
	Social/Behavioral Course (ECON 2301 or PSYC 2301 or PSYC 2314 or SOCI 1301 or SOCI 1306 or SOCI 2319)	3
SPCH	Speech Elective (SPCH 1315 or SPCH 1321)	3
	Total Hours	**12**
Semester 5		
	Humanities Course (ANTH 2346 or ENGL 2321 or ENGL 2326 or ENGL 2331 or PHIL 1301 or PHIL 1304 or PHIL 2306 or SOCI 2319 or SPAN 2323 or SPAN 2324	3
SPCH 2333	Discussion and Small Group Communication	3
MATH 1314	College Algebra	3
	Total Hours	**9**
	GRAND TOTAL	**57**

Marketable Skills Awards

General Information

Skill development programs offered at TSTC award certificates of completion. These programs are designed to teach students specific skills needed for entry-level jobs. This is accomplished through specialized training in the particular technical areas.

Generally, three-fourths of the courses are in the student's major program of study, with the remainder in general education and support courses. The majority of the student's class time is spent in the laboratory or field, applying the skills he or she has learned in class. This emphasis on hands-on experience is the major strength of TSTC's skill development programs.

General Requirements

The following information is an outline of requirements for the certificate of completion, including requirements listed under the Admissions and Records and Scholastic Regulations sections of this catalog.

1. Completion of admission requirements.
2. Completion of curriculum requirements.
   a. Students must complete the minimum credit hours as specified for the program of study.
   b. The curriculum will generally include general education and support courses.
3. Meet all scholastic guidelines and specific program requirements. Additional information is included in the Scholastic Regulation section of this catalog. Some programs have specific requirements. More information is listed in the respective program of study description.
4. Discharge of all financial obligations to TSTC.
5. Completion of an Application for Graduation and payment of graduation fees.

Air Conditioning & Refrigeration

This Marketable Skills Achievement Award in Air Conditioning & Refigeration Technology defines specific skills in duct installation or the principles of electricity

Admissions Requirements:

Students must complete the admissions requirements listed under "Admissions Information."

Notes:_____

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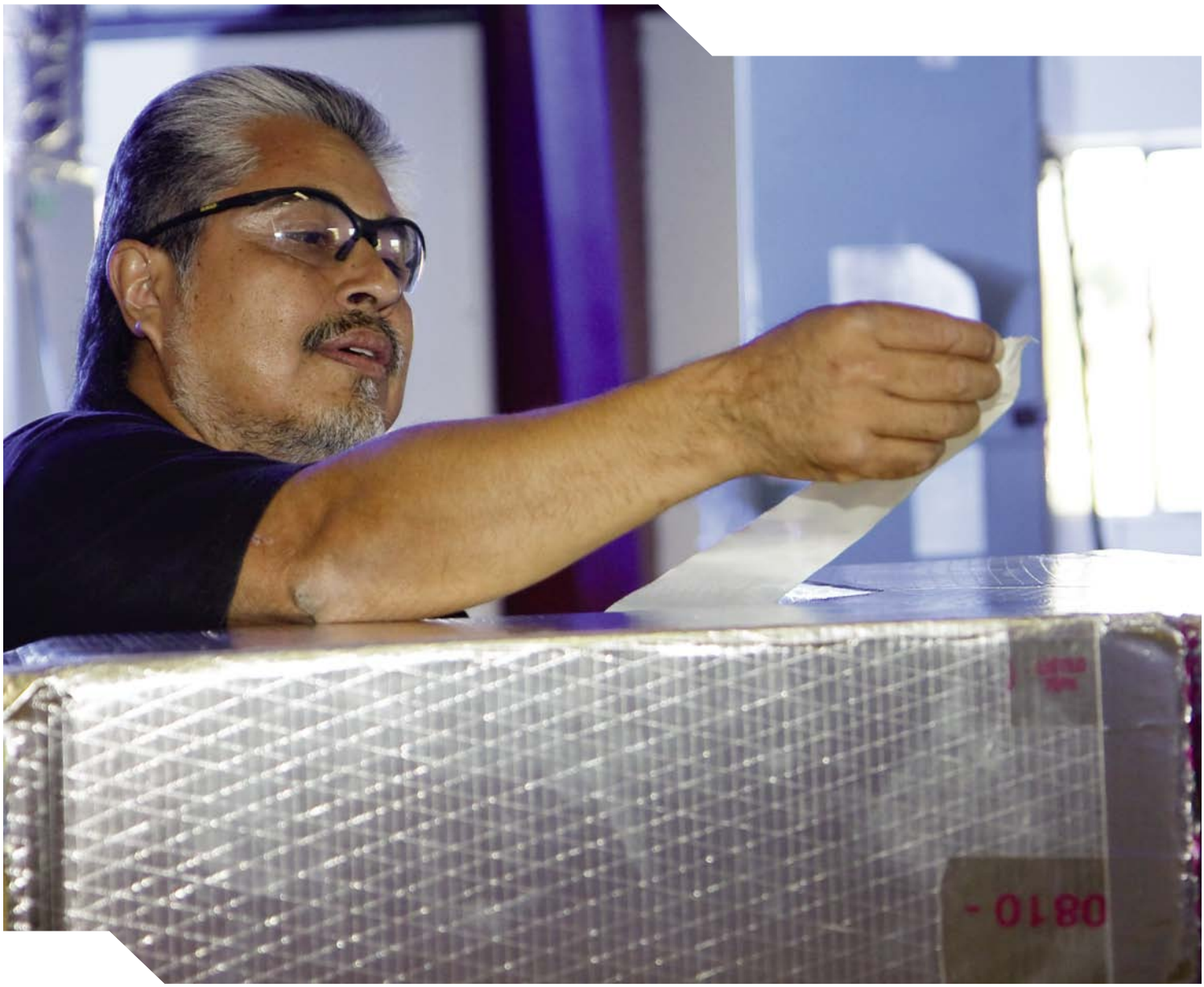
COURSE NAME		CREDIT HOURS
AIR CONDITIONING DUCT INSTALLER		
Semester 1		
HART 1300	HVAC Duct Fabrication	3
HART 1310	HVAC Shop Practices and Tools	3
DFTG 1313	Drafting for Specific Occupations	3
	Total Hours	**9**

AIR CONDITIONING/REFIGERATION PRINCIPLES OF ELECTRICITY		
Semester 1		
HART 1310	HVAC Shop Practices and Tools	3
HART 1401	Basic Electricity for HVAC	3
HART 1407	Refigeration Principles	3
	Total Hours	**9**



Auto Collision Technology
Auto Body Collision and Finish Preparer

This Marketable Skills Achievement Award in Auto Collision Technology defines specific skills needed to be a preparer.

Admissions Requirements:
Students must complete the admissions requirements as listed under "Admissions Information."

COURSE NAME		CREDIT HOURS
Semester 1		
ABDR 1331	Basic Refinishing	3
ABDR 1419	Basic Metal Repair	4
ABDR 1349	Automotive Plastic & Sheet Molded Compound Repair	3
ABDR 1458	Intermediate Refinishing	4
	Total Hours	**14**

Notes:_____

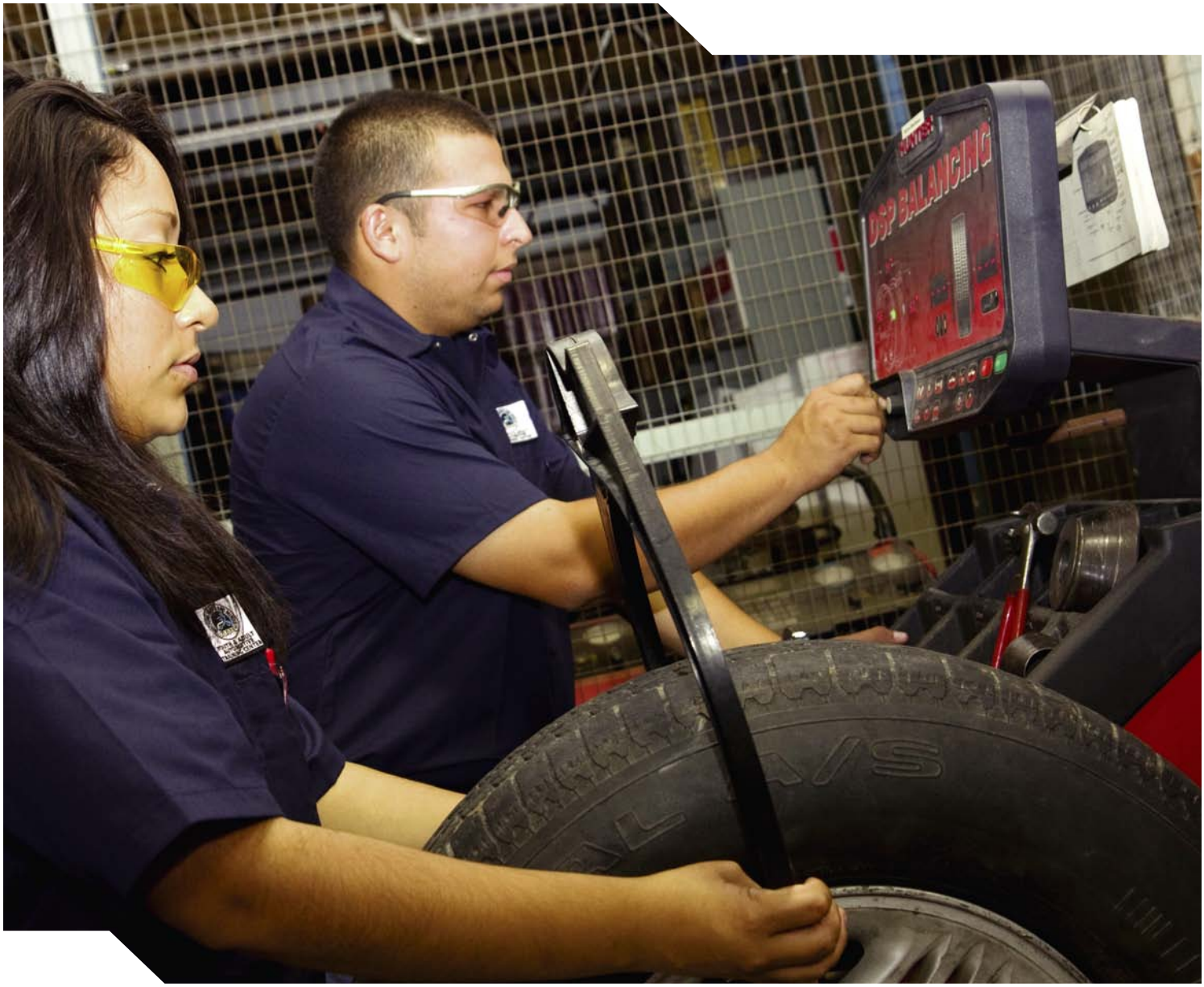
Automotive Technology
Automotive Maintenance Mechanic

This Marketable Skills Achievement Award in Automotive Technology defines specific skills needed to be a mechanic in automotive maintenance.

Admissions Requirements:
Students must complete the admissions requirements listed under "Admissions Information."

COURSE NAME		CREDIT HOURS
Semester 1		
AUMT 1410	Automotive Brake Systems	4
AUMT 1201	Introduction & Theory of Automotive Technology	2
AUMT 1407	Automotive Electrical Systems	4
AUMT 1416	Automotive Suspension & Steering Systems	4
	Total Hours	**14**

Notes:_____



Building Construction Science
Green Construction

This Marketable Skills Achievement Award in Building Construction Science defines specific skills needed green construction.

Admissions Requirements:
Students must complete the admissions requirements listed under "Admissions Information."

COURSE NAME		CREDIT HOURS
Semester 1		
CNBT 2342	Construction Management	3
CNBT 2315	Construction Specifications and Contracts	3
CNBT 2317	Green Construction	3
	Total Hours	**9**

Notes:_____

Business Management Technology

This Marketable Skills Achievement Award in Business Management Technology defines specific skills needed for clerical office.

Admissions Requirements:

Students must complete the admissions requirements listed under "Admissions Information."

Notes:_____

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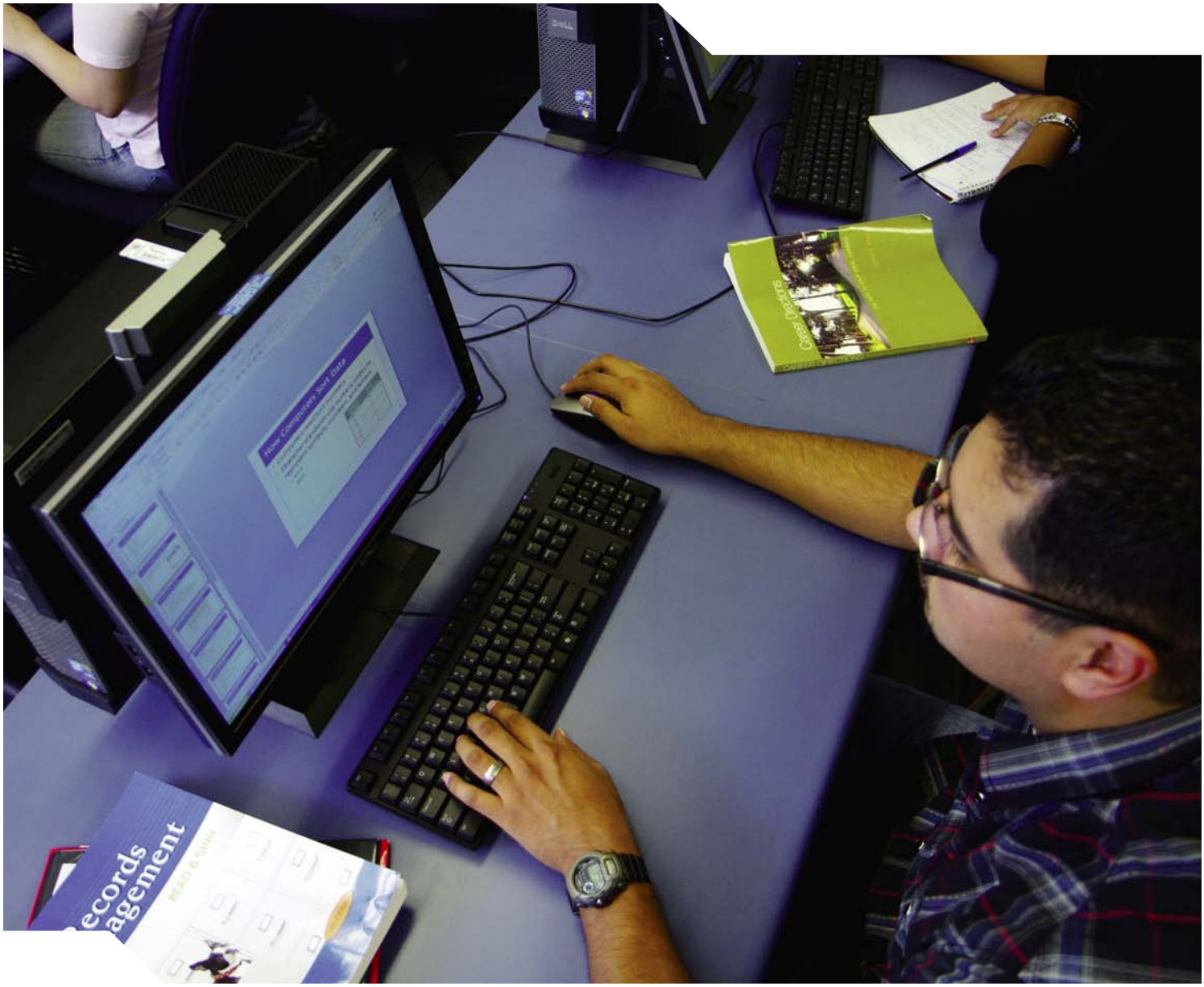
COURSE NAME		CREDIT HOURS
CLERICAL		
Semester 1		
ITSC 1309	Integrated Software Applications I	3
MRKG 1301	Customer Relationship Management	3
POFT 1329	Beginning Keyboarding	3
	Total Hours	**9**
OFFICE MANAGEMENT		
Semester 2		
ACNT 1303	Introduction to Accounting I	3
HRPO 2301	Human Resource Management	3
MRKG 1301	Customer Relationship Management	3
	Total Hours	**9**



Computer Drafting and Design Technology
GIS Specialist

This Marketable Skills Achievement Award in Building Construction Science defines specific skills needed in Geographic Information Systems

Admissions Requirements:
Students must complete the admissions requirements as listed under "Admissions Information."

COURSE NAME		CREDIT HOURS
Semester 1		
GISC 1311	Introduction to Geographic Information Systems (GIS)	3
GISC 2320	Intermediate Geographic Information Systems (GIS)	3
GISC 1301	Cartography and Geography in Geographical Information Systems (GIS) and Global Positioning Systems	3
	Total Hours	**9**

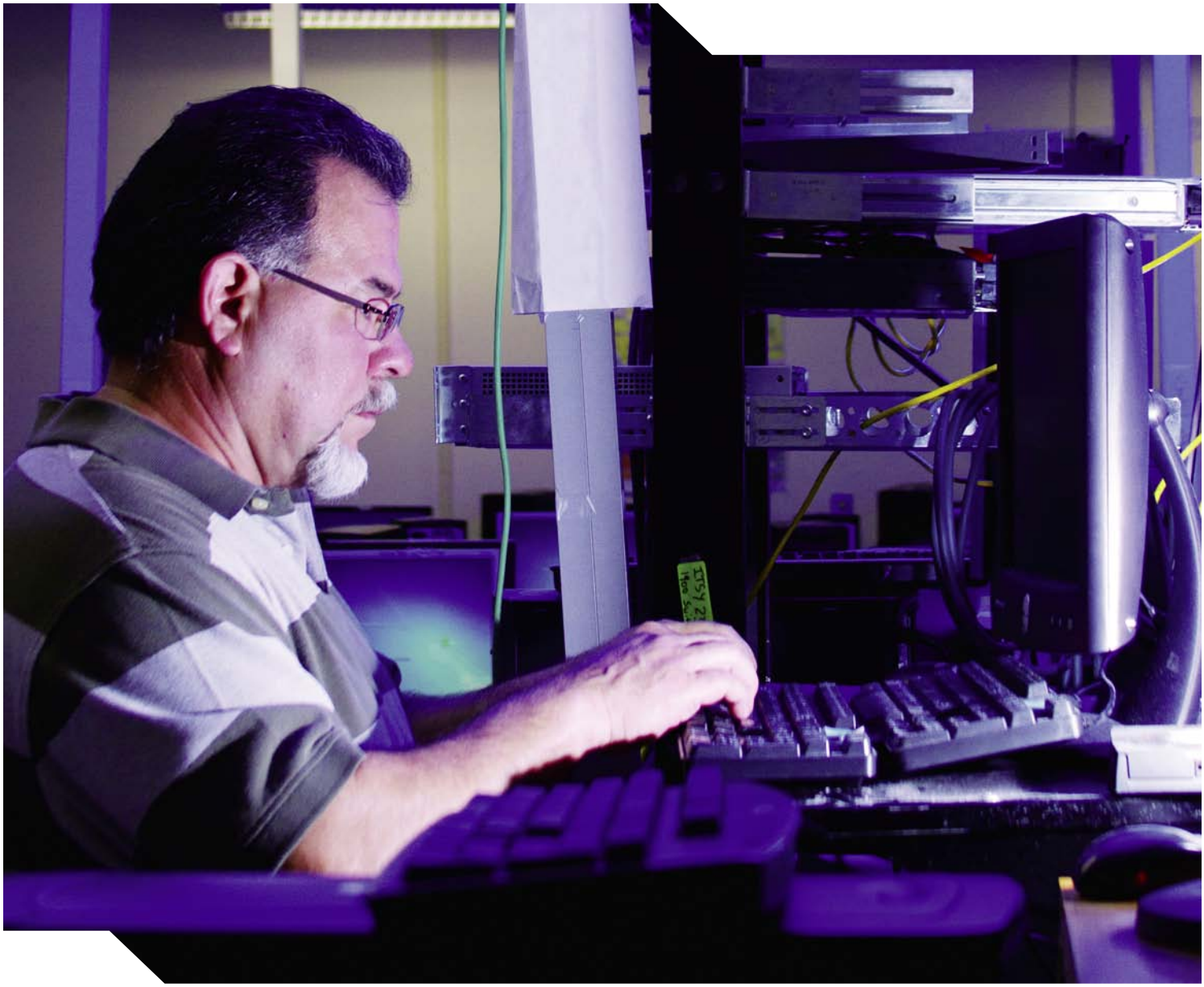
Computer Networking and Security Technology
Switching and Routing Technician

This Marketable Skills Achievement Award in Computer Networking and Security Technology defines specific skills needed for the support and maintenance of switching and routing.

Admissions Requirements:
Students must complete the admissions requirements as listed under "Admissions Information."

