College Catalog
& Student Handbook
2015-2016

Texas State Technical College is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award Associate 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.

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Equal opportunity shall be afforded within Texas State Technical College to all employees and applicants for admission or employment regardless of race, color, gender, religion, national origin, age genetic information, disability or veteran status. TSTC will make reasonable accommodations for persons with disabilities. TSTC's policy is that, in all aspects of its operations, each person with a disability shall be considered for admission or access to or treatment or employment in its programs and activities in accordance with Part 84 of Title 45, the regulation implementing Section 504 of the Rehabilitation Act of 1973.

TSTC reserves the right to limit the enrollment of any program and to make any changes in the provisions of this catalog when such action is deemed to be in the best interest of the student or TSTC. TSTC reserves the right to change any of this catalog's provisions, without notice or obligation, in keeping with the policies of the Board of Regents and in conformance with the laws of the State of Texas. This catalog is not a legal document and does not constitute a contract between TSTC and the user.

Table of Contents

Map 2
Mission and Purpose 4
Vision and Value 5
Governance and Accreditation 6
Admissions and Records 8
Registration 10
Tuition and Fees 10
Installment Payment Plan 14
Housing 14
Refunds 14
Financial Assistance 16
Veterans Center Services 23
Scholastic Information 26
Texas Success Initiative (TSI) Requirements 28
Advising 29
Graduation and Commencement 31
Curriculum 32
Developmental Education Courses 32
Academic Core Courses 35
Credit Award for Assessments in Training 38
Credit Award for Continuing Education Units (CEUs) 38
Individualized Instruction 38
Dual Enrollment 38
Online Learning 39
Enrollment 39
Schedule Changes 39
Student Participation 39
Student Absence and Religious Holy Days 39
High School Articulation Agreements 39
Transfer of Credit 40
Academic Integrity 40
Workforce Training and Continuing Education 41
College Readiness and Advancement 41
Student Services 42
Student Housing 42
Counseling and Support Services 42
Student Life and Engagement 45
Student Identification Cards 47
Learning Resource Center 47
College Bookstore 47
Food Service 47
Student Health Services 48
Student Insurance 48
Student Transportation 49
Campus Security 49
Office of Student Success 49
Industry Relations and Talent Management 49
Community Standards 49
Title IX 49
Student Rights and Responsibilities 50
Student Conduct and Discipline 59
Family Education Rights and Privacy Act (FERPA) 63
Compact with Texans 64
Texas Higher Education Coordinating Board Complaint Procedure 65
Associate Degree and Certificate Curriculum 67
Course Descriptions 179
Faculty 219

Mission and Purpose

Statement of Purpose

The Texas State Technical College System mission is defined by the Texas State Legislature and published in Vernon's Texas Education Code Section 135.01:

Texas State Technical College System is a coeducational 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.

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 course work, 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 education research commercialization initiatives. Through close collaboration with business, industry, governmental agencies and communities, including public and private secondary and postsecondary educational institutions, the system shall facilitate and deliver an articulated and responsive technical education system.

In developing and offering highly specialized technical programs with related supportive course work, 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 programs not commonly offered by public junior colleges. (TEC 135.01)

Expanded Statement of Purpose

Texas State Technical College (TSTC) is a coeducational two-year, multi-campus institution of higher education providing innovative and responsive programs and courses of study in technical education for which there is demand in the State of Texas, with emphasis on advanced and emerging technologies. TSTC is a leader in building the economic vibrancy of Texas by providing excellence in learning experiences, on location and at a distance, and through diverse technical programs and rigorous curricula offerings. TSTC facilitates the transfer of technical expertise through the placement of former students, who have obtained hands-on learning experience, in jobs with Texas business and industry. TSTC works collaboratively both internally and with other organizations to increase the availability of relevant technical education in Texas and to be accountable to its various constituencies. Integrity in all of its dealings provides the foundation of TSTC's mission.

TSTC awards include Associate of Applied Science degrees, Certificates of Completion, badges (skill-set institutional awards) and workforce certificates. TSTC also provides opportunities for the seamless transfer of credits to other colleges and universities, including awards at its Harlingen campus for Associate of Science degrees and institutional recognitions for completion of the General Education Core curricula.

TSTC makes higher education affordable, readily accessible and personal through multiple instructional delivery systems, counseling and guidance services, student activities and the opportunity to learn in a residential setting at several of its campuses. By offering TSTC programs and services in flexible times and places, TSTC students are able to achieve their educational and career goals at a pace that meets their needs while minimizing the elapsed time needed to reach those goals. To achieve time and place flexibility, TSTC offers traditional higher education credit programs taught on a semester basis, dual credit programs that lead to marketable skills achievement or further education (in partnerships with Independent School Districts), competency-based education and training delivery, online instruction, project-based learning activities, continuing education, and specialized training for business and industry. TSTC operates its programs and services in accordance with the public trust for which it is responsible.

Diversity in the student body and in faculty and staff is a value that TSTC strives to achieve. It is TSTC's goal for the ethnicity of these groups to mirror statewide and local demographics. Likewise, serving non-traditional and special population groups has always been a TSTC keynote, with specialized services provided to assist where and when needed.

Vision and Values

Vision

Texas State Technical College 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.

Values

Integrity	Dealing honestly and openly with all of our constituencies and with one another
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
Innovation	Creating and implementing new ideas and methods
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
Diversity	Striving for inclusivity in our faculty, staff and students as reflected in state demographics; treating others fairly and equitably as we would all like to be treated

Texas State Technical College

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. An additional campus was created in 1970 in the Panhandle of Texas and in Sweetwater in West Texas. As the demand for quality technical education continued to grow, campuses were established in Abilene (1985), Breckenridge (1989), Brownwood (1991), Marshall (1991), Fort Bend County (2001), Williamson County and North Texas (2013). In 1991, TSTI was renamed Texas State Technical College.

Today, serving as the state's college for workforce and economic development, TSTC offers new, emerging and customized curriculum at eleven campuses in Abilene, Breckenridge, Brownwood, Fort Bend County, Harlingen, Ingleside, Marshall, North Texas, Sweetwater, Waco and Williamson County. In addition, programs and customized training are offered at partnership centers throughout the state.

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. 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 hands-on learning 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.

Governance and Accreditation

Texas State Technical College is governed by a nine-member Board of Regents and is operated under the leadership of the Chancellor/Chief Executive Officer (CEO), whom the Board appoints. Board members are appointed by the Governor of Texas to six-year staggered terms and are confirmed by the Texas Senate. The Board meets a minimum of four times a year to enact policies and take actions that support the successful operation and management of the College.

The Texas State Technical College Chancellor and CEO is
Mr. **Mike Reeser, MBA**

The Texas State Technical College Administration
Dr. Elton E. Stuckly, Jr., Executive Vice Chancellor/Chief Operations Officer
Mr. Jonathan Hoesktra, Vice Chancellor/Chief Finance Officer
Dr. Gary Hendricks, Vice Chancellor/Chief Business Intelligence Officer
Mr. Jeff Kilgore, Vice Chancellor/Chief Marketing Officer
Ms. Gail Lawrence, Senior Vice Chancellor/Chief Culture Officer
Mr. Randy Wooten, Vice Chancellor/Chief Execution Oficer
Mr. Roger Miller, Senior Vice Chancellor/Chief Government Affairs Officer
Mr. Rick Herrera, Vice Chancellor/Chief Technology Officer
Mr. Michael Bettersworth, Vice Chancellor/Chief Policy Officer
Mr. Ray Rushing, Vice Chancellor/Chief General Council

The TSTC Board of Regents include:
Mr. Keith Honey, Chair of the Board;
Mr. John K. Hatchel, Vice Chair;
Mr. Joe K. Hearne, Executive Committee Place 1;
Mr. Ivan Andarza, Executive Committee Place 2;
Mr. Ellis M. Skinner, II;
Mr. James Virgil (J.V.) Martin;
Mr. Joe M. Gurecky;
Ms. Linda McKenna;
Ms. Penny Forrest

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

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 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
- Emergency Medical Technology

National Center for Construction Education and Research (NCCER)

- Building Construction Science
- Welding Technology

Texas Department of Aging and Disability Services

- Nurse Assistant

Texas Board of Nursing

- Registered Nursing
- Vocational Nursing

Committee on Accreditation of Educational Programs for the Emergency Medical Services (CoAEMSP)

- Emergency Medical Technology

Department of State Health Services (DSHS)

- Certified Nursing Aids Program

The following programs are certified by the:

National Automotive Technicians Education Foundation (NATEF)

- Auto Collision Technology
- Automotive Technology

Inter-Industry Conference on Auto Collision Repair (I/CAR)

- Auto Collision Technology

Automotive Service Excellence (ASE)

- Auto Collision Technology

Federal Aviation Administration (FAA)

- Aviation Maintenance Technology

American Wind Energy Association (AWEA)

- Wind Energy and Turbine Technology

The following programs are recognized by the:

Texas Skills Standards Board (TSSB)

- Biomedical Equipment Technology
- Digital Media Design Technology
- Precision Manufacturing Technology
- Telecommunications

GENERAL INFORMATION

TSTC
Texas State Technical College™

tstc.edu

Admissions and Records

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 Admissions Office to schedule an appointment with an Admissions Advisor and a campus tour.

Admission Requirements

General Admission Requirements

The admission of each student into the college will be in accordance with institutional procedures which includes the completion of the appropriate forms. In order to register into a specific program, a student must satisfy program entry requirements.

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Admission Categories

Prospective students may be admitted to any TSTC campus as regular students under the following conditions:

A. High School Graduate: A student is admitted upon proof of graduation from an accredited high school upon submission of an official high school transcript. In this policy, accredited high school means a Texas public high school accredited by the Texas Education Agency, a Texas nonpublic high school accredited by the Texas Private School Accreditation Commission, an out-of-state high school accredited by an equivalent official accrediting body for the state in which the high school is located, or a homeschool directed by a parent as defined in case law by TEA vs Leeper. A student who graduated from a homeschool is admitted once a notarized record of the high school equivalent work completed with a date of successful completion is submitted. This work should be consistent with Texas Education Agency minimums for high school completion.

B. College Transfer: Prior attendance at a regionally accredited college or university. A student is admitted upon receipt of official transcripts from all previously attended institutions of higher education.

C. GED: Successful completion of the General Education Development test (GED) as certified by a state education agency or a state authorized examination that the State recognizes as the equivalent of a higher school diploma. A student is admitted upon receipt of official GED score report or scores from a state authorized examination the State recognizes as the equivalent of a high school diploma.

D. Exceptional Admission: An individual who does not qualify for admission under one of the previous categories may be eligible for exception admissions. Individuals who are applying for admission based on the completion of an independent study rather than through a public high school, accredited private high school, or home school may be admitted on an individual approval basis provided that they:
   1. Present a notarized record of the high school equivalent work completed with a date of successful completion. This work should be consistent with Texas Education Agency minimums for high school completion;
   2. Complete an Exceptional Admission Form which includes appropriate authorization;
   3. Comply with applicable TSI requirements;
   4. Complete an information session with a designated TSTC College official.

Individual Approval Categories

A. Individual Approval A:
   1. Students age 16 or 17 or older who are graduates of an unaccredited high school.
   2. Students age 17 or older who are attending a course of instruction to prepare for the high school equivalency examination and who can present sufficient evidence indicating their capability to do college-level work.
   3. Students 18 or older who can present sufficient evidence indicating their capability to do college-level work.

Exceptional Admission Students shall be considered to have "capability to successfully complete college-level work" by one of the following:
   1. Passing all sections of the Texas Success Initiative (TSI) Assessment
   2. Completing the TSTC developmental sequence of courses to be TSI met
   3. Completing six (6) or more college-level course hours (non-developmental) with a grade of "C" or better

B. Individual Approval B: Dual enrollment students in the eleventh or twelfth grade who are currently attending a high school and do not have a diploma or GED;

C. Individual Approval C: Dual enrollment students who have less than a junior year high school standing who demonstrate outstanding academic performance and capability.

Admission Enrollment Procedures

A. Submit an admission application form which includes an Oath of Residency and a declaration of intent to enroll as a degree-seeking or non-degree-seeking student. All applicants applying for admissions to the college will be required to complete the information regarding felony charges on the Application for Admissions form. Applicants who answer "Yes" will be required to complete a "Supplemental form" and may be required to submit additional documentation.

B. Submit all required documents based on admissions category. See admission categories above for more information.

C. Comply with applicable testing requirements:
   1. Submitting TSI Assessment Test results; or
   2. Submitting documentation of TSI exemption or waiver; or
   3. Taking the TSI Assessment test.

D. Comply with any immunization related requirements as specified by law.
E. Students seeking admission to specific programs must also satisfy any established and approved program entry-level standards.
   Note: TSTC campuses entering into contractual agreements (including State Authorization Reciprocity Agreements) with independent school districts, businesses and/or other entities for the delivery of courses to specific student populations may develop supplemental requirements and documentation to meet the conditions of the agreement. In such cases, the supplemental requirements and documentation will be in addition to the minimum requirements stated in these operating requirements.
F: Attend a New Student Orientation session. New Student Orientation is required for all new students.

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. At the end of one year, all records are discarded unless the applicant has notified the Office of Admissions of continued interest in attending TSTC. All documents become the property of TSTC and are not returned to the students.

International Students

College credit applicants who do not hold United State 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.
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, 15-30 in Listening, 18-30 in Speaking, and 17-30 in Writing on a internet-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)

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. Consult with your international liaison located at the Office of the Registrar.

Due to delays in international communications, international applicants are encouraged to complete all admissions requirements at least 90 days prior to the expected entry date. International students will receive an acceptance letter when all Admission requirements have been met including NSO. The I-20 is issued once all other documents that include TOEFL and financial support documents have been reviewed and accepted.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. Carry medical and hospitalization insurance;
3. Not obtain federal financial aid (except students holding to I-551 visas) and
4. 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.

Early Admission/Concurrent High School/Dual Enrollment

TSTC has agreements with many independent 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.

Enrollment in developmental courses is not permitted for a student enrolling under the exceptional admission program (concurrent high school or dual enrollment).

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 College Readiness Office or your high school counselor for more information.

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.

Re-admission of Students

A. Re-apply for admission after an interruption of enrollment of more than one year prior;
B. Comply with applicable testing requirements;
C. Comply with any immunization related requirements as specified by law;
D. Submissions of official transcripts for any College/University previously attended, GED score report, or High School transcript.

Academic Fresh Start

Texas Senate Bill 1321, entitled "Right to An Academic Fresh Start" allows a person who is a resident of Texas to apply for admission and not have coursework completed 10 or more years prior to the date of anticipated enrollment included as consideration in the admission decision. This allows the student to begin a new course of study with a clear academic record.

A. This is an all or nothing option. Students are not able to pick and choose which courses to ignore and which courses to count. This option clears only the student's academic record. If the student chooses the "Academic Fresh Start" option, the student does not receive any credit for any courses taken 10 or more years prior to the re-enrollment. This means that:
   1. Courses taken previously cannot be used to fulfill new prerequisite requirements
   2. Courses taken previously cannot be counted towards a new degree
   3. Courses taken previously will not be counted in the student's GPA calculation.
B. The student must still complete the usual admissions process, including providing information on all colleges or universities previously attended and provide official copies of transcripts from all schools attended.
C. Once the "Right to an Academic Fresh Start" provision has been claimed, and the student has enrolled, the provision cannot be reversed.

Registration for Classes

After the above requirements are met and the required procedures completed, students may register for credit classes. Consult with your faculty advisor or academic advisor and review the TSTC course schedule for more information on these classes. Registration for workforce training and continuing education programs are different from those described in this section. Contact the Workforce Training Office for more information.

Change of Personal Information

Students are responsible for maintaining accurate personal information on their educational records to ensure communication with college departments. Official changes to personal information are made at the Office of the Registrar on a Data Change Form although changes of address, email address, and telephone numbers may be made online through Web Advisor. Some changes require additional documentation as outlined below. All changes are processed immediately upon receipt.

Name changes must be completed in person at the Office of the Registrar. Students must provide legal documentation, such as an original marriage license or certificate, passport, court order, divorce decree, birth certificate or naturalization papers. A driver's license or Social Security card will not be accepted. Name changes for graduation candidates must be completed by the graduation application deadline. A student's permanent academic record, TSTC diploma or certificate and commencement program must reflect the same name.

Social Security number changes must also be completed in person at the Office of the Registrar. The student must present an original Social Security card as documentation.

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 student 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 2015
- Resident of Texas Tier 3 tuition: $89 per semester credit hour
- Resident of Texas Tier 2 tuition: $105 per semester credit hour
- Resident of Texas Tier 1 Tuition: $129 per semester credit hour
- Non-resident of Texas: $276 per semester credit hour

Designated Tuition Rate Effective Fall 2015
- $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 for more information regarding the residency of minors, dependents, members of the armed forces or other special circumstances.

Aircraft Pilot Training Technology program and its Helicopter

Specialization require additional flight fees. To view the schedule of fees for this program go to www.tstc.edu/programs/AircraftPilotTraining.

$1,000 Tuition Rebate for Certain Undergraduates

The tuition rebate program provides a financial incentive for students to complete a bachelor's degree efficiently, taking as few courses outside their degree plan as possible. The program's goal is minimizing the number of courses students take - saving money for the student, the student's parents and the State of Texas.

Students must meet the following eligibility requirements:

- First college course after high school graduation must be taken in Fall 1997 or later;
- Student must have been a Texas resident at all times while pursuing the degree;
- Student must have been entitled to pay in-state tuition at all times while pursuing the degree; and
- Student must not have graduated yet.

For more information on this rebate program, go to www.collegeforalltexans.com.

Student Payments

Student charges for Tuition and Fees are due and payable by dates published each semester to ensure that the student's schedule is not affected. All tuition and fees may be paid by cash, check or credit card at the cashier's office or online through the students' TSTC Portal account.

The Installment Payment Plan, Emergency Tuition Loan or Student Financial Aid constitute additional forms of payment; however all payment arrangements must be completed by the published deadlines 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 the fees of any collection agency, which may be based on a percentage, with a maximum of 30 percent of the debt, and all costs and expenses, including reasonable attorney fees TSTC incurs in such collection efforts after internal collection efforts have failed to result in the full payment of the student's account. Student accounts may be sent to an outside collection agency and may be reported to one or more credit bureau reporting service(s).

Fees

Students' fees are determined by a variety of factors, as described in the accompanying table. Not all of these fees apply to workforce training and continuing education programs. Contact Student Accounting for more information. Fees in force for Fall 2015 are listed below.

TYPE OF FEE	AMOUNT OF FEE	NOTES
Application Fee	Up to $100 per application	
Late Registration Fee	$100	After close of registration
Late Graduation Fee	$100	After graduation application deadline
Non-Resident E-Learning Fee	$300 per semester credit hour	For out-of-state residents enrolled in online 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 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	
Student Medical Health and/or Accident Insurance	Cost of insurance	Optional, unless required by program
Library Fines	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	
Locker Rental Fee	$25 per semester	Voluntary fee to reserve a locker for a semester
Required vaccines	Cost of vaccine	Optional by campus
Background security check	Cost of security check	Required for certain programs
Student ID replacement fee	$10 per card	
Digital Materials Fee	Cost of materials including administrative fee	Varies by course
Installment plan fee	$25 per semester	
Installment plan late fee	$25 after 7 business days grace period	
Returned check charge	$50 per check	
Audit Fee	Applicable tuition plus $25 per semester credit hour	
CTE Award Path Fee	$50 per student per year	
Handicap Parking Violation Moving Violation Other Offenses	$100— Handicap Parking Violation $40— Moving Violation Other Offenses: $25 - First offense $50 - Second offense $100 - Third offense	Other offenses include, but are not limited to, housing violations, code of conduct violation, smoking in a non-designated area and other parking violations
Allied Health Insurance	Cost of Insurance	Required for certain Allied Health programs. Includes malpractice and/or needlestick insurance.
Dental Hygiene Clinical Fee	$100 per clinical course	
External Certification of Specialty	Cost of Market Price	

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.

Effective Fall 2014, a new law has been adopted by State Legislation (SB 1210, passed in 2013). The law requires that students must meet the Financial Aid Standards of Academic Progress for certain waivers and exemptions. These standards are outlined under the TSTC Satisfactory Academic Progress (SAP policy for Financial Aid)

WAIVERS & EXEMPTIONS FOR RESIDENTS	OFFICE
Students who are the highest-ranking graduate of their high school class (valedictorian)	Student Accounting
High school graduates who received TANF benefits while in high school	Student Accounting
Dependents of Texas veterans who were killed in action or died while in service (Hazlewood)	Veterans Center
Children of POWs and MIAs as certified by the U.S. Department of Defense	Veterans Center
Children of disabled Firefighters or Peace Officers as certified by the Texas Higher Education Coordinating Board	Student Accounting
Blind or Deaf Students as certified by the Texas Department of Assistive and Rehabilitative Services – Blind and Deaf-Blind Services, and Deaf and Hard of Hearing Services.	Admissions
Students in foster or other residential care as certified by the Texas Department of Protective and Regulatory Services	Student Accounting

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
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
Senior citizens 65 years of age or older may audit courses without payment of state and designated tuition	Student Accounting
TSTC employees, their spouses and/or dependents have a reduction in state tuition and a waiver of designated tuition	Human Resources
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.	Admissions

WAIVERS & EXEMPTIONS FOR NON-RESIDENTS	OFFICE
Military personnel stationed in Texas and their spouses and children	Veterans Center
Individuals employed at least half time as teachers or professors at Texas institutions of higher education and their spouses and children	Student Accounting
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 Accounting
Students who receive a competitive scholarship of at least $1,000	Financial Aid
Students who reside in a county or parish of Arkansas, Louisiana, New Mexico, or Oklahoma, that is adjacent to Texas in the out-of-state county or parish where a current reciprocity agreement is in effect with a college or university.	Admissions
Students from Mexico or Canada enrolled through a Texas Higher Education Coordinating Board approved Exchange Program	Student Accounting
Students from Mexico who demonstrate financial need	Student Accounting
Nonimmigrant aliens residing in Texas in accordance with NATO treaties and their spouses and children	Student Accounting

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 (other than Harlingen family 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 completed online through the TSTC Portal prior to published deadlines.