COURSE NAME		CREDIT HOURS
Semester 1		
ITNW 2321	Networking with TCP/IP	3
ITNW 2313	Networking Hardware	3
ITSY 2301	Firewalls and Network Security	3
	Total Hours	**9**

Notes:_____



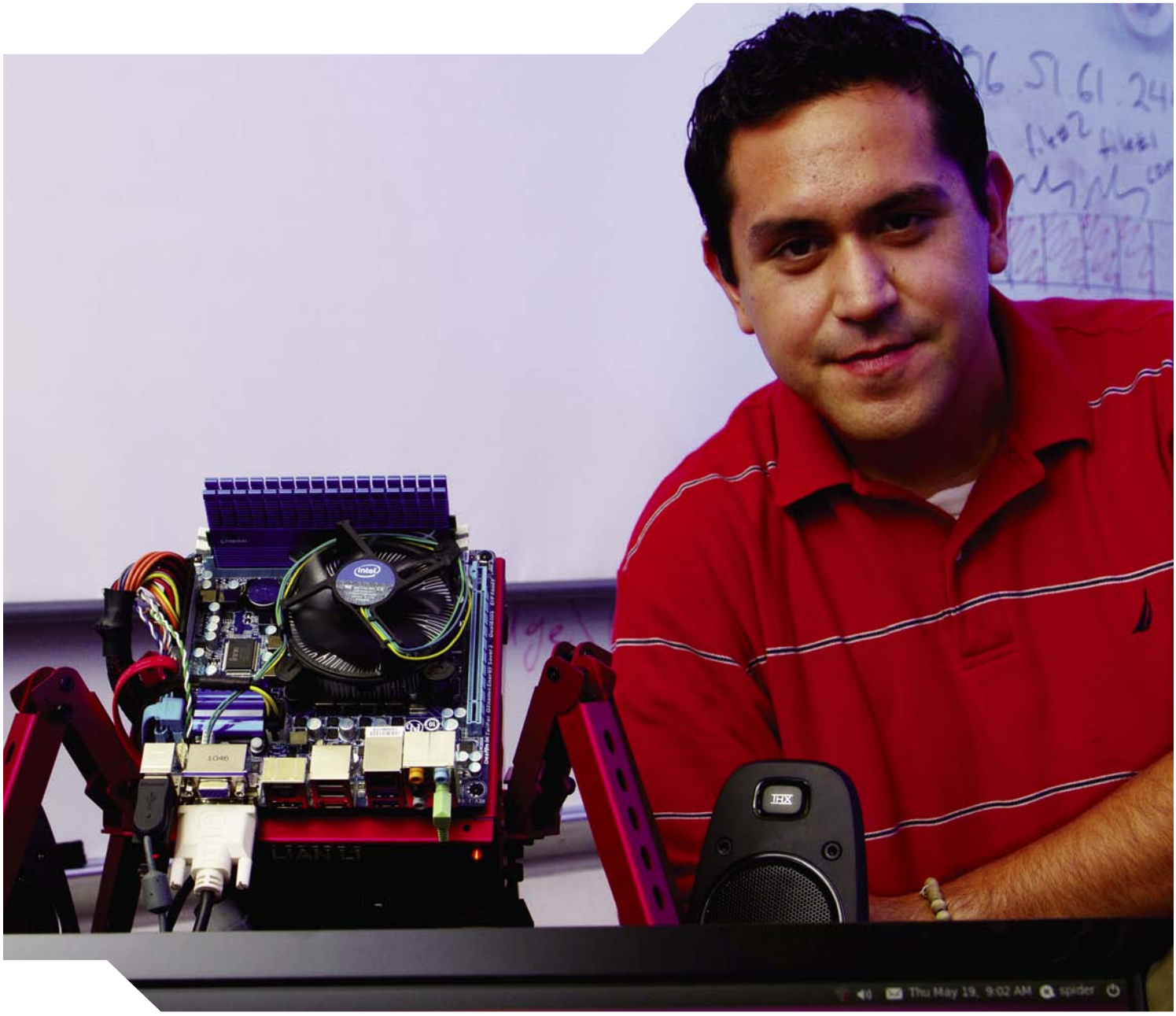
Computer Systems Management Technology
Computer Retail Technician

This Marketable Skills Achievement Award in Computer Systems Management Technology defines specific skills needed for a computer retail technician.

Admissions Requirements:
Students must complete the admissions requirements as listed under "Admissions Information."

COURSE NAME		CREDIT HOURS
Semester 1		
CPMT 1303	Introduction to Computer Technology	3
CPMT 1304	Microcomputer System Software	3
ITNW 1325	Fundamentals of Networking Technology	3
	Total Hours	**9**

Notes:_____



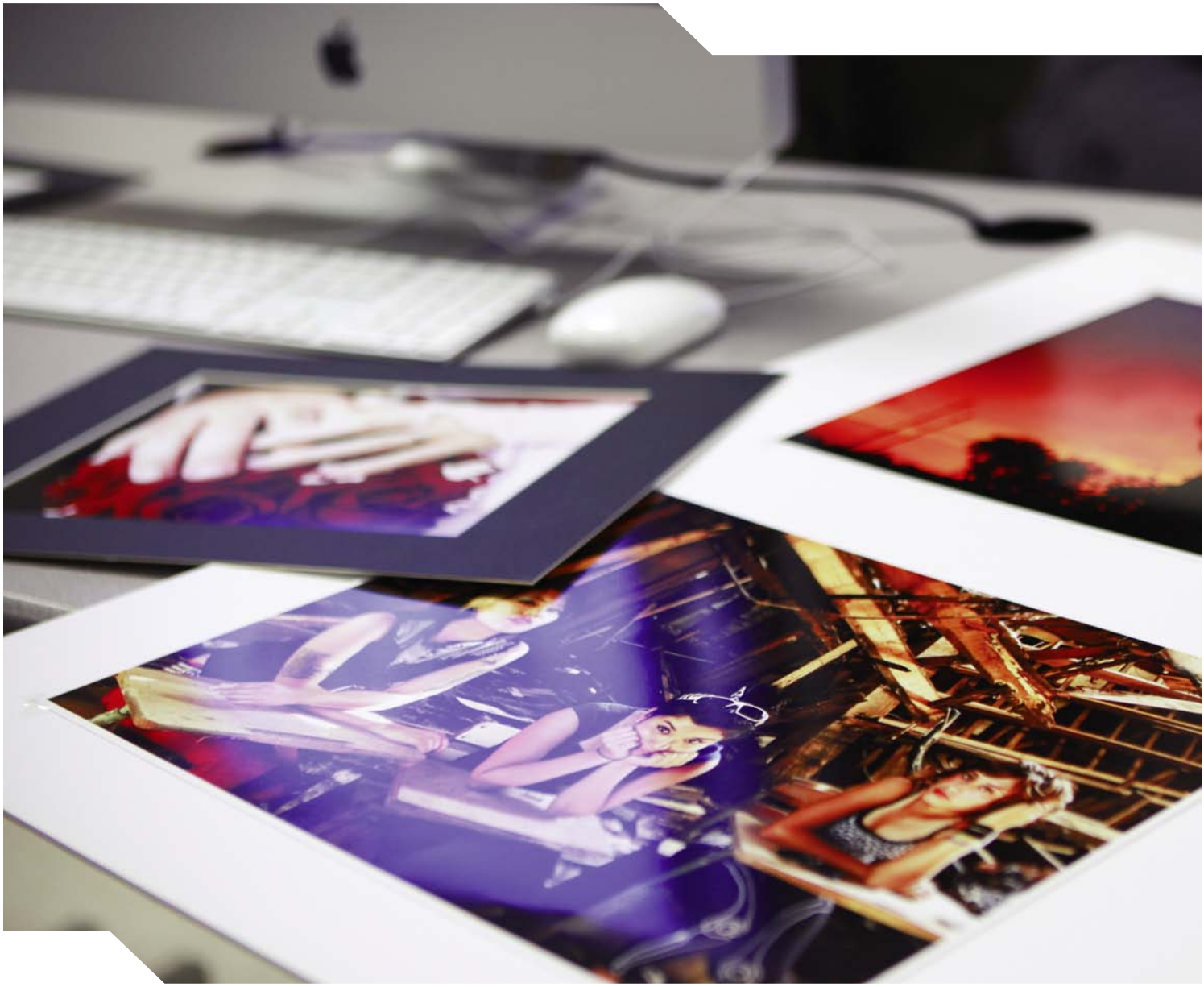
Digital Media Design Technology
Digital Photography Technician

This Marketable Skills Achievement Award in Digital Media Design Technology defines specific skills needed for digital photography.

Admissions Requirements:
Students must complete the admissions requirements listed under "Admissions Information."

COURSE NAME		CREDIT HOURS
Semester 1		
ARTC 1313	Digital Publishing I	3
ARTC 1305	Digital Imaging I	3
PHTC 1311	Fundamentals of Photography	3
	Total Hours	**9**

Notes:_____



Machining Technology

These Marketable Skills Achievement Award in Machining Technology defines specific skills needed for handling or inspecting materials in manufacturing.

Admissions Requirements:

Students must complete the admissions requirements as listed under "Admissions Information."

Notes:_____

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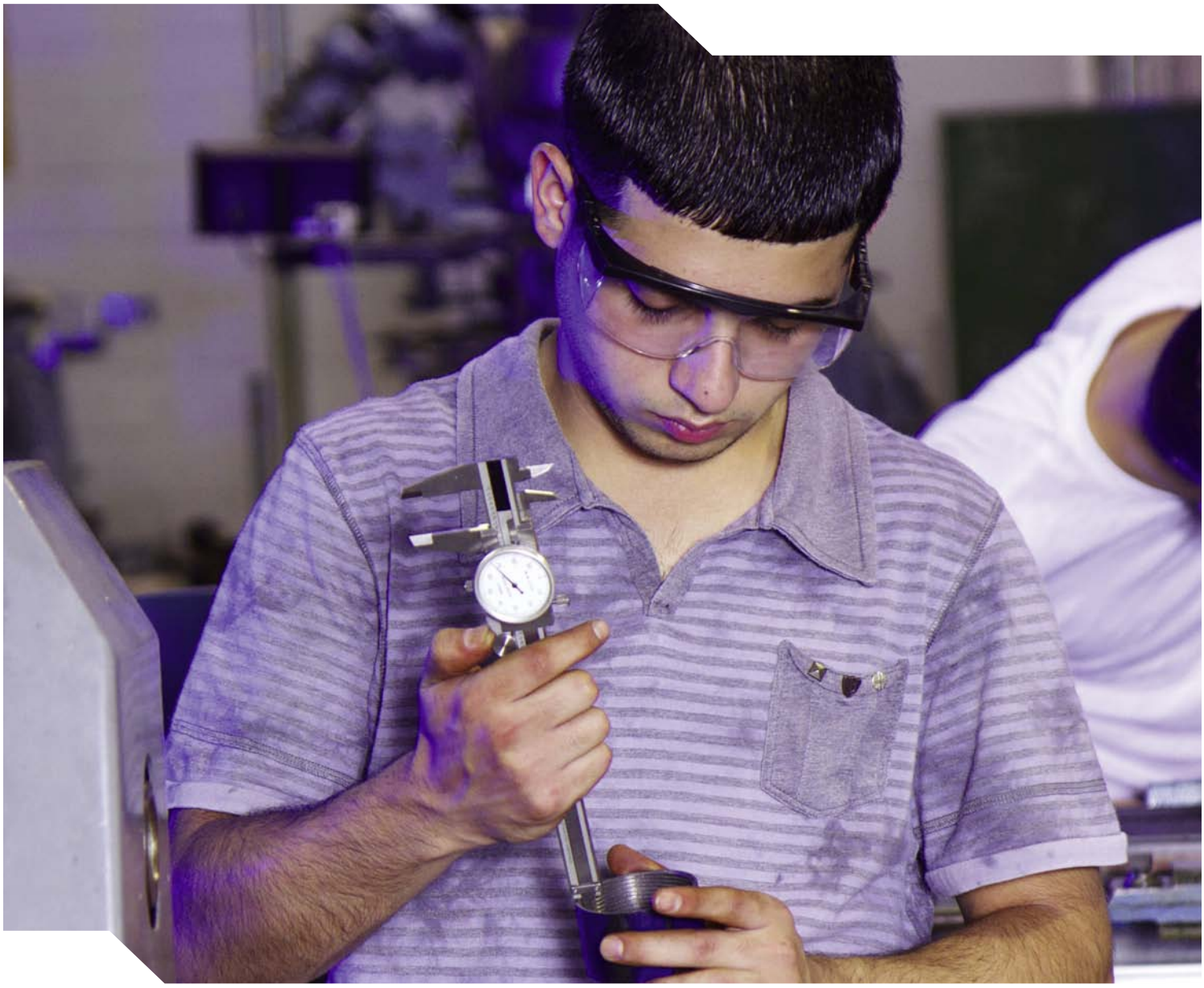
COURSE NAME				CREDIT HOURS	
MANUFACTURING MATERIAL HANDLER					
Semester 1					
MCHN 1302	Print Reading For Machining Trades	3	0	48	3
MCHN 1338	Basic Machine Shop I	1	6	112	3
MCHN 1343	Machine Shop Mathematics	3	0	48	3
Total Hours		**7**	**6**	**208**	**9**

MANUFACTURING PARTS INSPECTION (QUALITY CONTROL)					
Semester 1					
MCHN 1302	Print Reading For Machining Trades	3	0	48	3
MCHN 1338	Basic Machine Shop I	1	6	112	3
MCHN 1343	Machine Shop Mathematics	3	0	48	3
MCHN 1320	Precision Tools & Measurement	2	3	80	3
Total Hours		**9**	**9**	**288**	**12**



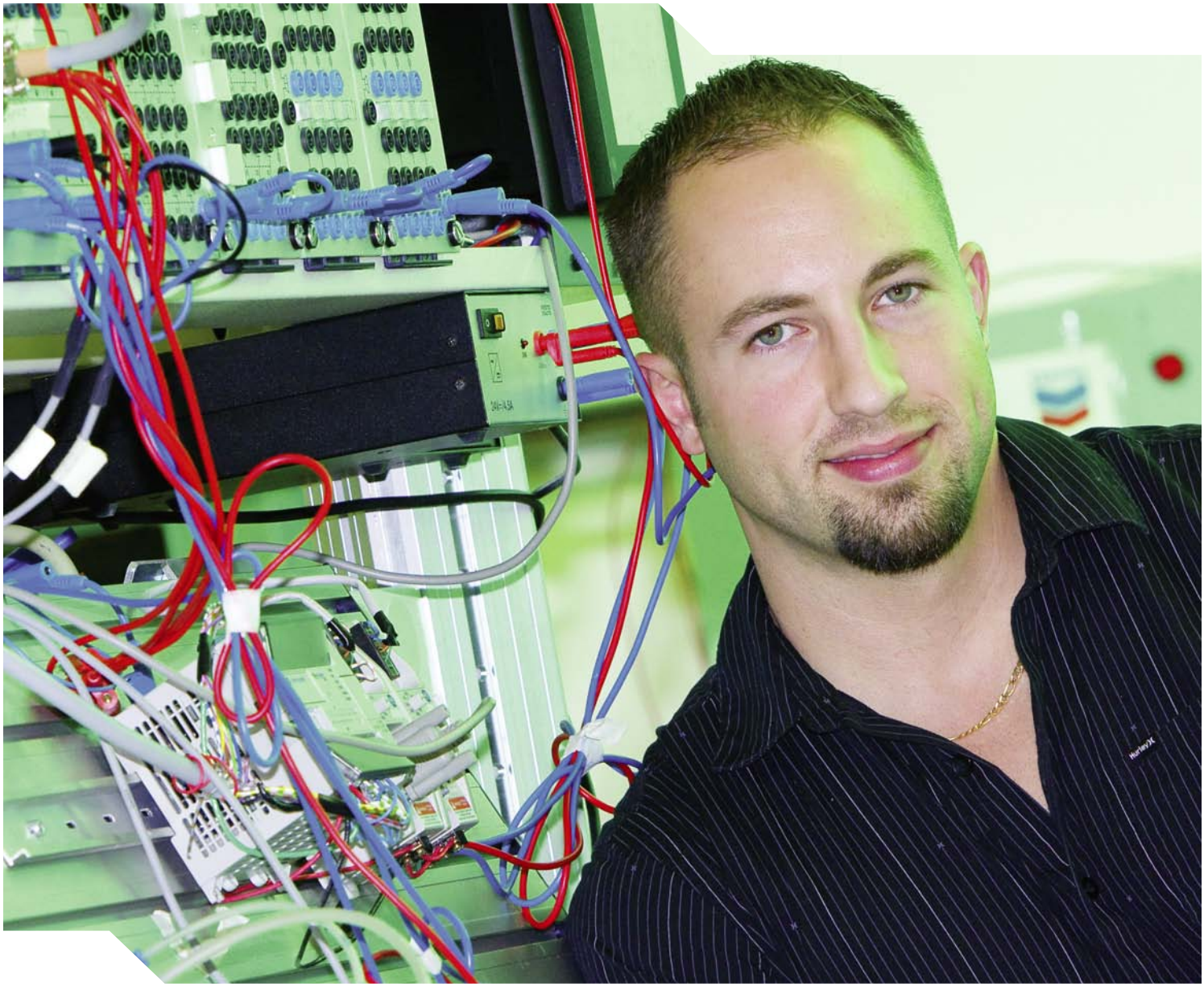
Mechatronics Technology
Mechatronics/Principles of Electricity

These Marketable Skills Achievement Award in Mechatronics Technology defines specific skills needed for the principles of electricity.

Admissions Requirements:
Students must complete the admissions requirements as listed under "Admissions Information."

COURSE NAME					CREDIT HOURS
Semester 1					
CETT 1303	DC Circuits	2	4	96	3
CETT 1305	AC Circuits	2	4	96	3
CETT 1325	Digital Fundamentals	2	4	96	3
INTC 1357	AC/DC Motor Controls	2	4	96	3
Total Hours		**8**	**16**	**384**	**12**

Notes:_____



Nurse Assistant

These Marketable Skills Achievement Award in Mechatronics Technology defines specific skills needed for the principles of nurse assisting.

Admissions Requirements:

Students must complete the admissions requirements as listed under "Admissions Information."

COURSE NAME					CREDIT HOURS
Semester 1					
NURA 1301	Nurse Aid Health Care Organization I	2	4	96	3
NURA 1360	Clinical Nursing Assistant Aid	0	12	192	3
HITT 1305	Medical Terminology	2	4	96	3
	Total Hours	**4**	**20**	**384**	**9**

Notes:_____

Telecommunications Technology

These Marketable Skills Achievement Award in Machining Technology defines specific skills needed for fiber optic cable instaling or the principles of electronics.

Admissions Requirements:

Students must complete the admissions requirements as listed under "Admissions Information."

Notes:_____

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COURSE NAME				CREDIT HOURS	
TELECOMMUNICATION FIBER OPTIC CABLE INSTALLER					
Semester 1					
EECT 1303	Intro to Telecommunications	2	4	96	3
CSIR 1303	Telecommunications System Installer	2	4	96	3
CSIR 2351	Fiber Optic Communication Systems, Installation & Repair	2	4	96	3
	Total Hours	**6**	**12**	**288**	**9**

TELECOMMUNICATION PRINCIPLES OF ELECTRONICS					
Semester 1					
CETT 1303	DC Circuits	2	4	96	3
CETT 1305	AC Circuits	2	4	96	3
CETT 1325	Digital Fundamentals	2	4	96	3
EECT 1303	Introduction to Telecommunications	2	4	96	3
	Total Hours	**8**	**16**	**384**	**12**

Welding Technology

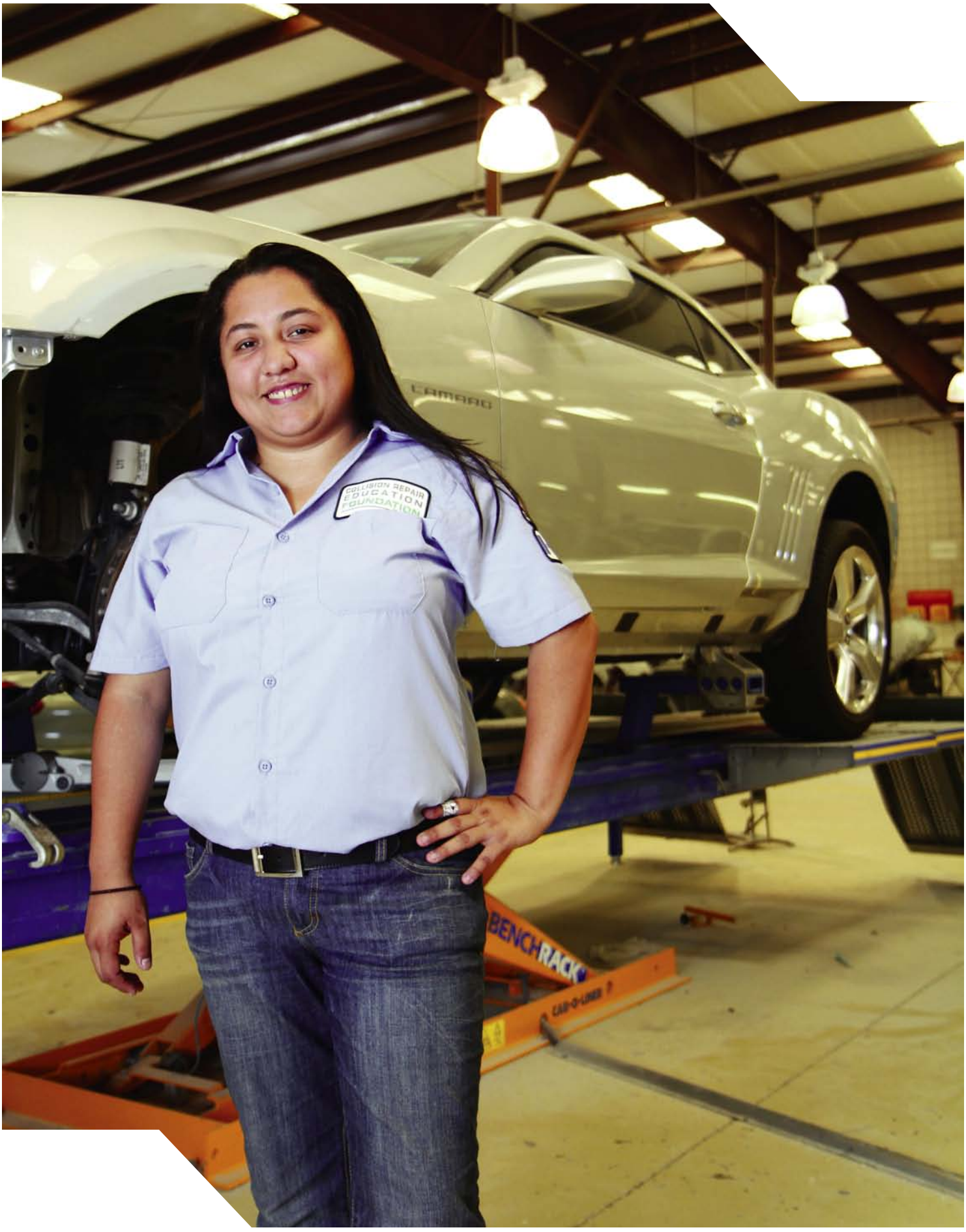
These Marketable Skills Achievement Award in Mechatronics Technology defines specific skills needed for an entry level welder and cutter.

Admissions Requirements:

Students must complete the admissions requirements as listed under "Admissions Information."

COURSE NAME					CREDIT HOURS
Semester 1					
WLDG 1430	Introduction to Gas Metal Arc Welding (GMAW)	2	6	128	4
WLDG 1313	Introduction to Blueprint s Reading for Welder	2	2	64	3
WLDG 1323	Welding Safety, Tools, & Equipment	3	0	48	3
WLDG 1421	Introduction to Welding Fundamentals	2	6	128	4
	Total Hours	**9**	**14**	**368**	**14**

Notes:_____


COLLISION REPAIR
EDUCATION
FOUNDATION
CAMARO
BENCHRACK

COURSE DESCRIPTIONS

Texas State Technical College™

Course Descriptions

Please note: In the parenthesis following the course number and title of each course description are the lecture hours per week - lab hours per week - credit hours per course (ex: 2-4-3 is 2 lecture-4 lab-3 credit).

Agricultural Technology

ACCT 2401 (see Transferable Academic)

AGAH 1347 Animal Reproduction (2-4-3)
Study of organs, functions, endocrinology, and common management practices related to reproduction.

AGAH 1401 Animal Science (3-4-4)
An introductory survey of the scientific principles and applied practices related to livestock production. Topics include genetics, animal breeding and selection, anatomy and physiology, nutrition, reproduction, health, and marketing of livestock and livestock products.

AGAH 2413 Principles of Feeds & Feeding (3-4-4)
Study of the role and application of feed nutrients and additives. Topics include comparative aspects of digestion, absorption, and metabolism of nutrients. Emphasis on identification of nutrient requirements and formulation of dietary feeding regiments.

AGCR 1341 Forage & Pasture Mgmt (2-2-3)
Study of the production and management of forage crops and pastures including establishment fertilization, weed control, grazing systems, hay, seed production, and harvesting.

AGCR 1403 Crop Science (3-4-4)
Fundamentals of the development, production, and management of field crops. Topics include the classification and distribution of field crops, botany, soils, plant breeding, pest management, and harvesting.

AGCR 2305 Entomology (2-4-3)
Study of the morphology, physiology, and classification of the common insect orders and related arthropods with emphasis on species of economic or biological importance. Emphasis on integrated pest management concepts and proper use of pesticides.

AGCR 2313 Soil and Water Conservation Management (2-4-3)
Study of physical and chemical soil deterioration and loss, water conservation, and principles for protection and maintenance of these resources. Topics include plant/water relationships, water conservation methods, basic terrace engineering principles, sediment loss, and land use plants.

AGMG 1300 Agricultural Policies, Safety & Codes (2-4-3)
Study of safety standards, government regulations, and codes as they apply to agriculture. Emphasis on the application of current safety and health standards, and compliance with state and federal regulations.

AGMG 1311 Intro to Agribusiness (2-3-3)
Introduction to agribusiness management, marketing and sales in the free enterprise system. Topics include economic principles, finance, risk management, record keeping, budgeting, employee/employer responsibilities, communications human relation skills, and agricultural career opportunities.

AGMG 1318 Intro to Agricultural Economics (2-4-3)
Study of the fundamental economic principles and their application to the problems of the industry of agricultural.

AGMG 1344 Agricultural Records Management (2-4-3)
Examination of the principles of agricultural records and bookkeeping with emphasis on utilization and interpretation of farm and ranch accounts.

AGMG 2312 Marketing of Agricultural Products (2-4-3)
Study of 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.

AGMG 2382 COOP: Farm and Ranch Management (1-19-3)
AGMG 2682 COOP: Farm and Ranch Management (1-39-6)
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 employer, the student combines classroom learning with work experience. Includes a lecture component.

BIOL 1406, BIOL 1407 (see Math/Natural Sciences)

CHEM 1405, CHEM 1411 (see Math/Natural Sciences)

ENGL 1301 (see English/Communications)

EPCT 1211 (see Chemical-Environmental Technology)

HRPO 1311 (see Behavioral/Social Sciences)

MATH 1314 (see Math/Natural Sciences)

POFT 1301 (see Related Instruction)

SPCH 1318 (see Speech Electives)

TECM 1303 (see Related Instruction)

Air Conditioning and Refrigeration Technology

DFTG 1313 (see Computer Drafting & Design Technology)

ENGL 1301 (see English/Communications)

HART 1300 HVAC Duct Fabrication (2-4-3)
Layout and fabrication of HVAC duct systems using common tools and equipment of the trade.

HART 1310 HVAC Shop Practices and Tools (2-4-3)
Tools and instruments used in the HVAC industry. Includes proper application, use and care of these tools, and tubing and piping practices.

HART 1401 Basic Electricity for HVAC (2-6-4)
Principles of electricity as required by HVAC technicians including proper use of test equipment, electrical circuits, and component theory and operation.

HART 1403 A/C Control Principles (2-6-4)
A basic study of HAVC and refrigeration controls; troubleshooting of control components; emphasis on use of wiring diagrams to analyze high and low voltage circuits; a review of Ohm's law as applied to air conditioning controls and circuits.

HART 1407 Refrigeration Principles (2-6-4)
An introduction to the refrigeration cycle, basic thermodynamics, heat transfer theory, temperature/pressure relationship, safety, refrigeration containment, and refrigeration components.

HART 1441 Residential Air Conditioning (2-6-4)
A study of components, applications, and installation of mechanical air conditioning systems including operating conditions, troubleshooting, repair, and charging of air conditioning systems.

HART 1445 Gas and Electrical Heating (2-6-4)
A study of the procedures and principles used in servicing heating systems including gas fired furnaces and electric heating systems.

HART 2380 COOP: Heating, A/C, & Refrigeration Tech (1-19-3)
HART 2680 COOP: Heating, A/C & Refrigeration Tech (1-39-6)
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.

HART 2381 COOP: Heating, A/C, & Refrigeration (1-19-3)
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.

HART 2436 Air Conditioning Troubleshooting (2-6-4)
An advanced course in application of troubleshooting principles and use of test instruments to diagnose air conditioning and refrigeration components and system problems including conducting performance tests.

HART 2438 A/C Installation & Startup (2-6-4)
A study of air conditioning system installation, refrigerant piping, condensate disposal, and air cleaning equipment with emphasis on startup, performance testing.

HART 2441 Commercial Air Conditioning (2-6-4)
A study of components, applications, and installation of air conditioning systems with capacities of 25 tons or less.

HART 2442 Commercial Refrigeration (2-6-4)
Theory of and practical application in the maintenance of commercial refrigeration; medium and low temperature applications and ice machines.

HART 2445 Residential A/C System Design (2-6-4)
Study of the properties of air and results of cooling, heating, humidifying or dehumidifying; heat gain and heat loss calculations including equipment selection and balancing the air system.

HRPO 1311 (see Behavioral/Social Sciences)

MAIR 1449 Refrigerators, Freezers, Window A/C (2-6-4)
Theory, sequence of operation, components and repair, electrical schematics, and troubleshooting electronic components in air conditioning and refrigeration. Emphasis on safety for the electrical, mechanical, and sealed systems.

POFT 1301 (see Related Instruction)

SPCH (see Speech Electives)

TECM 1303 (see Related Instruction)

Allied Health Related Skills

HPRS 1101 Intro to Health Professions (1-0-1)
An overview of the roles of the various members of the health care system, educational requirements, and issues affecting the delivery of health care.

HPRS 1204 Basic Health Profession Skills (1-3-2)
A study of the concepts that serve as the foundation for health profession courses. Topics include client handling and safety issues, basic client monitoring, and health documentation methods.

HPRS 1205 Medical Law/Ethics Health Professionals (2-0-2)
Introduction to the relationship between legal aspects and ethics in health care, with emphasis on responsibilities of health care professionals.

HPRS 2300 Pharmacology/Health Professions (3-0-3)
A study of drug classifications, actions, therapeutic uses, adverse effects, routes of administration, and calculation of dosages.

Auto Collision Technology

ABDR 1207 Auto Body Welding (1-4-2)
A study of industry and standard welding and cutting procedures.

ABDR 1311 Vehicle Measurement and Damage Repair Procedures (2-4-3)
Introduction to damaged vehicle measurement and alignment systems.

ABDR 1331 Basic Refinishing (2-4-3)
An introduction to current refinishing products, shop safety, and equipment used in the automotive refinishing industry. Painting of trim and replacement parts included. Emphasis on surface preparation, masking techniques, and refinishing of trim and replacement parts.

ABDR 1349 Automotive Plastic and Sheet Molded Compound Repair (2-4-3)
A comprehensive course in repair of interior and exterior plastics including the use of various types of adhesives and state of the art plastic welding.

ABDR 1419 Basic Metal Repair (2-6-4)
In depth coverage of basic metal principles and working techniques including proper tool usage and product application.

ABDR 1441 Structural Analysis and Damage Repair I (2-6-4)
Expanded training in the roughing and shaping procedures on automotive sheet metal necessary to make satisfactory minor body repairs. Emphasis on the alignment of component parts such as doors, hood, front-end assemblies, and deck lids.

ABDR 1442 Structural Analysis and Damage Repair II (2-6-4)
Continuation of general repair and replacement procedures for damaged structural parts and collision damage.

ABDR 1455 Minor Metal Repair (2-6-4)
A course in sheet metal alignment principles using mechanical and hydraulic equipment. Emphasis on attachment devices used to straighten and align exterior body panels.

ABDR 1458 Intermediate Refinishing (2-6-4)
Expanded training in mixing and spraying of automotive topcoats. Emphasis on formula ingredient, reducing, thinning, and special spraying techniques. Introduction to partial panel refinishing techniques and current industry paint removal techniques.

ABDR 2257 Collision Repair Shop Management (1-2-2)
A study of methods and equipment used in state of the art collision repair shops to improve management functions and profitability.

ABDR 2345 Vehicle Safety Systems (2-4-3)
Theory and operation of air bags and other passive and non-passive restraint systems including automotive anti-lock systems and the latest technology and diagnostic methods used in the collision repair industry.

ABDR 2353 Color Analysis & Paint Matching (2-4-3)
Advanced course in color theory, color analysis, tinting, and advanced blending techniques for commercially acceptable paint matching.

ABDR 2370 Collision Damage Analysis/Rpt (2-4-3)
This course is a detailed study of manual and computerized systematic approaches for inspecting, checking, identifying, measuring and determining damage. A detailed study of preparing and interpreting computerized damage reports is part of this course.

ABDR 2380 COOP: Autobody Collision & Repair Technology/Technician (1-19-3)
ABDR 2680 COOP: Autobody Collision & Repair Technology/Technician (1-39-6)
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.

ABDR 2431 Structural Analysis & Damage Repair III (2-6-4)
Advanced concepts in the application of theories of auto body repair and replacement of major body units.

ABDR 2441 Major Collision Repair and Panel Replacement (2-6-4)
Instruction in preparation of vehicles for major repair processes. This course covers interpreting information from damage reports, planning repair sequences, selecting appropriate tools, and organizing removed parts for reinstallation.

ABDR 2449 Advanced Refinishing (2-6-4)
Skill development in multi-stage refinishing techniques. Further development in identification of problems and solutions in color matching and partial panel refinishing.

ABDR 2451 Specialized Refinishing Techniques (2-6-4)
Advanced topics in specialty automotive refinishing. Emphasis on refinishing of vinyl tops, interior plastics, fiberglass, and aluminum and galvanized panels as well as custom graphics and current industry innovations.

ENGL 1301 (see English/Communications)

MATH 1314, MATH 1332 (see Math/Natural Sciences)

POFT 1301 (see Related Instruction)

HRPO 1311 (see Behavioral/Social Sciences)

SPCH (see Speech Electives)

TECM 1301 (see Related Instruction)

Automotive Technology

AUMT 1201 Intro & Theory of Automotive Tech (1-3-2)
An introduction to the automobile industry including automotive history, safety practices, shop equipment and tools, vehicle subsystems, service publications, fasteners, professional responsibilities, and automobile maintenance.

AUMT 1380 COOP: Automobile/Automotive Mechanics Technology/Technician (1-9-3)
AUMT 1381 COOP: Automobile/Automotive Mechanics Technology/Technician (1-19-3)
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.

AUMT 1407 Automotive Electrical Systems (2-6-4)
An overview of automotive electrical systems including topics in operational theory, testing, diagnosis, and repair of batteries, charging and starting systems, and electrical accessories. Emphasis on electrical schematic diagrams and service manuals. May be taught manufacturer specific.

AUMT 1410 Automotive Brake Systems (2-6-4)
Operation and repair of drum/disc type brake systems. Emphasis on safe use of modern equipment. Topics include brake theory, diagnosis, and repair of power, manual, anti-lock brake systems, and parking brakes. May be taught with manufacturer specific instructions.

AUMT 1416 Auto Suspension and Steering (2-6-4)
A study of automotive suspension and steering systems including tire and wheel problem diagnosis, component repair, and alignment procedures. May be taught manufacturer specific.

AUMT 1419 Automotive Engine Repair (2-6-4)
Fundamentals of engine operation, diagnosis and repair including lubrication systems and cooling systems. Emphasis on overhaul of selected engines, identification and inspection, measurements, and disassembly, repair, and reassembly of the engine. May be taught manufacturer specific.

AUMT 1445 Auto Heating & Air Conditioning (2-6-4)
Diagnosis and repair of manual/electronic climate control systems; includes the refrigeration cycle and EPA guidelines for refrigerant handling. May be taught manufacturer specific.

AUMT 2270 Automotive Technician Certification Standards (2-0-2)
A study of certification procedures and testing as offered by major automotive manufacturers and National Institute for Automotive Service Excellence. This testing is required by the automotive industry in order to become a certified automotive technician.

AUMT 2301 Automotive Management (3-0-3)
Instruction in human relations, customer relations and customer satisfaction. Emphasis on management techniques and building relationships between the service department and the customer.

AUMT 2413 Automotive Drive Train & Axles (2-6-4)
A study of automotive clutches, clutch operation devices, standard transmissions/transaxles, and differentials with emphasis on the diagnosis and repair of transmissions/transaxles and drive lines. May be taught with manufacturer specific instructions.

AUMT 2417 Automotive Engine Performance Analysis I (2-6-4)
Theory, operation, diagnosis, and repair of basic engine dynamics, ignition systems, and fuel delivery systems. Use of basic engine performance diagnostic equipment. May be taught with manufacturer specific instructions. Prerequisite: AUMT 1407.

AUMT 2421 Automotive Electrical Lighting and Accessories (2-6-4)
Repair of automotive electrical subsystems, lighting, instrumentation, and accessories. Emphasis on accurate diagnosis and proper repair methods using various troubleshooting skills and techniques. May be taught manufacturer specific. Prerequisite: AUMT 1407.

AUMT 2425 Automatic Transmission/Transaxle (2-6-4)
A study of the operation, hydraulic principles, and related circuits of modern automatic transmissions and automatic transaxles. Diagnosis, disassembly, and assembly procedures with emphasis on the use of special tools and proper repair techniques. May be taught manufacturer specific.

AUMT 2434 Engine Performance Analysis II (2-6-4)
A study of diagnosis and repair of emission systems, computerized engine performance systems, and advanced ignition and fuel systems; and proper use of advanced engine performance diagnostic equipment. May be taught manufacturer specific. Prerequisite: AUMT 2417.

AUMT 2680 COOP: Automobile/Automotive Mechanics Technology/Technician (1-39-6)
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.

DEMR 2434 AdvDieselTune-up/Troubleshoot (2-6-4)
Advanced concepts and skills required for tune-up and troubleshooting procedures of diesel engines. Emphasis on the science of diagnostics with a common sense approach.

ENGL 1301 (see English/Communications)

MATH 1314 (see Math/Natural Sciences)

POFT 1301 (see Related Instruction)

HRPO 1311 (see Behavioral/Social Sciences)

SPCH (see Speech Electives)

TECM 1301 (see Related Instruction)

Aviation Maintenance Technology

AERM 1203 Shop Practices (1-4-2)
An introduction to shop safety, the correct use of hand tools, equipment and precision measurement, identification of aircraft hardware, and the fabrication of fluid lines and tubing. Emphasis on procedures for testing, heat treating, and inspection of aircraft structures.

AERM 1205 Weight & Balance (1-2-2)
An introduction to Federal Aviation Administration (FAA) required subjects relating to the weighing of aircraft, the performance of weight and balance calculations, and appropriate maintenance record entries.

AERM 1208 Federal Aviation Regulations (1-4-2)
A course in the use and understanding of the Federal Aviation Administration and aircraft manufacturers' publications, forms, and records; and the exercise of mechanic privileges within prescribed limitations.

AERM 1210 Ground Operations (1-3-2)
An introductory course in fuels, servicing methods and procedures, aircraft movement, securing and operations of aircraft, external power equipment, aircraft cleaning, and corrosion control.

AERM 1240 Aircraft Propellers (1-3-2)
Fundamentals of propeller design, function, and construction. Skill development in inspection, servicing, and repair of fixed-pitch, constant-speed, and feathering propellers and governing systems. Instruction in removal, balancing, and installation of propellers and fundamentals of safety are also addressed.

AERM 1241 Wood, Fabric & Finishes (1-3-2)
A course in the use and care of various covering materials, finishes, and wood structures including approved methods and procedures. Safety also addressed.

AERM 1243 Instruments & Navigation/Communication (1-2-2)
A study of aircraft instruments and electronic flight instrument systems including testing and installing instruments; inspecting, checking, and troubleshooting navigation and communication systems; and inspecting and repairing antennas and electronic equipment installations.

AERM 1247 Airframe Auxiliary Systems (1-4-2)
A comprehensive study of airframe auxiliary systems including the operation and repair of position and warning systems, cabin atmospheric control systems, ice and rain control systems for aircraft and engines, and fire detection and protection systems. Fundamentals of safety procedures also addressed.

AERM 1253 Aircraft Welding (1-3-2)
Skill development in repair procedures for steel, magnesium, brass, and aluminum materials used in aircraft assembly and selection and application of appropriate methods of welding, brazing, and soldering steel, magnesium, brass, and aluminum. Fundamentals of safety procedures also addressed.

AERM 1254 Aircraft Composites (1-4-2)
Comprehensive concepts of the inspection and repair of composite, fiberglass, honeycomb, and laminated structural materials including doors, windows, bonded structures, and interior furnishings. Safety procedures will also be addressed.

AERM 1314 Basic Electricity (2-4-3)
A study of aircraft electrical systems and their requirements including the use of ammeter, voltmeter, and ohmmeter; series and parallel circuits; inductance and capacitance; magnetism; converting alternating current (AC) to direct current (DC); controlling devices; maintenance and servicing of aircraft batteries; and reading and interpreting aircraft electrical diagrams to include solid state devices and logic functions. Fundamentals of electrical safety also addressed.

AERM 1315 Aviation Science (2-4-3)
Fundamentals of mathematics, physics, and drawing as they apply to aircraft principles and operation as required by the Federal Aviation Administration for airframe and powerplant mechanics.

AERM 1344 Aircraft Reciprocating Engines (2-4-3)
A study of reciprocating engines and their development, operating principles, and theory. Instruction in engine instruments, lubricating, and exhaust systems. Fundamentals of safety will also be addressed.

AERM 1345 Airframe Electrical Systems (1-6-3)
A study of airframe electrical systems including installation, removal, disassembly, and repair of electrical components and related wiring. Fundamentals of electrical safety also addressed. Prerequisite: AERM 1314.

AERM 1349 Hydraulic, Pneumatic, and Fuel Systems (2-4-3)
Skill development in inspecting, servicing, and maintaining aircraft fluid systems including hydraulics, pneumatics, and fuel. Application of basic concepts through detailed maintenance procedures. Fundamentals of safety also addressed.

AERM 1350 Landing Gear Systems (2-3-3)
General principles of inspection, servicing, overhaul, and repair of fixed and retractable landing gear systems. Includes coverage of systems, components, operation, and fundamentals of safety procedures.

AERM 1351 Aircraft Turbine Engine Theory (2-3-3)
General principles theory, history, and servicing of turbine engines to include lubrication, instrumentation, auxiliary power units, and exhaust systems. Fundamentals of safety procedures are also addressed.

AERM 1352 Aircraft Sheet Metal (1-8-3)
Skill development in inspection and repair of sheet metal structures including forming, layout, and bending of sheet metal and identification, selection, and installation of rivets and fasteners. Fundamentals of safety procedures also addressed.

AERM 1357 Fuel Metering and Induction Systems (2-4-3)
Skill development in fuel metering and induction systems used on reciprocating and turbine engines including fuel metering systems, carburetors, induction systems, heat exchangers, and cooling systems. Fundamentals of safety procedures will also be addressed.

AERM 1456 Aircraft Powerplant Electrical (2-6-4)
General principles of theory, operation, and maintenance of powerplants electrical systems including ignition, starting, and fire protection systems. Fundamentals of safety procedures will also be addressed. Prerequisite: AERM 1314.

AERM 2231 Airframe Inspection (1-3-2)
In depth coverage of methods and procedures to perform airframe conformity and air worthiness inspections (including one hundred hour inspections) in accordance with Federal Aviation Regulations and manufacturer's service information. Safety procedures will also be addressed.

AERM 2233 Assembly and Rigging (1-4-2)
A comprehensive study of the assembly and rigging of fixed and rotary-wing aircraft including structural alignment, balancing and rigging of control systems and assembly of aircraft components. Fundamentals of safety procedures are also addressed.

AERM 2341 Powerplant & Auxiliary Power Units (2-3-3)
Advanced concepts of auxiliary power unit (APU) and powerplant systems and components. Safety procedures will also be addressed.

AERM 2351 Aircraft Turbine Engine Overhaul (2-4-3)
A comprehensive study in inspection, disassembly, reassembly and replacement of gas turbine engines, sections, and components and operational troubleshooting, analysis, and safety.

AERM 2352 Aircraft Powerplant Inspection (2-4-3)
In-depth coverage of methods and procedures to perform powerplant conformity and airworthiness inspections (including one hundred hour inspections) in accordance with Federal Aviation Regulations and manufacturer's information. Safety procedures will also be addressed.

AERM 2380 COOP: Aircraft Mechanic & Maintenance (1-19-3)
AERM 2381 COOP: Aircraft Mechanic & Maintenance(1-19-3)
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.

AERM 2447 Aircraft Reciprocating Engine Overhaul (2-6-4)
A comprehensive study of reciprocating engine overhaul including measurement and inspection procedures. Instruction in removal and installation, inspections, checks, servicing, and repair of engines. Safety procedures will be addressed.

AERM 2680 COOP: Airframe Mechanic & Aircraft Maintenance (1-39-6)
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.

ENGL 1301 (see English/Communications)

MATH 1314, MATH 1332 (see Math/Natural Sciences)

HRPO 1311 (see Behavioral/Social Sciences)

SPCH (see Speech Electives)

Behavioral/Social Sciences

BMGT 1341 Business Ethics (2-2-3)
Discussion of ethical issues, the development of moral frame of reference and the need for an awareness of social justice in management practices and business activities. Review of ethical responsibilities and relationships between organizational departments, divisions, executive management, and the public.

ECON 2301 Principles of Macroeconomics (3-0-3)
History, development, and application of macroeconomic theory underlying the production, distribution, and exchange of goods and services including the utilization of resources, analysis of value and prices, national income analysis, fiscal policies, monetary and banking theory and policy, distribution of income, labor problems, international economics, and economics systems. Attention given to the application of economic principles to economic problems.

ECON 2302 Principles of Microeconomics (3-0-3)
History, development, and application of macroeconomic and microeconomic theory underlying the production, distribution, and exchange of goods and services including the utilization of resources, analysis of value and prices, national income analysis, fiscal policies, monetary and banking theory and policy, distribution of income, labor problems, international economics, and economics systems. Attention given to the application of economic principles to economic problems.

GOVT 2301 American Government I (3-0-3)
Introduction to the theory and practice of politics and government in America at the national, state, and local levels, with special attention to Texas. Topics include political theory, the American and Texas constitutions, federalism, political participation and elections, the institutions of government, and domestic and foreign policies. Prerequisites: READ 0200 or English placement test equivalent.