The payments are due as follows:

Fifteen-Week Term:
- 34 percent prior to published deadlines plus the $25 installment plan fee
- 33 percent prior to the sixth class week
- 33 percent prior to the eleventh-class week

Twelve-Week Summer Term:
- 34 percent prior to published deadlines plus the $25 installment plan fee
- 33 percent prior to the fifth class week
- 33 percent prior to the ninth class week

Less Than Twelve-Week Term:
- 50 percent prior to published deadlines plus the $25 installment plan fee
- Remainder 50 percent before the class week prior to the halfway point of the term

A student who elects to pay in installments will:
1. pay an $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. not be able to obtain official copies of his/her student records until the debt is paid in full;
5. be at risk of being dropped or barred from attending classes until the debt is paid or acceptable arrangements are made with Student Accounting; and
6. be responsible for payment of any remaining balance upon withdrawal 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. Emergency Tuition Loans are due in full approximately 30 days after first class day. Contact the Student Accounting Department for more information.

Housing

Required items include the Housing Application with the appropriate deposit, the Release of Background Information Form and the non-refundable criminal background check fee.

Please see the Housing Office for information regarding room and board.

Refunds

Refunds for Changes in Enrollment

The following definitions apply when calculating refunds for changes in enrollment. Changes must occur by the published deadlines. 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 Registrar according to the following schedule. Students who concurrently add and drop the same number of credit hours will not be charged or refunded for these simultaneous transactions if they occur by the published deadlines.

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 percent 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.

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

A refund of normally non-refundable fees could be approved in cases when the student is not accepted for enrollment by TSTC or when a class is cancelled. TSTC reserves the right to withhold refunds when a student is suspended for disciplinary reasons. No refunds will be processed until time has elapsed for a check to clear the bank. Refunds are given to a student after receipt of the withdrawal notice from the Office of the Registrar. Cash refunds are not permitted. Financial aid balances and other credit balances are disbursed via the TechOne Card on the date announced at registration.

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 percent of the semester should contact the Financial Aid Office 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.

An unofficial withdrawal is when the students stops participating in all the classes during the semester, and all final grades are Fs. Students will be responsible for repaying federal aid based on return of Title IV calculations, based on the last date of participation, unless an instructor certifies and documents that the student was participating in at least one class after the 60 percent point of the term or until the end of the term. A term may consist of one or more blocks or modules.

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 the student withdraws from the College on or before the 60 percent 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. William D. Ford Unsubsidized Federal Direct Loan (other than PLUS loans)
2. William D. Ford Subsidized Federal Direct Loan
3. Federal Pell Grants for which a return of funds is required
4. Federal Supplemental Educational Opportunity Grants (FSEOG) for which a return of funds is required
5. State, Institutional, Scholarship or other program requiring a refund for enrollment changes

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.

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 consumables 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 approved fee schedule:

- Refundable portion of 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.

The Financial Aid Office offers a variety of financial assistance programs to help eligible students with the cost of attending TSTC. The funds provided through these programs can be in the form of a grant, payment for part-time employment (Work Study), Direct Loan, scholarship, veteran benefit, or a combination of any of these programs.

A grant is a gift that does not need to be repaid.

The college Work Study Program is part-time employment that allows students to earn money and provides them with the opportunity to gain work experience.

A scholarship is competitive aid, which does not have to be repaid.

A Direct Loan is borrowed money and must be repaid with interest.

See the Financial Aid Office for a complete listing of financial assistance programs

Financial Literacy
TSTC, joined by other colleges and universities throughout the country, is concerned about student debt and financial literacy. In an effort to help students and their families, TSTC is providing money management tools right at their fingertips. There are many reports and statistics that indicate having high debt affects a student's enrollment, retention, and graduation. Students are encouraged to use the tools outlined in the USA Funds Life Skills Student Guide.

Students have an opportunity to set up their own personal profile and learn at their own pace, for free. Students can also download a helpful mobile device application called Borrowing for College. The USA Funds Borrowing for College Calculator helps students manage their student loan borrowing responsibly.

You can go online at http://www.usafunds.org/CollegePlanning/Pages/BorrowingforCollege.aspx or get your free app today. TG - www.tgslc.org/students - The TG website offers information on how to budget, finance tools (loan calculator, interest calculator, credit card calculator) budgeting, credit cards and repaying loans information.

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:

Priority Deadlines

Fall Term - March 15, 2015
Spring Term - October 1, 2015
Summer Term - March 1, 2016

Applications completed by these deadlines are processed for available funds on a first-come first-served basis. Late applications 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 by the payment deadline, it is recommended that students make alternative arrangements to pay registration expenses. Contact Student Accounting for information on emergency loans and installment plans.

To be eligible for assistance, a student must:

- Complete the Free Application for Federal Student Aid (FAFSA). Be sure to complete the correct application for the year that you are applying for.
  - For Fall 2014 through Summer 2015 semesters, complete the 2014-2015 FAFSA
  - For Fall 2015 through Summer 2016 semesters, complete the 2015-2016 FAFSA available starting January 1, 2015.
- Verification documents and other forms may need to be submitted after the office reviews the application.
- Complete the admissions requirements, be accepted for enrollment, and enroll in an eligible program.
- Meet the TSTC financial aid standards of academic process.
- Be a United States citizen or an eligible non-citizen.
- Other rules for foreign students and non-citizens may apply.
- Be registered with the U.S. Selective Service (if you are a male born after December 31, 1959). All males residing in the United States are required to register for Selective Service immediately

following their 18th birthday. For Selective Service information go to www.sss.gov.
- Must have a high school diploma or a GED (effective after July 1, 2012).
- Not be in default on an educational loan or owe a refund on any federal grants.
- Be registered each semester and pay tuition no later than the 11th class day of the 15-week semester, the 9th class day of the 12-week semester, or by the census date for the class/ classes registered for. Students registering after the 11th class day of the 15-week semester, the 9th class day of the 12-week semester or after census date may not be eligible for financial aid for that semester. Other rules apply to short summer sessions and online education courses.

Note: Class no-shows affect financial aid eligibility. When the student is reported as not attending class prior to census, the student's award may be affected.

Awards are based on full-time enrollment. Awards will be reduced when students register for less than 12 credit hours.

Determination of Award

TSTC attempts to meet the educational financial needs of students. Financial need is determined by subtracting the parent(s)' and/or student's expected family contribution (EFC, as determined by the Free Application for Federal Student Aid, known as FAFSA), from the total estimated cost of attendance or COA. Educational Financial Need = COA - EFC. Students are awarded aid based on financial need and the availability of funds. Financial aid programs have limited funds; therefore, the Financial Aid Office may not be able to meet the student's financial aid packaging expectations, but it will try to meet the direct educational needs. Students will need to have a balance of gift aid and self-help assistance. Students are responsible for notifying the office about all resources provided to the student.

Student Cost of Attendance Budget (include COA budget)

Cost of Attendance (COA) at TSTC is based on the number of credit hours a student is enrolled for as of the census day of each semester. The initial calculation of a student's COA is based on 15 credit hours per semester of the academic year (45 credits for 3 terms/1 year). Once census day passes for a semester, the recalculation of a student's actual credit hours enrolled for will take place.

Transportation cost will be based on the housing code reported on the student's FAFSA's financial aid.
- Adjustments to the cost of attendance may be considered on a case-by-case basis for child care expenses, excessive transportation costs, purchase of a computer, etc.
- TSTC Employees and their eligible dependents are charged the adjusted tuition rate approved by the TSTC Board of Regents

Due to time constraints, the student may not receive immediate notification of the adjustment; therefore, students should monitor their awards and balances on WebAdvisor.

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.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 2015-2016 school year, you will need financial information from 2014. 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) 2014 Federal Income Tax Return - IRS Form 1040, 1040A, 1040EZ, 1040 Telefile, 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 2014 Federal Income Tax Return (if you are a dependent student)
- (vi) Your 2014 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, stocks, bonds and other investment records
- (ix) Your alien registration card (if you are not a U.S. citizen)

(c.) For the 2015-2016 school year, submit the 2014 income information.

3. Officially declare a major to the TSTC Admissions Office and complete the admissions process. Undeclared majors are not eligible for financial aid.
4. 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.

Packaging Philosophy

The Federal Pell Grant is awarded based on eligibility and enrollment status. Students enrolled for 12 or more credit hours receive the maximum Pell entitlement, nine (9) to eleven (11) credit hours receive 3/4, and six (6) to eight (8) credit hours receive 1/2 the award. Less than half-time students who qualify receive the Pell amount determined for enrollment between one (1) and five (5) financial aid credit hours. Other grants, loans, and scholarships may be canceled if the student is enrolled for one (1) to five (5) credits.

Additional financial aid is awarded on a first-come, first-served basis or based on program eligibility. Due to limited funds, precedence may be given to full-time students who meet priority deadlines. Students who are enrolled at least half-time may request to be considered for additional assistance. Funds are not guaranteed due to the limited availability

Denial of Aid and/or Repayment

Financial assistance may be reduced, denied or canceled, and students may owe repayment if they:

- Purposely give false or misleading information (they may be fined $20,000, sent to prison, or both);
- Are on academic/financial aid suspension;
- Owe money to TSTC or the Department of Education;
- Fail to report any changes in circumstances that may affect the award such as assistance from Workforce Investment Act (WIA), Department of Assistive and Rehabilitative Services (DARS), outside scholarships, day care and other programs;
- Withdraw from TSTC or drop below half-time at any time of the semester, or fail to meet eligibility requirements;
- Fail to begin attendance in one or all classes between the first day and census day;
- Are awarded Federal Pell Grant for more than one school for the same period of time;
- Stop attending classes without officially dropping or withdrawing; or
- Fail to notify TSTC about aid awarded at other institutions;
- Default on a student loan;
- Owe overpayment of grants.

Change in Circumstances

Financial aid awards are based on information reported on the financial aid application and the student's enrollment status. Any financial situation that has recently changed because of, but not limited to, loss of job or benefits, death or other hardship may qualify a student for a Special Circumstance evaluation.

The document is available at the Financial Aid Office or can be obtained online.

Re-applying/Renewal Applications

Financial aid is not automatically renewable. The FAFSA must be submitted each academic year. Applications for the following academic year are available each year beginning January 1. The priority application deadline for the fall semester is March 15. An academic year includes three semesters: fall, spring and summer.

Verification of Information

All applications and forms must be completed carefully and accurately. The Department of Education or TSTC may select your application for verification. Visit our website to download the necessary documents or request them at the Financial Aid Office. Parent and/or student/spouse Federal Income Tax Transcripts, W-2's, Social Security, unemployment, child support paid or received, received SNAP or other income benefit documentation will be required. Students are responsible for submitting accurate information in order to prevent a delay in the processing of the application. Failure to complete the verification process will prevent financial aid awarding.

Note: Documents submitted should be official documents from agencies such as IRS, Social Security, Office of Attorney General or other agencies.

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 the student's FAFSA need analysis results, the cost of attendance and enrollment status.

- **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.

- **Texas Educational 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 $4,800. They must be enrolled in a TSTC certificate or degree-seeking program (EA and non-degree seeking students are not eligible). Students must be within the first 30 credit hours for consideration. TEOG funds are limited and are awarded on a first-come first-served basis.

- **Federal and State Work Study Program:** The Federal College Work Study Program is funded under the authority of the Economic Opportunity Act of 1964 and subsequent amendments. This program is jointly funded by the federal government under Title IV. In addition, the Texas College Work

Study Program provides eligible, financially-needy students with jobs, which are partly funded by the state of Texas. All students considered for employment under the Work Study Program are ensured equal employment opportunities without regard to race, color, religion, gender, national origin, age, genetic information, disability, or veteran status.

Federal and Texas Work Study Programs allow students to work part-time to help them pay for educational expenses. The programs encourage community service jobs as well as work related to the student's chosen program of study. At all times,the priority should be given to the student's academics. Therefore, the Work Study Program is not intended to interfere with the student's education. Student work study employees cannot work during scheduled class time.

Students who are interested in applying for the Work Study Program may indicate their interest in work study on the Free Application for Federal Student Aid (FAFSA). Students must be meeting the Financial Aid Standards of Academic Progress. Funds awarded are subject to change due to the enrollment status or failure to meet program requirements. Students must submit a résumé to the Financial Aid Office and be enrolled at least half-time. Students who submit a résumé and are eligible for the Work Study Program will receive a job notification when a position is available. A background check is required for all work study students. Once a student is selected for the Work Study Program, the student will be notified by phone and/or email. A selected student will meet with a Financial Aid Officer to complete employment forms and receive the Work Study Employee Handbook.

- **Department of Assistive and Rehabilitative Services:** The Department of Assistive and Rehabilitative Services (DARS) provides financial assistance to eligible students whose disability may result in substantial vocational limitations. In order to provide training assistance, DARS must determine that such training is necessary for employment and that the individual has a good chance of success in the chosen program. Applicants must submit an application to be interviewed and assessed before eligibility is determined. The amount of DARS assistance is based on individual needs. A DARS counselor is available to assist DARS clients while attending TSTC. Contact your local DARS office for an application and more information

- **Workforce Investment Act (WIA):** The Workforce Development: Board in your area may offer payment of tuition and/or other expenses to students who qualify for this program. Interested applicants should contact the nearest Workforce Center or call 1-800-457-5600 or 1-800-457-5633. Applications for the program should be made as far in advance of registering as possible.

- **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. First-time Federal Direct Loan borrowers will need to attend a pre-loan counseling session before completing the loan process.

Student Loan

If the student is on financial aid suspension, the application will not be approved. The student will need to meet satisfactory academic progress guidelines. First-year, first-time borrowers must wait 30 days before their first disbursement can be released. To be eligible for a loan, students must have a current financial aid application on file, must be enrolled for six credit hours, not be on financial aid suspension or on default, and meet any other current eligibility requirements.

TSTC candidates for graduation who have borrowed a Direct or FFEL loan are required to complete a loan exit counseling session at www.nslds.ed.gov before graduation. This should be done before graduation in order to avoid graduation holds.150 percent limit on Direct Subsidized Loan eligibility is not the same as the financial aid standards of satisfactory academic progress maximum time frame of 150 percent for completion of a degree or certificate program. The financial aid standards of satisfactory academic progress maximum time frame is based on 150 percent of the program length as determined by total attempted credits.

NOTE: Other awards may be adjusted accordingly once the Federal Direct Loan has been processed and awarded

Maximum eligibility period to receive Direct Subsidized Loans

Time Limitation on Direct Subsidized Loan Eligibility for First-Time Borrowers on or after July 1, 2013.

There is a limit on the maximum period of time (measured in academic years) that you can receive Direct Subsidized Loans. In general, you may not receive Direct Subsidized Loans for more than 150 percent of the published length of your program. This is called your "maximum eligibility period." You can usually find the published length of any program of study in your school's catalog.

For example, if you are enrolled in a 1-year certificate degree program, the maximum period for which you can receive Direct Subsidized Loans is one year (150 percent of 1 year = 1.5 years). If you are enrolled in a 2-year associate degree program, the maximum period for which you can receive Direct Subsidized Loans is three years (150 percent of 2 years = 3 years).

Your maximum eligibility period is based on the published length of your current program. This means that your maximum eligibility period can change if you change programs. Also, if you receive Direct Subsidized Loans for one program and then change to another program, the Direct Subsidized Loans you received for the earlier program will generally count against your new maximum eligibility period. To complete Stafford Entrance counseling:

All new TSTC student loan borrowers including transfer students borrowing for the first time at TSTC must attend an in person

entrance loan session. Log in to studentloans.gov and you will see a message stating that you have already completed Entrance Counseling, however, you must select "continue" in order to proceed to the Entrance Counseling session. As part of your "Entrance Counseling" please review the information about the 150 percent borrowing regulation at Federal Student Aid.

Maintaining Eligibility for Financial Aid

The following Standards of Academics Progress (SAP) are adopted for the purpose of determining continuing student eligibility that 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 student's enrollment, even those for which the student did not receive financial aid. Students are expected to be continually aware of their grades.

Financial Aid Standards of Academic Progress

TSTC evaluates all parts of the Satisfactory Academic Progress standards at the end of each term of enrollment.

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.

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 should 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. Appeals will be reviewed by financial aid staff and may be appealed to the Assistant Director of Financial Aid and to the Director of Financial Aid. The decision of the Director of Financial Aid will be final. Appeals for students who have exceeded the maximum time frame are reviewed by the Retention Department. Students are notified of the appeal decision by email. The decision of the Retention department is final and cannot be appealed. Not enrolling for one or more terms does not remove the probation or suspension status.Qualitative Progress Measure:

Minimum Cumulative Grade Point Average (GPA)
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 that a student has taken, including transfer credits accepted towards their certificate or degree at TSTC, college-level courses and developmental courses 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 percent of the credit hours in which you enrolled during each term. You must also achieve a minimum cumulative completion rate of 67 percent 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 percent completion requirement. All courses, including remedial courses, are included in the calculation.

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 34 CFR 668.34 has been placed on the number of hours that you can attempt. The limit is 150 percent of the minimum number of hours required to complete your program. For example, if your degree program requires 60 credit hours for completion, you must complete your degree or certificate program within a maximum of 90 attempted credit hours. Once you reach the 150 percent limit or the Financial Aid Office determines that you cannot complete your program within the 150 percent limit, you will no longer be able to receive financial aid. Several variables are considered when calculating the 150 percent limit and the satisfactory progression rules. These variables include, but are not limited to:

- 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, as of the census date, in every term.
- 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.
- 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.
- 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.
- 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 Major requests will be considered. Change of Major request forms must be submitted to the Registrar's Office. Registrar's Office personnel will change the student major to ensure that the student's new program is tracked for SAP.

Transfer credits that are applicable to the student's' degree plan will be counted in both the attempted and completed credits.

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. Changing programs will not change a student's current status. The student's timeframe and continued eligibility will be re-evaluated at the time of the review.

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 an advisor.

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)
- Also not covered are 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 percent 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

This status is assigned to students, who fail to meet Standards of Academic progress at the end of a semester. Students on '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 GPA) or quantitative requirements (minimum 67 percent of 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. It may take several terms of enrollment to regain eligibility.
- A student who is on probation and who fails to meet the academic or Success Plan measurements will be placed on suspension.

Other types of Financial Aid Suspension:

Maximum Time Frame

- A student who has reached the maximum time frame for their program of study will be placed on maximum time frame, which is a type of financial aid suspension. The maximum time frame is calculated by multiplying the number of hours required for the program by 1.5.
- If the Financial Aid Office mathematically determines that you cannot complete your program within the 150 percent limit, you will immediately be placed on maximum time frame.
- Once the 150 percent limit has been met, you cannot regain satisfactory progress or financial aid eligibility for that program of study.

Maximum Time Frame Suspension

A student who has reached the maximum time frame for their program of study and has also failed to comply with another SAP requirement, such as having a term or cumulative GPA below 2.0 or a term or cumulative completion rate below 67 percent will be placed on maximum time frame suspension.

Reinstatement of Financial Aid Eligibility

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 percent cumulative completion rate along with a 67 percent completion rate for your last term of enrollment.

Once you have met both of these standards, you will once again be eligible to 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.

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

Appeal Process

Students who are placed on financial aid suspension, maximum time frame, or maximum time frame suspension may file an appeal based on mitigating circumstances.

Note: Appeals should include supporting documentation.

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 should 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. Appeals will be reviewed by a committee comprised of campus personnel. The decision of the committee will be final.

A suspension appeal must include the following:

- A completed Satisfactory Academic Progress Appeal Form.
- A written description of the mitigating circumstances
- Documentation to support any claims
- A description of the steps you have taken to remedy the situation (Success Plan)

A maximum time frame appeal must include the following:

- A completed Federal Time Frame Appeal form
- A written description of the mitigating circumstances
- A degree plan showing the number of hours remaining until graduation

A maximum time frame suspension appeal must include the following:

- A completed Federal Time Frame Suspension Appeal form
- A written description of the mitigating circumstances
- A degree plan 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. Note: Education and career planning tools such as Focus are tools available for students. The assessment may be required for students requesting reinstatement, appeals, or change of program.

Appeal Decisions

Maximum Time Frame Appeal Approved
The student will be placed on an academic plan and their progress will be reviewed at the end of each term. Failure to meet both GPA and completion rate standards will result in suspension from aid.

Maximum Suspension Appeal Approved
The student will be placed on an academic plan and their progress will be reviewed at the end of each term. Failure to meet both GPA and completion rate standards will result in suspension from aid.

Probation
A student will be placed on probation if we determine that he or she should be able to reach both the 2.0 term and cumulative GPA and 67 percent term and cumulative completion rate requirements at the end of the next term of enrollment. If the student fails to meet any of these standards, he or she will be placed on suspension.

Academic Plan
A student may be placed on an academic plan under which they are able to achieve a 2.0 GPA by the end of their second year of enrollment so that they will be eligible for graduation. While on this 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 percent in order to continue to retain aid eligibility. The first term that a student is under an academic plan will be a probationary term. If the student complies with the terms of the academic plan, he or she will be making academic progress and can continue to receive aid as long as they meet the conditions of the plan. Failure to achieve these conditions will result in suspension.

Appeal Denied
The student will not be eligible to receive financial aid until he or she meets the Satisfactory Academic Progress (SAP) standards as listed above; both a cumulative 2.0 GPA and a cumulative completion rate of 67 percent. It may take several semesters in order for a student to regain aid eligibility.

Repayment of Federal Funds: Return of Title IV

If a student receives federal financial aid and stops attending or withdraws from all courses at or before 60 percent of the term is completed, the student will be required to repay all or a portion of the federal aid received, including aid used to pay for college expenses. If the student received a grade of F in all courses for any term, the student 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 the student was participating in at least one class after the 60 percent point of the term or until the end of the term. A term may consist of one or more blocks or modules.

For information on the return of Title IV funds, go to http://www.tstc.edu/home/returnoffunds

Veterans Center Services

The Veterans Center will serve as a centralized point of contact to assist prospective and current veterans, veteran dependents and active duty military students with navigating college resources to ensure a successful college experience. The Veterans Center staff may serve as advocates for student veterans and act as liaisons between the student and other college offices, community resources and the Veteran Affairs Department.

The following services are provided by the Veterans Center:

- Application support – FAFSA, Admissions, Hazlewood and GI Bill
- TSTC Portal and WebAdvisor training
- College policies and procedures support
- On campus job information and referral
- Veteran benefits information and assistance
- Coordinate referrals for veterans and their dependents
- Educationally related printing and faxing support for veterans and their dependents
- Assistance with scholarship searches and application process
- Support services referral for Counseling and other campus support offices
- Tutoring support and referral
- Computer lab access and support
- Academic advisement support
- College credit evaluation support

Veterans Benefits

TSTC is approved for training service members, veterans and their eligible dependents under the provisions of various laws commonly called the G.I. Bill. The student is responsible for Tuition and Fees not covered by GI Bill or the Hazlewood Tuition Exemption. 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 are required. Veterans who are eligible for assistance under any of the Department of Veterans Affairs programs should contact the Financial Aid Office. Veterans must also consent to a background check.