GOVT 2302 American Government II (3-0-3)
Continuation of the theory and practice of politics and government in America at the national, state, and local levels, with special attention to Texas. Topics include political theory, the American and Texas constitutions, federalism, political participation and elections, the institutions of government, and domestic and foreign policies. Prerequisites: READ 0200 or English placement test equivalent.

HIST 1301 United States History I (3-0-3)
Survey of the political, social, economic, military, cultural, and intellectual history of the United States from the discovery of America to the present. This course provides an integration of social, political and economic history of the United States. Course topics include discovery, the colonial period; the American Revolution; establishment of the nation; political, territorial and socio-economic growth; the sectional controversy, the Civil War, and the reconstruction in the South to 1877. Prerequisites: READ 0200 or English placement test equivalent.

HIST 1302 United States History II (3-0-3)
Survey of the political, social, economic, military, cultural, and intellectual history of the United States from the discovery of America to the present. This course provides as integration of social, political and economic history of the United States. Course topics include the growth of transportation and industry; the agrarian protest and movement toward economic and political reform; the creation of an overseas empire; the United States in two world wars; and the cold War and the role of the United States as a dominant world power. Prerequisites: READ 0200 or English placement test equivalent.

HRPO 1311 Human Relations (3-0-3)
Practical application of the principles and concepts of the behavioral sciences to interpersonal relationships in the business and industrial environment.

PSYC 2301 General Psychology (3-0-3)
Survey of major topics in psychology. Introduces the study of behavior and the factors that determine and affect behavior. Prerequisite: READ 0200 or English placement test equivalent.

PSYC 2314 Lifespan Growth & Development (3-0-3)
Study of the relationship of the physical, emotional, social and mental factors of growth and development of children and throughout the lifespan. Prerequisite: READ 0200 or English placement test equivalent.

SOCI 1301 Introductory Sociology (3-0-3)
Introduction to the concepts and principles used in the study of group life, social institutions, and social processes.

SOCI 1306 Social Problems (3-0-3)
Application of sociological principles to the major problems of contemporary society such as inequality, crime and violence, substance abuse, deviance, or family problems.

ENVR 1401 Environmental Science I (3-3-4)
General interest course requiring a minimum of previous science background and relating scientific knowledge to problems involving energy and the environment. May or may not include a laboratory.

LAWT 1301 Copyright & Ethical Issues(3-0-3)

Introduction to basic copyright law and related ethical issues as they apply to creation and use of copyrighted material. Emphasis on practical application of copyright law through case studies.

Biomedical Equipment Technology

BIOM 1201 Biomedical Equipment Technology (1-2-2)

Introduction to current job responsibilities, salaries, and compensations in the medical industry and health care organizations.

BIOM 1205 Soldering Skills & Shop Safety (1-4-2)

Preparation for selection of soldering equipment and application of safety practices at work. Laboratory development of proficiency in soldering and desoldering electronic components.

BIOM 1209 Applied Biomedical Equipment Technology (1-4-2)

Introduction to biomedical instrumentation as related to anatomy and physiology. Detailed coverage of anatomical systems that use medical equipment for monitoring, diagnosis, and treatment.

BIOM 1305 Soldering Skills and Shop Safety (2-4-3)

Preparation for selection of soldering equipment and application of safety practices at work. Laboratory development of proficiency in soldering and desoldering electronic components.

BIOM 1309 Applied Biomedical Equipment Technology (2-4-3)

Introduction to biomedical instrumentation as related to anatomy and physiology. Detailed coverage of anatomical systems that use medical equipment for monitoring, diagnosis, and treatment.

BIOM 1341 Medical Circuits/Troubleshooting (2-4-3)

Development of skills in logical isolation of troubles in malfunctioning medical electronic circuits and utilization of appropriate test equipment. Prerequisites: CETT 1305 or IEIR 1304.

BIOM 1355 Medical Electronic Application (2-4-3)

Presentation of sensors, transducers, and supporting circuits used in medical instrumentation devices. Prerequisites: CETT 1305 or IEIR 1304.

BIOM 1391 Special Topics in Biomedical Engineering-Related Technology/Technician (2-4-3)

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 was designed to be repeated multiple times to improve student proficiency.

BIOM 2201 Safety in Health Care Facilities (1-4-2)

Study of codes, standards and management principles related to biomedical instrumentation. Emphasize on the proper use and application of safety test equipment, preventive maintenance procedures, and documentation of work performed.

BIOM 2249 Basic X-Ray & Medical Imaging Systems (1-4-2)

A study of radiation theory and safety hazards, fundamental circuits and application of X-ray systems including circuit analysis, troubleshooting, and isolation of system malfunctions.

BIOM 2288 Internship-Biomedical Technology (0-10-2)

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.

BIOM 2301 Safety in Health Care Facilities (2-4-3)

Study of codes, standards and management principles related to biomedical instrumentation. Emphasize on the proper use and application of safety test equipment, preventive maintenance procedures, and documentation of work performed. Prerequisites: CETT 1305 or IEIR 1304.

BIOM 2315 Physiological Instrument I (2-4-3)

Theory of operation, circuit analysis, and troubleshooting physiological instruments.

BIOM 2319 Fundamentals of X-Ray and Medical Imaging Systems (2-3-3)

Radiation theory and safety hazards, fundamental circuits, and application of X-ray systems including circuit analysis and troubleshooting.

BIOM 2339 Physiological Instruments II (2-4-3)

Graphic display recording devices. Includes defibrillators and multi-purpose diagnostic equipment.

BIOM 2341 General Medical Equipment I (2-4-3)

Extraction of selected current paths from a larger schematic with requirements to redraw into the proper configuration. Discussion of motors and diassembly and reassembly of equipment.

BIOM 2343 General Medical Equipment II (2-4-3)

Theory and principles of operation of a variety of basic electro-mechanical equipment with emphasis on repair and service of actual medical equipment. Prerequisites: BIOM 2341.

BIOM 2380 COOP - Biomedical Technology (1-19-3)
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. Prerequisite: BIOM 2201.

BIOM 2480 COOP: Biomedical Technology (1-24-4)
BIOM 2680 COOP: Biomedical Technology (1-39-6)
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. Prerequisite: BIOM 2201.

BIOM 2688 Internship/Biomedical (0-20-6)
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. Prerequisite: BIOM 2301.

CETT 1303 (see Mechatronics Technology)

CETT 1305 (see Mechatronics Technology)

CETT 1325 (see Mechatronics Technology)

ELMT 2333 (see Mechatronics Technology)

ENGL 1301 (see English/Communications)

HRPO 1311 (see Behavioral/Social Sciences)

INTC 1357 (see Mechatronics Technology)

ITNW 1325 (see Computer Networking & Security Technology)

MATH (see Math/Natural Sciences)

PSYC 2301 (see Behavioral/Social Sciences)

RBTC 1305 (see Mechatronics Technology)

SPCH (see Speech Electives)

Building Construction Science

CNBT 1300 Residential and Light Commercial Blueprint Reading (2-4-3)
Introductory blueprint reading for residential and light commercial construction.

CNBT 1342 Building Codes and Inspections (2-4-3)
Building codes and standards applicable to building construction and inspection processes.

CNBT 1346 Construction Estimating I (2-4-3)
Fundamentals of estimating materials and labor costs in construction.

CNBT 1416 Construction Technology I (2-6-4)
Site preparation, foundation, form work, and framing. Includes safety; tools and equipment; basic site preparation; basic foundations and form work; and basic floor, wall, and framing methods and systems.

CNBT 1449 Concrete II (2-6-4)
Various techniques for concrete utilization in commercial and industrial construction.

CNBT 2310 Comm/Indust BLprintRead (2-4-3)
Scale commercial/industrial prints with architectural and engineering scales; identify and apply construction blueprint symbols and abbreviations; interpret a set of commercial/industrial construction contract documents including specifications and working drawings regarding mechanical, electrical, civil, structural, and architectural requirements; corelate elevations, sections, details, plan views, schedules, and general notes; and apply commercial/industrial regulatory codes to working drawings and specifications.

CNBT 2315 Construction Specifications and Contracts (2-4-3)
Overview of the legal aspects of written construction documents.

CNBT 2317 Green Building (2-2-3)
Methods and materials used for buildings that conserve energy, water, and human resources.

CNBT 2342 Construction Management I (2-4-3)
Human relations management skills on the job site. Topics include written and oral communications, leadership and motivation, problem solving, and decision making.

CNBT 2380 COOP: Construction Engineering Technology/Technician (1-19-3)
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. Prerequisites: CNBT 1549, CRPT 1315, CRPT 1323.

CNBT 2437 Construction Estimating II (2-4-4)
Advanced estimating concepts using computer software programs for the construction and crafts. Prerequisites: CNBT 1305.

CNBT 2680 COOP: Construction Engineering Technology/Technician (1-39-6)
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. Prerequisites: CNBT 1549, CRPT 1315, CRPT 1323.

CRPT 1315 Conventional Wall Systems (2-4-3)
Conventional wall systems with emphasis on wood frame construction. Includes identification of components; construction of wall systems; safe work practices; and the selection, use, and maintenance of tools and equipment.

CRPT 1323 Floor Systems (2-4-3)
An introduction to common floor systems. Topics include component identification; construction of a floor system; safe work practices; and the selection, use, and maintenance of tools and equipment.

CRPT 1341 Conventional Exterior Finish Systems (2-4-3)
Installation of exterior finish systems and components including the placement and installation of cornice, windows, doors, siding, and flashing. Emphasis on safe work practices and the selection, use, and maintenance of tools and equipment.

CRPT 1345 Conventional Interior Finish Systems (2-4-3)
Installation of interior finish systems and components including the placement and installation of doors, trim, floor, wall, and ceiling finishes. Emphasis on safe work practices and the selection, use, and maintenance of tools and equipment.

CRPT 1411 Conventional Roof Systems (2-6-4)
Study of the principles of design and construction of a conventional roof system incorporating gable, hip, and intersections. Emphasis on safe work practices and the selection, use, and maintenance of tools and equipment.

ENGL 1301 (see English/Communications)

HRPO 1311 (see Behavioral/Social Sciences)

MATH 1314, MATH 1332 (see Math/Natural Sciences)

OSHT 1405 OSHA Regulations-Construction Industry (3-3-4)
A study of Occupational Safety and Health Administration (OSHA) regulations pertinent to the construction industry.

POFT 1301 (see Related Instruction)

SPCH (see Speech Electives)

TECM 1301 (see Related Instruction)

WDWK 1413 Cabinet Making (2-6-4)
Includes the design and construction of base cabinets and wall cabinets for kitchens and bathrooms. Emphasis on the safe use of portable and stationary power tools.

Business Management Technology
Office Administration, Office Assistant

ACNT 1303 Introduction to Accounting I (2-3-3)
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.

BMGT 1327 Principles of Management (2-2-3)
Concepts, terminology, principles, theory, and issues in the field of management.

ENGL 1301 (see English/Communications)

HRPO 1311 (see Behavioral/Social Sciences)

HRPO 2301 Human Resource Management (2-3-3)
Behavioral and legal approaches to the management of human resources in organizations.

ITSC 1309 Integrated Software Applications I (2-3-3)
Introduction to business productivity software suites using word processing, spreadsheets, databases, and/or presentation software.

ITSW 1307 Introduction to Database (2-3-3)
Introduction to database theory and the practical applications of a database.

LAWT 1301 (see Behavioral/Social Sciences)

MATH 1314, MATH 1332 (see Math/Natural Sciences)

MRKG 1301 Customer Relationship Management (2-2-3)
General principles of customer service including skills, knowledge, attitudes, and behaviors.

POFI 2331 Desktop Publishing (2-2-3)
In-depth coverage of desktop publishing terminology, text editing, and use of design principles. Emphasis on layout techniques, graphics, multiple page displays, and business applications.

POFT 1301 (see Related Instruction)

POFT 1309 Administrative/Office Procedures I (2-3-3)
Study of current office procedures, duties, and responsibilities applicable to an office environment.

POFT 1319 Records & Info Management I (2-3-3)
Introduction to basic records information management filing systems including manual and electronic filing.

POFT 1321 Business Math (2-3-3)
Instruction in the fundamentals of business mathematics including analytical and problem-solving skills for critical thinking in business applications.

POFT 1329 Beginning Keyboarding (2-3-3)
Skill development in the operation of the keyboard by touch applying proper keyboarding techniques. Emphasis on development of acceptable speed and accuracy levels and formatting basic documents.

POFT 2331 Administrative Systems (2-3-3)
Advanced concepts of project management and office procedures integrating software applications.

SPCH (see Speech Electives)

Chemical-Environmental Technology

CTEC 1205 Chemical Calculations I (1-2-2)
Parallels and supports college-level applied general chemistry. Emphasis on solving problems in exercises and lab experiments.

CTEC 1206 Chemical Calculations II (1-2-2)
Parallels and supports college-level applied general chemistry. Emphasis on solving problems in exercises and lab experiments.

CTEC 1380 COOP: Chemical Technology Technician (1-19-3)
CTEC 1680 COOP: Chemical Technology Technician (1-39-6)
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.

CTEC 1441 Applied Instrumental Analysis I (2-6-4)
Overview of instrumental chemical analysis. Topics include chromatography, spectroscopy, and/or electro analytical chemistry.

CTEC 2250 Unit Operations II (1-4-2)
A continuation of Unit Operations I. Includes identification, operation and control of plant equipment, general process equipment, process operations, instrumentation, process control, product transfer and storage, preventive maintenance, and utilities.

CTEC 2333 Comprehensive Studies in Chemical Technology (1-6-3)
Course requiring a special laboratory research project.

CTEC 2441 Polymers I (2-6-4)
Study of the concepts of polymer science. Topics include classification, structure, properties, synthesis, characterization, and industrial applications.

CTEC 2443 Polymers II (2-6-4)
Continuation of Polymers I with emphasis on polymeric materials.

CTEC 2445 Unit Operations (2-6-4)
Instruction in the principles of chemical engineering and process equipment. Emphasis on scale-up from laboratory bench to pilot plant.

ENGL 1301 (see English/Communications)

EPCT 1203 24 Hr Emergency Response Training (1-3-2)
Minimum certification requirements of a hazardous material emergency response technician, hazardous materials specialist, or on-site incident commander as found in the Code of Federal Regulations:29CFR-1910.120.

EPCT 1211 Intro to Environmental Science (1-3-2)
An overview of environmental science and current global concerns, and a brief history of environmental ethics, resource use, and conversation. Discussion of fundamental principles of resource economics and environmental health.

EPCT 1251 Quality Assurance & Quality Control (1-4-2)
Quality assurance/quality control procedures used to confirm viability and confidence of sample results or procedures. Emphasis on documentation, blank and check sample (spike) preparation, and control tables.

EPCT 1344 Environmental Sampling/Analysis (2-4-3)
Sampling protocol, procedures, quality control, preservation technology, and field analysis. Emphasis on analysis commonly performed by the field technician.

EPCT 2335 Advanced Environmental Instrument Analysis (1-6-3)
Regulations and standards in the analysis of samples using specific analytical instruments and their procedures. Emphasis on instrument calibrator sample preparation, evaluation, and reporting of analytical results.

HRPO 1311 (see Behavioral/Social Sciences)

MATH 1314 (see Math/Natural Sciences)

PSYC 2301 (see Behavioral/Social Sciences)

SCIT 1414 Applied General Chemistry (2-6-4)
1094052276 Study of the general concepts of chemistry with an emphasis on industrial applications. Prerequisite: DMTH 0100 or Math placement test equivalent.

SCIT 1415 Applied General Chemistry II (2-6-4)
A continuation of Applied General Chemistry I with emphasis on solids, liquids, gases, solutions, energy changes, reaction rates, and chemical equilibrium. Prerequisite: SCIT 1414.

SCIT 1543 Applied Analytical Chemistry I (3-6-5)
Instruction in gravimetric and titrimetric analysis of practical samples by classical and standard methods.
Prerequisite: SCIT 1415.

SCIT 2401 Applied Organic Chemistry I (3-4-4)
An overview of the classification, characteristics, and structure of carbon compounds and an introduction to basic organic laboratory techniques. Prerequisite: SCIT 1415.

SPCH (see Speech Electives)

Computer Drafting and Design Technology

DFTG 1305 Technical Drafting (2-4-3)
Introduction to the principles of drafting to include terminology and fundamentals, including size and shape descriptions, projection methods, geometric construction, sections, auxiliary views, and reproduction processes.

DFTG 1309 Basic Computer-Aided Drafting (2-4-3)
An introduction to basic computer-aided drafting. Emphasis is placed on drawing setup; creating and modifying geometry; storing and retrieving predefined shapes; placing, rotating, and scaling objects, adding text and dimensions, using layers, coordinating systems; and plot/print to scale.

DFTG 1317 Architectural Drafting-Residential (2-4-3)
Architectural drafting procedures, practices, and symbols. Preparation of detailed working drawings for residential structures. Emphasis on light frame construction methods. Prerequisites: DFTG 1309.

DFTG 1333 Mechanical Drafting (2-4-3)
Detail drawings with proper dimensioning and tolerances, use of sectioning techniques, common fasteners, pictorial drawings, including bill of materials. Prerequisites: DFTG 1305, DFTG 1309.

DFTG 2306 Machine Design (2-4-3)
Theory and practice of design. Projects in problem-solving, including press fit, bolted and welded joints, and transmission components. Prerequisites: DFTG 2332.

DFTG 2312 Technical Illustration & Presentation (2-4-3)
Topics includes pictorial drawing including isometrics, obliques, perspectives, charts, and graphs. Emphasis on rendering and using different media. Prerequisites: DFTG 2340.

DFTG 2321 Topographical Drafting (2-4-3)
Plotting of surveyor's field notes. Includes drawing elevations, contour lines, plan and profiles, and laying out traverses. Prerequisites: DFTG 2330.

DFTG 2328 Architectural Drafting-Commercial (2-4-3)
Architectural drafting procedures, practices, and symbols including the preparation of detailed working drawings for a commercial building, with emphasis on commercial construction methods. Prerequisites: DFTG 1309, DFTG 1317.

DFTG 2330 Civil Drafting (2-4-3)
An in-depth study of drafting methods and principles used in public works civil engineering. Prerequisites: DFTG 1309.

DFTG 2331 AdvTech in Archit Design Drafting (2-4-3)
Use of architectural specific software to execute the elements required in designing standard architectural exhibits utilizing custom features to create walls, windows and specific design requirements for construction in residential/commercial and industrial architecture.

DFTG 2332 Advanced Computer-Aided Drafting (2-4-3)
Advanced techniques, including the use of a customized system. Presentation of advanced drawing applications, such as three-dimensional solids modeling and linking graphic entities to external non-graphic data. Prerequisites: DFTG 2340.

DFTG 2340 Solid Modeling/Design (2-4-3)
A computer-aided modeling course. Development of three-dimensional drawings and models from engineering sketches and orthographic drawings and utilization of three-dimensional models in design work.

DFTG 2350 Geometric Dimensioning & Tolerancing (2-4-3)
Geometric dimensioning and tolerancing, according to standards, application of various geometric dimensions and tolerances to production drawings. Prerequisites: DFTG 1333, DFTG 2332.

DFTG 2380 COOP: Drafting & Design Technology, General (1-19-3)
DFTG 2680 COOP: Drafting & Design Technology (1-39-6)
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. Prerequisite: DFTG 2328, DFTG 2340.

ENGL 1301 (see English/Communications)

GISC 1301 Cartography and Geography in GIS & GPS (2-4-3)
Introduction to the principles of cartography and geography. Emphasis on global reference systems and the use of satellites for measurements and navigation.

GISC 1311 Introduction to GIS (2-4-3)
Explain basic concepts of using GIS in mapping the earth in spatial terms and populating the GIS's system to access data; create and access data in the GIS's system using an appropriate software package; and develop and print maps with industry standard legends. Operate industry standard GIS packages on a personal computer; capture positional and attribute information with correct and accurate geographic referencing; convert geographic information among several coordinate systems; acquire GIS's system information from databases, existing maps, and the Internet; and annotate output for finished maps, documents, and reports.

GISC 2320 Intermediate Geographic Info Sys (2-4-3)
This course focuses on the study of spatial data structures and the display, manipulation, and analysis of geographic information. Students will study the technical aspects involved in spatial data handling, analysis and modeling. Instruction will include theories and procedures associated with the implementation and management of GIS projects. A variety of GIS software packages will be used in the laboratory.

HRPO 1311 (see Behavioral/Social Sciences)

MATH (see Math/Natural Sciences)

PSYC 2301 (see Behavioral/Social Sciences)

SPCH (see Speech Electives)

SRVY 2348 Plane Surveying (2-4-3)
Surveying instruments, basic measuring procedures, vertical and horizontal control, and traverse closure.

Computer Networking and Security Technology

CPMT 1303 (See Computer Systems Management Technology)

CPMT 1304 (See Computer Systems Management Technology).

ENGL 1301 (see English/Communications)

HRPO 1311 (see Behavioral/Social Sciences)

ITNW 1325 Fundamentals of Networking Technology (2-4-3)
Instruction in networking technologies and their implementation. Topics include the OSI reference model, network protocols, transmission media, and networking hardware and software.

ITNW 1354 Implementing & Supporting Servers (2-4-3)
Development of skills necessary to implement, administer, and troubleshoot information systems that incorporate servers in a networked computing environment.

ITNW 1380 COOP - Computer Systems Network (1-19-3)
ITNW 1680 COOP - Computer Systems Network (1-39-6)
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 1392 Special Topics in Computer Systems and Telecomunications (2-4-3)
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 was designed to be repeated multiple times to improve student proficiency.

ITNW 2309 Network Administration for Intranet (2-4-3)
Perform the role of network administrator or system manager in an Intranet network.

ITNW 2313 Network Hardware (2-4-3)
Maintain network hardware devices. Topics include network cables, servers, and workstations; network connectivity devices such as routers, hubs, bridges, gateways, repeaters, and uninterruptible power supplies; and other networking hardware devices.

ITNW 2321 Networking with TCP/IP (2-4-3)
Set up, configure, use, and support Transmission Control Protocol/Internet Protocol (TCP/IP) on networking operating systems.

ITNW 2350 Enterprise Network (2-4-3)
A case study in Convergence Technologies requiring a network engineer to study a problem and design a network solution for an enterprise network.

ITNW 2354 Internet/Intranet Server (2-4-3)
Designing, installing, configuring, maintaining, and managing an Internet server.

ITNW 2359 Web Server Support & Maintenance (2-4-3)
Instruction in the installation, configuration, and implementation of web servers.

ITSC 1301 Introduction to Computers (2-4-3)
Overview of computer information systems. Introduces computer hardware, software, procedures, and human resources.

ITSC 1309 (see Business Management Technology)

ITSC 2380 COOP - Computer & Information Sciences (1-19-3)
ITSC 2680 COOP - Computer & Information Sciences (1-39-6)
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.

ITSE 1331 (See Game & Simulation Programming)

ITSY 1342 Information Technology Security (2-4-3)
Instruction in security for network hardware, software, and data, including physical security; backup procedures; relevant tools; encryption; and protection from viruses.

ITSY 2301 Firewalls and Network Security (2-4-3)
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. . Prerequisite: ITNW 2321, ITSY 1342

ITSY 2330 Intrusion Detection (2-4-3)
Computer information systems security monitoring, intrusion detection, and crisis management. Includes alarm management, signature configuration, sensor configuration, and troubleshooting components. Emphasizes identifying, resolving, and documenting network crises and activating the response team.

ITSY 2342 Incident Response & Handling (2-4-3)
In-depth coverage of incident response and incident handling, including identifying sources to attacks and security breaches; analyzing security logs; recovering the system to normal; performing postmortem analysis; and implementing and modifying security measures. Prerequisite: ITSY 1342.

ITSY 2359 Security Assessment & Auditing (2-4-3)
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. Prerequisite: ITSY 2342

MATH 1314 (see Math/Natural Sciences)

POFT 1301 (see Related Instruction)

SPCH (see Speech Electives)

TECM 1303 (see Related Instruction)

Computer Systems Management Technology

CPMT 1303 Introduction to Computer Technology (2-4-3)
A fundamental computer course that provides in-depth explanation of the procedures to utilize hardware and software. Emphasis on terminology, acronyms, and hands-on activities.

CPMT 1304 Microcomputer System Software (2-4-3)
Skill development in the installation, configuration, maintenance and troubleshooting of system software in microcomputers. Topics may include operating systems, utility software and other software affecting the basic operation of a microcomputer system.

CPMT 1307 Electronic & Computer Skills (2-4-3)
Modern electronic construction techniques including using common hand tools in disassembly, repair, and re-assembly of electronics and computer components. Prerequisite: TECM 1303 or MATH 1314.

CPMT 1311 Introduction to Computer Maintenance (2-4-3)
Introduction to the installation, configuration, and maintenance of a microcomputer system. Prerequisites: CPMT 1303.

CPMT 1343 Microcomputer Architecture (2-4-3)
Computer characteristics and subsystem operations, timing, control circuits, and internal input/output controls. Prerequisite: CPMT 1311.

CPMT 1345 Computer Systems Maintenance (2-4-3)
Examination of the functions of the components within a computer system. Development of skills in the use of test equipment and maintenance aids. Prerequisites: CPMT 1311.

CPMT 1347 Computer System Peripherals (2-4-3)
Theory and practices involved in computer peripherals, operation and maintenance techniques, and specialized test equipment.

CPMT 2302 Home Technology Integration (2-4-3)
Integration and maintenance of various home technology subsystems. Includes home automation, security and surveillance, home networks, video and audio networks, and structured wiring.

CPMT 2337 Microcomputer Interfacing (2-4-3)
An interfacing course exploring the concepts and terminology involved in interfacing the internal architecture of the microcomputer with commonly used external devices. Prerequisites: CPMT 1311.

CPMT 2345 Computer System Troubleshooting (2-4-3)
Principles and practices involved in computer system troubleshooting techniques and repair procedures including advanced diagnostic test programs and the use of specialized test equipment. Prerequisites: CPMT 1343, CPMT 1347, & CPMT 2337.

CPMT 2350 Industry Certification Preparation (2-4-3)
Overview of the objectives for industry specific certification exam(s).

ENGL 1301 (see English/Communications)

GAME 1301 (see See Game & Simulation Programming)

HRPO 1311 (see Behavioral/Social Sciences)

ITNW 1325 (see Computer Networking & Security Technology)

ITNW 2321 (see Computer Networking & Security Technology)

ITSC 1305 Intro PC Operating Systems (2-4-3)
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.

ITSC 1307 UNIX Operating Systems I) (2-4-3)
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. Prerequisite: ITSC 1305.

ITSC 1309 (see Business Management Technology)

ITSC 1325 Personal Computer Hardware (2-4-3)
A study of current personal computer hardware including personal computer assembly and upgrading setup and configuration, and troubleshooting. Prerequisites: ITSC 1305.

ITSC 2339 Personal Computer Help Desk (2-4-3)
Diagnosis and solution of user hardware and software related problems with on-the-job and/or simulated projects in either a Help Desk lab or in short-term assignments for local business. Prerequisites: CPMT 1303.

ITSE 1331 (See Game & Simulation Programming)

ITSE 1350 Systems Analysis & Design (2-4-3)
Comprehensive introduction to the planning, design, and construction of computer information systems using the systems development life cycle and other appropriate design tools.

MATH 1314 (see Math/Natural Sciences)

SPCH (see Speech Electives)

TECM 1303 (see Related Instruction)

Culinary Arts

BIOL 1408 (see Math/Natural Sciences)

BMGT 1327 (see Related Instruction)

CHEF 1205 Sanitation and Safety (1-2-2)
A study of personal cleanliness; sanitary practices in food preparation; causes, investigation, control of illness caused by food contamination (Hazard Analysis Critical Control Points); and work place safety standards.

CHEF 1301 Basic Food Preparation (1-8-3)
A study of the fundamental principles of food preparation and cookery to include Brigade System, cooking techniques, material handling, heat transfer, sanitation, safety, nutrition and professionalism.

CHEF 1314 A la Carte Cooking (2-4-3)
A course in a la carte or "cooking to order" concepts. Topics include menu and recipe interpretation and conversion, organization of work station, employment of appropriate cooking methods, plating, and saucing principles. Prerequisites: CHEF 2301.

CHEF 2301 Intermediate Food Preparation (1-8-3)
Continuation of previous food preparation course. Topics include the concept of pre-cooked food items, as well as scratch preparation. Covers full range of food preparation techniques. Prerequisites: CHEF 1301.

CHEF 2480 COOP- Culinary Arts/Chef Training (1-29-4)
CHEF 2680 COOP-Culinary Arts/Chef Training (1-39-6)
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.

ENGL 1301 (see English/Communications)

FDNS 1305 Nutrition (3-0-3)
A study of nutrients including functions, food sources, digestion, absorption and metabolism with application to normal and preventive nutrition needs. Includes nutrient intake analysis, energy expenditure evaluation, and diet planning.

HRPO 1311 (see Behavioral/Social Sciences)

IFWA 1205 Food Service Equipment & Planning (1-3-2)
A study of various types of food service equipment and the planning of equipment layout for product flow and efficient operation.

IFWA 1219 Meat Identifying and Processing (1-4-2)
A study of the identification and characteristics of wholesale and retail cuts of meat; hotel, restaurant, and institutional cuts of meat; U.S.D.A. quality grades; quality control; and the Federal Meat Inspection Regulation. Prerequisites: CHEF 1301.

IFWA 2341 Specialized Food Preparation (1-6-3)
A study of ethnic/regional cooking with actual preparation of local favorite dishes and common international favorites. Prerequisites: CHEF 2301.

IFWA 2437 Special Projects & Field Work (2-6-4)
Assignment to real or simulated projects in campus facilities or off campus locations which require the application of all knowledge and skills learned throughout the program. Prerequisites CHEF 2301.

PSTR 1401 Fundamentals of Baking (2-6-4)
Fundamentals of baking including dough, quick breads, pies, cakes, cookies, tarts, and doughnuts. Instruction in flours, fillings, and ingredients. Topics include baking terminology tool and equipment use, formula conversions, functions of ingredients, and the evaluation of baked products. Prerequisites: CHEF 2301.

POFT 1301 (see Related Instruction)

POFT 1321 (see Related Instruction)

RSTO 1201 Beverage Management (1-4-2)
A study of the beverage service of the hospitality industry including spirits, wines, beers, and non-alcoholic beverages. Topics include purchasing, resource control, legistation, marketing, physical plant requirement, staffing, service, and the selection of wines to enhance foods.

RSTO 1204 Dining Room Service (1-4-2)
Introduces the principles, concepts, and systems of professional table service. Topics include dining room organization, scheduling, and management of food service personnel.

RSTO 1221 Menu Management (1-4-2)
Introduces the principles, concepts, and systems of professional table service. Topics include dining room organization, scheduling, and management of food service personnel. Prerequisites: CHEF 2301.

RSTO 1313 Hospitality Supervision (2-2-3)
Fundamentals of recruiting, selection, and training of food service and hospitality personnel. Topics include job descriptions, schedules, work improvement, motivation, and applicable personnel laws and regulations. Emphasis on leadership development. Prerequisites: RSTO 2301.

RSTO 1325 Purchasing for Hospitality Operations (2-2-3)
Study of purchasing and inventory management of foods and other supplies to include development of purchase specifications, determination of order quantities, formal and informal price comparisons, proper receiving procedures, storage management, and issue procedures. Emphasis on product cost analysis, yields, pricing formulas, controls, and record keeping at each stage of the purchasing cycle.

RSTO 2301 Principles of Food & Beverage Controls (2-2-3)
A study of financial principles and controls of food service operation including review of operation including review of operation policies and procedures. Topics include financial budgeting and cost analysis emphasizing food and beverage labor costs, operational analysis, and international and regulatory reporting procedures.

RSTO 2307 Catering (1-4-3)
Principles, techniques, and applications for both on-premises, off-premises, and group marketing of catering operations including food preparation, holding, and transporting techniques. Prerequisite: CHEF 2301, RSTO 1221, RSTO 2301.

SOCI 1301 (see Behavioral/Social Sciences)

Dental Assistant

DNTA 1113 Emergency Management (1-1-1)
Methods and equipment in life-saving and other emergencies. Addresses maintenance of emergency kit as well as taking and recording vital signs.

DNTA 1245 Preventive Dentistry (1-3-2)
The study and prevention of dental diseases and community dental health. Prerequisites: DNTA 1305, DNTA 1315.

DNTA 1251 Dental Office Management (1-3-2)
The study of business office procedures, including telephone management, appointment control, receipt of payment for dental services, completion of third-party reimbursement forms, supply inventory maintenance, data entry for charges and payments, recare management (manage recall systems),federal and state guidelines regarding health care providers, and operating basic business equipment. Prerequisite: DNTA 1353

DNTA 1305 Dental Radiology I (2-3-3)
Introduction to radiation physics, protection, the operation of radiographic equipment, exposure, processing and mounting of dental radiographs. Specific safety and standard precautions for the classroom and lab settings will be practiced.

DNTA 1315 Chairside Assisting (2-4-3)
An introduction to pre-clinical chairside assisting procedures, instrumentation, infection and hazard control protocol, equipment safety and maintenance.

DNTA 1353 Dental Assisting Applications (2-4-3)
Comprehensive procedures and applications for the general and specialty areas of dentistry. Prerequisite: DNTA 1315.

DNTA 1660 Clinical Dental Assistant (0-21-6)
A health-related work-based learning experience that enables the student to apply specialized occupational theory, skill, and concepts. Direct supervision is provided by the clinical professional.

HRPO 1311 (see Behavioral/Social Sciences)

Dental Hygiene

BIOL (see Math/Natural Sciences)

CHEM 1411 (see Math/Natural Sciences)

DHYG 1123 Dental Hygiene Practice (1-0-1)
Practice settings for the dental hygienist including office management, employment considerations, resume preparation, and job interviewing. Emphasis on the laws governing the practice of dentistry and dental hygiene, moral standards, and the ethical standards established by the dental hygiene profession. Prerequisite: DHYG 2360.

DHYG 1207 General & Dental Nutrition (2-0-2)
General nutrition and nutritional biochemistry with emphasis on the effects of nutrition, dental health, diet, and application of counseling strategies. Prerequisite: DHYG 2360.

DHYG 1211 Periodontology (1-2-2)
Study of normal and diseased periodontium to include the structural, functional, and environmental factors. Emphasis on etiology, pathology, treatment modalities, and therapeutic and preventive periodontics in a contemporary private practice setting. Prerequisites: DHYG 1331.

DHYG 1215 Community Dentistry (1-4-2)
The principles and concepts of community public health and dental health education emphasizing community assessment, educational planning, implementation, and evaluation including methods and materials used in teaching dental health education in various community settings.

DHYG 1227 Preventive Dental Hygiene Care (1-3-2)
Study of the dental hygienist in the dental health care system and the basic concepts of disease prevention and health promotion. Communication and behavior modification skills are emphasized to facilitate the role of the dental hygienist as an educator. Prerequisites: CHEM 1411.

DHYG 1235 Pharmacology for Dental Hygienist (1-2-2)
A study of the classes of drugs and their uses, actions, interactions, side effects, contraindictions, and oral manifestations with emphasis on dental applications. Prerequisites: DHYG 1331.

DHYG 1239 General & Oral Pathology (1-2-2)
Study of disturbances in human body development, diseases of the body, and disease prevention measures. Emphasis on the oral cavity and associated structures.

DHYG 1260 Clinical-Dental Hygiene/Hygienist I (0-10-2)
DHYG 1261 Clinical-Dental Hygiene/Hygienist II (0-11-3)
A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional.

DHYG 1301 Orofacial Anatomy, Histology & Embryology (2-4-3)
A study of histology and embryology of oral tissues, gross anatomy of the head and neck, tooth morphology, and individual tooth identification. Prerequisites: CHEM 1411.

DHYG 1304 Dental Radiology (2-3-3)
A study of radiation physics, biology, hygiene, and safety theories. Emphasis on the fundamentals of oral radiographic techniques and interpretation of radiographs. Includes exposure of intra-oral radiographs, quality assurance, radiographic interpretation, patient selection criteria, and other ancillary radiographic techniques. Prerequisites: CHEM 1411.

DHYG 1319 Dental Materials (2-3-3)
Physical and chemical properties of dental materials including the application and manipulation of the various materials used in dentistry. Prerequisite: DHYG 1331.

DHYG 1331 Preclinical Dental Hygiene (1-6-3)
Foundational knowledge for performing clinical skills on patients. Emphasis on principles, procedures, and professionalism for performing comprehensive oral prophylaxis. Prerequisites: CHEM 1411.

DHYG 2301 Contemporary Dental Hygiene Care I (2-2-3)
1094050476 Dental hygiene care for the medically or dentally compromised patient with emphasis on supplemental instrumentation techniques.

DHYG 2360 Clinical- Dental Hygiene/Hygienist III (0-14-3)
DHYG 2361 Clinical- Dental Hygiene/Hygienist IV (0-14-3)
A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. Prerequisite: DHYG 2360.

ENGL 1301 (see English/Communications)

HRPO 1311 (see Behavioral/Social Sciences)

SOCI 1301 (see Behavioral/Social Sciences)

PSYC 2301 (see Behavioral/Social Sciences)

SPCH (see Speech Electives)

Dental Laboratory Technology

DLBT 1201 Dental Anatomy/Tooth Morphology (1-4-2)
Study of the anatomy of the head and neck including the maxila, mandible, and temporomandibular joint. Emphasis on natural dentition, tooth anatomy, form, function, nomenclature, tooth drawing, and wax carving.

DLBT 1205 Dental Materials (1-4-2)
Study of dental materials and their uses in the fabrication of all types of dental protheses.

DLBT 1209 Removable Partial Denture Tech I (1-4-2)
Introduction to removal partial dentures. Topics include temporary partials and treatment partials with wrought clasps.

DLBT 1213 Complete Denture Techniques I (1-4-2)
Introduction to the fabrication of complete dentures. Topics include edentulous arch anatomical lanmarks, edentulous cast preparation, impressions, trays, baseplates, occlusal rims, and artificial tooth arrangement.

DLBT 1217 Fixed Restorative Techniques I (1-4-2)
Introduction to fixed restorative techniques. Topics include types of casts with removable dies and fabrication of posterior wax patterns.

DLBT 1291 Special Topics in Dental Laboratory Technician (1-4-2)
Topics address recently identified current events, skills, knowledges, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. This course was designed to be repeated multiple times to improve student proficiency.

DLBT 2204 Removable Partial Denture Technique II (1-4-2)
Study of the components of removable partial dentures and the methods of surveying and designing and fabricating removable partial dentures. Prerequisites: DLBT 1209.

DLBT 2207 Complete Denture Techniques II (1-4-2)
Comprehensive study and practice of the procedures required to construct complete maxillary and mandibular dentures from the final impression to the finished appliance. Prerequisites: DLBT 1213.

DLBT 2211 Fixed Restorative Techniques II (1-4-2)
Continuation of construction of wax patterns for single unit crowns by spruing, investing, casting, and polishing the metal crown. Prerequisites: DLBT 1217.

DLBT 2215 Removable Partial Dentures Techniques III (1-3-2)
Comprehensive study of and practice in the phases of partial denture contraction with emphasis on complex dental prostheses. Prerequisites: DLBT 2204.

DLBT 2217 Complete Denture Techniques III (1-3-2)
Introduction to the semi-adjustable articulator and techniques required to repair, reline, and rebase complete dentures. Emphasis on the completion of balanced set-ups. Prerequisites: DLBT 2207.

DLBT 2233 Complete Denture Techniques IV (1-4-2)
Continued instruction in the fabrication of complete dentures. Emphasis on the semi-adjustable articulator using various occlusal theories and different forms of posterior teeth. Set-up modifications for Class II and Class III relationships will be discussed. Prerequisites: DLBT 2217.

DLBT 2235 Fixed Restorative Techniques IV (1-4-2)
Construction of multiple-unit bridges with emphasis on rigid and non-ridig connectors. Prerequisites: DLBT 2321.

DLBT 2241 Dental Ceramics I (1-3-2)
Introduction to dental ceramic procedures with emphasis on porcelain and metal substructures. Topics include individual and bridge copings, waxing, casting, and preparation for porcelain adaptation.

DLBT 2242 Dental Ceramics II (1-4-2)
Construction of single and multiple-unit ceramic teeth including characterization and shading of teeth. Emphasis on anterior teeth. Prerequisites: DLBT 2241.

DLBT 2244 Intro to Orthodontics Procedures (1-3-2)
Introduction to orthodontic dental laboratory procedures. Emphasis on wire bending, soldering, and removable acrylic resin appliances.

DLBT 2321 Fixed Restorative Techniques III (2-3-3)
Continued refinements in crown and bridge fabrication for multiple-unit fixed-partial dentures with metal pontics. Experience in the fabrication and repair of single and multiple-unit fixed-partial dentures. Prerequisite: DLBT 2211.

DLBT 2430 Special Project in Dental Lab Procedures (2-8-4)
Culmination of instruction in practical laboratory procedures with the emphasis on specialized areas of choice.

DLBT 2446 Practical Lab Procedures (2-8-4)
Comprehensive study of basic commercial laboratory procedures employed while performing specialties in separate departments in actual or simulated situations. Includes laboratory procedures associated with following doctor's prescriptions, quality control, check billing, and mailing. Prerequisites: DLBT 2235.

ENGL 1301 (see English/Communications)

HRPO 1311 (see Behavioral/Social Sciences)

MATH 1314 (see Math/Natural Sciences)

POFT 1301 (see Related Instruction)

PSYC 2301 (see Behavioral/Social Sciences)

SPCH (see Speech Electives)

TECM 1303 (see Related Instruction)

Developmental

DMTH 0050 Basic Mathematics (3-1-3)
A study of fundamental mathematics involving operations on whole numbers, fractions, decimals and percents, data analysis, real numbers, algebraic expressions, and elementary equations.

DMTH 0100 Introductory Algebra (3-1-3)
A study of geometry and elementary algebra involving real numbers, algebraic expressions, equations, inequalities, graphs, slopes, and operations with polynomials. Prerequisite: Grade of C or better in DMTH 0050 or Math placement test equivalent.

DMTH 0200 Intermediate Algebra (3-1-3)
A study of intermediate algebra that includes polynomial factoring, rational expressions and equations, systems of equations, radical expressions and equations, and quadratic equations. Prerequisite: Grade of C or better in DMTH 0100 or Math placement test equivalent.

DMTH 0801 Mathematics Lab (0-1-1)
DMTH 0802 Mathematics Lab (0-4-2)
DMTH 0803 Mathematics Lab (2-2-3)
This course is designed for students to participate in remedial math studies on an individual basis. Course content is customized to each student's specific deficiencies in math. Semester credit hours vary depending on students' specific needs. Course may be repeated for credit. The last digit of the course number indicates the semester credit hours. When appropriate, and with developmental department approval, this course may substitute for a course on the student's TSI Plan. Prerequisite: Instructor approval.

READ 0050 Basic Reading Skills (3-1-3)
Fundamental reading skills to develop comprehension, vocabulary, and rate. Includes intensive, diagnostic-based instruction in basic word attack skills, vocabulary development and basic comprehension strands; main idea, major or minor supporting details, information retention, fact/opinion identification, inferences, and critical reading. Individual and group tutoring, counseling, and computer-assisted learning are available.

READ 0100 Reading Skills I (3-1-3)
Fundamental reading skills to develop comprehension, vocabulary, and rate. This course is designed to enable college students to become more aware of themselves as readers and to develop strategies and skills to meet the demands of college reading. Emphasis is placed on vocabulary, study skills, and the comprehension strands. Individual and group tutoring, counseling, and computer-assisted learning are available. Prerequisite: Grade of C or better in READ 0050 or departmental placement test equivalent.

READ 0200 Reading Skills II (3-1-3)
Fundamental reading skills to develop comprehension, vocabulary, and rate. Focus is on increased proficiency in basic forms of expository writing and critical reading skills in addition to vocabulary, study skills, and the comprehension strand essential to success in academic and technical fields of study. Individual and group tutoring, counseling, and computer-assisted learning are available. Prerequisite: Grade of C or better in READ 0100 or departmental placement test equivalent.

READ 0801 Reading Lab (0-2-1)
READ 0802 Reading Lab (0-4-2)
READ 0803 Reading Lab (2-2-3)
This course is designed for students to participate in remedial reading studies on an individual basis. Course content is customized to each student's specific deficiencies in reading. Semester credit hours vary depending on students' specific needs. Course may be repeated for credit. The last digit of the course number indicates the semester credit hours. When appropriate, and with developmental department approval, this course may substitute for a course on the student's TSI Plan. Prerequisite: Instructor approval.

WRIT 0050 Basic Writing Skills (3-1-3)
Development of fundamental writing skills such as idea generation, organization, style, utilization of standard English, and revision. This course provides instruction in writing standard English. The emphasis is on vocabulary, application of grammar, spelling, standard English usage, and organization of ideas. Individual and group tutoring, counseling, and computer-assisted learning are available.

WRIT 0100 Writing Skills I (3-1-3)
Development of fundamental writing skills such as idea generation, organization, style, utilization of standard English, and revision. This course provides instruction in fundamental writing skills. Emphasis is placed on writing and revising paragraphs and essays using standard English. Individual and group tutoring, counseling, and computer-assisted learning are available. Prerequisite: Grade of C or better in WRIT 0050 or departmental placement test equivalent.