Veterans interested in using their GI Bill benefits must submit the following documents to the Veterans Center before enrollment certification can be processed and submitted to the Veterans Affairs 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 Office of Admissions)
- 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 Office of Admissions).
- Transcript Evaluation Form
- VA Form 22-5495 - (Chapter 35) when changing degree plan or incoming transfer student.

Service members, Veterans and dependents are encouraged to review all benefits at 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 Veterans Center.

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, Veterans Center or print the Program Evaluation that is available in the TSTC Portal.

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.

Veterans Guide For Success

A step by step guide has been created to assist Veterans, Service Members and their dependents in navigating the Admissions process and obtaining your GI Bill benefits.

Step 1: Apply for Admission and complete the required admissions process
Step 2: Apply for GI Bill and/or Texas Hazlewood Tuition Exemption
Step 3: Submit all required documentation
Step 4: Apply for Financial Aid (optional)
Step 5: Register for VA benefits or WAVES

Create an eBenefits PREMIUM account to check your deposits from VA along with the history of your enrollment certification status and months of benefits remaining. You can set up direct deposit or update your address with VA.

GI Bill Checklist

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

Eligibility

Students must be eligible under one 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 Office of Admissions)
- 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 Office of Admissions)
- 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 Office of Admissions)
- 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 Office of Admissions)
- 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 Office of Admissions)
- 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

  All students must complete the Hazlewood renewal application each semester they intend to use the tuition exemption, and reapply annually.

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

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.

*NOTE: Effective Fall 2014, a new law has been adopted by State Legislation (SB 1210, passed in 2013). The law requires that students must meet the Financial Aid Standards of Academic Progress for certain waivers and exemptions. These standards are outlined under the TSTC Satisfactory Academic Progress (SAP policy for Financial Aid).

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 the 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 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 Calculated

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 minimum 2.00 standards of progress cumulative and term grade point averages will be in good academic standing.

Scholastic Probation
A student whose standards of progress cumulative and 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 minimum standard of progress term grade point average of 2.00 at the end of the enrollment period. A student is removed from scholastic probation when the standards of progress cumulative and term grade point averages 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 in the college. 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 in order to improve grade point average. After counseling with an advisor, the student may be permitted to enroll in a new program while on scholastic probation.

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 standard of progress term grade point average of 2.00 or higher will be suspended for a time period not less than one semester. At the end of the suspension period, the student may be permitted to re-enroll in the college. 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.

Term Scholastic Honors

Full-time students as of the end of term who earn a standards of progress term grade point average of 3.50-3.99 shall be recognized with the notation of 'Dean's List' on the official transcript.

Full-time students as of the end of term who earn a standards of progress term grade point average of 4.00 shall be recognized with the notation of 'President's List' on the official transcript.

Graduation Scholastic Honors
Graduation honors will be awarded to students who graduate from a credit program based on the following cumulative grade point averages:

Board of Regents Honors: 4.00
With Honors: 3.50 - 3.99
Graduation honors will be listed on the official transcript.

Notification of Grades

Students are expected to monitor their academic progress. Student grades are available upon course completion and students can view grades by accessing WebAdvisor. Students should review the grade reports for accuracy. All requests for review or correction must be submitted to the Registrar 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, appropriate department designee and the Registrar.
- Upon receipt of the completed and signed grade change form, the Registrar 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 campus, the Registrar 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 or during holidays may take longer 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 appropriate department designee.

Texas Success Initiative (TSI) Requirements

In the Fall 2013 semester, the Texas Success Initiative (TSI) established new college readiness standards for incoming students who have declared a certificate level II or Associates Degree program (42 hours or more) and are not otherwise exempt from testing. The TSI Assessment is designed to help higher education institutions determine if students are ready for college-level coursework in the general areas of Reading, Writing and Math. If the student does not meet testing requirements, the assessment will also help with student placement in courses that will aid in the preparation of student skills for college-level classes. For the latest exemptions please visit the Testing Center website.

TSI Advisement

Students who do not meet TSI standards must meet with the identified advisor(s) at each campus. Advisors will work with students to establish an individualized Academic Success Plan. The Academic Success 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. Academic Success Plans may include provisions for students to retake an approved TSI Assessment, subject to availability. For a list of identified advisor(s) please visit the Testing Center website.

TSI Test Standards

The following table provides the minimum passing scores on the TSI Assessment taken August 26, 2013 or after.

Reading: 351

Writing: Essay Score of 5 and Multiple-Choice of 350 or higher; or Essay Score of 4 and Multiple-Choice of 363 or higher

Math: 350

Note: Test score information is subject to change. Confirm required scores at the Testing Center.

TSI Testing Schedule

The TSI Assessment and Pre-Assessment Activity are administered at the Testing Center. Check with the Testing Center for specific dates and times at each campus. The TSI Assessment and Pre-Assessment Activity are computer-based and can only be offered in a paper format for those with documented disabilities. Students are encouraged to make arrangements at least two weeks prior to test date. Please be advised that late requests will be considered, but cannot be guaranteed.

Exemptions from TSI Requirements

1. Students who meet the score standards for ACT, SAT, STAAR, TAKS or TAAS tests may be exempt from TSI assessment standards in a specific skill area if the tests have been taken within the approved time frame. Students must provide official scores to the Testing Center prior to enrollment in order to qualify for this exemption. For a list of qualifying scores please contact the Testing Center.
2. A student who has graduated with an associate or baccalaureate degree from an institution of higher education.
3. A student who transfers to an institution from a private or independent institution of higher education or an accredited out-of-state institution of higher education and who has satisfactorily completed college-level coursework as determined by the receiving institution.
4. A student who has previously attended any institution and has been determined to have met readiness standards by

that institution. For students meeting non-Algebra intensive readiness standards in mathematics as defined in §4.59(d)(1)(B) of title 19 part (relating to Determination of Readiness to Perform Entry-Level Freshman Coursework), institutions may choose to require additional preparatory coursework/interventions for Algebra intensive courses, including MATH 1314/1324/1414 (or their local equivalent).

5. A student who is enrolled in a certificate program of one year or less (Level-One certificates, 42 or fewer semester credit hours or the equivalent) at a public junior college, a public technical institute, or a public state college.
6. A student who is serving on active duty as a member of the armed forces of the United States, the Texas National Guard, or as a member of a reserve component of the armed forces of the United States and has been serving for at least three years preceding enrollment.
7. A student who on or after August 1, 1990, was honorably discharged, retired, or released from active duty as a member of the armed forces of the United States or the Texas National Guard or service as a member of a reserve component of the armed forces of the United States.
8. A student who successfully completes a college preparatory course under Texas Education Code §28.014 is exempt for a period of twelve (12) months from the date of high school graduation with respect to the content area of the course. This exemption applies only at the institution of higher education that partners with the school district in which the student is enrolled to provide the course. Additionally, an institution of higher education may enter into a Memorandum of Understanding with a partnering institution of higher education to accept the exemption for the college preparatory course

College-level Courses

TSTC has designated courses to satisfy requirements with TSI standards which can be found on the Testing Center website. 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).

Advising

Texas State Technical College recognizes advisement as an essential contributor to the educational experience, student learning, and student success. TSTC provides strong institutional support and has developed a comprehensive advisement program to support student success. In support of student success, advisement services are designed to guide students through the various levels of the college experience to enable them to realize their personal, career, and educational goals, as well as prepare them for life-long learning. Advisement services are available to all degree and non-degree seeking prospective and current students.

All TSTC students are responsible for:

- seeking advisement,
- understanding assessments and Texas Success Initiative (TSI) requirements for their program of study,
- enrolling in courses in the appropriate sequence to ensure progress and success toward their educational objectives, and
- understanding and adhering to all policies and procedures.

Each TSTC campus provides faculty program advisors and identified staff to assist with TSI advisement. Students should consult WebAdvisor for their primary advisor assignment.

New Student Advising

All new students are encouraged to contact an Admissions Advisor to begin the advising process prior to or upon completing the admissions requirements.

The Admissions Advisor acts as guide for new students to make sure all admission requirements are met and students are enrolled in their first semester of classes at TSTC.

New Student Orientation

During the registration process, students will be advised of the campus New Student Orientation schedule. All new student admissions requirements must be met before attending.

Faculty Program Advisor

Program advisement will continue throughout the student's enrollment. All students are assigned a Faculty Program Advisor, based on their major. Students are responsible for scheduling an appointment with a Faculty Program Advisor, prior to registering for the subsequent semester. Faculty Program Advisors will inform students of any restrictions that may prevent them from registering. It is the student's responsibility to clear all restrictions. Faculty Program Advisors can assist with:

- Program admission requirements, if applicable.
- Degree and certificate completion, program changes.
- Licenses or certification for job placement.
- TSI compliance, as needed.
- Program completion time, course transfer, and substitutions.
- Time commitment to lecture and lab.
- Opportunities for career assessment and advisement.
- First Year seminar requirement.
- Maintaining academic and Financial Aid Standards of Progress
- Departmental participation policy
- Dropping/adding class(es) or withdrawing from the College.
- Job placement, gainful employment information, and job market expectations
- Applying for graduation

Students will meet with the program advisor each semester to make sure that the student is meeting all of the requirements to successfully graduate from the program.

Testing Center

Testing Center provides the TSI Assessment and departmental tests. Selected TSTC campuses may offer GED testing. For a complete list of assessments and tests please visit the Testing Center Web Page.

Non-Traditional Services

Non-Traditional occupations for females and males are defined as "a field in which either gender comprises less than 25 percent of the current enrollment." Each TSTC campus provides services to assist qualifying students that are enrolled full-time in a declared non-traditional program of study leading to an Associate Degree or Certificate. For more information on services provided to Non-Traditional students please consult the Vice President of Student Development webpage.

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.

New Student Seminar Course

All current TSTC students and all transfer students with fewer than 24 Semester Credit Hours (SCH) are required to take New Student seminar course. This one-credit-hour, student-success course will present students with the essential knowledge to accomplish their goals at TSTC. New Student seminar course is the most important class a student will take at the college and provides a strong foundation for a student's academic career by focusing on student development, utilizing campus resources, and building lifelong learning skills for academic and workplace success.

Dual enrollment students are exempt from taking New Student seminar course. Students who intend to attend TSTC for one semester only may request a one time exemption from New Student seminar course from the Office of Student Learning.

Transfer students who have successfully completed more than 24 credit hours may be exempted from taking a required New Student seminar course. All students are responsible for providing official transcripts to the Office of Admissions to receive the exemption. Transcripts should be received no later than one week prior to the start of the semester. The student is responsible for updating his/her schedule after providing transcripts that show 24 or more hours of successfully completed credit or after an exemption has been approved.

Credentials

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

- Associate of Science programs are designed specifically for students planning to pursue a bachelor's degree in the areas of agriculture, biology, chemistry, computer science, engineering, mathematics and physics. They include the institution's approved academic core curriculum and form the foundation and prerequisites for a seamless transition into a baccalaureate program at four-year institutions. Graduates of these programs will receive an Associate of Science degree.
- Associate of Applied Science 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 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.

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 department designee. 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 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

A student may change majors only between terms or prior to the 11th class day of a 15-week semester, the 5th class day of a 12-week semester or the 4th class day of a 6-week session. Students who wish to change programs should meet with an advisor. Students must meet the entry requirements if specified. Students receiving financial aid should meet 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 to the Registrar 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.

Repeat Courses

It is the policy of Texas State Technical College to allow students to repeat a course only when the initial grade earned was below a grade of "A".

When a student repeats a course in which the grade earned was below a "A" the first grade earned will not be calculated into the cumulative grade point average. The last grade issued (regardless of whether higher or lower than the first grade) will be calculated into the cumulative grade point average. See SOS ES 4.15.

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 campus academic officer. 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.

Graduation Application

Students must complete the online Graduation Application Form prior to the posted deadline. Failure to apply by the posted deadlines may result in a late graduation application fee. The Office of the Registrar will certify that the student has met graduation criteria and requirements.

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 if applicable.
2. All required course work is satisfactorily completed.
3. At least 25 percent 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 2.0 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. Settlement of all financial obligations to TSTC must be made prior to graduation. If any business is pending with TSTC by commencement, TSTC withholds the diploma until clearance approval.

Commencement Ceremonies

Candidates for graduation are encouraged to participate in commencement ceremonies held at the end of each semester. Participation is voluntary; however, only those students who participate in the commencement ceremony receive diploma covers, as well as honor cords and medals if eligible. Students not planning to attend the commencement ceremony may pick up their diplomas at the Office of the Registrar upon notice of graduation eligibility. Diplomas not picked up will be mailed to the graduate at the address in the college's administrative database.

Candidates for graduation participating in the commencement ceremony must wear only TSTC designated regalia (cap, gown, tassel) which may be purchased at the TSTC Bookstore.

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 or certificate of completion graduate or marketable skills achievement award 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 in a technical or occupational program or pathway published in the TSTC catalog.
2. The graduate must have earned at least 75 percent 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 campus academic officer.
4. The employment must have commenced within 12 months of graduation or completion.
5. The Graduate Guarantee process must be initiated in writing to the TSTC Office of the Chancellor and CEO, 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 Education Courses

TSTC provides courses and learning activities for students who need assistance with basic academic skills. 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.

General Education Courses

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 and represent a commitment to offer breadth as well as depth to a student's technical education program of study. TSTC'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 accreditation 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.

However, not all courses are part of the General Education Academic Core and may not satisfy the core requirements for graduation. Certain program 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 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. 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."

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	
ENGL 1301*	Composition I	
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 1304	Introduction to World Religions	
SOCI 2319	Minority Studies I	
SPAN 1311*	Beginning Spanish I	
SPAN 1312*	Beginning Spanish II	SPAN 1311
SPCH 1311*	Introduction to Speech Communication	
SPCH 1315*	Public Speaking	
SPCH 1318*	Interpersonal Communication	
SPCH 2321	Business communications	
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	
MATH 1316	Plane Trigonometry	MATH 1314
MATH 1332	Contemporary Mathematics I	
MATH 1350	Fundamentals of Mathematics I	
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 2305	Federal Government	
GOVT 2306	Texas Government	
HIST 1301	United States History I	
HIST 1302	United States History II	
PSYC 2301	General Psychology	
PSYC 2314	Lifespan Growth & Development	
SOCI 1301	Introductory Sociology	
SOCI 1306	Social Problems	

More Information

Anyone have questions regarding transfer credit should contact the Office of the Registrar and questions regarding special partnerships should contact the Curriculum 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, the Natural Sciences/Mathematics or Behavioral/Social Science elective requirements should be addressed to the chairs of the respective academic departments.

Academic Core Courses

The following is a list General Education courses offered by TSTC General Education Academic Core departments which vary by campus.

TSTC in Harlingen offers the Texas Core Curriculum, a core package of transferable academic courses defined by the Texas Higher Education Coordinating Board 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
Communication (6 hours)	
ENGL 1301	Composition
ENGL 1302	Composition II
Mathematics (3 hours)	
MATH 1314	College Algebra
MATH 1316	Plane Trigonometry
MATH 1332	Contemporary Mathematics
Life and Physical Sciences (6 hours)	
BIOL 1306	Biology for Science Majors I (Lecture)
BIOL 1307	Biology for Science Majors II (Lecture)
BIOL 1308	Biology for Non-Science Majors I (Lecture)
BIOL 1309	Biology for Non-Science Majors II (Lecture)
BIOL 2301	Anatomy & Physiology I (Lecture)
BIOL 2302	Anatomy & Physiology II (Lecture)
CHEM 1311	General Chemistry I (Lecture)
CHEM 1312	General Chemistry II (Lecture)
PHYS 1301	College Physics I (Lecture)
PHYS 1302	College Physics II (Lecture)
PHYS 1315	Physical Science I (Lecture)
PHYS 1317	Physical Science II (Lecture)
Language, Philosophy & Culture (3 Hours)	
ENGL 2321	British Literature
ENGL 2331	World Literature
ENGL 2326	American Literature
PHIL 1304	Introduction to World Religions
Creative Arts (3 hours)	
ARTS 1301	Art appreciation
MUSI 1306	Music Appreciation
American History (6 hours)	
HIST 1301	U.S. History I (to 1877)
HIST 1302	U.S. History II (since 1877)
Government/Political Science (6 hours)	
GOVT 2305	Federal Government
GOVT 2306	Texas Government
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
Component Area Option A (3 hours)	
SPCH 1311	Introduction to Speech Communication
SPCH 1315	Public Speaking
SPCH 1318	Interpersonal Communication
SPCH 1321	Business & Professional Communication
Component Area Option B (3 hours)	
BIOL 1106	Biology for Science Majors I (lab)
BIOL 1107	Biology for Science Majors II (lab)
BIOL 1108	Biology for Non-Science Majors I (lab)
BIOL 1109	Biology for Non-Science Majors II (lab)
BIOL 2101	Anatomy/Physiology I (lab)
BIOL 2102	Anatomy/Physiology II (lab)
CHEM 1111	General Chemistry I (lab)
CHEM 1112	General Chemistry II (lab)
ENGL 2321	British Literature
ENGL 2326	American Literature
ENGL 2331	World Literature
PHYS 1101	College Physics I (lab)
PHYS 1102	College Physics II (lab)
PHYS 1115	Physical Science I (lab)
PHYS 1117	Physical Science II (lab)
PSYC 2314	Life Span Growth & Development
SPAN 1311	Beginning Spanish I
SPAN 1312	Beginning Spanish II

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 2301	Principles of Accting I - Financial
ACCT 2302	Principles of Accting II - Managerial (ACCT 2301*)
BCIS 1305	Business Computer Applications
BUSI 1301	Business Principles
BUSI 2301	Business Law
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
GEOG 1303	World Regional Geography
HIST 2321	World Civilizations
MATH 2305	Discrete Mathematics (MATH 2413*)
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 enrollment 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 percent of the total credits required for the student's declared program of study. At least 25 percent 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 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.

CLEP Subject Area Exams

The College Level Examination Program (CLEP) is a series of tests offered by the 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 10 years from the test date. Subjects approved by TSTC may be found on the Admissions website.

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. Approved exams may be found on the TSTC Admissions website

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

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 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 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 department chair, 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 division director and submitted to the campus academic officer 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 obtained from the Workforce Training and 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 and an audit fee specified in the Tuition and Fees section of this catalog. Contact the Registrar 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 enrollment Courses

High school students who have completed their sophomore year may enroll for dual enrollment 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 College Readiness 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 enrollment programs, students in ECHS are subject to additional requirements for admission and participation in classes.

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. Workforce training and continuing education courses are scheduled throughout these time periods. Contact the Workforce Training Office for details.

Online Learning

TSTC offers instruction through a variety of electronic media. Online classes offer students the opportunity to complete college courses using personal computers and Internet connections. Each TSTC program that offers online learning courses has requirements specific to that department.

Online 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 online 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 online learning courses complete assignments and communicate with instructors via the established Learning Management System (LMS). Some online learning courses require proctored testing. Prior to registering in a fully-online course,

students must complete the Student Online Learning Orientation (SOLO) course to demonstrate ability to succeed in TSTC's online learning environment. Contact the Office of Online Learning to take the SOLO course.

In most cases, tuition for online learning courses is the same as on campus courses. The Tuition and Fees section of this catalog provides more details. Students planning to take only online learning courses should notify the Online Learning Office and the TSTC Advisement Center so that the appropriate information and advising can be arranged.

Enrollment

Registration

Returning students and new students who have completed admission procedures should contact their local TSTC campus for specific registration information. Students must register for classes prior to the beginning of the semester of attendance. Students may register for classes during the scheduled registration period. Students must clear all holds or restrictions prior to registration.

Note: Attending class or doing course work for a course in which they are not properly registered (which includes paying fees) is prohibited and grounds for dismissal from the college.

Schedule Changes

The published calendar outlines the dates during which schedule changes may occur. Students may add, drop courses, or change sections before classes begin by contacting their program advisor. After classes begin, all students may change their schedules by obtaining course schedule change forms available from the Office of the Registrar, 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 Registrar. The effective date is the date the course schedule change form is received by the Registrar. Deadlines for course drops and withdrawals from the college are published in the TSTC college calendar.

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. Students who withdraw from the institution may be asked to meet with a college representative.

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 percent 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. Contact the Office of the Registrar for more information.

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 the TSTC College Readiness Office.

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.

Academic 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 academic dishonesty is subject to disciplinary action. Academic 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.

For more information and procedures regarding a violation of Academic Dishonesty, please see Section "J" of the Code of Student Conduct.

Workforce Training and Continuing Education

TSTC offers a range of workforce training and continuing education courses (CE) 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
- Workforce Training to train for new careers and to provide skill updates, professional development, personal improvement and recreation

Admission and Registration

The majority of CE 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, competencies and some program requirements prior to enrollment.

Tuition and Fees

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

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

Class Records and Certificates

Students completing CE courses receive one CEU for every 10 hours of participation in a workforce training and continuing education course or program.

Grades of Satisfactory "S" or Unsatisfactory "U" are typically awarded in CE classes. Other types of grades may be awarded depending on the requirements of the course sponsor. Students who successfully complete CE 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.

Refund Policy for CE Courses

Students who drop a CE course prior to the first class day will receive an 100 percent refund. Students who drop on or after the first class day will receive a 0 percent refund and will be responsible for all course fees.

CE Attendance Policy

CE students must typically hold a minimum of 90% attendance per course in order to maintain satisfactory progress unless a program's external governing agency requires differently. Such modification will be listed in the course syllabus.

Customized Training for Business and Industry

TSTC has a 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 the Workforce Training and Continuing Education Office.

College Readiness and Advancement

College Readiness & Advancement offers students the educational support needed to make the successful transition into college.

Dual Enrollment

The Dual Enrollment Program provides an accessible, affordable and flexible avenue for high school students to accelerate into postsecondary academic core and high-demand technical programs. This high value opportunity is primarily focused on positioning students to enroll in a dual enrollment technical program. The Dual Enrollment program collaborates closely with participating school districts, TSTC faculty and Student Services to continually enhance the educational opportunities for participating students.

CAMP

The College Assistance Migrant Program (CAMP) is a migrant education program designed to assist students who are migrant or seasonal farm workers enrolled in their first year of a post-secondary education program. Its purpose is to strengthen the ability of eligible migrant and seasonal farm workers and members of their families to successfully obtain a post-secondary degree.