WRIT 0200 Writing Skills II (2-2-3)
Development of fundamental writing skills such as idea generation, organization, style, utilization of standard English, and revision. Emphasis is placed on different methods of composition development with an advanced review of grammar, sentence structure, punctuation, and commonly-confused words. Individual and group tutoring, counseling, and computer-assisted learning are available. Prerequisite: Grade of C or better in WRIT 0100 or departmental placement test equivalent.

WRIT 0801 Writing Lab (0-2-1)
WRIT 0802 Writing Lab (0-4-2)
WRIT 0803 Writing Lab (2-2-3)
This course is designed for students to participate in remedial writing studies on an individual basis. Course content is customized to each student's specific deficiencies in writing. Semester credit hours vary depending on students' specific needs. Course may be repeated for credit. The last digit of the course number indicates the semester credit hours. When appropriate, and with developmental department approval, this course may substitute for a course on the student's TSI Plan. Prerequisite: Instructor approval

Digital Media Design Technology

ARTC 1302 Digital Imaging I (2-4-3)
Digital imaging using raster image editing and/or image creation software: scanning, resolution, file formats, output devices, color systems, and image-acquisitions.

ARTC 1305 Basic Graphic Design (2-4-3)
Graphic design with emphasis on the visual communication design process. Topics include basic terminology and graphic design principles.

ARTC 1313 Digital Publishing I (2-4-3)
The fundamentals of using digital layout as a primary publishing tool and the basic concepts and terminology associated with typography and page layout. Prerequisites: ARTC 1302.

ARTC 2305 Digital Imaging II (2-4-3)
General principles of digital image processing and electronic painting. Emphasis on bitmapped or raster-based image marking and the creative aspects of electronic illustration for commercial and fine art applications.

ARTC 2313 Digital Publishing II (2-4-3)
Layout procedures from thumbnails and roughs to final comprehensive and printing; emphasis on design principles for the creation of advertising and publishing materials, and techniques for efficient planning and documenting projects. Prerequisites: ARTC 1313.

ARTV 1341 3-D Animation I (2-4-3)
Three-dimensional (3-D) modeling and rendering techniques including lighting, staging, camera, and special effects. Emphasizes 3-D modeling building blocks using primitives to create simple and complex objects.

ARTV 1343 Digital Sound (2-4-3)
Digitizing sound and incorporating it into multimedia or web titles for various delivery systems. Emphasizes compression issues, sampling, synchronizing, and resource management.

ARTV 1351 Digital Video (2-4-3)
Producing and editing video and sound for multimedia or web productions. Emphasizes capture, editing, and outputting of video using a desktop digital video workstation.

ARTV 2341 Advanced Digital Video (2-4-3)
Advanced digital video techniques for post-production. Emphasizes generation and integration of special effects, 2-D animation and 3-D animation for film, video, CD-ROM, and the Internet. Exploration of new and emerging compression and video streaming technologies.

ENGL 1301, ENGL 2314 (see English/Communications)

GRPH 1359 Object Oriented Computer Graphics (2-4-3)
Mastery of the tools and transformation options of an industry standard draw program to create complex illustrations and follow them through to the color output stage. Mastery in the use of basic elements of good layout and design principles and use of the capabilities specific to vector (object oriented) drawing software to manipulate both text and graphics with emphasis on the use of bezier curves. Acquisition of images via scanning and the creative use of clipart is included. Prerequisites: ARTC 1302.

GRPH 1380 COOP-Prepress/Desktop Publishing and Digital Imaging Design (1-19-3)
GRPH 2380 COOP: Prepress/Desktop Publishing & Digital Imaging Design (1-19-3)
GRPH 2680 COOP: Prepress/Desktop Publishing & Digital Imaging Design (1-39-6)
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. Prerequisites: ARTC 2313, ARTV 1343, ARTV 1351, IMED 1316, IMED 1345.

HRPO 1311 (see Behavioral/Social Sciences)

IMED 1316 Web Page Design I (2-4-3)
Instruction in web page design and related graphic design issues including mark-up languages, web sites,and browsers.

IMED 1345 Interactive Digital Media I (2-4-3)
Exploration of the use of graphics and sound to create interactive multimedia animations using industry standard authoring software.

IMED 2311 Portfolio Development (2-4-3)
Emphasis on preparation and enhancement of portfolio to meet professional standards, professional organizations, presentation skills, and job-seeking techniques.

IMED 2315 Web Page Design II (2-4-3)
A study of mark-up language advanced layout techniques for creating web pages. Emphasis on identifying the target audience and producing web sites according to accessibility standards, cultural appearance, and legal issues. Prerequisites: IMED 1316, IMED 1345.

IMED 2345 Interactive Digital Media II (2-4-3)
Instruction in the use of scripting languages to create interactive digital media applications.

MATH 1314, MATH 1332 (see Math/Natural Sciences)

PHTC 1311 Fundamentals of Photography (2-4-3)
An introduction to camera operation and image production, composition, supplemental lighting, and use of exposure meters and filters.

POFT 1301 (see Related Instruction)

TECM 1303 (see Related Instruction)

English/Communications

COMM 2311 News Gathering & Writing I (3-0-3)
Fundamentals of writing news for the mass media. Includes instruction in methods and techniques for gathering, processing, and delivering news in a professional manner. Prerequisite: ENGL 1301.

ENGL 1301 Composition I (3-0-3)
Principles and techniques of written, expository, and persuasive composition; analysis of literary, expository, and persuasive texts; and critical thinking. Prerequisite: Grade of C or better in READ 0200 and WRIT 0200 or English placement test equivalent.

ENGL 1302 Composition II (3-0-3)
Further development in the principles and techniques of written, expository, and persuasive composition; analysis of literary, expository, and persuasive texts; and critical thinking. Prerequisite: Grade of C or better in ENGL 1301.

ENGL 2307 Creative Writing (3-0-3)
Practical experience in the techniques of imaginative writing. May include fiction, nonfiction, poetry, or drama. Prerequisites: ENGL 1301, READ 200 or equivalent or as determined by English placement test.

ENGL 2314 Technical & Business Writing I (3-0-3)
Principles, techniques, and skills needed for college-level scientific, technical, or business writing. Standard technical documents and the internal report are emphasized. Prerequisite: Grade of C or better in ENGL 1301.

ENGL 2321 British Literature (3-0-3)
Critical reading, discussion, and written analysis of selected significant works of British literature. May include study of movements, schools, or periods. Prerequisite: Grade of "C" or better in ENGL 1301.

ENGL 2326 American Literature (3-0-3)
Critical reading, discussion, and written analysis of selected significant works of American literature. May include study of movements, schools, or periods. Prerequisite: Grade of "C" or better in ENGL 1301.

ENGL 2331 World Literature (3-0-3)
Critical reading, discussion, and written analysis of selected significant works of world literature in translation. May include study of movements, schools, or periods. Prerequisite: Grade of "C" or better in ENGL 1301.

Education and Training

CDEC 1321 The Infants & Toddlers (3-0-3)
A study of appropriate infant and toddler programs (birth to age 3), including an overview of development, quality caregiving routines, appropriate environments, materials and activities and teaching/guidance techniques.

CDEC 1356 Emergent Lit for Early Childhood (2-4-3)
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 (2-4-3)
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 2340 Instructional Techniques for Children with Special Needs (2-4-3)
Exploration of development and implementation of curriculum for children with special needs.

EDTC 1164 Practicum Teacher Assistant/Aide (0-10-1)
Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

EDTC 1301 Educational Systems (2-4-3)
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 Intro to Teaching Reading (2-4-3)
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 Practice/Effective Learning Environment (2-4-3)
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 1321 Bilingual Education (2-2-3)
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 & Practices of Multicultural Education (3-0-3)
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 1341 Instructional Tech and Computer Apps (2-2-3)
Examination of specialized educational technology. Topics include the integration of educational computer terminology, system operations, software, and multimedia in the contemporary classroom environment.

EDTC 1364 Practicum-Teacher Assistant/Aide (0-21-3)
Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

EDTC 1393 Special Topics: Writing Problems (2-4-3)
An in depth coverage of writing difficulties at the elementary level. Emphasis will be on the foundations and theories of writing at the elementary level, required curriculum to be taught, instructional techniques to utilize with students, models of teaching students, assessment techniques, and lesson planning strategies useful in working with the elementary student.

EDTC 1394 Special Topics: Math and Science in the Elementary School (3-0-3)
This course covers practical approaches for introducing math and science concepts in an elementary classroom lab environment with an emphasis on problem solving, inquiry, and critical thinking. Topics include basic math and science concepts and properties, diagnostic testing, pedagogy, and recognizing and recommending corrective teaching strategies.

EDTC 1395 Special Topics: Behavior Management for Students with Special Needs (3-0-3)
Topics address recently identified current events, skills, knowledges, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. This course was designed to be repeated multiple times to improve student proficiency.

EDTC 2305 Reading Problems (2-4-3)
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 2311 Instructional Practices and Effective Learning Environments (2-4-3)
General principles for selecting developmentally appropriate strategies in core curriculum areas, planning the classroom environment, and instructional accommodations and modifications. Topics address methods for supporting instructional planning and implementation of educational goals and objectives. Also examines cooperative learning strategies.

EDTC 2317 Guiding Student Behavior (2-4-3)
A study of developmentally appropriate 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.

ENGL 1301 (see English/Communications)

GOVT 2301, GOVT 2302 (see Behavioral/Social Sciences)

HIST 1301, HIST 1302 (see Behavioral/Social Sciences)

HRPO 1311 (see Behavioral/Social Sciences)

MATH 1314 (see Math/Natural Sciences)

SPCH (see Speech Electives)

TECA 1354 Child Growth & Development (3-0-3)
A study of the physical, emotional, social, and cognitive factors impacting growth and development of children through adolescence.

Game & Simulation Programming

CPMT 1303 (see Computer Systems Management Technology)

ENGL 1301 (see English/Communications)

GAME 1301 Computer Ethics (2-2-3)
Computer ethics and related ethical issues that apply to computers in the workplace, intellectual property, privacy and anonymity, professional responsibility, and the effects of globalization. Emphasizes the practical application of computer ethics through case studies and current events in the game and simulation industry.

GAME 1303 Intro to Game Design/Development (2-4-3)
Introduction to electronic game development and game development careers. Includes examination of history and philosophy of games, the game production process, employee factors for success in the field, and current, issues and practices in the game development industry.

GAME 1304 Level Design (2-4-3)
Introduction to the tools and concepts used to create levels for games and simulations. Incorporates level design, architecture theory, concepts of critical path and flow, balancing, play testing, and storytelling. Includes utilization of toolsets from industry titles. Prerequisites: CPMT 1303.

GAME 1306 Design and Creation of Games (2-4-3)
Introduction to game and simulation development. Includes analysis of existing applications and creation of a game using an existing game engine. In-depth coverage of the essential elements of game design. Also covers an overview of cultural history of electronic games, survey of the major innovators, and examination of the trends and taboos that motivate game design.

GAME 1309 Intro to Animation Programming (2-4-3)
Mathematical elements and algorithms involved in basic animation. Includes generating graphics, viewing 3D environments such as visible line detection and 3D surfaces, image processing techniques, and special effects.

GAME 1343 Graphics & Simulation Programming I (2-4-3)
Game and simulation programming using the C++ language. Topics will include advanced pointer manipulation techniques and pointer applications, points and vectors, sound and graphics. MATH 1316.

GAME 1349 OpenGL Programming I (2-4-3)
Computer graphics with focus on the basic principles and techniques of graphics applications. Emphasizes 3D computer graphics and translating a task from design to suitable algorithms and program code. Combines principles and major techniques in computer graphics with third-party game and simulation technologies. Prerequisites: ITSE 1307.

GAME 1353 Multi-User Game Programming I (2-4-3)
Network topologies, architecture and protocols, and communication in game and simulation programming. Introduces sockets programming utilizing TCP and UDP protocols in high-level language. Focuses on blocking and asynchronous modes. Prerequisites: GAME 1343.

GAME 1359 Graphics & Simulation Programming II (2-4-3)
Design and development of 2D game and simulation programs including user interface design, mathematical elements, image and file structure, and software development techniques. Introduces the basics of 3D graphics related to game and simulation programming. Prerequisites: GAME 1343.

GAME 2303 Artificial Intelligence Programming I (2-4-3)
Basic techniques in artificial intelligence related to game and simulation programming. Includes knowledge representation and interference techniques, expert systems, pathfinding algorithms, and search techniques for problem solving. Prerequisites: ITSE 1307.

GAME 2333 Graphics & Simulation Programming III (2-4-3)
Advanced applications of game and simulation programming techniques. Includes advanced rendering techniques and BSP trees. Incorporates shadowing, lighting, collision detection, and 3D animation and motion. Prerequisites: GAME 1359.

GAME 2338 Game Testing (2-4-3)
Testing and debugging gaming and simulation applications in the alpha and beta stages of production. Includes critiques of the product and written documentation of the testing and debugging processes.

GAME 2353 OpenGL Programming II (2-4-3)
Vector tools for graphics, transformation of objects, modeling shapes with polygon meshes, 3D viewing, rendering faces for realism, and color theory for game and simulation programming. Prerequisites: GAME 1349.

GAME 2359 Game/Simulation Group Project (2-4-3)
Creation of a game and/or simulation project utilizing a team approach. Includes animation, titles, visualization of research results, modeling with polygon frames, curves and surfaces, 3D text and animation with keyframes, paths (objects and curves), morphing, vertex keys, skeletons and lattices.

HRPO 1311 (see Behavioral/Social Sciences)

ITSC 1309 (see Business Management Technology)

ITSE 1307 Introduction to C++ Programming (2-4-3)
Introduction to computer programming using C++. Emphasis on the fundamentals of object-oriented with development, testing, implementation, and documentation. Includes language syntax, data and file structures, input/output devices, and files.

ITSE 1331 Intro to Visual Basic Programming (2-4-3)
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.

ITSE 2345 Data Structures (2-4-3)
Further applications of programming techniques. Includes an in-depth look at various data structures and the operations performed on them.

MATH (see Math/Natural Sciences)

POFT 1301 (see Related Instruction)

SPCH (see Speech Electives)

TECM 1303 (see Related Instruction)

QCTC 1301 (see Mechatronics Technology)

Health Information Technology

BIOL 2401, BIOL 2402 (see Math/Natural Sciences)

ENGL 1301 (see English/Communications)

HITT 1211 (see Medical Information Specialist/Transcriptionist)

HITT 1253 Legal & Ethical Aspects of Health Info (1-2-2)
Concepts of confidentiality, ethics, health care legislation, and regulations relating to the maintenance and use of health information.

HITT 1255 Health Care Statistics (1-3-2)
General principles of health care statistics with emphasis in hospital statistics. Skill development in computation and calculation of health data.

HITT 1301 Health Data Content & Structure (3-0-3)
Introduction to systems and processes for collecting, maintaining, and disseminating primary and secondary health related information. Instruction in delivery and organization structure to include content of health record, documentation requirements, registries, indices, licensing, regulatory agencies, forms, and screens.

HITT 1305 (see Medical Information Specialist/Transcriptionist)

HITT 1341 Coding & Classification of Systems (2-4-3)
Application of basic coding rules, principles, guidelines, and conventions.

HITT 1342 Ambulatory Coding (2-4-3)
Application of basic coding rules, principles, guidelines, and conventions with emphasis on ambulatory coding.

HITT 1345 Health Care Delivery Systems(2-4-3)
Introduction to organization, financing, and delivery of health care services, accreditation, licensure, and regulatory agencies.

HITT 2149 RHIT Competency Review (0-3-1)
Review Health Information Technology (HIT) competencies, skills, and knowledge.

HITT 2166 Practicum - Health Information/Medical Records (0-8-1)
Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

HITT 2239 Health Information Organization & Supervision (1-2-2)
Principles of organization and supervision of human, fiscal, and capital resources.

HITT 2266 Practicum - Health Information/Medical Records (0-16-2)
The college with the employer develops and documents an individualized plan for the student. The plan relates the workplace training and experiences to the student's general and technical course of study. The guided external experiences may be paid or unpaid. This course may be repeated if topics and learning outcomes vary. Prerequisites: 5th semester standing.

HITT 2335 Coding/Reimbursement Methodology (2-4-3)
Development of advanced coding techniques with emphasis on case studies, health records, and federal regulations regarding perspective payment systems and methods of reimbursement.

HITT 2343 Quality Assessment & Performance Improvement (2-4-3)
Study of the many facets of quality standards and methodologies in the health information management environment. Topics include licensing, accreditation, compilation and presentation of data in statistical formats, quality improvement functions, quality tools, utilization management, risk management, and medical staff data quality issues.

HPRS 2300 (see Allied Health Related Skills)

HRPO 1311 (see Behavioral/Social Sciences)

ITSC 1309 (see Business Management Technology)

MDCA 1321 (see Medical Assistant)

MDCA 1402 (see Medical Information Specialist/Transcriptionist)

PSYC 2301 (see Behavioral/Social Sciences)

SPCH (see Speech Electives)

Humanities/Fine Arts Electives

ANTH 2346 General Anthropology (3-0-3)
Study of human beings, their antecedents and related primates, and their cultural behavior and institutions. Introduces the major subfields: physical and cultural anthropology, archeology, linguistics, and ethnology.

ARTS 1301 Art Appreciation (3-0-3)
Exploration of purposes and processes in the visual arts including evaluation of selected works.

ARTS 1303 Art History I (3-0-3)
Examination of painting, sculpture, architecture, and other arts from prehistoric times to the 14th century.

ARTS 1304 Art History II (3-0-3)
Examination of painting, sculpture, architecture, and other arts from the Middle Ages to the present day.

ARTS 1316 Drawing I (3-0-3)
Investigation of drawing media and techniques including descriptive and expressive possibilities

MUSI 1306 Music Appreciation (3-0-3)
Understanding music through the study of cultural periods, major composers, and musical elements. Video and audio recordings and live performances help illustrate the influence of music.

PHIL 1301 Introduction to Philosophy (3-0-3)
Introduction to the study of ideas and their logical structure, including arguments and investigations about abstract and real phenomena. Includes introduction to the history, theories, and methods of reasoning.

PHIL 1304 Introduction to World Religions (3-0-3)
A comparative study of various world religions.

PHIL 2306 Introduction to Ethics (3-0-3)
Classical and contemporary theories concerning the good life, human conduct in society, and moral and ethical standards.

SOCI 2319 Minority Studies (3-0-3)
Historical, economic, social, and cultural development of minority groups. May include African-American, Mexican American, Asian American, and Native American issues.

Machining Technology
Mold, Tool and Die Making

ENGL 1301 (see English/Communications)

HRPO 1311 (see Related Instruction)

MATH 1314, MATH 1316 (see Math/Natural Sciences)

MCHN 1302 Print Reading For Machining Trades (3-0-3)
A study of blueprints for machining trades with emphasis on machine drawings.

MCHN 1305 Metals and Heat Treatment (2-3-3)
Designed for students going into the workforce as manual machinists, tool designers, or heat treat operators. Topics include properties of metals and heat treatment of metals. Prerequisites: MCHN 1308, MCHN 1313.

MCHN 1308 Basic Lathe (1-6-3)
An introduction to the common types of lathes. Emphasis on basic parts, nomenclature, lathe operations, safety, machine mathematics, blueprint reading, and theory. Prerequisites: MCHN 1317 & MCHN 1338.

MCHN 1313 Basic Milling Operation (1-6-3)
An introduction to the common types of milling machines, basic parts, nomenclautre, basic operations and procedures, machine operations, safety; machine mathematics; blueprint reading; and theory. Prerequisites: MCHN 1317 & MCHN 1338.

MCHN 1320 Precision Tools & Measurement (2-3-3)
An introduction to the modern science of dimensional metrology. Emphasis on the identification, selection, and application of various types of precision instruments associated with the machining trade. Practice of basic layout and piece part measurement while using standard measuring tools.

MCHN 1335 Grinders Outside/Internal/Surface (1-6-3)
An introduction to types and operation of outside diameter, internal diameter, and surface grinders. Emphasis on identification, selection, and replacement of grinding wheels. Related topics include math, blueprint reading, and safety. Prerequisite: Fourth semester standing.

MCHN 1338 Basic Machine Shop I (1-6-3)
An introductory course that assists the student in understanding the machinist occupation in industry. The student begins by using basic machine tools such as the lathe, milling machine, drill press, power saw, and bench grinder. Machine terminology, theory, math, part layout, and bench work using common measuring tools is included. Emphasis is placed on shop safety, housekeeping, and preventative maintenance.

MCHN 1343 Machine Shop Math (3-0-3)
Designed to prepare the student with technical, applied mathematics that will be necessary in future machine shop-related courses.

MCHN 1358 Intermediate Lathe Operation (1-6-3)
Continuation of Basic Lathe Operations with emphasis on continued proficiency in lathe operations. Identification and operation of lathe machine tools, including basic tapered form turning and basic threading operations. Prerequisite: MCHN 1308.

MCHN 2302 Intermediate Milling Operation (1-6-3)
A continuation of Basic Milling Operations with emphasis on continued proficiency in mill operation. Identification and operation of milling machines and support tooling including keyseat cutter, staggertooth cutters, rotary table and dividing heads. Prerequisite: MCHN 1313.

MCHN 2303 Fundamentals of CNC Machine Controls (1-6-3)
An introduction to G and M codes (RS274-D) necessary to program Computer Numerical Controlled (CNC) machines. Prerequisites: MCHN 1317 or MCHN 1302, MCHN 1338, MCHN 1343.

MCHN 2335 Advanced CNC Machining (1-6-3)
The study of advanced CNC operation with an emphasis on programming and operations of machining and turning centers. Prerequisites: MCHN 2303.

MCHN 2337 Advanced Milling Operations (1-6-3)
An advanced study of milling machine operations. Identification and/or use of milling cutters and support tooling including end mills, slab mills, face mills, involute cutters, rotary tables, and indexing heads. A review of related math and machine theory. Prerequisite: Fourth semester standing.

MCHN 2370 Mold Making/Repair (1-8-3)
This course is designed to give the student basic concepts of common mold making practices. Different types of molds used in industry and the associated terminology with be stressed. Standard mold bases and mold components are covered. The student will rebuild mold sections by manufacturing and installing core and cavity inserts, and rebuilding ejector systems by modifying or installing new ejector pins where necessary. The student will qualify the reconstructed mold base assembly. Prerequisite Fourth semester standing.

MCHN 2372 Tool & Die Making and Repair (1-8-3)
This course is designed to give the student the basic concepts involved in tool and die construction that will include bending, blanking, piercing, guiding, stripping, and die stops. Compound, progressive and inverted dies will be covered. The student will repair or manufacture precision machined die parts that perform trimming, notching, piercing, blanking, piloting, or forming, and install them in a die. The student will set up a repaired die in a punch press and sample. Prerequisite: Fourth semester standing.

MCHN 2447 Specialized Tools & Fixtures (2-6-4)
An advanced course in the designing and building of special tools, such as jigs, fixtures, punch press dies, and molds. Machining and assembling of a production tool using conventional machine shop equipment. Application of production tool theory, care, and maintenance. Prerequisites: MCHN 1335, MCHN 2337.

SPCH (see Speech Electives)

WLDG 1206 (see Welding Technology)

Math/Natural Sciences

BIOL 1106 Biology for Science Majors I Lab (0-3-1)
BIOL 1306 Biology for Science Majors I (3-0-3)
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.

BIOL 1107 Biology for Science Majors II Lab (0-3-1)
BIOL 1307 Biology for Science Majors II (3-0-3)
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.

BIOL 1108 Biology for Non-Science Majors I Lab (0-3-1)
BIOL 1308 Biology for Non-Science Majors I (3-0-3)
Fundamental principles of living organisms including physical and chemical properties of life, organization, function, evoluntary adaptation, and classification. Concepts of reproduction, genetics, ecology, and the scientific method are included. Course is designed for both science and non-science majors.

BIOL 1109 Biology for Non-Science Majors II Lab (0-3-1)
BIOL 1309 Biology for Non-Science Majors II (3-0-3)
Fundamental principles of living organisms including physical and chemical properties of life, organization, function, evoluntary adaptation, and classification. Concepts of reproduction, genetics, ecology, and the scientific method are included. Course is designed for both science and non-science majors.

BIOL 1411 General Botany (3-3-4)
Study of structure and function of plant cells, tissues, and organs. Includes an evolutionary survey and life histories of the following representative groups: algae, fungi, mosses, liverworts, ferns, and seed producing organisms. Plant reproductive and functional interactions with their environment and with humans. Selected laboratory exercises.

BIOL 1413 General Zoology (3-3-4)
Study of the principles of taxonomy, molecular biology, and ecology as they relate to animal form and function, diversity, behavior, and evolution.

BIOL 2101 Anatomy & Physiology I Lab (0-3-1)
BIOL 2301 Anatomy & Physiology I (3-0-3)
Study of the structure and function of human anatomy, including the neuroendocrine, integumentary, musculoskeletal, digestive, urinary, reproductive, respiratory, and circulatory systems. Content may be either integrated or specialized.

BIOL 2102 Anatomy & Physiology II Lab (0-3-1)
BIOL 2302 Anatomy & Physiology II (3-0-3)
Study of the structure and function of human anatomy, including the neuroendocrine, integumentary, musculoskeletal, digestive, urinary, reproductive, respiratory, and circulatory systems. Content may be either integrated or specialized.

BIOL 2121 Microbiology for Science Majors Lab (0-3-1)
BIOL 2321 Microbiology for Science Majors (3-0-3)
Study of the morphology, physiology, and taxonomy of representative groups of pathogenic and nonpathogenic microorganisms. Pure cultures of microorganisms grown on selected media are used in learning laboratory techniques. Includes a brief preview of food microbes, public health, and immunology.

CHEM 1105 Introductory Chemistry I Lab (0-3-1)
CHEM 1305 Introductory Chemistry I (3-0-3)
Survey course introducing chemistry. Topics may include inorganic, organic, biochemistry, food/physiological chemistry, and environmental/consumer chemistry. Designed for non-science and allied health students.

CHEM 1111 General Chemistry I Lab (0-3-1)
CHEM 1311 General Chemistry I (3-0-3)
General principles, problems, fundamental laws, and theories. Course content provides a foundation for work in advanced chemistry and related sciences.

CHEM 1112 General Chemistry II Lab (0-3-1)
CHEM 1312 General Chemistry II (3-0-3)
A course designed for Science Majors. Topics include Thermochemistry, Chemical Equilibrium, Chemical Kinetics, Acid Bases, Solubility, Electrochemistry, and an introduction to Organic and Biochemistry. Prerequisite: CHEM 1311 & CHEM 1111.

CHEM 2123 Organic Chemistry I Lab (0-3-1)
CHEM 2323 Organic Chemistry I (3-0-3)
An introduction to the fundamentals of carbon-based compounds. Topics covered include chemical structures, isomerism, aliphatic and aromatic compounds, nomenclature, functional groups, stereochemistry, reactions, synthesis, and mechanisms. Designed for students in science or pre-professional programs. Prerequisites: CHEM 1312 & CHEM 1112 or equivalent

CHEM 2125 Organic Chemistry II Lab (0-3-1)
CHEM 2325 Organic Chemistry II (3-0-3)
A continuation of CHEM 2323. Emphasis on the classes of aliphatic and aromatic compounds not previously discussed; spectroscopy; the use of instrumentation in organic chemistry; and introduction to the chemistry of carbohydrates, amino acids, proteins, and natural products. Designed for students in science or pre-professional programs. Prerequisites: CHEM 2323 & 2125 or equivalent.

MATH 1314 College Algebra (3-0-3)
Study of quadratics; polynomial, rational, logarithmic, and exponential functions; systems of equations; progressions; sequences and series; and matrices and determinants. Prerequisite: Grade of C or better in DMTH 0200 or Math placement test equivalent.

MATH 1316 Plane Trigonometry (3-0-3)
Topics in trigonometric functions, identities, equations, applications, radian measure, graphs of periodic functions, and oblique triangles.

MATH 1324 Mathematics for Business & Social Sciences I (3-0-3)
Topics from college algebra (linear equations, quadratic equations, functions and graphs, inequalities), mathematics of finance (simple and compound interest, annuities), linear programming, matrices, systems of linear equations, applications to management, economics, and business. Prerequisite: Grade of C or better in DMTH 0200 or Math placement test equivalent.

MATH 1325 Mathematics for Business & Social Sciences II (3-0-3)
Sets, probability, functions, inequalities, linear programming, and differential and integral calculus with applications.

MATH 1332 Contemporary Mathematics I (3-0-3)
Topics may include introductory treatments of sets, logic, number systems, number theory, relations, functions, probability and statistics. Appropriate applications are included. Prerequisite: Grade of C or better in DMTH 0200 or Math placement test equivalent.

MATH 1342 Elementary Statistical Methods (3-0-3)
Presentation and interpretation of data, probability, sampling, correlation and regression, analysis of variance, and the use of statistical software. Prerequisite: Math 1314.

MATH 1348 Analytic Geometry (3-0-3)
Lines, circles, and other conic sections; transformation of coordinates; polar coordinates; and parametric equations. Prerequisite: Math 1316

MATH 1350 Fundamentals of Mathematics I (3-0-3)
Concepts of sets, functions, numeration systems, number theory, and properties of the natural numbers, integers, rational, and real number systems with an emphasis on problem solving and critical thinking. Prerequisite: Grade of C or better in DMTH 0200 or Math placement test equivalent.

MATH 1351 Fundamentals of Mathematics II (3-0-3)
Concepts of geometry, probability, and statistics, as well as applications of the algebraic properties of real numbers to concepts of measurement with an emphasis on problem solving and critical thinking. This course is designed specifically for students who seek middle grade (4 though 8) teacher certification. Prerequisite: MATH 1350.

MATH 2305 Discrete Mathematics (3-0-3)
An introduction to mathematical logic, mathematical induction, relations and functions, basic counting techniques, graphs and trees, and applications to computing devices. The study of proof techniques, asymptotic notations for growth function analysis, common functions found in algorithm analysis, manipulating and bounding summations, different methods to solve recurrences including alterations and generating functions, combinatory analysis, number theory, binomial coefficients, and sets. Prerequisite: MATH 2413

MATH 2312 Precalculus Math (3-0-3)
Applications of algebra and trigonometry to the study of elementary functions and their graphs including polynomial, rational, exponential, logarithmic, and trigonometric functions. May include topics from analytical geometry. Prerequisite: MATH 1314.

MATH 2318 Linear Algebra (3-0-3)
Finite dimensional vector spaces, linear transformations and matrices, quadratic forms, and eigen values and eigen vectors. Prerequisite: MATH 1314.

MATH 2320 Differential Equations (3-0-3)
Solutions of ordinary differential equations and applications. Prerequisite: MATH 2414.

MATH 2342 Elementary Statistical Methods (3-0-3)
Presentation and interpretation of data, probability, sampling, correlation and regression, analysis of variance, and the use of statistical software. Prerequisite: MATH 1314.

MATH 2413 Calculus I (3-2-4)
Functions, limits, continuity, differentiation, integration, applications, sequences and series, vector analysis, partial differentiation, and multiple integration. This course may include topics in analytic geometry. Prerequisite: MATH 1316 or MATH 2312.

MATH 2414 Calculus II (3-2-4)
Derivatives and integration of transcendental functions, integration methods and applications, infinite sequences and series. Prerequisite: MATH 2413.

MATH 2415 Calculus III (3-2-4)
The study of vectors, partial differentiation, and multiple integrals. Prerequisite: Math 2414.

PHYS 1401 College Physics I (3-3-4)
Algebra-level physics sequence, with laboratories, that includes study of mechanics, heat, waves, electricity and magnetism, and modern physics with emphasis on fundamental concepts, problem solving, notation and units. Prerequisite: MATH 1314.

PHYS 1402 College Physics II (3-3-4)
Algebra-level physics sequence, with laboratories, that includes study of mechanics, heat, waves, electricity and magnetism, and modern physics with emphasis on fundamental concepts, problem solving, notation and units. Prerequisite: PHYS 1401.

PHYS 1415 Physical Science I (3-1-4)
Course designed for non-science majors that surveys topics from physics, chemistry, geology, astronomy, and meteorology. May or may not include a lab.

PHYS 1417 Physical Science II (3-1-4)
Course designed for non-science majors that surveys topics from physics, chemistry, geology, astronomy, and meteorology. May or may not include a lab.

PHYS 2425 University Physics I (3-3-4)
Calculus-level physics sequence, with laboratories, that includes study of mechanics, heat, thermo-dynamics, vibrations, waves, electricity and magnetism. Prerequisite: MATH 2413.

PHYS 2426 University Physics II (3-3-4)
Calculus-level physics sequence, with laboratories, that includes study of mechanics, heat, thermo-dynamics, vibrations, waves, electricity, electro-magnetic theory and applications, electromagnetic waves, solid state and modern physics. Prerequisite: PHYS 2425.

Mechatronics Technology

CETT 1303 DC Circuits (2-4-3)
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 (2-4-3)
A study of the fundamentals of alternating current including series and parallel AC circuits, phasors, capacitive and inductive networks, transformers, and resonance. Prerequisite: CETT 1303 or IEIR 1302.

CETT 1307 Fundamentals of Electronics (2-4-3)
Applies concepts of electricity, electronics, and digital fundamentals; supports programs requiring a general knowledge of electronics..

CETT 1325 Digital Fundamentals (2-4-3)
An entry level course in digital electronics covering number systems, binary mathematics, digital codes, logic gates, Boolean algebra, Karnaugh maps, and combinational logic. Emphasis on circuit logic analysis and troubleshooting digital circuits. Prerequisite: CETT 1303.

EECT 1307 (see Telecommunications Technology)

ELMT 1301 Programmable Logic Controllers (2-4-3)
An introduction to programmable logic controllers as used in industrial environments including basic concepts, programming, applications, troubleshooting of ladder logic, and interfacing of equipment. Prerequisites: INTC 1357.

ELMT 1305 Basic Fluid Power (2-4-3)
Basic fluid power course covering vacuum systems, pneumatic and hydraulic systems, fluid power symbols, operating theory, components, and basic electrical and manual controls.

ELMT 2333 Industrial Electronics (2-4-3)
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. Prerequisite: CETT 1305, CETT 1325.

ELMT 2339 Advanced Programmable Logic Controllers (2-4-3)
Advanced applications of programmable logic controllers as used in industrial environments including concepts of programming, industrial applications, troubleshooting ladder logic, and interfacing to equipment. Prerequisite: ELMT 1301. .

ELPT 2231 AC/DC Drives (1-4-2)
IInstallation and maintenance of alternating current (AC) and direct current (DC) variable speed drives with emphasis on application, operating characteristics, and troubleshooting techniques.

ENGL 1301 (see English/Communications)

FCEL 1305 Intro-Fuel Cell & Alternative/ Renewable Energy (2-4-3)
Types and applications of alternative/renewable energy sources. Includes photovoltaic, wind generation, solar, geothermal, and fuel cell types. Emphasizes fuel cell applications and processes, reformation of fossil fuels, heat transfer, chemical reaction, power conditioning, combined heat and power, and distributed generation systems.

HRPO 1311 (see Behavioral/Social Sciences)

IEIR 1302 Introduction to Direct Current Circuits (2-4-3)
Fundamentals of direct current including Ohm's Law. Emphasis on methods of analyzing series, parallel, and combination circuits including measurement devices.

IEIR 1304 Alternating Current Circuits for Industrial Applications (2-4-3)
Fundamentals of alternating current including series and parallel circuits, phasors, and capacitive and inductive networks. Discusion of circuit analysis and measurement. Prerequisite: IEIR 1302.

INMT 1319 Manufacturing Processes (2-4-3)
Exploration of a variety of methods used in manufacturing. Theory and application of processes including but not limited to metal forming, welding, machining, heat treating, plating, assembly procedures, and process control considerations, casting and injection molding.

INTC 1341 Principles of Automatic Control (2-4-3)
A study of the theory of basic measurements, automatic control systems and design, closed loop systems, recorders, controllers, feedback, control modes and control configurations. Prerequisite: ELMT 2333.

INTC 1357 AC/DC Motor Controls (2-4-3)
A study of electric motors and motor control devices common to a modern industrial environment. A presentation of motor characteristics with emphasis on starting, speed control, and stopping systems.

PSYS 1401 (see Math/Natural Sciences)

QCTC 1303 Quality Control (2-4-3)
Quality control principles and applications.

RBTC 1305 Robotic Fundamentals (2-4-3)
An introduction to flexible automation. Topics include installation, repair, maintenance, and development of flexible robotic manufacturing systems.

Medical Assistant

BIOL (see Math/Natural Sciences)

CHEM 1411 (see Math/Natural Sciences)

ENGL 1301 (see English/Communications)

HITT 1211 (see Medical Information Specialist/Transcriptionist)

HITT 1301 (see Health Information Technology)

HITT 1305 (see Medical Information Specialist/Transcriptionist)

HRPO 1311 (see Behavioral/Social Sciences)

MATH 1314, MATH 1332 (see Math/Natural Sciences)

MDCA 1205 Medical Law & Ethics (2-0-2)
Instruction in principles, procedures, and regulations involving legal and ethical relationships among physicians, patients, and medical assistants. Includes current ethical issues and risk management as they relate to the practice of medicine and fiduciary responsibilities.

MDCA 1321 Administrative Procedures (2-4-3)
Medical office procedures including appointment scheduling, medical records creation and maintenance, interpersonal communications, financial processes, coding, billing, collecting, third party reimbursement, credit arrangements, and computer use in the medical office.

MDCA 1343 (see Medical Information Specialist/Transcriptionist)

MDCA 1348 Pharmacology & Administration of Medications (2-4-3)
Instruction in concepts and application of pharmacological principles. Focuses on drug classifications, principles and procedures of medication administration, mathematical systems and conversions, calculation of drug problems, and medico-legal responsibilities of the medical assistant.

MDCA 1352 Medical Assistant Lab Procedures (2-4-3)
Procedures depicted in the Current Clinical Laboratory Improvement Act (CLIA). Includes blood collection, specimen handling, basic urinalysis, identification of normal ranges, quality assurance, and quality control. May include electrocardiography.

MDCA 1402 (see Medical Information Specialist/Transcriptionist)

MDCA 1417 Procedures in a Clinical Setting (2-6-4)
Emphasis on patient-centered assessment, examination, intervention, and treatment as directed by physician. Includes vital signs, collection and documentation of patient information, asepsis, minor surgical procedures, and other treatments as appropriate for the medical office.

MDCA 1460 Clinical - Medical/Clinical Assistant (0-16-4)
A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional.

MDCA 2266 Practicum - Medical/Clinical Assistant (0-14-2)
Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

PLAB 1323 Phlebotomy (2-3-3)
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.

POFT 1301 (see Related Instruction)

PSYC 2301 (see Behavioral/Social Sciences)

SPCH (see Speech Electives)

Medical Information Specialist/Transcriptionist

BIOL 2301, BIOL 2101 (see Math/Natural Sciences)

HITT 1166 Practicum-Health Information /Medical Records (0-8-1)
Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

HITT 1211 Computers in Health Care (1-4-2)
Introduction to the concepts of computer technology related to health care and the tools and techniques for collecting, storing, and retrieving health care data.

HITT 1301 (see Health Information Technology)

HITT 1305 Medical Terminology (2-3-3)
Study of word origin and structure through the introduction of prefixes, suffixes, root words, plurals, abbreviations and symbols, surgical procedures, medical specialties, and diagnostic procedures.

HITT 1342 (see Health Information Technology)

HRPO 1311 (see Behavioral/Social Sciences)

MDCA 1321 (see Medical Assistant)

MDCA 1343 Medical Insurance (2-4-3)
Emphasizes accurate ICD-9 and CPT coding of office procedures for payment/ reimbursement by patient or third party and prevention of insurance fraud. Additional topics may include managed care or medical economics.

MDCA 1402 Human Disease/Pathophysiology (3-3-4)
A study of anatomy and physiology with emphasis on human pathophysiology, including etiology, prognosis, medical treatment, signs and symptoms of common diseases of all body systems. Prerequisite: BIOL 2401.

MRMT 1307 Medical Transcription I (2-4-3)
Fundamentals of medical transcription with hands-on experience in transcribing physician dictation including basic reports such as history and physicals, discharge summaries, consultations, operative reports, and other medical reports. Utilizes transcribing and information processing equipment compatible with industry standards. Designed to develop speed and accuracy.

MRMT 2333 Medical Transcription II (2-4-3)
Production of advanced reports of physician dictation with increasing speed and accuracy including history and physicals, consultations, discharge summaries, operative reports, and other medical reports.

Nurse Assistant

HITT 1305 (see Medical Information Specialist/Transcriptionist)

HRPO 1311 (see Behavioral/Social Sciences)

NURA 1301 Nurse Aide for Health Care I (2-4-3)
Preparation for entry level nursing assistants to achieve a level of knowledge, skills, and abilities 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. Emphasis on effective interaction with members of the health care team.

NURA 1360 Clinical - Nursing Assistant Aide (0-12-3)
A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. Prerequisites: NURA 1301, NURA 1307.

POFT 1301 (see Related Instruction)

TECM 1301 (see Related Instruction)

Related Instruction

ACNT 1325 Principles of Accounting I (2-4-3)
A study of accounting concepts and their application in transaction analysis and financial statement preparation and asset and equity accounting in proprietorships and corporations. Emphasis on accounting cycle for service and merchandising enterprises.

BMGT 1327 Principles of Management (2-2-3)
Concepts, terminology, principles, theories, and issues in the field of management.

BMGT 1345 Communication Skills for Managers (2-4-3)
Comprehensive study of advanced communication 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.

BMGT 2309 Leadership (2-3-3)
Concepts of leadership and its relationship to management. Prepares the student with leadership and communication skills needed to motivate and identify leadership styles.

POFT 1301 Business English (2-3-3)
Introduction to a practical application of basic language usage skills with emphasis on fundamentals of writing and editing for business.

POFT 1321 Business Math (2-2-3)
Instruction in the fundamentals of business mathematics including analytical and problem-solving skills for critical thinking in business applications.

TECM 1301 Industrial Mathematics (2-2-3)
Fundamentals of math applicable to industrial trades including fraction and decimal manipulation, measurement, scientific notation, percentage, and problem solving techniques for equations and ratio/proportion applications. Also includes instruction in the use of the scientific calculator.

TECM 1303 Technical Mathematics (3-0-3)
Specific mathematical calculations required by business and industry. Includes whole numbers, fractions, mixed numbers, decimals, percents, ratios, and proportions. Also covers converting to different units of measure (standard and/or metric).

Spanish

SPAN 1311 Beginning Spanish I (3-0-3)
Fundamental skills in listening comprehension, speaking, reading and writing, including basic vocabulary, grammatical structures and culture. This course is for students who already have a significant Spanish vocabulary. (Students may take either SPAN 1311/1312 or SPAN 1411/1412 for credit but may not take both sequences for credit.)

SPAN 1312 Beginning Spanish II (3-0-3)
This course is a continuation of Span 1311 covering fundamental skills in listening, comprehension, speaking, reading and writing. This course includes basic grammatical structures and culture. (Students may take either SPAN 1311/1312 or SPAN 1411/1412 for credit but may not take both sequences for credit.) Prerequisite: SPAN 1311.

SPAN 1411 Beginning Spanish I (for non-native speakers) (3-2-4)
Fundamental skills in listening comprehension, speaking, reading and writing, including basic vocabulary, grammatical structures and culture. (Students may take either SPAN 1311/1312 or SPAN 1411/1412 for credit but may not take both sequences for credit.) Prerequisite: Admission to course determined by instructor assessment.

SPAN 1412 Beginning Spanish II (for non-native speakers) (3-2-4)
This course is a continuation of Span 1411 covering fundamental skills in listening, comprehension, speaking, reading, and writing. This course includes basic vocabulary, grammatical structures and culture. (Students may take either SPAN 1311/1312 or SPAN 1411/1412 for credit but may not take both sequences for credit.) Prerequisite: SPAN 1411.

SPAN 2311 Intermediate Spanish I (3-0-3)
Review and application of skills in listening comprehension, speaking, reading and writing. This course emphasizes coversation, vocabulary acquiring, reading, and composition, and includes discussion of the people, events, history, and culture of selected countries. Prerequisite: SPAN 1312 or SPAN 1412 or equivalent.

SPAN 2323 Introduction to Latin American Literature (3-0-3)
This course introduces the literature, including the prose, poetry and drama, of Latin American. Prerequisite: SPAN 2311 or SPAN 1312 with permission of the instructor.

SPAN 2324 Spanish Culture (3-0-3)
Representative readings of the literature, art, history and geography that have helped shape the Hispanic culture of the United States. Prerequisite: SPAN 2311 or SPAN 1312 with permission of the instructor.

Speech Electives

SPCH 1311 Introduction to Speech Communication (3-0-3)
Theories and practice of speech communication behavior in interpersonal, small group, and public communication situations.

SPCH 1315 Public Speaking (3-0-3)
This course provides for research, composition, organization, delivery, and analysis of speeches for various purposes and occasions.

SPCH 1318 Interpersonal Communication (3-0-3)
Theories and exercises in verbal and nonverbal communication with focus on interpersonal relationships.

SPCH 1321 Business & Professional Communication (3-0-3)
The application of theories and practice of speech communication as applied to business and professional situations.

SPCH 2333 Discussion & Small Group Communication (3-0-3)
Discussion and small group theories and techniques as they relate to group process and interaction.