Student Services

Student Housing

The College considers housing an added service for its students.

Occupancy in student apartments is assigned 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 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 deposit, the Release of Background Information Form and the non-refundable criminal background check fee. The deposit can be made by cash, credit card, 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.

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

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. "Tenant may move into their assigned facilities in accordance with said facilities regulations." Move-in policy varies according to facility as well as campus. 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 approved fee schedule.

Housing Accommodations for Students with Disabilities

Students with disabilities that require accommodations for TSTC Housing must contact the Disabilities Office in a timely manner for further guidance on the accommodations process. Students with disabilities are encouraged to self-disclose when initiating the housing application process.

Counseling, Disabilities and Support Services

Counseling assists students in obtaining maximum results from their educational opportunities. Services are provided by an experienced counseling staff. 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 could 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.

At most campuses, the counseling department also provides regularly offered educational programs for the general student population focusing on awareness and prevention of substance abuse.

Disabilities Services

Disabilities Services 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 students with disabilities. Students requiring reasonable accommodations or services will need to identify with the Disabilities Department in a timely manner. All requests for accommodations must be accompanied by professional assessments/reports from individuals qualified to diagnose the disability disclosed. This Disabilities Department collaborates with both college personnel and students with disabilities to develop appropriate accommodations that ensure equal access and promote accessible programs and facilities at TSTC.

The goal of the Amercians with Dsiabilities Act (ADA) is to guarantee that individuals with disabilities are given equality of opportunity, full participation, independent living, and economic self-sufficiency. In post-secondary education, individuals with disabilities are ensured reasonable and appropriate accommodations to ensure equality in obtaining an education. Those accommodations are based on the need of the individual. Such reasonable accommodations do not include: excessive absences, lack of preparation, or lack of time management skills.

Support Services

Support Services coordinates awareness events that promote emotional and physical wellness, disability awareness and sensitivity, sexual assault and domestic violence education, and drug and alcohol prevention for the TSTC community.

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

Support Services, at some campuses, is the liaison for the Texas Department of Assistive and Rehabilitative Services (DARS) and the Texas Department of Blind Services (DBS).

Each campus offers services unique to their specific student population. Please see the applicable college personnel on your campus to be directed to resources provided at your location.

Harlingen
Counseling, Disabilities and Support Services
Student Services Bldg. EK, Room 216
1902 N. Loop 499
Harlingen, Texas 78550
956-364-4520
TTY: 956-364-4526

Marshall and North Texas Center
Counseling Services
South Building
Room 437
2650 East End Blvd. South
Marshall, Texas 75671
903-923-3309

Abilene, Breckenridge, Brownwood, and Sweetwater
Success for our Students Office
300 Homer K. Taylor Drive
Sweetwater, TX 79556
325-236-8292

Waco
Access & Learning Accommodations
(Disabilities Services)
Student Services Center
3801 Campus Drive
Waco, Texas 76705
254-867-3600

Counseling and Support Services
Student Services Building
3801 Campus Drive
Waco, TX 76705
254-867-3634

Prohibiting Racial Harassment Policy

TSTC prohibits any act, deed or speech interpreted as racial harassment, by or against, students, employees, and guests of the college. Students or employees engaging in such conduct are subject to disciplinary action ranging from probation or suspension to termination of employment.

Philosophy Statement

TSTC is committed to the principles of free inquiry and free expression. Members of the college community have the right to hold, vigorously defend and promote their ideas and opinions to flourish or wither according to their merits.

Respect for this right requires that students and employees tolerate expression of views that they find offensive. All members of the educational community should however, voluntarily adopt standards of civility and good taste that reflect mutual respect, understanding and sensitivity among its diverse racial, ethnic and cultural groups.

TSTC is also committed to the principles of equal opportunity and non-discrimination. Each student and employee has the right to work and be educated without discrimination on the basis of race, color, gender, national origin, age, genetic information, disability, or veteran status.

Harassment of students or employees on the basis of race contributes to a hostile work or school environment that makes access to work or education for those subjected to it less than equal. Racist behavior also brings dishonor to the perpetrator, demoralizes and disrupts the academic community as a whole and diminishes the stature of TSTC.

Racist communication and acts that demean, ridicule and humiliate the victim and also can cause serious emotional distress, impede the learning process and in the form of "fighting words" may provoke a violent response.

For all these reasons, TSTC unequivocally condemns racist behavior in all of its forms. The Discipline Officer or designee at the local campus has the primary responsibility for responding to an accusation or complaint of racial harassment and will inform the student of complaint, investigation and resolution procedures during the initial meeting.

Upon receipt of an allegation of racial harassment, the Discipline Officer or designee shall ascertain the facts and provide mediation services to assist the student. These mediation services may include consultation with the student and alleged wrongdoer, either separately or together, and with student services staff, vice president's or other approved administrative officials of the college. If such mediation efforts result in a solution satisfactory to the student, the student shall be asked to complete a written and signed statement to the effect.

Where such mediation efforts fail or the student does not wish to pursue mediation, the student complainant may seek formal resolution concerning potential suspects of criminal behavior. The term is not relevant as it pertains to witnesses, complainants or other citizen contacts

Racial Profiling Policy

It is the policy of the TSTC Police Department to police in a proactive manner and, to aggressively investigate suspected violations of law. Officers shall actively enforce state and federal laws in a responsible and professional manner, without regard to race, ethnicity or national origin. The right of all persons to be treated equally and to be free from unreasonable searches and seizures must be respected. Officers are strictly prohibited from engaging in racial profiling as defined in this policy. Racial profiling is an unacceptable patrol tactic and will not be condoned. This policy shall be applicable to all persons, whether drivers, passengers or pedestrians.

The prohibition against racial profiling does not preclude the use of race, ethnicity or national origin as factors in a detention decision. Race, ethnicity or national origin may be legitimate factors in a detention decision when used as part of an actual description of a specific suspect for whom an officer is searching. Detaining an individual and conducting an inquiry into that person's activities simply because of that individual's race, ethnicity or national origin is racial profiling.

Examples of racial profiling include but are not limited to the following:

- Citing a driver who is speeding in a stream of traffic where most other drivers are speeding because of the cited driver's race, ethnicity or national origin.
- Detaining the driver of a vehicle based on the determination that a person of that race, ethnicity or national origin is unlikely to own or possess that specific make or model of vehicle.
- Detaining an individual based upon the determination that a person of that race, ethnicity or national origin does not belong in a specific part of town or place.

The TSTC Police Department holds two basic principles based o the adoption of this definition of racial profiling:

- Police may not use racial or ethnic stereotypes as factors in selecting whom to stop and search, while police may use race in conjunction with other known factors of the suspect.
- Law enforcement officers may not use racial or ethnic stereotypes as factors in selecting whom to stop and search.

Racial profiling is not relevant as it pertains to witnesses, etc. Students who have questions or complaints about TSTC Police Department's racial profiling policies or procedures may call the local campus office:

Abilene, Breckenridge, Brownwood, and Sweetwater 325-235-7400
Harlingen 956-364-4220
Marshall 903-923-3313
Waco 254-867-3690

Drug & Alcohol Policy Statement

Texas State Technical College is a drug- and alcohol-free college and workplace. The unlawful manufacture, distribution, purchase, dispensation, possession or use of an illegal drugs or alcohol by students and employees on college property, or as a part of any college-sponsored activity, is prohibited. Students violating any provision of the drug and alcohol policies are subject to disciplinary sanctions ranging from suspension to referral for prosecution. Employees who violate any provision of the drug and alcohol policies may be subject to disciplinary action up to termination. Information regarding drug and alcohol problems, as well as referral services, is available in the Counseling or Health Services Office.

Alcohol and Drug Use

Drug and alcohol use, misuse, and abuse are complex behaviors with many outcomes at both the cultural and the individual levels. Awareness of the dangerous effects of drug/alcohol use is imperative for an individual's well-being or survival. Negative consequences of drug/alcohol may be exhibited through: physical dependence (the body's learned requirement of a drug for functioning) or psychological dependence (the experiencing of persistent craving for the drug and/or a feeling the drug/alcohol is a requirement for functioning).

Abuse of any drug/alcohol whether licit or illicit may result in marginal to marked, temporary to permanent physical and/ or psychological damage, even death. Since many of the illicit drugs are manufactured and sold illegally, their content varies and may contain especially harmful ingredients or amounts. Regardless of the types of drug/alcohol utilized, a perceived need for the continued use is likely to ensue, resulting in dependence. Dependence on drugs and/or alcohol alters the user's psychological functioning. The acquisition of drugs and alcohol becomes the primary focus of the drug dependent individual and often results in reduced job performance and jeopardized family and other interpersonal relationships. Criminal behavior is frequently the means for

financing a drug habit. Behavior patterns often include violence and assault as the individual becomes increasingly drug/alcohol dependent. Social and psychological alienation and medical problems increase as the abuser becomes entrapped in drug/alcohol dependence. Drug/alcohol counseling and referrals are available in the Counseling Office.

Possible Alcohol Sanctions
- Probation
- On-line Alcohol Edu Course
- Community Service
- Workshops
- Removal from Campus Living Facilities
- Suspension
- Expulsion

Possible Drug Sanctions
- Probation
- On-line Drug Edu Course
- Community Service
- Removal from Campus Living Facilities
- Suspension
- Expulsion

*The Discipline Officer has authority to sanction as seen fit for any violation of the Student Code of Conduct involving Drugs and Alcohol. For more information on the disciplinary process, go to the Code of Student Conduct.

Health Risks Associated with Alcohol Abuse
- Increased risk of liver cancer
- Increased risk of cirrhosis of the liver
- Increased risk of heart disease
- Adverse reactions when combined with many medications, including over-the-counter drugs
- Overdose resulting in respiratory failure
- Impaired concentration
- Impaired coordination
- Risk of permanent nerve damage from long-term abuse

Health Risks Associated with Marijuana Use
- Lowered sperm counts in men
- Decreased testosterone levels in men
- Increased testosterone levels in women
- Enhanced cancer risk
- Impaired short-term memory
- Psychological dependence

Health Risks Associated with the Use of Cocaine and Crack
- Addiction
- Heart attack
- Stroke
- Respiratory failure
- Brain seizures
- Hepatitis or AIDS through sharing needles
- Decreased ability to combat infections
- Violent, erratic, or paranoid behavior
- Anxiety, depression
- Cocaine psychosis

Health Risks Associated with the Use of Hallucinogens
- Sleeplessness and tremors
- Convulsions
- Heart and lung failure
- Depression, anxiety, and paranoia
- Violent behavior

For more information or community resources visit http://www.tstc.edu/drugalcoholpolicy.

Student Life & Engagement

The Office of Student Life & Engagement provides activities that enhance students' educational and personal development. Activities are open to all full-time, part-time and evening students, and TSTC encourages students to take advantage of activities offered by the college. Unless otherwise noted; dual enrollment students do not participate in Student Life & Engagement activities.

Student Activities

It is the goal of the Student Activities staff to provide a comprehensive and varied program of social and recreational experiences regardless of the skill or ability of the individual. Through clubs and organizations, recreation, volunteerism, leadership development, and special events, the goal is to strive to meet the needs and interests of students, faculty, staff, and non student participants.

When able this staff promotes various recreational and sports opportunities, not only to enhance physical activity, but to cultivate lifelong sport and leadership skills to develop habits of fair play, to foster personal health and to prepare people for the workload in today's high tech society. Student Activities supports and provides services that integrate students, employees and the public through clubs, organizations, recreation, sports or other college sponsored event.

Clubs and Organizations

Students are encouraged to join or organize clubs with the guidance of a TSTC faculty or staff advisor. Dual enrollment students may join selected student clubs. The list of club and organizations are located at the Office of Student Life & Engagement or at the links provided below. Clubs can be related to professional careers or non-academic interests. The advisor is responsible for students' actions in any activity sponsored by the organization or club. All clubs or professional organizations must be granted approval through the Office of Student Life & Engagement.

All officially recognized student organizations sponsoring social functions, fundraisers, and/or volunteer activities, either on or off campus, MUST coordinate such functions with the Vice President of

Student Development or designee and have them approved by the designated representative. Student organizations and their advisors (sponsors) are responsible for compliance with TSTC policies and regulations and all applicable state and federal laws.

TSTC is judged by the actions of its students, on and off campus. Therefore, students will be responsible to College authorities for any questionable acts, regardless of where they are committed.

All student events, social, fundraising and/or volunteer activities, on and off campus, must be registered with the office of Student Life & Engagement.

Students interested in starting a new club or organization are encouraged to visit with the Office of Student Life & Engagement for further guidance.

Student Clubs/Organization Risk Management Policy

In accordance with Texas Education Code §51.9361, the advisor and president, or other designated officer, of each registered student organization shall attend a risk management program each academic year.

By law the training will include, but not be limited to, the following topics:

- Possession and use of alcoholic beverages and illegal drugs
- Hazing
- Sexual abuse and harassment
- Fire and other safety issues
- Student travel guidelines
- Behavior at parties and other events held by the club or organization
- Adoption of risk management policy

Failure to comply may result in the student organization's recognition being withdrawn, withheld or denied by the administration or Board of Regents of the College.

Free Speech

As an institution of higher learning, TSTC is dedicated to maintaining a college community that values and encourages the free exchange of ideas. The college will honor the rights of free speech, expression, petition, and peaceful assembly as set forth in the U.S. Constitution.

Contact the Office of Student Life & Engagement about specific guidelines.

Student Leadership

Student Leadership Body

The Student Leadership Body (SLB) is comprised of representatives elected annually by the student body. The SLB serves as the voice for students for many activities and policies. SLB members serve on committees and gain the opportunity to meet people seeking improvements for TSTC's academic, social and cultural environment. The SLB discusses and studies issues pursuing the best interests of students that do not conflict with TSTC policies and regulations. The SLB also represents TSTC at annual regional and national student government conventions. SLB encourages all students to assist in the continual improvement of TSTC and ask that they do so by completing the various student surveys administered throughout the academic year. Student feedback is reviewed and considered toward excellence at TSTC. Your voice is important. Participation is open to any student enrolled at TSTC.

Leadership Academy (available at TSTC Harlingen)

Students have the opportunity to earn TSTC Certified Student Leader status by participating in a variety of leadership workshops offered through the Leadership Academy series in the Fall and Spring Semesters. TSTC also provides leadership development opportunities at an annual Student Leadership Conference.

Student Travel

Official student travel is defined as travel involving one or more students traveling to an event or activity that is organized or sponsored by TSTC and is located more than 25 miles from the college or during which the students will be staying overnight. International travel is not permitted at TSTC. The faculty/staff member or student club advisor is responsible for ensuring that all TSTC rules and regulations are followed. During any trips requiring an overnight stay, the advisor(s) and students must stay in the same hotel facility/complex. Students and advisor(s) must travel together during any off campus trips. The faculty/staff member or club advisor must submit the official Travel Request Form and a Field Trip Release Form for each student participating in the trip at least ten days prior to the sponsored trip. Forms are available at the Office of Student Life & Engagement.

Students in good standing, with at least a 2.0 GPA, and without holds on their account, are eligible to travel. Each student will be evaluated on a case by case basis.

Students driving personal vehicles and/or transporting others in their personal vehicles on college trips must sign waiver and show proof of current liability insurance. Students will be required to ride in state vehicles or contracted transportation on long trips offered by the Student Activities Department. Those students traveling in a state vehicle sign a field trip release form. Students are not permitted to drive state vehicles.

Trips 'N Travel

Student Activities offers a variety of opportunities for the student, faculty, and staff to get away from the pressures of academia. Trips are usually limited to a set number and are filled on a first-come, first-served basis. Activities include, but are not limited to theme parks, camping, rafting/canoeing, fishing, hiking, museums and other points of interest.

Intramurals

At participating campuses, the intramural program provides faculty, staff, and students indoor and outdoor sports and facilities throughout the year.

Competitive tournaments and leagues are organized and conducted in a variety of sports and games by the Intramural Department. Activities are offered in women's, men's and recreational divisions for students and staff of all skill levels. Programs offered are based upon the availability of resources and facilities. Examples of intramural sports include, but are not limited to, basketball, flag football, golf, volleyball, softball, tennis, horseshoes, disc golf and badminton. Students are encouraged to bring new ideas to the Student Activities/Intramural Department.

Special Events

Sponsored special events, an integral part of the Student Activities Department, are supervised by TSTC employees. All such special events are considered TSTC functions; therefore, all Texas State Technical College policies and rules apply. Academic and personal conduct standards also apply. Events include, but are not limited to, dances, banquets, cookouts, parties, holiday functions, special student days, Student Appreciation Day, guest speakers and community related event.

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 workforce training and continuing education programs.

Students should carry these cards at all times. They must be presented for various purposes, such as cashing checks, paying fees, checking out library books, or as requested by authorized officials.

Misuse of ID cards may result in disciplinary action.

Libraries and Learning Resource Centers

The libraries and Learning Resource Centers (LRC) provide 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 library or 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

TSTC provides Food Service at various campuses. Please contact your local Food Service for hours of operation and cost.

Student Health Services

Texas State Technical College supports the health and well-being of our students in order to maximize our students' likelihood of successfully achieving their academic goals. Each campus offers services unique to their specific student population. Please see the applicable college personnel on your campus to be directed to resources provided at your location.

East Williamson County Higher Education Center
East Williamson County Higher Education Center
in Hutto, Texas (EWCHEC-Hutto)
Temple College: Center Police: 512-759-5950

Ft. Bend Technical Center
Fort Bend Technical Center
Wharton Community College Security Office
5333 FM 1640
Richmond, Texas 77469
281-239-1501
281-239-1500 (operator)

Harlingen
Student Health Services Department
Student Center, Room 132
1902 N. Loop 499
Harlingen, Texas 78550
Health Clinic: 956-364-4305
Ask-A-Nurse Advice Line: 956-364-4306
Counseling, Disabilities, Health &
Support Services: 956-364-4520

Ingleside
Wind Energy Technology Program
1365 Ticonderoga Road
Building 201
Ingleside, Texas
Office: 361-238-2013

Marshall
Student Counseling Department
South Building
Room 437
Marshall, Texas 75671
903-923-3309

North Texas Center
Ginny Lindsey, Office Manager
North Texas Center CATE Building
156 Louise Ritter Dr.
Room 550, Red Oak, Texas 75154
972-617-4726

Abilene, Breckenridge, Brownwood, and Sweetwater
Joni Coon, Licensed Paramedic
Wellness Coordinator
Student Health Services Department
The Student Center (second floor)
300 Homer K. Taylor Drive
Sweetwater, TX 79556
325-235-7418
Joni.coons@tstc.edu

Waco
Student Health Services Department
Student Services Center
3801 Campus Drive
Waco, Texas 76705
254- 867-3820

Medical Fees

In the event of an emergency, all students are responsible for any medical fees that occur. This may include ambulance transfers, emergency room visits, hospitalizations or medical facilities. Students are encouraged to carry college or private insurance to help defray medical costs.

Campus Immunizations

Students who will be attending classes on campus and are ages 21 or younger are required by Texas state law to obtain the Bacterial Meningitis vaccination. Additional vaccinations or boosters may be required for admission into specific programs. Students are encouraged to contact their programs of interest for further details.

Available immunizations differ by campus. Please contact the Student Health Services personnel on your campus for further information (see above). In order to obtain a vaccine, you must be a registered student or have a student ID number with picture identification. Check with the local health department or a private health care provider for vaccinations if they are not available at your campus.

Student Insurance

Accident Only insurance coverage is available for purchase. Insurance coverage is offered by semester and may be purchased at the cashier's window until the tenth class day of each semester. Proof of accident insurance may be required by certain instructional programs. The insurance policy does not offer complete coverage or reimbursement of expenses. The policy also may not cover any pre-existing medical conditions.

Students with Contagious Diseases

TSTC recognizes that contagious diseases are a serious threat to public health. We are committed to encouraging an informed and educated response to issues concerning infectious diseases. Individuals with HIV or hepatitis will not be discriminated against in admission to academic programs, health care or access to facilities. Students with HIV or hepatitis may attend any function or event if they are physically capable and do not pose health risks to others. All information regarding the medical status of students is confidential.

Bacterial Meningitis Notification

State law requires that information regarding bacterial meningitis be provided to 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 percent of the most common types of bacterial meningitis are available and required by those living in close quarters and by college students ages 21 or younger (22 and older are exempt). For more information, visit the Student Health Clinic, a health care provider, the Texas Department of State Health Services or Centers for Disease Control and Prevention.

Student Transportation

Students operating motorized vehicles on campus must register those vehicles with the TSTC Police/Security Department (excluding Waco). TSTC traffic rules and regulations and a valid parking decal will be provided to all motorists.

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

Campus Security

The Student Right-to-Know and Campus Security Act and Crime Awareness and Campus Security Act (Public Law 101-52), the Higher Education Technical Amendments of 1991 (Public Law 102-26), the Higher Education Amendments of 1992 (Public Law 102-325), the Higher Education Amendments of 1998 and Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act (Public Law 105-244), the Victims of Trafficking and Violence Protection Act of 2000 and Campus Sex Crimes Prevention Act (Public Law 106-386), and Higher Education Opportunity Act (Public Law 110-315) require institutions of higher education to prepare, publish and distribute to all employees, prospective students and students an Annual Security Report referred to as the Clery Report by Oct. 1 of each year.

The Clery 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. The Clery Report also includes geographical breakdown, expanded definition of campus, reporting of hate-crimes and a public crime log. TSTC's Annual Clery Report is available online at tstc.edu.

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

Office of Student Success

The Office of Student Success (Harlingen only) coordinates and implements student success initiatives that provide students with opportunities to achieve their academic, career, and personal goals.

Student success initiatives include:

- The President's and Vice President's Honor Rolls which recognize students achieving academic excellence.
- Supplemental Instruction and Tutoring Services, including MyTSTC Video Tutor Library which consists of short video tutorials developed by our Peer Tutors on subjects like Math, English, History, Biology, Chemistry and Spanish, as well as some technical subject areas
- The HATSS Mentoring Program (Helping a TSTC Student Succeed) which provides mentoring, guidance and academic support to students on scholastic and/or financial aid suspension appeal.
- A referral system where students can be referred to campus and community resources.
- Seminars and workshops on academic policies, test-taking strategies, learning strategies, time management, GPA and Completion Rate Forecasting, and related topics

Industry Relations & Talent Management

TSTC 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. Industry Relations & Talent Management 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 Industry Relations & Talent Management 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.