Surgical Technology

BIOL (see Math/Natural Sciences)

ENGL 1301 (see English/Communications)

HITT 1305 (see Medical Information Specialist/Transcriptionist)

HPRS 2300 (see Allied Health Related Skills)

HRPO 1311 (see Behavioral/Social Sciences)

MATH 1314, MATH 1332 (see Math/Natural Sciences)

PSYC 2301, PSYC 2314 (see Behavioral/Social Sciences)

SPCH (see Speech Electives)

SRGT 1244 Tech Sciences for the Surgical Technology (2-0-2)
In-depth coverage of specialized surgical modalities. Areas covered include endoscopy, microsurgery, therapeutic surgical energies, and other integrated science technologies. Prerequisites: SRGT 1405.

SRGT 1405 Intro to Surgical Technology (3-2-4)
Orientation to surgical technology theory, surgical pharmacology and anesthesia, technological sciences, and patient care concepts. Prerequisite: BIOL 2401.

SRGT 1409 Fundamentals of Perioperative Concepts and Techniques (3-2-4)
In-depth coverage of perioperative concepts such as aseptic principles and practices, infectious processes, wound healing, and creation and maintenance of the sterile field. Prerequisite: BIOL 2401.

SRGT 1441 Surgical Procedures I (3-3-4)
Introduction to surgical pathology and its relationship to surgical procedures. Emphasis on surgical procedures related to the general, OB/GYN, genitourinary, and orthopedic surgical specialties incorporating instruments, equipment, and supplies required for safe patient care. Prerequisites: SRGT 1409.

SRGT 1442 Surgical Procedures II (3-3-4)
Introduction to surgical pathology and its relationship to surgical procedures. Emphasis on surgical procedures related to the thoracic, peripheral vascular, plastic/reconstructive, EENT, cardiac, and neurological surgical specialties incorporating instruments, equipment, and supplies required for safe patient care. Prerequisite: SRGT 1441.

SRGT 1460 Clinical I: Surgical Technology/Technologist (0-16-4)
A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. Prerequisite: BIOL 2401.

SRGT 1461 Clinical II: Surgical Tech/Technologist (0-24-4)
A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. Prerequisite: SRGT 1460.

SRGT 2462 Clinical III: Surgical Tech/ Technologist (0-24-4)
A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. Prerequisite: SRGT 1461.

Telecommunications Technology

CETT 1303 (see Mechatronics Technology)

CETT 1305 (see Mechatronics Technology)

CETT 1325 (see Mechatronics Technology)

CSIR 1303 Telecommunications Systems Installer (2-4-3)
This course reviews fundamentals of telecommunications media, including terminology, rules and regulations, safety procedures, industry standards and protocols, installation, connectorization, maintenance, and troubleshooting. General principles of customer service within a technical environment are also studied. The competencies acquired are summarized in a comprehensive project covering network, telephone and coaxial wiring, fiber optics cables, satellite television systems, structural wiring, and "smart house" concepts.

CSIR 1355 Industry Certifications (2-4-3)
Preparation for the certifications required by industry.

CSIR 1359 Digital Data Communication (2-4-3)
Introduction to the theory and troubleshooting skills needed in the digital data communication field.

CSIR 1391 Special Topics/Communications System Install & Repair (2-4-3)
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 was designed to be repeated multiple times to improve student proficiency.

CSIR 2350 Telecommunications Maintenance (2-4-3)
FFocus on technical knowledge/skills related to assembly installation operation, maintenance and repair of one and two way communications equipment/systems, including television cable systems, mobile and stationary communication devices. Topics include diagnostics, use of test equipment, and principles of mechanics, electricity, and electronics as they relate to repair.

CSIR 2351 Fiber Optic Communication System Installation & Repair (2-4-3)
Focus on installation, and repair of fiber optic communication systems including networks and peripherals. Topics include fiber optic technology; state-of-the-art networking systems; installation/repair of fiber optic systems; testing equipment.

EECT 1300 Technical Customer Service (2-2-3)
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.

EECT 1303 Intro to Telecommunications (2-4-3)
An overview of the telecommunications industry. Topics include the history of the telecommunications industry, terminology, rules and regulations, and industry standards and protocols.

EECT 1307 Convergent Technologies (2-4-3)
A study of telecommunications convergent technologies including telephone, LAN, WAN, wireless, voice, video, and internet protocol.

EECT 1342 Telecommunication outside Plant (2-4-3)
A study of outside plant facilities with emphasis on cabling layout design, splicing, bonding, grounding and facility protection systems. Safety practices and procedures are included.

EECT 1344 Telecommunications Broadband Systems (2-4-3)
A survey of telecommunications broadband transmissions systems including protocols, testing, applications and safety practices.

EECT 1380 Coop: Telecommunication (1-19-3)
EECT 1680 Coop: Telecommunication (1-39-6)
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.

EECT 2330 Telecommunications Switching (2-4-3)
The operation of telecommunications switching equipment and related software. Topics include installation, testing, maintenance, and troubleshooting. Prerequisite: EECT 1303.

EECT 2337 Wireless Telephony Systems (2-4-3)
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.

EECT 2435 Telecommunications (2-4-4)
A study of modern telecommunications systems incorporating microwave, satellite, optical, and wire/cable-based communications systems. Instruction in installation, testing, and maintenance of communications systems components.

EECT 2680 Coop: Electrical & Communications Engineering (1-39-6)
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. Prerequisites: CSIR 1359, EECT 1342.

ENGL 1301 (see English/Communications)

HRPO 1311 (see Behavioral/Social Sciences)

MATH 1314, MATH 1332 (see Math/Natural Sciences)

POFT 1301 (see Related Instruction)

SPCH (see Speech Electives)

TECM 1303 (see Related Instruction)

Transferable Academic Courses

ACCT 2401 Principles of Accounting I - Financial (3-3-4)
Accounting concepts and their application in transaction analysis and financial statement preparation; analysis of financial statements; and asset and equity accounting in proprietorships, partnerships, and corporations. Introduction to cost behavior, budgeting, responsibility accounting, cost control, and product costing.

ACCT 2402 Principles of Accounting II – Managerial (3-3-4)
Accounting concepts and their application in transaction analysis and financial statement preparation; analysis of financial statements; and asset and equity accounting in proprietorships, partnerships, and corporations. Introduction to cost behavior, budgeting, responsibility accounting, cost control, and product costing. Prerequisite: ACCT 2401.

BUSI 1301 Business Principles (3-0-3)
Introduction to the role of business in modern society. Includes overview of business operations, analysis of the specialized fields within the business organization, and development of a business vocabulary.

BUSI 2301 Business Law (3-0-3)
Principles of law which form the legal framework for business activity.

COSC 1301 Microcomputer Applications (2-2-3)
Overview of computer information systems. Introduces computer hardware, software, 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 in a higher level programming language may be discussed and applied.

COSC 1436 Programming Fundamentals I (3-2-4)
Introduces the fundamental concepts of structured programming. Topics include software development methodology, data types, control structures, functions, arrays, and the mechanics of running, testing, and debugging. This course assumes computer literacy.

COSC 1437 Programming Fundamentals II (3-2-4)
Review of control structures and data types with emphasis on structured data types. Applies the object-oriented programming paradigm, focusing on the definition and use of classes along with the fundamentals of object-oriented design. Includes basic analysis of algorithms, searching and sorting techniques, and an introduction to software engineering. Prerequisite: COSC 1336/1436.

ENGR 1201 Introduction to Engineering (2-0-2)
An introduction to the engineering profession with emphasis on technical communication and team-based engineering design. One hour of lecture and three hours of laboratory each week. Prerequisite: MATH 1314 - College Algebra or equivalent academic preparation

ENGR 1204 Engineering Graphics I (2-0-2)
Introduction to computer-aided drafting using CAD software and sketching to generate two and three-dimensional drawings based on the conventions of engineering graphical communication; topics include spatial relationships, multi-view projections and sectioning, dimensioning, graphical presentation of data, and fundamentals of computer graphics. Prerequisite: MATH 1314 - College Algebra or equivalent academic preparation

ENGR 2105 Electrical Circuits I Laboratory (0-3-1)
Laboratory experiments supporting theoretical principles presented in ENGR 2305 involving DC and AC circuit theory, network theorems, time, and frequency domain circuit analysis. Introduction to principles and operation of basic laboratory equipment; laboratory report preparation. Co-requisite: ENGR 2305

ENGR 2304 Programming for Engineers (3-0-3)
Introduction to computer programming. Emphasis 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.

ENGR 2301 Engineering Mechanics I – Statics (3-0-3)
Calculus-based study of composition and resolution of forces, equilibrium of force systems, friction, centroids, and moments of inertia. Prerequisite: PHYS 2425. Co-requisite: a second course in calculus.

ENGR 2305 Electrical Circuits I (3-0-3)
Principles of electrical circuits and systems. Basic circuit elements (resistance, inductance, mutual inductance, capacitance, independent and dependent controlled voltage, and current sources). Topology of electrical networks; Kirchhoff 's laws; node and mesh analysis; DC circuit analysis; operational amplifiers; transient and sinusoidal steady-state analysis; AC circuit analysis; first- and second-order circuits; Bode plots; and use of computer simulation software to solve circuit problems. Prerequisite or Co-requisite: MATH 2320. Prerequisites: PHYS 2325, ; PHYS 2125, MATH 2414

ENVR 1401 Environmental Science I (3-3-4)
General interest course requiring a minimum of previous science background and relating scientific knowledge to problems involving energy and the environment. Includes a laboratory.

Vocational Nursing

BIOL (see Math/Natural Sciences)

FDNS 1341 Nutrition in the Life Cycle (3-0-3)
Analysis of nutrition assessment indicators for each age group. Social consideration to growth standards, maternal weight gains, eating behaviors of various age groups, and the physiology of aging as it relates to nutrient adequacy in the mature adult.

HITT 1305 (see Medical Information Specialist/Transcriptionist)

HPRS 1204 (see Allied Health Related Skills)

HRPO 1311 (see Behavioral/Social Sciences)

PSYC 2314 (see Behavioral/Social Sciences)

RNSG 1301 Pharmacology (3-1-3)
Introduction to the science of pharmacology with emphasis on the actions, interactions, adverse effects, and nursing implications of each drug classification. Topics include the roles and responsibilities of the nurse in safe administration of medications within a legal/ethical framework. This course lends itself to either a blocked or integrated approach.

VNSG 1119 Professional Development (1-0-1)
Study of the importance of professional growth. Topics include the role of the licensed vocational nurse in the multi-disciplinary health care team, professional organizations, and continuing education.

VNSG 1230 Maternal Neonatal Nursing (2-1-2)
A study of the biological, psychological, and sociological concepts applicable to basic needs of the family including childbearing and neonatal care. Topics include physiological changes related to pregnancy, fetal development, and nursing care of the family during labor and delivery and the puerperium.

VNSG 1261 Introductory Clinical-Practical Nurse (0-12-2)
A health-related work-base learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional.

VNSG 1304 Foundations of Nursing (3-0-3)
Introduction to the nursing profession including history, standards of practice, legal and ethical issues, and role of the vocational nurse. Topics include mental health, therapeutic communication, cultural and spiritual diversity, nursing process, and holistic awareness.

VNSG 1329 Medical-Surgical Nursing I (3-1-3)
Application of the nursing process to the care of the adult patient experiencing medical-surgical conditions along the health-illness continuum in a variety of health care settings.

VNSG 1334 Pediatric Nursing (3-0-3)
Study of the care of pediatric client and family during health and disease. Emphasis on growth and developmental needs.

VNSG 1402 Applied Nursing Skills I (3-3-4)
Introduction to and application of primary nursing skills. Emphasis on utilization of the nursing process and related scientific principles.

VNSG 1432 Medical-Surgical Nursing II (3-1-4)
Continuation of Medical-Surgical Nursing I with application of the nursing process to the care of the adult patient experiencing medical-surgical conditions along the health-illness continuum in a variety of health care settings.

VNSG 1462 Intermediate Clinical–Practical Nurse (0-20-4)
A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional.

VNSG 2413 Applied Nursing Skills II (3-2-4)
Application of nursing skills to meet more complex client needs utilizing the nursing process and related scientific principles.

VNSG 2463 Advanced Clinical-Practical Nurse (0-20-4)
A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional

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Welding Technology

ENGL 1301 (see English/Communications)

HRPO 1311 (see Behavioral/Social Sciences)

MATH 1322 (see Math/Natural Sciences)

NDTE 2311 Prep for Weld Inspection (2-2-3)
General principles of welding inspection including welding processes, terms and definitions, welding discontinuities, duties and responsibilities of inspectors, destructive and nondestructive testing, quality assurance/quality control, welding codes and blueprints, procedures, and case studies. An overview of welding tools and equipment, metallurgy, chemistry, and joint design.

SPCH (see Speech Electives)

WLDG 1312 Intro to Flux Cored Arc Welding (FCAW) (2-4-3)
An overview of terminology, safety procedures, and equipment set-up. Practice in performing T-joints and butt joints using self-shielding and dual- shield electrodes.

WLDG 1313 Intro to Blueprint Reading for Welders (2-2-3)
A study of industrial blueprints. Emphasis placed on terminology, symbols, graphic description, and welding processes. Includes systems of measurement and industry standards. Also includes interpretation of plans and drawings used by industry to facilitate field application and production.

WLDG 1317 Introduction to Layout & Fabrication (2-4-3)
A fundamental course in layout and fabrication related to the welding industry. Major emphasis on structural shapes and use in construction.

WLDG 1323 Weld Safety Tools/Equipment (3-0-3)
An introduction to welding careers and safety practice, including welding safety; OSHA and the Hazardous Communication Act; Material Safety Data Sheets (MSDS); basic mathematics; measuring systems; shop operations; use and care of precision measuring tools; and the use and care of hand and power tools. Instruction on various types of welding equipment and processes, basic welding gases, fluxes, rods, electrodes, symbols, and blueprints.

WLDG 1337 Introduction to Welding Metallurgy (2-2-3)
A study of ferrous and nonferrous metals from the ore to the finished product. Emphasis on metal alloys, heat treating, hard surfacing, welding techniques, forging, foundry processes, and mechanical properties of metal including hardness, machinability, and ductility

WLDG 1421 Intro to Welding Fundamentals (2-6-4)
An introduction to the fundamentals of equipment used in oxy-fuel and arc welding, including welding and cutting safety, basic oxy-fuel welding and cutting, basic arc welding processes and basic metallurgy.

WLDG 1430 Intro to Gas Metal Arc (GMAW) (2-6-4)
A study of the principles of gas metal arc welding, setup and use of Gas Metal Arc Welding (GMAW) equipment, and safe use of tools/equipment. Instruction in various joint designs.

WLDG 1434 Intro to Gas/Tung/Arc Welding (GTAW) (2-6-4)
An introduction to the fundamentals of equipment used in oxy-fuel and arc welding, including welding and cutting safety, basic oxy-fuel welding and cutting, basic arc welding processes and basic metallurgy.

WLDG 1435 Intro to Pipe Welding (2-6-4)
An introduction to welding of pipe using the shielded metal arc welding process (SMAW), including electrode selection, equipment setup, and safe shop practices. Emphasis on weld positions 1G and 2G using various electrodes.

WLDG 1457 Intermediate Shielded Metal Arc (SMAW) (2-6-4)
A study of the production of various fillets and groove welds. Preparation of specimens for testing in all test positions.

WLDG 2413 Intermediate Welding Using Multiple Processes (2-6-4)
Instruction using layout tools and blueprint reading with demonstration and guided practices with some of the following welding processes: oxy-fuel gas cutting and welding, shield metal arc welding (SMAW), gas metal arc welding (GMAW), flux-cored arc welding (FCAW), gas tungsten arc welding (GTAW), or any other approved welding process.

WLDG 2435 Advanced Layout & Fabrication (2-6-4)
An advanced course in layout and fabrication. Includes production and fabrication of layout, tools, and processes. Emphasis on application of fabrication and layout skills.

WLDG 2443 Advanced Shield Metal Arc (SMAW) (2-6-4)
Advanced topics based on accepted welding codes. Training provided with various electrodes in shielded metal arc welding processes with open V-groove joints in all positions.

WLDG 2453 Advanced Pipe Welding (2-6-4)
Advanced topics involving welding of pipe using the shielded metal arc welding (SMAW) process. Topics include electrode selection, equipment setup, and safe shop practices. Emphasis on weld positions 5G and 6G using various electrodes.

Wind Energy Technology

CETT 1303 (see Mechatronics Technology)

CETT 1305 (see Mechatronics Technology)

CETT 1325 (see Mechatronics Technology)

CPMT 2250 Industry Certification Preparation (1-4-2)
Overview of the objectives for industry specific certification exam(s).

ELMT 1301 (see Mechatronics Technology)

ELMT 1305 (see Mechatronics Technology)

ENGL 1301 (see English/Communications)

HRPO 1311 (see Behavioral/Social Sciences)

INTC 1357 (see Mechatronics Technology)

MATH 1314 (see Math/Natural Sciences)

POFT 1120 Job Search Skills (1-0-1)
Skills to seek and obtain employment in business and industry.

TECM 1303 (see Related Instruction)

WIND 1300 Introduction to Wind Energy (3-0-3)
Introduction of the evolution of wind technology, wind farm design, and characteristics of energy sources.

WIND 1302 Wind Safety (3-1-3)
Introduction to safety procedures and practices relating to turbine towers. Includes first aid training and CPR certifications.

WIND 1470 Wind Turbine SCADA and Networking (2-4-4)
Topics in Supervisory Control and Data Acquisition systems, Industrial Ethernet communications systems as they apply to the wind energy industry.

WIND 2310 Wind Turbine Materials and Electro-Mechanical Equipment (2-4-3)
Identification and analysis of the components and systems of wind turbine.

WIND 2455 Wind Turbine Troubleshooting and Repair (2-5-4)
Operation, maintenance, troubleshooting, and repair of wind turbine electro-mechanical systems

WIND 2459 Wind Power Delivery System (2-5-4)
Components, equipment, and infrastructure used in the production and transmission of electricity as related to wind turbine power.

ELMT 2380 COOP: Electromechanical/ Engineering Technology (1-19-6)
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. Prerequisites: INMT 1347.

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CATALOG 2012-2014

TSTC
Texas State Technical College™

Texas State Technical College Harlingen Technical Careers

Allied Health Care

Culinary Arts
Dental Assistant
Dental Hygiene
Dental Laboratory Technology
Health Information Technology
Medical Assistant
Medical Information Specialist/Transcriptionist
Nurse Assistant
Surgical Technology
Vocational Nursing

Computer Information Systems

Business Management Technology
Computer Networking and Security Technology
- Switching and RoutingTechnician

Computer Systems Management Technology
- Computer Retail Technician

Digital Media Design Technology
- Digital Photography Technician

Game & Simulation Programming
- Game Testing Technology

Engineering

Computer Drafting & Design Technology
- GIS Specialist

Biomedical Equipment Technology
Chemical-Environmental Technology
Mechatronics Technology
- Mechatronics/Principles of Electricity

Telecommunications Technology
Wind Energy Technology

Industrial/Manufacturing

Agricultural Technology
Air Conditioning & Refrigeration Technology
Auto Collision Technology
- Auto Body Repair
- Auto Body Collision and Finish Preparer

Automotive Technology
- Ford Maintenance & Light Repair
- Automotive Maintenance Mechanic

Aviation Maintenance Technology
- Airframe
- Powerplant

Building Construction Science
- Green Construction

Machining Technology
Welding Technology

Education and Humanities

Education and Training
Academic Core

Field of Study
Business
Communication

Associate of Science Degrees
Biology
Computer Science
Engineering
Health Professions
Mathematics
Nursing Preparatory
Physics

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VOCATIONAL NURSING PROGRAM
TSTC
Texas State Technical College
STUDENT

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Helpful Phone Numbers

Career Services 956.364.4106

Cashiers 956.364.4413

College Information 956.364.4117

College Housing..... 956.364.4235

College Police 24/7 ..... 956.364.4911

Continuing Education 956.364.4615

Marketing 956.364.4111

President's Office 956.364.4021

Student Life..... 956.364.4304

Student Receivables..... 956.364.4409

Student Services 956.364.4301

Student Success 956.364.4109

TSTC Operator.....956.364.4000 or 1.800.852.8784

Contact Information

Office of Admissions & Records.....956.364.4320
Monday – Thursday..... 8 AM – 6 PM
Friday ..... 8 AM – 5 PM
Saturday* ..... 8 AM – 12 PM

Bookstore 956.364.4441**
Monday – Thursday..... 7:45 AM – 5:30 PM
Friday ..... 7:45 AM – 5 PM

Cafeteria.....956.364.4450
Serving Hours
Monday – Friday.....(Breakfast) 7 AM – 10:30 AM
(Lunch) 11 AM – 2 PM
Hours of Operation
Monday – Friday ..... 6 AM – 2 PM

Cashier/Student Receivables .....956.364.4413 or 956.364.4412
Monday – Thursday..... 8 AM – 6 PM
Friday ..... 8 AM – 5 PM
Saturday*.....8 AM – 12 PM

Counseling/Advisement Center 956.364.4310
Monday – Thursday..... 8 AM – 6 PM
Friday ..... 8 AM – 5 PM
Saturday*.....8 AM - 12PM

Financial Aid & Veteran Services.....956.364.4330
Monday – Friday ..... 8 AM– 5 PM
Monday – Thursday (counter only) ..... 8 AM – 6 PM
Saturday* (counter only) ..... 8 AM – 12 PM

Learning Resource Center.....956.364.4608
Monday – Thursday ..... 7:30 AM – 8 PM
Friday ..... 7:30 AM – 5 PM
Saturday* ..... 10 AM – 4 PM
Sunday ..... 1 PM – 4 PM
Semester Breaks (Monday-Friday).....8 AM - 5 PM

Student Health Services 956.364.4305
Day Nurse (Student Center)
Monday – Friday..... 8 AM – 1 PM & 2 PM – 5 PM
Evening Nurse (Student Housing Office)
Monday – Thursday ..... 5 PM – 10 PM

Support Services 956.364.4520/voice
956.364.4526/TDD
Monday – Friday..... 8 AM – 12 PM & 1 PM – 5 PM

Testing Center.....956.364.4308
Monday & Tuesday .....8 AM - 5 PM
Students must begin testing by 1:30PM
Wednesday & Friday.....8 AM - 5 PM
GED Testing Only
Thursdays.....8 AM - 9 PM
Students must begin testing by 6:00PM
Saturday*.....8 AM - 12 PM
Students must begin testing by 9:00AM

Wellness & Sports Center 956.364.4340
Monday – Thursday..... 8 AM – 9 PM
Friday ..... 8 AM – 2 PM

* Saturday holidays closed
** Summer semester hours may vary.

Texas State Technical Colleges
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TSTC Harlingen
1.800.852.8784
956.364.4000

TSTC Marshall
1.888.382.8782
903.935.1010

TSTC Waco
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