Industry Relations & Talent Management conducts follow-up studies which help to determine the effectiveness of education and training and overall student success. Industry Relations & Talent Management is committed to equal opportunity in employment and does not discriminate on the grounds of race, color, gender, national origin, age, genetic information, disability, or veteran status. 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 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 Rights and Responsibilities

As members of the college community, TSTC Students are entitled to certain rights associated with attending an institution of higher education. These rights are published and can be found on-line on the TSTC website.

Statement of TSTC Student Rights and Responsibilities

1. The right to freedom from discrimination on the basis of race, color, religion, gender, age, national origin, genetic information, gender identity, sexual orientation, disability, or veteran status.
2. The right to develop one's individual potential.
3. The right to expect a quality education.
4. The right to pursue an education without undue interference.
5. The right to be free from hazing, threats, stalking, violence, and other harassing actions.
6. The right to petition the appropriate college unit or body for redress of grievances in accordance with college procedures.
7. The rights to confidentiality of official records, transcripts, disciplinary records and other educational records consistent with the Family Educational Rights & Privacy Act (FERPA) of 1974 (Buckley Amendment).
8. The right to communicate with administrators, faculty, and staff through appropriate processes.
9. The right to publish and distribute information through the appropriate forums subject to the standards of reasonable journalism and applicable regulations/ statements of the U.S. Constitution, the Federal Communications Commission, and the college.
10. The right, in accordance with law and college procedures, to freedom of speech and assembly which are subject to college requirements for the maintenance and order and the protection of rights and privileges of other members in the college community.
11. The right and opportunity to participate in the formulation of procedures directly affecting students through membership or appointment to appropriate committees as determined by the College, Student Leadership, and other recognized groups within the college.
12. The right of access to college-designated facilities through college approved/recognized student organizations for business meetings, special meetings, and programs open to the public in accordance with college procedures

Statement of TSTC Academic Student Responsibilities

1. **Academic Freedom** - Students and all other members of the college community are guaranteed the rights freely to study, discuss, investigate, teach, conduct research and publish as appropriate to their respective roles and responsibilities. In the classroom and in conference, students have the right within the scope of the course of study to state divergent opinions, challenge ideas, and take reasoned exception to the data or the views offered.

   Responsibility - Students and faculty share the responsibility to protect and to preserve conditions that are conducive to the learning process, including withholding judgment on matters of opinion, ensuring a fair hearing for divergent viewpoints, and observing rules of courtesy in the classroom.

2. **Academic Standards** - Students have the right to know the standards of academic performance established for each course in which they are enrolled.

   Responsibility - Students are responsible for seeking clarification of any standard in question at the beginning of the term, for preparing assignments in advance of each class session, and for learning the content of any course of study for which they are enrolled. Rules applying to academic dishonesty must be followed, including those related to plagiarism and cheating.

3. **Academic Evaluation** - Students have the right to be evaluated solely on an academic basis, without regard to issues of diversity, opinions or conduct in matters unrelated to academic standards. Students have the right to review tests and other written works after the instructor has evaluated them and are accorded protection through the Academic Appeal Procedure against prejudiced or capricious academic evaluation.

   Responsibility - Students are responsible for bringing academic grievances first to the attention of the instructor who performed the evaluation in an effort to resolve the issue. If the matter cannot be settled at this level, it may be appealed in writing as outlined in the Academic Appeal Procedure.

4. **Improper Disclosure** - Except when disclosure may be required by state or federal law, students have the right to confidentiality of information about views, beliefs and political associations which they may share privately with instructors, advisers or academic counselors. Judgment of ability and character may be provided under appropriate circumstances, normally with the knowledge and consent of the student.

   Responsibility - Students have the responsibility to state clearly what is and what is not confidential disclosure.

5. **Disruptions** - Students have the right to pursue an education without disruption or interference and to expect enforcement of norms for acceptable classroom behavior that prevents disruption of the teaching/ learning process.

Responsibility - Students may not disrupt class or any other college process by any means whatsoever (including sideline conversations, comments, arguments, noise of any kind or other activity which would hinder access to or utilization of academic information).

6. **Non-Discrimination** - Students have the right to learn in a classroom environment where diversity is respected.

   Responsibility - Students are responsible for respecting diversity and for behaving courteously to both faculty members and other students in the classroom regardless of difference in sex, color, religion, gender, national origin, genetic information, disability, or veteran status.

7. **Intellectual Property** - Students have the right to expect that presentation of material in a class will be in compliance with copyright law and that their own creative work will not be disseminated or published without their permission.

   Responsibility - Students who receive written notification from a faculty member that the information provided in his or her course is the faculty member's intellectual property shall not distribute, use for commercial purpose, or create derivative works of the intellectual property without obtaining the express permission of the faculty member. Students shall not assume permission absent written notification from a faculty member. Students shall also respect and treat in similar manner the intellectual property of other students.

Community Standards

Behavior Intervention Team (BIT)

A behavioral intervention team (BIT) is a multi-disciplinary group whose purpose is meeting regularly to support its target audience (students, employees, faculty, staff) via an established protocol. The team tracks "red flags" over time, detecting patterns, trends, and disturbances in individual or group behavior. Membership may vary from campus to campus. The committee may include other college departments or personnel who are deemed to have information pertinent to the student's individual situation.

Any member of the college community who has reason to believe that a student may endanger the health, safety, or welfare of another person may report the concern by contacting the proper authority on campus or by completing the incident form found on the website at http://www.tstc.edu/student_life/intervention.

Abilene, Breckenridge, Brownwood, and Sweetwater
TSTC Police Department
325-235-7400
www.tstc.edu/student_life/intervention

Harlingen
TSTC Police Department
956-364-4220
www.tstc.edu/student_life/intervention

Waco
TSTC Police Department
254-867-3690
www.tstc.edu/student_life/intervention

Marshall:
TSTC Security Department
903-503-8538
www.tstc.edu/student_life/intervention

Bicycle, Skateboard, Hoverboard (and other self-balancing boards/scooters) and Roller Blade Use Guidelines

Riding bicycles, roller blades, hoverboards, Swagways, Segways, IO Hawks, Skywalkers or other similar self-balancing boards/scooters, or skateboards will be allowed as long as all safety precautions are taken. They may not be utilized in buildings or left in hallways, staircases, classrooms, lounges or where otherwise prohibited by a campus rule, regulation or signage. Use of any of these items in a manner that damages property or endangers or inconveniences vehicles or pedestrians is prohibited.

Prohibiting Sexual Misconduct and Gender Based Discrimination

To ensure and maintain a workplace and an educational environment free of, and protected from, sexual misconduct and discrimination based on gender. Texas State Technical College (TSTC) does not tolerate and expressly prohibits sexual misconduct which includes but is not limited to: sexual harassment, sexual assault, and/or sexual exploitation. No person on the basis of sex, will be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity.

This practice applies to all members of the TSTC organization including all employees, students, and visitors. This practice and procedure includes incidents occurring on and off campus that would cause a substantial disruption in the learning environment. The procedures also include complaints filed by visitors on TSTC property. Respondents are subject to disciplinary action including possible suspension/expulsion from the college or termination of employment.

Prohibiting Sexual Misconduct and Gender Based Discrimination

To ensure and maintain a workplace and an educational environment free of, and protected from, sexual misconduct and discrimination based on gender. Texas State Technical College (TSTC) does not tolerate and expressly prohibits sexual misconduct which includes but is not limited to: sexual harassment, sexual assault, and/or sexual exploitation, stalking, dating and domestic violence. No person on the basis of sex, will be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity.

This practice applies to all members of the TSTC organization including all employees, students, and visitors. This practice and procedure includes incidents occurring on and off campus that would cause a substantial disruption in the learning environment. The procedures also include complaints filed by visitors on TSTC property. Respondents are subject to disciplinary action including possible suspension/expulsion from the college or termination of employment.

Pertinent Information

Title IX of the Education Amendments of 1972 protects people from discrimination based on sex in education programs or activities which receive federal financial assistance. Title IX states, "No person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving Federal financial assistance."

Definitions

Complainant Individual making the complaint of sexual misconduct or gender discrimination.

Consent

Sexual contact cannot be given by anyone who is underage, under the influence of alcohol or drugs, or who is otherwise mentally impaired or incapable of giving knowledgeable, informed consent. Consent is only given when verbalized by yes or active, willing participation by both or all parties involved. Not hearing no or the absence of resistance is not consent. It is important to understand that consent can be withdrawn at any point, upon which actions must stop.

Gender Discrimination

Discrimination based on sex (to be determined by Title IX Coordinator)

A. **Bullying** –repeated and/or aggressive physical or mental behavior that is intimidating, controlling, etc.
B. **Cyber Bullying** –repeated and/or aggressive written, graphic, or verbal harassment expressed through various communication forms (online, electronic, etc.) that is created or transmitted through any electronic/digital device.
C. **Hazing** – acts that are likely to cause physical, psychological, or social harm to any individual related to the admission, initiation, pledging, or any other group affiliated activity.
D. **Stalking**- behavior that is repetitive involving calling, texting, emailing, following and/or communicating with an unwilling individual and interferes with the peace of the student and/or the student's community. It is behavior that is directed toward a specific individual that would cause a reasonable person fear for his/her own, for other's safety, and/or also causes one to experience substantial emotional distress.
E. **Dating/Domestic Violence** – controlling, abusive, and aggressive behavior in a romantic relationship. It can happen in straight or gay relationships. It can include verbal, emotional, physical, or sexual abuse, or a combination.
F. Discrimination based on pregnancy, childbirth, false pregnancy, termination of pregnancy, or recovery from any of these conditions. The Title IX regulation also prohibits a school from applying any rule related to a student's parental, family, or marital status that treats students differently based on their sex.

Incapacitation

Lacking the ability or capacity to reasonably understand the situation one is in due to lack of sleep, disability, involuntary physical constraint, or due to alcohol or other drugs.

Preponderance of the Evidence

The majority of the evidence would cause a reasonable person to make a conclusion.

Respondent

Individual against whom the complaint of sexual misconduct or gender discrimination is made.

Retaliation

An adverse action taken to try to keep someone from opposing a discriminatory practice. The act could be intimidation, force, or threats communicated in any form-verbal, electronic, etc.

Sexual Misconduct:

A. **Sexual Harassment** – includes unwelcomed gender based verbal or physical conduct that sufficiently severe, persistent, and pervasive. It has the effect of unreasonably interfering with, and/or denying or limiting someone's ability to participate in or benefit from the college's educational program and/or activities (hostile environment). It is based on power differentials (quid pro quo - "this for that") and can be the creation of a hostile environment and/or that of retaliation.
B. **Nonconsensual Sexual Contact (or Attempts)** – intentional sexual touching, however slight, with an object and/or body part(s) by an individual towards another individual that is without consent or done so forcefully.
C. **Nonconsensual Intercourse (or Attempts)** – any form of sexual intercourse (vaginal, oral, or anal) regardless of how slight the penetration without consent. Also referred to as a sexual assault/rape.
D. **Sexual Exploitation** – obtaining a personal gain for one's self or for another by taking advantage of an individual in a sexual nature. Examples include but are not limited to: invasion of sexual privacy, prostituting another person, non-consensual video or audio taping of sexual activity, going beyond the boundaries of consent, engaging in voyeurism, knowingly transmitting a STD or HIV to another person, exposing one's genitals in non-consensual circumstances or inducing another to expose their genitals, and sexually-based stalking and/or bullying.
E. **Acquaintance Rape** – nonconsensual sexual intercourse (rape/sexual assault) by someone known to the complainant.
G. **Sexual Violence** – act penetrated against someone's will. Includes same sex violence/incidents.
H. **Sexual Abuse** – sexual interaction between an adult and a minor, including sexual intercourse, touching, or contact.

Complaints Involving Sexual Assault

TSTC recommends that victims of sexual assault report the offense immediately to TSTC Police Department/Security/Local Agency. Evidence of the assault should be preserved whenever possible. The victim should not bathe or shower and should not throw away or wash the clothes worn at the time of the assault. The victim will at all times be offered campus assistance in the reporting process and will, to the extent permitted by law, be offered anonymity if requested. Please see the section of "confidentiality" below to ensure complete anonymity.

Procedures For Complaints Made By Students

A. Students who believe they have been subjected to sexual misconduct or gender discrimination shall report to and consult with the designated Student Title IX Coordinator.
B. Any employee, this includes Resident/Community Assistant's, who have received a report or complaint from a student relating to sexual misconduct or gender discrimination should immediately notify and refer that student to the designated Student Title IX Coordinator.
C. The complaint may be oral or in writing. After receiving the complaint, the designated Student Title IX Coordinator will initiate an investigation. The investigator will initiate a thorough, prompt, and equitable investigation. Immediate interim actions may take place before the investigation is complete if determined necessary. This may include an interim suspension, no conduct orders, or removal/change from campus housing. When issued, the involved parties will be expected to adhere to the terms of the interim actions. Violations of interim measures will not be tolerated and will be addressed immediately. Students who violate such measures will be subjected to further disciplinary action up to and including suspension and expulsion.
D. The Investigator will follow the procedures outlined in the Code of Student Conduct which can be found on-line under "Disciplinary Procedures." The only exception will be the formal review process for both parties which will follow the steps outlined below under "Formal Review Process." If the respondent is found responsible of the accusations, then the proper sanctions will be imposed or mediation when it is acceptable to both parties. In incidents of sexual violence, mediation is never acceptable. If the complainant is found to of made a false accusation then disciplinary sanctions may be imposed.
E. If the complaint involves actions of an employee at TSTC, the Investigator shall immediately notify the designated Employee Title IX Coordinator who will initiate the employee investigation in accordance with the steps outlined above in "Procedure for Complaints by Employees and Visitors."
F. In all cases, a prompt, fair, and impartial investigation and resolution will be afforded.
G. The investigator will report to the Title IX Coordinator for reporting purposes: dates, type of misconduct, result of investigation, actions taken, if there was a Formal Review, the results, and any other pertinent information. The complete investigation documentation will be kept in the proper students disciplinary records for the duration of the records retention length.

Formal Review Process

A request for a formal review can be submitted in writing to the proper Title IX Coordinator by either the respondent or complainant within three (3) business days of receipt of the notice of the outcome. The proper Title IX Coordinator will arrange a review panel of three (3) TSTC employees who are appointed to serve as the sounding board in this review. The College will convene this Review Board in a timely manner, usually within five (5) business days, but in certain situations it may take longer. Both parties will be notified in advance of the date, time, and location of the Review and the panelists. They will be afforded an opportunity to object to any Review Member of the panel. This assures that the Title IX requirement to afford both parties a fair, impartial, and objective review is comprised of unbiased decision makers.

Continued communication with both parties will continue during this process. Within two business days prior to the date of the Review, a list of witnesses and all documentation must be submitted to the proper Title IX Coordinator. The objective of the Review Panel is to assess the findings and sanctions imposed. They may not impose more severe penalties. Because these proceedings are not designed to be a legal or judicial hearing, the Review Panel operates by basis of"Preponderance of the Evidence". The decision will be made by majority vote. If a student or employee brings an attorney for the review, they must provide sufficient notice (at least two (2) days) for TSTC to have their own attorney present as well. The attorney will only serve in an advisory role not be permitted to present evidence or argument before the Review Board. The presence of an attorney may cause a delay in process. All reviews will be closed.

Retailiation

Any form of retaliation by either party will not be condoned by the College and the College will take immediate action to rectify the situation and additional disciplinary action may occur, including separation from the college. Retaliation includes but is not limited to: intimidation, discrimination, coerce, or threats to either party.

Confidentiality

Privacy of individuals and confidentiality of information given will be maintained to the extent permitted by law throughout all phases of these procedures. TSTC strongly supports a complainant's interest in confidentiality in cases involving sexual misconduct. The College will try to honor this request except when the safety of the campus community is at risk or if it may create a nondiscriminatory environment for others. All employees, this includes Resident/Community Assistant's (RA/CA's), are considered responsible employees and have the duty to report sexual misconduct to the proper Title IX Coordinator and must report the name of the person disclosing the sexual misconduct, the alleged perpetrator, and all relevant facts regarding the incident, including date, time, and location. Exempt employees include Counselors and Nurses/EMT acting in their responsible job duties, such as in counseling and medical consultations respectively. Counselors and Nurses/EMT DO NOT have to report to the Title IX Coordinator and can remain totally confidential. In cases involving minors, state mandatory laws may require disclosure. Steps to ensure the complainant's protection will be taken.

Texas State Technical College will provide written notification to students and employees of dating violence, domestic violence, sexual assault/misconduct, or stalking whether the offense occurred on or off campus of the student's/employees' rights and options.

Complaintant's Rights

A. The right to a prompt and equitable resolution of sex discrimination complaints.
B. The right to present his/her case or have the College present. This includes the right to adequate, reliable, and impartial investigation of complaints, the right to have an equal opportunity to present witnesses and other evidence, and the right to the same review processes, for both parties.
C. The right to be notified of the time frame within which: (a) the college will conduct a full investigation of the complaint; (b) the parties will be notified of the outcome of the complaint; and (c) the parties may file a review, if applicable.
D. The right to be informed of and have access to campus reources for medical, counseling, and advisory services.
E. The right for the complaint to be decided using a preponderance of the evidence standard (i.e., it is more likely than not that sexual harassment or violence occurred).
F. The right to be notified, in writing, of the outcome of the complaint.
G. Right to not have irrelevant past sexual history admitted in a hearing.

Respondodent's Rights

A. The right to a prompt and equitable resolution of all credible complaints of sexual misconduct made in good faith to college officials against the accused.
B. The right to present his or her case. This includes the right to adequate, reliable, and impartial investigation of complaints, the right to have an equal opportunity to present witnesses and other evidence, and the right to the same review processes, for both parties.
C. The right to be notified of the time frame within which: (a) the college will conduct a full investigation of the complaint; (b) the parties will be notified of the outcome of the complaint; and (c) the parties may file a review, if applicable.
D. The right to be fully informed of the nature, rules and procedures of the campus conduct process and to timely written notice of all alleged violations within the complaint.
E. The right to be informed of and have access to campus resources for medical, counseling, and advisory services.
F. Right to not have irrelevant past sexual history admitted in a hearing. (Unless previous known behavior is similar to the alleged in the current investigation and there is evidence of a pattern of behavior.)

Reduce the Risk of Being Sexually Assaulted

1. Know your sexual intentions and limits. You have the right to say "NO" to any unwanted sexual contact. If you are uncertain of what you want, ask your partner to respect your feelings.
2. Communicate with your partner. Do not assume that someone will automatically know how you feel or will eventually "get the message" without you having to say anything. Just as its okay to say "NO" to unwanted activities, it's okay - and important - to give clear consent to activities you would like to engage in. Avoid giving "mixed messages"; back up your words with a firm voice and clear body language (e.g., if you consent, give a big smile and say "YES!").
3. Remember that some people think that drinking, dressing provocatively, or going to your or someone else's room is saying you are willing to have sex. Be clear up front about your limits in such situations.
4. Listen to your gut feelings. If you feel uncomfortable or think you might be at risk, leave the situation immediately and go to a safe place.
5. If you feel you are being pressured or coerced into sexual activity, you have a right to state your feelings and/or leave the situation. If you are concerned about the other person becoming angry, it is okay to make up an excuse to leave or create time to get help.
6. Attend large parties with friends you trust. Agree to "look out" for one another. Leave with the group, not alone. Avoid leaving with people that you don't know very well.

Texas State Technical College will provide written notification to students and employees about existing counseling, health, mental health, victim advocacy, legal assistance, visa and immigration assistance, student financial aid, and other services available for victims, both within the institution and in the community. In addition, the Title IX Coordinator will provide written notification to victims about options for, available assistance in and how to request changes to: academic, living, transformation, working and protective measures. This information will be provided regardless of whether the victim chooses to report the crime to campus police or local law enforcement. This request can be made to the Title IX Coordinator.

To report an incident of Sexual Misconduct or Gender-based Discrimination please contact your campuses representative or the Office of Civil Rights:

Student Title IX Coordinator – State Lead for TSTC

Annette Ellis
Associate Dean of Student Services
903-935-3313
annette.ellis@tstc.edu

Employee Title IX Coordinator – State Lead For TSTC

Hannah Love
Interim Lead Human Resources
325-236-8277
hannah.love@tstc.edu

Harlingen

Student Title IX Representative
Janette Gomez
Community Standards Liaison
956-364-4384
janette.gomez@tstc.edu
Service Support Center
1902 Loop 499
Harlingen, TX 78550

Employee Title IX Representative
Mary Prepejchal
Human Resources Executive
956-364-4041
mary.prepejchal@tstc.edu
Service Support Center
1902 Loop 499
Harlingen, TX 78550

Ingleside

Student Title IX Representative
Janette Gomez, Community Standards Liaison
956-364-4384
janette.gomez@tstc.edu
Service Support Center
1902 Loop 499
Harlingen, TX 78550

Employee Title IX Representative
Mary Prepejchal
Human Resources Executive
956-364-4041
mary.prepejchal@tstc.edu
Service Support Center
1902 Loop 499
Harlingen, TX 78550

Marshall

Student Title IX Coordinator
Annette Ellis
Associate Dean of Student Services
903-935-3313
annette.ellis@tstc.edu
2650 East End Blvd. South
Marshall, TX 75672

Employee Title IX Representative
Amanda Oswalt
Human Resources Consultant
903-935-3221
amanda.oswalt@tstc.edu
2650 East End Blvd. South
Marshall, TX 75672

North Texas

Campus Title IX Representative
James Fickens
Director
254-867-3652
james.fickens@tstc.edu
3801 Campus Dr.
Waco, TX 76705

Waco

Student Title IX Representative
Michelle Rachels
Dir. Student Leadership & Engagement
254-867-3441
michelle.rachels@tstc.edu
Student Recreation Center
3801 Campus Dr.
Waco, TX 76705

Employee Title IX Representative
Kelly Contella
Human Resources Executive
254-867-3953
kelly.contella@tstc.edu
Administration Building
3801 Campus Dr.
Waco, TX 76705

Ft. Bend Co.

Title IX Representative
Judy Cox
Ft. Bend Technical Center
281-239-1548
judy.cox@tstc.edu
5333 FM 1640
Richmond, TX 77469

Williamson Co.

Campus Title IX Representative
Evan Morgan
512-759-5620
Evan.morgan@tstc.edu
1600 Innovation Blvd. (CR 108)
Hutto, TX 78634

West Texas

Sweetwater
Student Title IX Representative
Sherry Strickland
Director Student Life
325-235-7396
sherry.strickland@tstc.edu
The Student Center
300 Homer K. Taylor Dr.
Sweetwater TX 79556

Employee Title IX Coordinator
Hannah Love
Ex. Dir. Strategic Initiatives
325-236-8277
hannah.love@tstc.edu
Graphics Building
300 Homer K. Taylor Dr.
Sweetwater TX 79556

Abilene
Campus Title IX Representative
Forrest McMillan
Vice President of Student Development
325-734-3600
forrest.mcmillan@tstc.edu
650 E. Hwy. 80 Abilene, TX 79601

Breckenridge
Campus Title IX Representative
Sherry Strickland
Associate VP, Enrollment Services
254-259-7707
slstrickland@tstc.edu
307 N. Breckenridge, TX 76424

Brownwood
Campus Title IX Coordinator
Lorie Dixon
Veterans Program Officer
325-641-3922
lorie.dixon@tstc.edu
305 Booker St. Brownwood, TX 76801

State/National Resources

Not Alone
www.notalone.gov
Rape, Abuse, and Incest National Network-RAINN
1-800-656-HOPE (4763) 24 hr. hotline

Texas Association Against Sexual Assault- TAASA
www.taasa.org

Texas Crime Victims' Clearinghouse
800-848-4284
www.tdcj.state.tx.us/divisions/vs/victim_txcvc.html

Crime Victims' Compensation
800-983-9933
www.texasattorneygeneral.gov/cvs/crime-victims-compensation

Crime Victim's Institute
936-294-3100
www.crimevictimsinstitute.org

National Hopeline Network
800-SUICIDE (800-784-2433)
www.hopeline.com

National Suicide Prevention Lifeline
800-273-TALK (8255)
www.suicidepreventionlifeline.org

Veterans Crisis Line
800-273-8255 (when connected, press 1)
www.veteranscrisisline.net

National Domestic Abuse Helpline for Men and Women
888-743-5754
www.dahmw.org

National Domestic Violence Hotline
800-799-7233
www.thehotline.org

National Sexual Violence Resource Center
877-739-3895
www.nsvrc.org

TAASA – Texas Association Against Sexual Assault
512-747-7190
taasa.org

RAINN – Rape Abuse and Incest National Network
800-656-4763
www.rainn.org

Office for Civil Rights
800-421-3481 or 214-661-9600 (Dallas)
OCR.Dallas@ed.gov

Office for Violence Against Women
202-307-6026
www.ovw.usdoj.gov

Texas Association Against Sexual Assault
512-474-7190
taasaconference.org

NOAH's Project – Victim Advocate
800-444-3551
noahproject.org

Women's Protective Services
800-736-6491
www.wpslubbock.org

Local Resources

Harlingen
TSTC Police
956-364-4220
After hours: 956-873-2677
Weekends: 956-873-2677

TSTC Counseling
956-364-4520

Health Services
956-364-4306

www.tstc.edu/harlingentitleix/helpfullinks/Ingelside

www.tstc.edu/harlingentitleix/localresources

Marshall
Campus Resources:
TSTC Campus Security
903-923-3351 or cell 903-503-8538

TSTC Counseling Services
903-923-3313

Area Resources:
Good Shepherd Medical Center Marshall - 903-927-6000

Marshall Rural Health Clinic	903-927-6140
Health Department	903-927-6607
HealthCare Express	903-938-4363
Access Family Health	903-927-2824
Marshall Internal Medicine	903-927-6800
CVS Pharmacy	903-935-6661
Walgreens Pharmacy	903-923-0605
Matthewson Drug Co	903-938-6741
Sabine Valley Regional MH	903-938-7725

Red Oak
http://tx-elliscounty.civicplus.com/BusinessDirectoryII.aspx?lngBusinessCategoryID=22&PREVIEW=YES

Waco

TSTC Police	254-867-3690 or 911
TSTC Counseling Office	254-867-3634
Health Sevices	254-867-3820

Ft. Bend
Women's Center
http://fortbendwomenscenter.org
281-342-4357

Katy Christian Ministries
http://ktcm.org/assistance-programs/sexual-abuse/
281-391-5262

Hutto
Williamson County Crisis Center

http://www.hopealliancetx.org/
1-800-460-7233

Waco
Family Abuse Center
www.familyabusecenter.org
254-772-4770

The Advocacy Center
www.advocacycntr.org
2323 Columbus Ave.
Waco, Texas 76701
254-752-7233 (Crisis Line)
254-752-9330

Scott & White Waco Hillcrest Baptist Medical Center
100 Hillcrest Medical Blvd.
Waco, Texas 76712
254-202-2000

Providence Health Care Center
342 Richland W. Circle
Waco, Texas 76712
254-751-4000

West Texas
Abilene Campus Resources:
TSTC Counselor office
325-738-3319; cell 325-668-3788

Abilene Area Resources:
Abilene Police Department
911
www.abilenepolice.org

Abilene Regional Medical Center
325-695-9900
www.abileneregional.com/Abilene-Regional-Medical-Center/home.aspx

Hendrick Medical Center
325-670-2000
www.ehendrick.org/Main/Home.aspx

Regional Victim Crisis Center (24 hrs)
325-677-7895
http://regionalcrime.org

Noah Project, Family Violence (24 hrs)
325-676-7107
http://noahproject.org

MHMR – Betty Hardwick Center (24 hrs)
800-758-3344
www.bhcmhmr.org

Love and Care Ministries
325-670-0246
www.lcmin.com

Hope Haven
325-677-4673
hwww.abilenehopehaven.com

The Salvation Army
325-677-1408
www.salvationarmytexas.org/location/Abilene

Taylor County District Attorney – Protective Order Unit:
325-674-1261
www.taylorcountytexas.org/index.aspx?nid=125

West Texas Legal Services
325.677.8591 or 800.933.8591

Breckenridge Campus Resources:
TSTC Counselor office:
254-559-7718; cell 325-668-3788

Breckenridge Area Resources:
Breckenridge Police Department
911 or 254-559-2211
www.townofbreckenridge.com/index.aspx?page=47

Stephens County Sheriff's Office
911 or 254-559-2481
http://stephenssheriff.com/Stephens_County_Sheriffs_Office/Home_1.html

Stephens Memorial Hospital
254-559-2241
http://www.smhtx.com/getpage.php?name=index

Crime Victim Assistance Center
254-559-4000 (Breckenridge)
254-629-3223 (Eastland)
888-686-3222 (24 hr. hotline)
www.chamberofcommerce.com/breckenridge-tx/7682554-crime-victim-assistance-center

MHMR – Betty Hardwick Center (24 hrs)
800.758.3344
1612 West Walker Street
Breckenridge, TX 76424

Brownwood Campus Resources:
TSTC Counselor office
325-641-3912; cell 325-642-1538

Brownwood Area Resources:
The Ark (Domestic Violence Shelter)
325-643-2699 or 800-313-2699
www.arkshelter.org

Family Services Center, Inc.
325-646-5939 or 866-211-2255
www.familysc.net

Legal Aid of Northwest Texas, Brownwood number
325-646-8659
www.lanwt.org

Central Texas MHMR (Center for Life Resources)
325-646-9574
http://cflr.us/wordpress

Heart of Texas Children's Advocacy Center
1409 Early Blvd.
Early, TX 76802.
www.cactx.org/find-a-local-center/early-cac

The Brownwood Police Dept.
325-646-2525
www.ci.brownwood.tx.us/PD/pdindex.htm

Brownwood Regional Medical Center
325-646-8541
www.brmc-cares.com/Brownwood-Regional-Medical-Center/home.aspx

Sweetwater Campus Resources:
TSTC Counselor office
325-236-8292; cell 325-514-1180

TSTC Police
325-235-7400 (on campus phone - call 400)

Sweetwater Local Resources:
Sweetwater Police Department
325-236-6686
http://cityofsweetwatertx.com/index.aspx?NID=86

Nolan County Sheriff's Office
325-235-5471
www.nolanso.com/

Rolling Plains Memorial Hospital
325-235-1701
www.rpmh.net

Nolan County - MHMR
325-236-6619
www.wtcmhmr.org/poc/view_doc.php?type=doc&id=10429

Nolan County - District Attorney
325-235-8639
www.co.nolan.tx.us/default.aspx?Nolan_County/District.Attorney

Nolan County - Victim Services Coordinator
325-235-2338
http://www.tdcj.state.tx.us/divisions/vs/counties/nolan.html

Hope House Counseling:
325-235-1910
http://hopehousesweetwater.com/

Family and Individual Counseling- Carol Frye, LPC
325-235-9896

West Texas Child Advocacy
325-235-1818
www.cactx.org/find-a-local-center/west-texas-childrens-advocacy-center

Bystander Intervention

Bystander Intervention is a philosophy and strategy for prevention of various types of violence, including bullying, sexual harassment, sexual assault, and intimate partner violence. Simply put, it's when someone interrupts a potentially harmful situation. That includes stopping actions or comments that promote sexual violence.

TSTC supports members of our community to speak up and say something if they see a potentially harmful situation.

Five Steps to Accountability:

1. Notice the event.
2. Recognize it as a risky situation.
3. Take responsibility for helping in the situation.
4) Have the skills necessary to intervene.
5. Take Action!

Intervening in Any Situation

- Gather details about the situation.
- Ask for help from other bystanders or friends.
- Be sensitive and understanding.
- Intervene early and in a safe manner.
- Consider multiple options.
- Don't be afraid to call for help! Resident Assistants (RA)/ Community Assistants (CA), TSTC Police, local police at 911

Non-emergency Intervention

- Don't make assumptions about the people involved or the situation.
- Keep your eyes open for red flags.
- Set a goal or a plan.
- In conversations, keep in mind that it is about mutual respect.

Emergency Intervention

- Try to keep everyone calm.
- Know your exit strategies.
- Understand that situations can escalate quickly.
- Be clear and concise when asking for help.
- Keep yourself and others safe.
- Tell whoever involved that you are committed to helping them.
- Encourage value-based decisions.

National Bystander Intervention Links:

Break the Cycle
• What Can I Do?

A CALL TO MEN
• Empower Your Friends & Family

hollaback!
• Take Action

Know Your IX
• Support a Survivor

Loveisrepect.org
• Help a Friend
• Help a Stranger

The National Domestic Violence Hotline
• Help for Friends and Family

Men Can Stop Rape
• Bystander Intervention

No More

Legal Assistance:

Abilene
Legal Aid of North West Texas
500 Chestnut, Ste. 901
Abilene, Texas 79602
325-672-7913
800-933-8591
www.lanwt.org

Breckenridge
Legal Aid of North West Texas
500 Chestnut, Ste. 901
Abilene, Texas 79602
325-672-7913
800-933-8591
www.lanwt.org

Brownwood
Legal Aid of North West Texas
300 N. Fisk Ave.
Brownwood, Texas 76801
325-646-8659
www.lanwt.org

Sweetwater
Legal Aid of North West Texas
500 Chestnut, Ste. 901
Abilene, Texas 79602
325-672-7913
800-933-8591
www.lanwt.org

Marshall
Lone State Legal Aid
140 East Tyler, Suite 150
Longview, Texas 75601
903-758-9123
800-866-0821
www.lonestarlegal.org

Harlingen
Texas RioGrande Legal Aid, Inc.
308 East Harrisons Ave.
Harlingen, Texas 78550
956-364-3800
800-369-2651
www.trla.org

Ft. Bend
Lone State Legal Aid
1415 Fannin Street
Houston, Texas 77002
713-652-0077
800-733-8394
www.lonestarlegal.org

Waco
Lone Star Legal Aid
900 Austin Ave. 7th Floor
Waco, Texas 76701
www.lonestarlegal.org

Hutto
Texas RioGrande Legal Aid, Inc.
4920 N. I 35
Austin, Texas 78751
512-374-2700
800-369-9270
www.trla.org

Red Oak
Legal Aid of North West Texas
100 E. Main Street, Ste. 200
Waxahachie, Texas 75165
866-614-3344
www.lanwt.org

Student Financial Aid Assistance:
Jackie Adler, Executive Director of Financial Aid – TSTC State Lead
254-867-3620
jackie.adler@tstc.edu

Student Visa and Immigration Assistance:
Paula Arrendondo, Executive Director for Admissions/Registrar
956-364-4322
paula.arredondo@tstc.edu

International and Student Visa Immigration Center
http://www.internationalstudent.com/immigration

TSTC has an ongoing comprehensive prevention and awareness campaign and can be found on the TSTC Website under Title IX.
http://www.tstc.edu/student_life/titleix

Code of Student Conduct

Purpose

It is the practice of Texas State Technical College (TSTC) to encourage fair and efficient solutions for problems arising out of the student/college relationship. As responsible members of the college community, students and organizations/ clubs are expected to maintain the highest level of academic and social conduct and are responsible for knowing TSTC's policies and standards. The Code is reviewed every academic year, but it is a living document which can be modified to comply with federal, state, or local law.

Definitions

Board of Regents – governing body of TSTC System, appointed by the Governor of Texas.

Code of Student Conduct (the Code) – standards of conduct and procedures established to provide a full and fair opportunity for review of alleged misconduct.

College – Texas State Technical College (TSTC)

College Premises – all buildings, facilities, land, and other property that is owned, used, leased or controlled by the college.

Complaint – a statement of the essential facts constituting a violation of the Code or policy of the college.

Disciplinary Officer – college official authorized to investigate alleged violations of the Code and to administer the procedures and sanctions of the Code.

Disciplinary Conference (Conference) – an informal conversation with the student to review the alleged violation(s) and give them an opportunity to respond directly and present relevant information including witnesses, documents, etc.

Drug Paraphernalia – any equipment, product, or material that is used for making, using, or concealing drugs, regardless of that item's intended use at the time of its production.

Established Student Relationship – from the time of application for admissions to the college through an award of degree which will include breaks of enrollment if the student continues to have an association with the college.

Notice of Complaint – the initial document that identifies alleged misconduct in violation of the Code.

Review – a request made by a student who disagrees with the Discipline Officer's decision or sanction and requests that the Student Conduct Review Board evaluate the decision.

Review Administrator – Chair/individual assigned to collect, schedule, and be a liaison for the review process.

Preponderance of Evidence – the majority of the evidence would cause a reasonable person to support a conclusion (it is more likely than not it happened, 51 percent rule).

Residential Facilities – any facility operated by the college or under agreement by an outside agency, with sole purpose of providing housing for students.

Student – an individual who has established a relationship with the college for the purpose of taking a course or courses.

Student Conduct Review Board – a group convened at the request of a student or student group to evaluate the Dean's decision or sanction placed on an individual.

Working Day – Monday through Friday, except for official college holidays or college closings

Application

- The Code provides an educational and non-adversarial process designed to resolve matters concerning student conduct; it is not designed to be a legal or judicial process.
- The Code is designed to be reliable, fair and effective.
- Individuals who have established a student relationship with the college are subject to the Code.
- The Code applies to all aspects of campus life: in the classroom, on college property, in residential facilities, at an off campus sponsored activity, or conduct that may occur off campus.
- The Code operates preponderance evidence.
- Disciplinary records are maintained by the local campus Disciplinary Officer in accordance with college records and retention policy.
- Students at TSTC neither lose the rights nor escape the responsibilities of citizenship. They are expected to conduct themselves in accordance with local, state, federal, and international law and the Code as authorized by the TSTC Board of Regents.
- The college disciplinary process will proceed during the pendency of any related criminal or civil proceedings and will not be subject to reconsideration even if related charges are dismissed or otherwise resolved.
- Student Clubs/Organizations are expected to conduct themselves in a manner consistent with he college's function as an educational institution. Student Clubs/Organizations must observe all international, federal, state or local laws and college policies, including the Code, both on campus and off campus.

Prohibited Conduct

The Discipline Officer may initiate disciplinary proceedings against a student for violations of the Code. Specific examples of prohibited conduct subject to disciplinary action include, but are not limited to, the following:

A. Acts Violating Statewide Operating Standards (SOS), and College Policies.
B. Acts of Dishonesty
   1. Intentionally furnishing false or misleading information to the college or a college official.
   2. Forging, altering, falsifying or misusing any college document or instrument of identification.
   3. Intentionally interfering with any election process.
C. Acts Affecting the College Community
   1. Engaging in disruptive behavior or activity, including but not limited to such acts defined in the Texas Education Code.
   2. Failure to comply with the reasonable directive(s) of a college employee which includes Resident/Community Assistants.
   3. Failure to heed an official summons within the designated time or failure to identify oneself to an institutional representative in response to a request.
   4. Violation of a rule or regulation relating to residence life policies, a breach of a housing contract/lease or motor vehicle regulations.
   5. Gambling in any form.
   6. Failure to fulfill financial or contractual obligation(s) to the college.
D. Acts Affecting Property or Service
   1. Theft or attempted theft of property or services.
   2. Possession of stolen or lost property.
   3. Destruction or damage to college property or the property of others.
   4. Unauthorized possession, duplication or use of access devices to college property or the property of others.
   5. Unauthorized entry onto or use of college or individual's premises, equipment or resources.
E. Acts Affecting Computing Resources or Technology
   1. Unauthorized access, use or misuse of college computing resources, systems or data.
   2. Disrupting college computer operations or the availability of computing resources.
   3. Using another individual's identification, password or other credential.
   4. Unauthorized use or sharing of copyrighted materials through electronic means.
   5. Initiating or contributing to attacks against external networks or college systems.
   6. Use of college computers to access lewd, offensive or pornographic material.
   7. Transporting copies of college programs, records or data to another person or computer without written authorization.
   8. Using the college's computer resources for personal gain.
F. Acts Affecting Health, Safety or Welfare
   1. Engaging in physical or verbal abuse, domestic violence, threats, intimidation, harassment, bullying, coercion, physical/electronic stalking or any other conduct that threatens or endangers the health, safety or welfare of another person.
   2. Possession, use, sale or distribution of any quantity, whether usable or not, of an illicit drug (including synthetic), narcotic, controlled substance, illegal drug paraphernalia or equipment. This includes medication not prescribed to oneself.
   3. Public intoxication, use, possession or distribution of an alcoholic beverage(s).
   4. Being under the influence of alcohol, an illicit drug, narcotic, synthetic, or controlled substance.
   5. Providing minors or any other individual intoxicating beverages in violation of any state, federal or local law.
   6. Hazing, as defined by the Texas Education Code, including engaging in, soliciting, encouraging, directing, aiding, or voluntarily submitting in behavior that could cause physical, mental or emotional harm to another or is considered humiliating or degrading.
   7. Engaging in acts of gender discrimination, sexual misconduct, abuse, assault or harassment.
   8. Engaging in speech, either orally or in writing that is directed to incite, produce lawless action, or intimidate another.
   9. Possession or use of a dangerous weapon, defined as any instrument, device or object capable of inflicting physical

harm. Examples of a dangerous weapon include firearms, explosive. devices, dangerous chemicals, knives, fireworks, compressed air guns, pellet guns, stun or zip guns, tasers, BB guns, paint ball guns, batons, nunchucks, etc.

10. Misuse or tampering of fire or other life safety equipment or interfering with any college orpublic safety function.
11. Reporting a false emergency or threat.
12. Smoking inside campus buildings or designated nonsmoking areas.

G. Acts Violating Law
1. Engaging in conduct that constitutes a criminal offense under international, federal, state or local law whether convicted or not, and regardless of whether the incident happened on campus or off campus.
2. Breaching the peace; or abetting or inciting another to breach the peace.
3. Disorderly conduct as defined by state law or any activity that includes, but may not be limited to: physical or verbal abuse, injury to another person, indecent displays or use of indecent language, nonconsensual acts of sexual contact/ assault or disrespect for the rights and privileges of others.

H. Facilitating Acts of Misconduct
1. Planning or facilitating an act of misconduct.
2. Being present during the commission of an act of misconduct, supporting/encouraging the act or not reporting the act to the appropriate officials.

I. Acts interfering with the Disciplinary Process
1. Failure to comply with a request to schedule and attend a conference with the Discipline Officer within a designated time.
2. Failure to comply with sanction(s) imposed under the Code or by the College.
3. Falsifying or misrepresenting information at any stage of the disciplinary process.
4. Knowingly initiating a false complaint to a college official.
5. Attempting to discourage a person's participation in or use of the disciplinary process.
6. Harassment, intimidation, coercion, bribery, or retaliation against a college official or person involved in the disciplinary process.

J. Acts of Academic Dishonesty

Includes, but is not limited to, cheating, plagiarism, collusion, falsifying academic records, any act designed to give unfair advantage to the student or any attempt to commit such an act.

1. "Cheating"on academic work includes, but is not limited to:
   - Copying from another student's test paper or other academic work.
   - Possession, during a test, of material, such as class notes, that is not authorized by the person giving the test. The presence of textbooks is a violation if they have been prohibited by the person giving the test.
   - Collaborating, without authority, or seeking aid from another student during an examination or assignment, or in preparing academic work.
   - Using, buying, selling, stealing, transporting or soliciting, in whole or in part, the contents of an un-administered test, test key, homework solution or computer program.
   - Substituting for another student or permitting another student to substitute for oneself to take a test or prepare other academic work.
   - Paying, offering money or other valuables to, or coercing another person to obtain an un-administered test, test key, homework solution or computer program, or Information about an un-administered test, test key, homework solution or computer program.
   - Falsifying laboratory reports and/or other academic work offered for credit.
   - Taking, keeping, misplacing or damaging property of the college, or of another, if the student knows or reasonably should know that an unfair academic advantage would be gained by such conduct.
   - Failing to comply with instructions given by a person administering a test.
   - Discussing the contents of an examination with another student who will take the examination.
   - Divulging the contents of an examination for the purpose of preserving questions for use by another when the instructor has designated that the examination is not to be removed from the examination room or not to be returned to the student.
   - Misrepresenting facts, including providing false grades or resumes for the purpose of obtaining academic or financial benefit or injuring another student academically or financially.
2. "Plagiarism" includes, but is not limited to, the appropriation, buying, receiving as a gift or obtaining by any means another's work and the submission of it as one's own academic work offered for credit.
3. "Collusion" means the unauthorized collaboration with another person in preparing academic or lab assignments offered for credit, or collaboration with another person to commit a violation of any scholastic-dishonesty rule.
4. "Falsifying academic records" includes, but is not limited to, the alteration of grades or other falsification of an academic record such as grade report, test paper, registration material or reporting form used by the college.

Procedures for discipline due to academic dishonesty will first be considered and reviewed by the faculty member. The faculty member is also responsible for the initial conference with the student where the student tells his/her side of the story. The faculty member must fill out an Academic Dishonesty Reporting Form and submit it to the student Discipline Officer for a centralized reporting mechanism, as well as, give a copy to the student for their records. Further disciplinary sanctions may occur if circumstances warrant or for multiple academic dishonesty violations. If the student does not accept the decision of the faculty member, he/she may request a Review with the Student Conduct Review Board. Procedures for the Review are identical to any other Code violation except the Student Conduct Review Board will give the Campus Academic Officer (CAO) a recommendation and the CAO will make the final decision based off the Review findings and all other information. The CAO will give the student in writing a justification for his/her decision within five working days of the review.

Disciplinary Procedures

The Discipline Officer will assess all suspected and reported violations of the Code. Complaints regarding alleged misconduct should be submitted to Student Rights and Responsibilities as soon as possible after the alleged violation.

After completing an initial inquiry the Discipline Officer may:

- Dismiss the allegations as unfounded.
- Summon the student for a conference.
- Upon completion of the conference, dismiss the allegations or impose disciplinary sanctions.
- Impose immediate interim action if the continued presence of the student poses a danger to persons, property, or disruption of the academic process of the college.

Notice of Complaint

- Deliver a notice summarizing the alleged misconduct either by mail, hand delivery, or electronic means. All students are responsible for maintaining a current physical mailing address with the college and be aware if documents are sent electronically the student's official TSTC e-mail address will be used.
- Give notification of a date that the student has to complete the conference by and if not completed the student automatically waives his/her right to a conference and the Discipline Officer will make a decision based solely on the information at hand.

Notice of Disciplinary Findings

- If it is determined that the greater weight of evidence or preponderance of evidence indicates that a student engaged in a violation of the code, then the Discipline Officer will deliver a Notice of Disciplinary Findings.
- Notice of Disciplinary Findings will also include information regarding the Review process.
- This notice will inform the student of the findings, any sanctions and/or restrictions imposed, and the student's right to a review if applicable.

Sanctions for Misconduct

- Admonition – oral or written reprimand.
- Discretionary Sanctions – work assignments, service to the college, etc.
- Disciplinary Probation – indicates that the student has engaged in unacceptable behavior and that further violation may result in more severe action. Additional conditions may be imposed such as counseling, educational seminars/ courses, etc.
- Withholding of grades, official transcript, certificate of completion, or degree.
- Suspension of Rights and Privileges – including, but not limited to, participation in intramurals/recreation center, extracurricular activities, election to office, restrictive building/ area access, housing or visitation privileges, etc.
- Removal or bar from college housing facilities.
- Administratively withdrawn from a course(s).
- Bar Against Readmission - for a specific period of time, and/or drop from current enrollment or drop from enrollment in one or more courses.
- Restitution – reimbursement for damages to or misappropriation of property either monetarily or by specific duties.
- Failing grade or other academic penalty.
- Denial of Degree – this will become part of the student's permanent record.
- Revocation of a degree, grade, or certification - this will become part of the student's permanent record.
- Suspension – removal from the college for a specified period of time. A suspended student will be administratively withdrawn from TSTC, prohibited from entering college premises, and blocked from future registration until reviewed by the Discipline Officer. This sanction will become a part of the student's permanent record and may be removed at the completion of the sanction, at the student's request.
- Expulsion – permanent removal from the college. An expelled student will be administratively withdrawn from TSTC and prohibited from entering college premises. This will become part of the student's permanent record.
- Other penalties as seen fit by the appropriate college administrator.

Review Process

- Only sanctions that include restrictions, loss of privileges, withholding/revocation of grades or degrees, suspension, or expulsion may be reviewed by the Student Conduct Review Board (Board). All Title IX cases will follow the Sexual Misconduct Policy and the Title IX Review Board process.
- A student has three (3) working days to request a review to the Review Administrator.
- The student will be notified within five (5) working days of the time, date, and location of the review by the Review Administrator. Any delays due to extenuating circumstances will be documented and all parties will be notified accordingly.
- At least two (2) working days prior to the hearing, a list of witnesses and documentation must be turned into the Review Administrator.
- The Discipline Officer will present the College's case followed by the student's presentation. Each Party will have the opportunity to present testimony and evidence in support of their position. The Board will be allowed to question both parties and request additional information or clarification.
- Review procedures will be confidential and closed to the public.

Student Conduct Review Board

- Consists of five (5) members of the campus community: chairperson (who also serves as the Review Administrator), three (3) faculty/staff and two (2) students. The chairperson and the faculty and staff members will be appointed by the local Campus President. Designated students selected to serve on the Board must be currently enrolled and must be in good disciplinary standing.
- The Chairperson will direct proceedings of the review and participate fully in all reviews and participate fully to include voting.
- The objective of the Board is to review the findings and sanctions originally imposed by the Discipline Officer. They may not impose more severe penalties.
- The decision will be made by majority vote. All votes will be

recorded by secret ballot, tabulated by the chair.
- The findings and conclusions of the Board are final.
- The Chairperson will have three (3) working days to provide written results of the Review to all involved.

General Rules

- Reviews are informal proceedings and traditional rules of the courtroom evidence do not apply, but the Discipline Officer must show substantial evidence and that the sanction imposed was reasonable based on the circumstances.
- An advisor or support person may be present for the review, but may not make statements, represent the accused or question witnesses.
- If a student intends to be accompanied by an attorney for the review, the attorney will not be permitted to present evidence or argument before the Board. The college reserves the right to counsel in the event it is deemed necessary. The time frame for scheduling a Review may be extended if the college has to retain counsel

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 curricula give students the technical knowledge, skills and abilities they need to be successful in their chosen careers. Its faculty is 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

The TSTC Foundation is a non-profit educational corporation chartered by the state of Texas in 2000 for the sole purposes of 1) supporting the educational undertaking of Texas State Technical College by furthering education, research and financial assistance of deserving students; 2) soliciting donations for particular objectives to accomplish such purpose, and 3) cooperating with the advancement and general welfare of TSTC as a whole. It is the intent of the Foundation to work very closely with the Board of Regents and the TSTC Administration to determine unmet needs of TSTC and expedite solutions to those needs.

Family Educational Rights and Privacy Act (FERPA)

TSTC complies with the Family Educational Rights and Privacy Act and informs students of their rights under the act. Student's rights covered by the act are as follows:

1. The right to inspect and review the academic record within 45 days after the day Texas State Technical College receives a request for access.

A student should submit to the Registrar or other appropriate official, a written request that identifies the record(s) the student wishes to inspect. The school official will make arrangements for access and notify the student of the time and place where the records may be inspected. If the records are not maintained by the school official to whom the request was submitted, that official shall advise the student of the correct official to whom the request should be addressed

2. The right of a student to petition to the college to amend or correct any part of his/her academic record which is believed to be inaccurate, misleading or in violation of the privacy or other rights of the student. 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.
   A student who wishes to petition to amend or correct a record may submit a written statement to the Custodian of Student Records identifying the part of the record the student wants changed, and specify why it should be changed. If the college decides not to amend the record as requested, the college will notify the student in writing of the decision and the student's right to a hearing regarding the request for amendment

3. The right to provide written consent before the college discloses personally identifiable information contained in the student's education records, except to the extent that FERPA authorizes disclosure without consent.

   Texas State Technical College discloses education records without a student's prior written consent under the exception for disclosure to school officials with legitimate educational interests. A school official is as a person employed by Texas State Technical College in an administrative, supervisory, academic or research, or support staff position (including law enforcement unit personnel and health staff); a person approved by and under contract to TSTC in a faculty position; a person or company with whom the college has contracted (such as an attorney, auditor or collection agent); a person appointed by the Governor and confirmed by the State Senate as a member of the Texas State College Board of Regents; or a student serving on an official committee, such as a disciplinary or grievance committee, or assisting another school official in performing his or her tasks.

   A school official has a legitimate educational interest if the official needs to review an educational record in order to fulfill his or her professional responsibilities for Texas State Technical College.

   Upon request the college may also disclose educational records without student written consent to the following:
   a. parents of an eligible student who claim the student as a dependent for income tax purposes (form available in the Registrar's Office);
   b. in order to comply with a judicial order or a lawfully issued subpoena;
   c. appropriate parties in a health or safety emergency;
   d. an alleged victim of any crime of violence or non-forcible sex offense; the disclosure may only include the final results of any institutional disciplinary proceeding with respect to that alleged crime or offense, regardless of whether the institution concluded a violation was committed;
   e. the general public if the institution determines as a result of disciplinary hearing that the student committed a crime of violence or non-forcible sex offense in violation of the institution's rules or policy or state or federal law, as authorized by state law;
   f. parents of a student under the age of 21 regarding a college's determination that the student violated federal, state or local law or institutional policy governing the use or possession of alcohol or a controlled substance

4. The right of a student to consent to release of semester credit hours taken at other institutions to the Texas Higher Education Coordinating Board.

5. The right of any person to file a complaint with the Family Education Rights and Privacy Act Office, Department of Education, Family Policy Compliance Office, 400 Maryland Avenue SW, Washington, DC 20202-4605, if TSTC violates the FERPA .

Directory Information

Under the Family Education Rights and Privacy Act of 1974, the following is designated by TSTC as directory information and may be made public unless the student desires to withhold all or any portion of it: name, preferred address, preferred telephone number, email address, classification of coursework level, enrollment status, major field of study, participation in officially recognized activities and sports, weight and height of members of athletic teams, dates of college attendance, photograph images, degrees, certificates and awards received and most recent previous educational agency or institution attended by the student. A currently enrolled student may prohibit the release of directory information by completing an appropriate request form in the Registrar's Office during registration or within the first five class days of each term. Under the Privacy Act of 1974, official records are not open to the public and will not be divulged without consent from the student. Minors attending the college have the same right regarding their records as adult students. If a student is still a legal dependent of a parent or guardian, the parent has the right to access the records of the dependent student provided the parent can establish this dependency as defined by the Internal Revenue Code of 1954, section 152. This request must be made in person at the Registrar by providing a copy of the most recent federal income tax return and required picture identification.

If you have any questions concerning disclosure of information contact the Registrar. Student Privacy and FERPA updates are available at www.tstc.edu.

Use of Student Photographs and Signatures for Publications

It is the policy of Texas State Technical College to utilize images or signatures of students for promotion or advertising purposes after obtaining the student's written permission to do so. A release

form shall be obtained for each set of student images or signatures retained for use by the college. The release form shall be be maintained in the student's permanent academic record file. Other copies may be maintained elsewhere at the college's decision

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 workforce training to business and industry, continuing education to the public, and training programs for community and state economic development.

Compact with Texas Complaint Representative

Abilene, Breckenridge, Brownwood, and Sweetwater
Forrest McMillian, Associate Vice President
forrest.mcmillian@tstc.edu
325-734-3600

Harlingen and Fort Bend County
Janette Gomez, Community Standard Liaison
janette.gomez@tstc.edu
956.364.4383

Marshall
Annette Ellis, Associate Vice President
annette.ellis@tstc.edu
903-935-3313

Waco, North Texas and Williamson County
James Fickens, Director
james.fickens@tstc.edu
254-867-3652

TSTC campuses are located at Abilene, Brownwood, Breckenridge, East Williamson County Higher Education Center, Fort Bend Technical Center, Harlingen, Marshall, North Texas Center , Sweetwater, and Waco. TSTC serves students from more than 220 counties in Texas, and TSTC graduates may 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.

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

TSTC's Formal Written Complaint /Compact with Texans Complaint Handling Procedure

It is the practice of Texas State Technical College to seek fair, efficient, and equitable solutions for problems that arise out of the student/college relationship and to allow any student to be heard when he/she feels that his/her rights have been violated or that an action taken by an employee of the college is unfair.

This procedure is available to all students to present complaints concerning disagreement or dissatisfaction arising out of the student/college relationship.

The filing of student grievance is not to be interpreted as a way to change existing school policy or rules. The policy, rules or regulations of the college are of themselves not subject to a grievance process, only their implementation. This student grievance procedure is simply a way for the student to indicate that either:

1. An action taken by a school official or employee is inappropriate, improper, or too harsh; or
2. He/she is being treated differently from other students.

Most questions or complaints can be resolved through routine channels. Students are encouraged to discuss questions or complaints with the instructor or employee with whom the question or complaint has arisen. Complaints received verbally and resolved through routine channels are not considered official written complaints and are not subject to this procedure.

1. The Representative will acknowledge receipt of the complaint in writing within (5) five working days. The notice will let the student know the matter is receiving attention and estimate the length of time it will take to resolve the issue.
2. The complaint will be investigated.
3. A solution that is consistent with TSTC policies, as well as applicable local, state and federal laws, will be proposed in writing to the student within the (10) ten working days from the date the Representative received the complaint.
4. If dissatisfied with the proposed solution the student may request that the Grievance Resolution Committee appointed by the Executive Management Council (EMC), or appropriate campus council, consider the complaint. This request must be made in writing to the Representative within (3) working days of receipt of the letter outlining the solution and must specify what in the solution is unsatisfactory. The committee will meet within (10) ten working days of receiving the student's request to review all available documentation. The Grievance Resolution Committee has a maximum of (5) five working days from the date of the review to respond to the student and employee with a decision. The committee's decision will be final.

Grievances/Complaints procedures:

Student>TSTC Employee>Supervisor(s)>Grievance Resolution Committee

Student disciplinary decisions that involve severe disciplinary penalties are not subject to this policy on student grievance, but should be onduct.

Discrimination of a student will be handled according to the appropriate policy.

Disability Program Appeal Process

Primary responsibility for ensuring compliance with the ADAAA rests with the college's ADA Coordinator.

The release of and access to all student-related educational records will be in compliance with the Family Educational Rights and Privacy Act (FERPA).

TSTC students who believe that they have been denied equal access in the form of appropriate accommodations, modifications, auxiliary aids, effective communication, or suffered discriminatory harassment as described in Section 504 of the Rehabilitation Act of 1973 or The Americans with Disabilities Act of 1990 have a right to file a grievance. The TSTC procedure for the filing of student-related grievances alleging violations of the

ADAAA and Section 504 is as follows.

1. The student will submit a written complaint to the Disability Department/Designee as soon as the complainant becomes aware of the alleged violation, but no later than 10 days after the alleged action occurred. The time for submitting a written complaint can be waived for good cause as determined by the Disability Department/Designee. The following should be included in the written complaint: the name and address of the person filing it, a brief description of the alleged violation, and any documents supporting the complaint. The Disability Department/Designee will assist the student in the interactive process in an effort to clarify and resolve the issue. At times, the Disability Department/Designee may consult with the ADA Coordinator, staff, and/or other pertinent parties to assist in the resolution process.
2. The Disability Department/Designee will review the complaint and provide the student a response within 10 working days of receipt of the complaint. An extension of time can be made, not to exceed 15 working days, if the student is notified by the Disability Department/Designee.
3. If the student is not satisfied with the decision of the Disability Department/Designee, a written complaint may be submitted to the ADA Coordinator within 10 working days of the decision provided in step 1. The time for submitting a written complaint can be waived for good cause as determined by the TSTC ADA Coordinator. The complaint must include the name and address of the person filing it and a description of the reason for the complaint. Upon receiving the complaint, the TSTC ADA Coordinator will review it within 10 working days. An extension of time can be made, not to exceed 15 working days, if the student is notified by the TSTC ADA Coordinator. At times, the ADA Coordinator will consult with the Disabilities Program and/or the ADA Compliance Committee to assist in the resolution process.

The ADA Coordinator's decision will be final at the college level.

Notes

ASSOCIATE DEGREES & CERTIFICATES

TSTC
Texas State Technical College™

tstc.edu

PROGRAM LISTING

AWARD NAME	AWARD TYPE	ABILENE	BRECKNRIDGE	BROWNW OOD	FORT BEND	HARLINGEN	INGLESIDE	MARSHALL	NORTH TEXAS	SWEETWATER	WACO	WILLIAMSON CO
Architectural/Civil Drafting Technology	AAS										●	
Auto Collision & Management Technology - Generalist Specialization	AAS					●						
Auto Collision Generalist	Cert1					●						
Auto Collision Generalist	Cert2					●						
Auto Collision & Management Technology - Refinishing Specialization	AAS										●	
Auto Collision Refinishing	ATC										●	
Auto Collision Refinishing	Cert1										●	
Auto Collision & Management Technology - Repair Specialization	AAS										●	
Auto Collision Repair	ATC										●	
Auto Collision Repair	Cert2										●	
Sheet Metal Fabrication	ESC										●	
Architectural Design & Engineering Graphics Technology	AAS					●						
Aircraft Dispatch Technology	AAS										●	
Aircraft Dispatch Technology (Baylor)	AAS										●	
Agricultural Technology	AAS					●						
Agricultural Operations	Cert1					●						
Aircraft Airframe Technology	AAS	●				●					●	
Aircraft Airframe Technician	Cert2	●				●					●	
Aircraft Powerplant Technology	AAS	●				●					●	
Aircraft Powerplant Technician	Cert2	●				●					●	
Aircraft Pilot Training Technology-Airplane (Baylor)	AAS										●	
Aircraft Pilot Training Technology-Airplane Specialization	AAS										●	
Aircraft Pilot Training Technology-Helicopter Specialization	AAS										●	
Commercial Pilot-Helicopter	Cert2										●	
Multi-Engine Aircraft Pilot	ESC										●	
Air Traffic Controller	AAS										●	
Air Traffic Controller (Baylor)	AAS										●	
Automotive Technology	AAS					●				●	●	
Automotive Technician	Cert1					●						
Automotive Technician	Cert2					●				●		
Automotive Technology Chrysler Specialization	AAS										●	
Ford Maintenance & Light Repair	Cert1					●						
Automotive Shop Management & Customer Service	ESC										●	
Automotive Maintenance & Light Repair	Cert1									●	●	
Automotive Technology Toyota T-Ten Specialization	AAS										●	
Automotive Technology Toyota T-Ten Specialist	Cert2										●	
Automotive Technology Advanced Vehicle Fuel Systems	ESC										●	

AWARD NAME	AWARD TYPE	ABILENE	BRECKNRIDGE	BROWNW OOD	FORT BEND	HARLINGEN	INGLESIDE	MARSHALL	NORTH TEXAS	SWEETWATER	WACO	WILLIAMSON CO
Avionics Technology	AAS										●	
Avionics Ramp Testing	Cert1										●	
Business Applications Programming	AAS										●	
Building Construction Technology	Cert1					●						
Building Construction Craftsman	Cert1										●	
Building Construction Technology - Management Specialization	AAS					●						
Building Construction Technology - Project Mgmt & Inspection Specialization	AAS										●	
Biomedical Equipment Technology	AAS					●		●			●	
Biomedical Equipment Technology-Medical Imaging Specialization	ESC										●	
Biology	AS					●						
Business Management Technology - Office Mgmt Specialization	AAS					●						
Business Management Technology - Operation Management Specialization	AAS					●						
Computer Aided Drafting & Design Technology	AAS	●		●				●	●	●		
CAD Mechanical Drafting Technology	Cert2							●	●			
Computer Aided Manufacturing Machinist	AAS							●				
Computer Aided Manufacturing Machinist	Cert1							●				
Computer Aided Manufacturing Machinist	Cert2							●				
Chemical Dependency Counseling	AAS	●	●	●								
Chemical Dependency Counseling	Cert1	●	●	●								
Cloud & Data Center Computing	AAS										●	
Chemical Technology	AAS					●					●	
Culinary Arts	AAS	●				●					●	
Culinarian	Cert2										●	●
Culinary Assistant	Cert1										●	●
Culinary Specialist	Cert1					●					●	
Computer Maintenance Technology	AAS					●					●	
Computer Maintenance Technician	Cert1					●					●	
Home Integration Technology	Cert1										●	
Computer Network Maintenance	AAS							●	●			
Computer Network Maintenance	Cert2							●	●			
Computer Networking & Systems Administration	AAS	●		●				●	●			
Computer Networking & Systems Administration	Cert2							●	●			
Computer Networking & Systems Administration - CISCO Specialization	AAS										●	
Computer Tech Support	Cert1										●	●
Computer Networking & Security Technology	AAS					●						
Computer Science	AS					●						
Cyber Security - Cyber Security Specialization	AAS							●	●		●	

AWARD NAME	AWARD TYPE	ABILENE	BRECKNRIDGE	BROWNW OOD	FORT BEND	HARLINGEN	INGLESIDE	MARSHALL	NORTH TEXAS	SWEETWATER	WACO	WILLIAMSON CO
Cyber Security	Cert2							●	●		●	●
Cyber Security - Digital Forensics Specialization	AAS										●	
Digital Forensics Specialist	ATC										●	
Dental Assistant	Cert1					●					●	
Digital Arts	AAS	●										
Diesel Equipment Technology Heavy Truck Specialization	AAS				●				●	●	●	
Diesel Equipment Technology-Heavy Truck	Cert1				●				●	●	●	
Diesel Equipment Technology-Heavy Truck	Cert2									●		
Diesel Equipment Technology-John Deere Construction & Forestry	AAS										●	
Diesel Equipment Technology Off Highway Specialization	AAS							●			●	
Diesel Equipment Technology-Off Highway Equipment	Cert1							●			●	
Diesel Equipment Technology-Outdoor Power Equiment	Cert1										●	
Dental Hygiene	AAS					●						
Dental Laboratory Technician	Cert1					●						
Digital Media Design	AAS	●				●						
Database & Web Programming	AAS	●		●								
Database Administration Programming	ATC										●	●
Electronic Communications Technology	AAS										●	
Global Communications Systems Installer	Cert1										●	●
Smart Grid Enhancement	ATC										●	
Wireless Communications Electronics	Cert1										●	
Education & Training	AAS					●						
Education & Training	Cert2					●						
Engineering	AS					●						
Electrical Construction	Cert1										●	
Electronics Technology	AAS										●	
Electrical Lineworker Management	AAS							●				
Electrical Lineworker	Cert1							●			●	
Paramedic	AAS	●										
Emergency Medical Services - Advanced EMT (AEMT)	Cert1	●										
Emergency Medical Services - EMT	Cert1	●	●							●		
Emergency Medical Services - Paramedic	Cert2	●										
Environmental Technology - Compliance Specialization	AAS										●	
Environmental Technology - Environmental Health & Safety	AAS		●									
Electrical Power & Controls	AAS										●	
Industrial Controls Technology	AAS							●				
Industrial Electrical Systems	Cert1								●			●
Owens-Illinois Industrial Technician	Cert1										●	

AWARD NAME	AWARD TYPE	ABILENE	BRECKNRIDGE	BROWNWOOD	FORT BEND	HARLINGEN	INGLESIDE	MARSHALL	NORTH TEXAS	SWEETWATER	WACO	WILLIAMSON CO
Electromechanical Technology	AAS									●		
Electromechanical Technician	Cert1			●								
Electromechanical Technician	Cert2									●		
Downhole Tool Technician	Cert1									●		
Wind Energy Technology	AAS					●	●			●		
Wind Energy Technician	Cert1					●	●			●		
Wind Energy Technician	Cert2									●		
Facilities Maintenance & Management	AAS										●	
Graphics, Gaming & Simulation Programming	AAS					●					●	
General Academic Core Curriculum	CCC					●						
Health Information Technology	AAS	●	●			●				●		
Medical Office Specialist	Cert2	●	●	●						●		
HVAC Technician	Cert1				●				●		●	●
HVAC Technology - Commercial Specialization	AAS				●						●	●
HVAC Technology - Indoor Environmental & Product Refrigeration	AAS								●			
HVAC Technology - Residential Light Commercial Specialization	AAS					●						
Refrigeration Mechanic	Cert1					●						
Industrial Maintenance Mechanic	Cert1										●	●
Industrial Maintenance - Electrical Specialization	AAS							●	●			
Industrial Maintenance Mechanic - Electrical	Cert2							●	●			
Industrial Maintenance - Mechanical Specialization	AAS										●	●
Instrumentation Technology	AAS										●	
Industrial Systems Technology	Cert1					●						
Laser Electro Optics	AAS										●	
Logistics Technology	AAS								●			
Vocational Nursing	Cert2		●			●				●		
Medical Assistant	AAS					●						
Medical Assistant	Cert2					●						
Mechatronics Technology	AAS					●						
Mechanical/Electrical Drafting Technology	AAS										●	
Medical Information Transcriptionist	Cert1					●						
Mathematics	AS					●						
Nurse Assistant	Cert1					●						
Professional Office Technology	AAS							●				
Occupational Safety Compliance Technology	AAS										●	
Professional Cooking	AAS	●										
Food Service Technology	Cert1	●										

AWARD NAME	AWARD TYPE	ABILENE	BRECKNRIDGE	BROWNW OOD	FORT BEND	HARLINGEN	INGLESIDE	MARSHALL	NORTH TEXAS	SWEETWATER	WACO	WILLIAMSON CO
Pharmacy Technician	Cert2										●	
Physics	AS					●						
Plumbing & Pipefitting Technology	Cert1										●	●
Precision Machining Technology	AAS				●				●		●	●
Machining	Cert1				●				●		●	●
Process Operations	AAS							●				
Residential Energy Efficiency Specialist	Cert1										●	
Robotics Technology	AAS										●	
Radiation Protection Technology	AAS										●	
Health Physics	ATC										●	
Software & Business Management Accounting	AAS	●		●								
Software & Business Accounting Specialist	Cert1	●		●								
Software Accounting & Management Professional	Cert2	●	●	●								
Software Development Technology	AAS							●				
Software Development	Cert2							●				
Mobile Applications Programming	ATC										●	
Solar Energy Technology	AAS										●	
Surgical Technology	AAS					●						
Land Surveying Technology	AAS										●	
Survey Field Technician	Cert1										●	
Telecommunications Convergence Technology	AAS					●						
Telecommunication Specialist	Cert1					●						
Tool & Die Technology	AAS					●						
Toolmaker	Cert2					●						
Turfgrass & Landscape Management	AAS										●	
Turfgrass & Landscape Management	Cert2										●	
Visual Communication Technology - Design Specialization	AAS										●	
Visual Communication Technology - Photography Specialization	AAS										●	
LVN-RN Transition	AAS			●		●						
Web Design & Development	AAS										●	
Welding Technology	AAS					●					●	●
Combination Welding	Cert1					●			●		●	●
Combination & Pipe Welding	Cert2										●	
Multi-craft Welding	Cert2							●				
Pipe Welding Technology	Cert1									●		
Advanced Pipe Welding Technology	ESC										●	
Structural Welding	Cert1		●	●								

Aircraft Airframe Technology

Aviation maintenance technicians are a vital part of the aerospace industry workforce, inspecting, servicing and maintaining aircraft worldwide. The Aircraft Airframe specialty trains students specifically in major airframe components and structures such as, hydraulics/pneumatics, landing gear systems, sheet metal, and composite technology. Airframe technicians are employed by repair stations, contract maintenance facilities, general aviation maintenance and regional and national airlines. For quicker entry into the industry, an Aircraft Airframe Technician certificate is also available.

Aircraft Airframe Technology is available at the Abilene, Harlingen, and Waco campuses.

Aircraft Airframe Technology
Associate of Applied Science Degree

Semester 1			Credits
AERM	1107	Aviation Mathematics	1
AERM	1109	Aviation Physics	1
AERM	1112	Aviation Drawings	1
AERM	1315	or Aviation Science	
AERM	1203	Shop Practices	2
AERM	1205	Weight and Balance	2
AERM	1208	Federal Aviation Regulations	2
AERM	1210	Ground Operations	2
AERM	1314	Basic Electricity	3
		Semester Totals	**14**

Semester 2			Credits
AERM	1247	Airframe Auxiliary Systems	2
AERM	1345	Airframe Electrical Systems	3
AERM	1350	Landing Gear Systems	3
AERM	1449	Hydraulic, Pneumatic, and Fuel Systems	4
ACGM	X3XX	Gen Ed Math/Natural Sciences Course	3
		Semester Totals	**15**

Semester 3			Credits
AERM	1241	Wood, Fabric, and Finishes	2
AERM	1243	Instruments and Navigation/Communication	2
AERM	1253	Aircraft Welding	2
AERM	1254	Aircraft Composites	2
ACGM	X3XX	Gen Ed Humanities/Fine Arts Course	3
ACGM	X3XX	Gen Ed Social/Behavioral Sciences Course	3
		Semester Totals	**14**

Semester 4			Credits
AERM	1452	Aircraft Sheet Metal	4
AERM	2230	FAA Review- Airframe	2
AERM	2231	Airframe Inspection	2
AERM	2333	Assembly and Rigging	3
ACGM	X3XX	Gen Ed Elective	3
ACGM	X3XX	Gen Ed Elective	3
		Semester Totals	**17**
		Program Totals	**60**

Aircraft Airframe Technology
Aircraft Airframe Technician Certificate 2

Semester 1			Credits
AERM	1107	Aviation Mathematics	1
AERM	1109	Aviation Physics	1
AERM	1112	Aviation Drawings	1
AERM	1315	or Aviation Science	
AERM	1203	Shop Practices	2
AERM	1205	Weight and Balance	2
AERM	1208	Federal Aviation Regulations	2
AERM	1210	Ground Operations	2
AERM	1314	Basic Electricity	3
		Semester Totals	**14**

Semester 2			Credits
AERM	1247	Airframe Auxiliary Systems	2
AERM	1345	Airframe Electrical Systems	3
AERM	1350	Landing Gear Systems	3
AERM	1449	Hydraulic, Pneumatic, and Fuel Systems	4
		Semester Totals	**12**

Semester 3			Credits
AERM	1241	Wood, Fabric, and Finishes	2
AERM	1243	Instruments and Navigation/Communication	2
AERM	1253	Aircraft Welding	2
AERM	1254	Aircraft Composites	2
		Semester Totals	**8**

Semester 4			Credits
AERM	1452	Aircraft Sheet Metal	4
AERM	2230	FAA Review- Airframe	2
AERM	2231	Airframe Inspection	2
AERM	2333	Assembly and Rigging	3
		Semester Totals	**11**
		Program Totals	**45**

Aircraft Dispatch Technology

With an aviation history dating back more than 40 years, TSTC is one of just three colleges in Texas to offer an FAA approved associate degree in Aircraft Dispatch. Students spend more than 60 percent of their time learning through hands-on training in the college's new cutting edge aerospace center, with multi-level hangars, modern classrooms and top-notch training labs. TSTC faculty come to the college with years of personal experience in the field, plus a board of advisors from some of the top names in the business ensures the curriculum stays on track with what industry needs.

Aircraft Dispatch Technology is available at the Waco campus.

Aircraft Dispatch Technology
Associate of Applied Science Degree

Semester 1			Credits
AIRP	1301	Air Navigation	3
AIRP	1307	Aviation Meteorology	3
AIRP	1417	Private Pilot Ground School	4
ACGM	X3XX	Gen Ed Math/Natural Sciences Course	3
		Semester Totals	**13**

Semester 2			Credits
AIRP	1451	Instrument Ground School	4
AIRP	1372	Dispatch Resource Management	3
AIRP	2331	Advanced Meteorology	3
ENGL	1301	Composition I	3
		Semester Totals	**13**

Semester 3			Credits
AIRP	2355	Propulsion Systems	3
AIRP	2452	Practical Dispatching I	4
AIRP	2175	Human Factors in Aviation	1
ACGM	X3XX	Gen Ed Humanities/Fine Arts Course	3
		Semester Totals	**11**

Semester 4			Credits
AIRP	1345	Aviation Safety	3
AIRP	2337	Commercial Ground School	3
AIRP	2453	Practical Dispatching II	4
AVIM	1470	Fundamentals of ATC	4
		Semester Totals	**14**

Semester 5			Credits
AVIM	2337	Aviation Law	3
ACGM	X3XX	Gen Ed Elective	3
ACGM	X3XX	Gen Ed Social/Behavioral Sciences Course	3
		Semester Totals	**12**

Program Totals 60

Aircraft Pilot Training Technology

With aviation experience dating back more than 40 years, TSTC is the single largest provider of aerospace programs in Texas. Students get a first-class education with hands-on training and flying time in a variety of aircraft, as well as training on top-notch multi-engine simulators, worldwide weather terminals and more. The two-year Aircraft Pilot Training associate degree program is FAA-approved under Part 141 of the Federal Air Regulations, and offers two specializations— airplane (fixed wing) and helicopter (rotary). Students spend more than 60 percent of their time in hands-on activities, learning by doing. All Aircraft Pilot Training students must fulfill requirements for a Class II flight physical and provide the Admissions & Records Office with a current Class II Medical record. All new students must also have successfully completed all sections of the Texas Higher Education Assessment (THEA) Test and all remedial courses before registering for classes in the APT program. Flight costs vary per term and are subject to change due to variables such as fluctuating fuel and flight-time costs. For quicker entry into the industry, certificates in Commercial Pilot-Helicopter and Multi-Engine Aircraft Pilot are available.

Aircraft Pilot Training is available at the Waco campus.

Aircraft Pilot Training Technology
Airplane Specialization
Associate of Applied Science Degree

Semester 1			Credits
AIRP	1301	Air Navigation	3
AIRP	1307	Aviation Meteorology	3
AIRP	1417	Private Pilot Ground School	4
AIRP	1215	Private Flight	2
		Semester Totals	12

Semester 2			Credits
AIRP	2250	Instrument Flight	2
AIRP	2331	Advanced Meteorology	3
AIRP	1451	Instrument Ground School	4
MATH	1332	Comtemporary Mathematics	3
		Semester Totals	12

Semester 3			Credits
AIRP	2355	Propulsion Systems	3
AIRP	1343	Aerodynamics	3
ENGL	1301	Composition I	3
ACGM	X3XX	Gen Ed Elective	3
		Semester Totals	12

Semester 4			Credits
AIRP	1345	Aviation Safety	3
AIRP	2337	Commercial Ground School	3
AIRP	2239	Commercial Flight	2
AIRP	2151	Multi-Engine Flight	1
ACGM	X3XX	Gen Ed Social/Behavioral Sciences Course	3
		Semester Totals	12

Semester 5			Credits
AIRP	2175	Human Factors in Aviation	1
AVIM	2337	Aviation Law	3
AIRP	2236	Certified Flight Instructor - Airplane	2
AIRP	2349	Instructor Ground School	3
ACGM	X3XX	Gen Ed Humanities/Fine Arts Course	3
		Semester Totals	12
		Program Totals	60

Aircraft Pilot Training Technology
Multi-Engine Aircraft Pilot
Enhanced Skills Certificate

Semester 1			Credits
AIRP	2151	Multi-Engine Flight	1
AIRP	2239	Commercial Flight	2
AIRP	2242	Flight Instructor - Instrument Airplane	2
AIRP	2243	Flight Instructor - Multi-Engine Airplane	2
		Semester Totals	7
		Program Totals	7

Aircraft Pilot Training Technology
Helicopter Specialization
Associate of Applied Science Degree

Semester 1			Credits
AIRP	1301	Air Navigation	3
AIRP	1307	Aviation Meteorology	3
AIRP	1417	Private Pilot Ground School	4
AIRP	1215	Private Flight	2
		Semester Totals	**12**

Semester 2			Credits
AIRP	2250	Instrument Flight	2
AIRP	2331	Advanced Meteorology	3
AIRP	1471	Helicopter Instrument Ground School	4
MATH	1332	Comtemporary Mathematics	3
		Semester Totals	**12**

Semester 3			Credits
AIRP	2273	Helicopter Commercial Flight	2
AIRP	2376	Helicopter Propulsion Systems	3
AIRP	1373	Helicopter Aerodynamics	3
AIRP	2175	Human Factors in Aviation	1
ENGL	1301	Composition I	3
		Semester Totals	**12**

Semester 4			Credits
AIRP	1345	Aviation Safety	3
AIRP	2337	Commercial Ground School	3
ACGM	X3XX	Gen Ed Humanities/Fine Arts Course	3
ACGM	X3XX	Gen Ed Social/Behavioral Sciences Course	3
		Semester Totals	**12**

Semester 5			Credits
AIRP	2274	Helicopter Certified Flight Instructor	2
AVIM	2337	Aviation Law	3
AIRP	2371	Helicopter Instructor Ground School	3
AIRP	2172	Flight Instructor-Instrument Helicopter	1
ACGM	X3XX	Gen Ed Elective	3
		Semester Totals	**12**

Program Totals 60

Aircraft Pilot Training
Commercial Pilot-Helicopter Certificate 2

Semester 1			Credits
AIRP	1215	Private Flight	2
AIRP	1301	Air Navigation	3
AIRP	1307	Aviation Meteorology	3
AIRP	1417	Private Pilot Ground School	4
		Semester Totals	**12**

Semester 2			Credits
AIRP	1451	Instrument Ground School	4
AIRP	2250	Instrument Flight	2
AIRP	2331	Advanced Meteorology	3
AIRP	2370	Helicopter Systems	3
		Semester Totals	**12**

Semester 3			Credits
AIRP	1255	Intermediate Flight	2
AIRP	2376	Helicopter Propulsion Systems	3
AIRP	1471	Helicopter Instrument Ground School	4
		Semester Totals	**9**

Semester 4			Credits
AIRP	1345	Aviation Safety	3
AIRP	2239	Commercial Flight	2
AIRP	2337	Commercial Ground School	3
		Semester Totals	**8**

Program Totals 41

Aircraft Powerplant Technology

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. Aircraft Powerplant Technology students learn basic aviation knowledge, shop practices, aircraft engines and electrical, troubleshooting and overhaul. For quicker entry into the industry, an Aircraft Powerplant Technology certificate is available.

Aircraft Powerplant Technology is available at the Abilene, Harlingen, and Waco campuses.

Aircraft Powerplant Technology
Associate of Applied Science Degree

Semester 1			Credits
AERM	1107	Aviation Mathematics	1
AERM	1109	Aviation Physics	1
AERM	1112	Aviation Drawings	1
AERM	1315	or Aviation Science	
AERM	1203	Shop Practices	2
AERM	1205	Weight and Balance	2
AERM	1208	Federal Aviation Regulations	2
AERM	1210	Ground Operations	2
AERM	1314	Basic Electricity	3
		Semester Totals	**14**

Semester 2			Credits
AERM	1351	Aircraft Turbine Engine Theory	3
AERM	1357	Fuel Metering and Induction Systems	3
AERM	1444	Aircraft Reciprocating Engines	4
AERM	1456	Aircraft Powerplant Electrical	4
ACGM	X3XX	Gen Ed Math/Natural Sciences Course	3
		Semester Totals	**17**

Semester 3			Credits
AERM	1240	Aircraft Propellers	2
AERM	2341	Powerplant and Auxiliary Power Units	3
AERM	2351	Aircraft Turbine Engine Overhaul	3
ACGM	X3XX	Gen Ed Humanities/Fine Arts Course	3
ACGM	X3XX	Gen Ed Social/Behavioral Sciences Course	3
		Semester Totals	**14**

Semester 4			Credits
AERM	2234	FAA Review-Powerplant	2
AERM	2352	Aircraft Powerplant Inspection	3
AERM	2447	Aircraft Reciprocating Engine Overhaul	4
ACGM	X3XX	Gen Ed Elective	3
ACGM	X3XX	Gen Ed Elective	3
		Semester Totals	**15**
		Program Totals	**60**

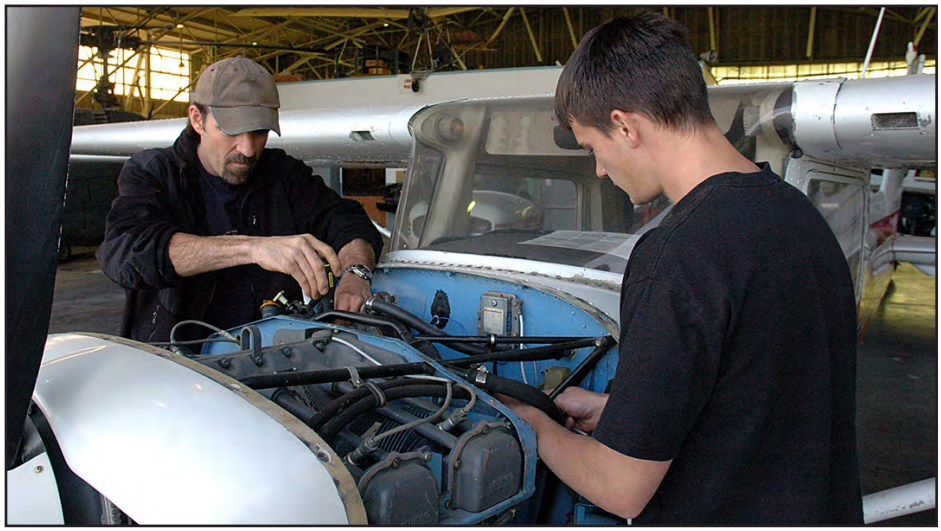
Aircraft Powerplant Technology
Aircraft Powerplant Technician Certificate 2

Semester 1			Credits
AERM	1107	Aviation Mathematics	1
AERM	1109	Aviation Physics	1
AERM	1112	Aviation Drawings	1
AERM	1315	or Aviation Science	
AERM	1203	Shop Practices	2
AERM	1205	Weight and Balance	2
AERM	1208	Federal Aviation Regulations	2
AERM	1210	Ground Operations	2
AERM	1314	Basic Electricity	3
		Semester Totals	**14**

Semester 2			Credits
AERM	1351	Aircraft Turbine Engine Theory	3
AERM	1357	Fuel Metering and Induction Systems	3
AERM	1444	Aircraft Reciprocating Engines	4
AERM	1456	Aircraft Powerplant Electrical	4
		Semester Totals	**14**

Semester 3			Credits
AERM	1240	Aircraft Propellers	2
AERM	2341	Powerplant and Auxiliary Power Units	3
AERM	2351	Aircraft Turbine Engine Overhaul	3
		Semester Totals	**8**

Semester 4			Credits
AERM	2234	FAA Review-Powerplant	2
AERM	2352	Aircraft Powerplant Inspection	3
AERM	2447	Aircraft Reciprocating Engine Overhaul	4
		Semester Totals	**9**
		Program Totals	**45**



Air Traffic Controller

TSTC is one of just 36 schools nationwide and the only public college in Texas to offer the FAA's Air Traffic Collegiate Training Initiative through its Air Traffic Control program. Students who complete the training can be recommended to the FAA for employment, and, if hired, will attend the academy in Oklahoma City to become fully trained Air Traffic Controllers at their respective FAA air traffic control facilities. As the largest provider of aerospace education in Texas, students get the advantage of FAA-experienced staff and an advisory committee of industry leaders. In addition, students take classes and labs in the college's new 82,500-square-foot cutting-edge aerospace center with multilevel hangars, modern classrooms and new training labs.

Air Traffic Controller is offered at the Waco campus.

Air Traffic Controller
Associate of Applied Science Degree

Semester 1			Credits
AIRP	1301	Air Navigation	3
AIRP	1307	Aviation Meteorology	3
AVIM	1470	Fundamentals of ATC	4
ACGM	X3XX	Gen Ed Humanities/Fine Arts Course	3
		Semester Totals	**13**

Semester 2			Credits
AIRP	2331	Advanced Meteorology	3
AIRP	1372	Dispatch Resource Management	3
AVIM	1371	Control Tower I	3
ENGL	1301	Composition I	3
		Semester Totals	**12**

Semester 3			Credits
AVIM	1375	Introduction to Terminal Operations	3
AVIM	2372	Control Tower II	3
ACGM	X3XX	Gen Ed Behavioral/Social Sciences Course	3
ACGM	X3XX	Gen Ed Math/Natural Sciences Course	3
		Semester Totals	**12**

Semester 4			Credits
AIRP	1417	Private Pilot Ground School	4
AVIM	1377	Enroute Operations I	3
AVIM	2373	Advanced Terminal Operations	3
ACGM	X3XX	Gen Ed Elective	3
		Semester Totals	**13**

Semester 5			Credits
AIRP	1451	Instrument Ground School	4
AIRP	2175	Human Factors in Aviation	1
AVIM	1376	Enroute Operations II	3
AVIM	2270	Control Tower Operations	2
		Semester Totals	**10**

Program Totals 60

Architectural Design & Engineering Graphics Technology

The Architectural Design & Engineering Graphics Technology Program works with designers and engineers to convert their ideas and concepts for new products and designs into accurate drawings that specify size, shape, materials and specifications. These drawings are then used by professionals in manufacturing, consulting, and construction to produce the desired product or structure. Designs are created using computer-aided drafting (CAD) equipment. Solid modeling and parametric concepts are introduced and utilized early in the program and throughout the curriculum.

Architectural Design & Engineering Graphics Technology is available at the Harlingen campus.

Architectural Design & Engineering Graphics Technology Associate of Applied Science Degree

Semester 1			Credits
GISC	1311	Introduction to Geographic Information Systems (GIS)	3
DFTG	1309	Basic Computer-Aided Drafting	3
DFTG	1310	Specialized Basic Computer-Aided Drafting (CAD)	3
ACGM	X3XX	Gen Ed Humanities/Fine Arts Course	3
		Semester Totals	**12**

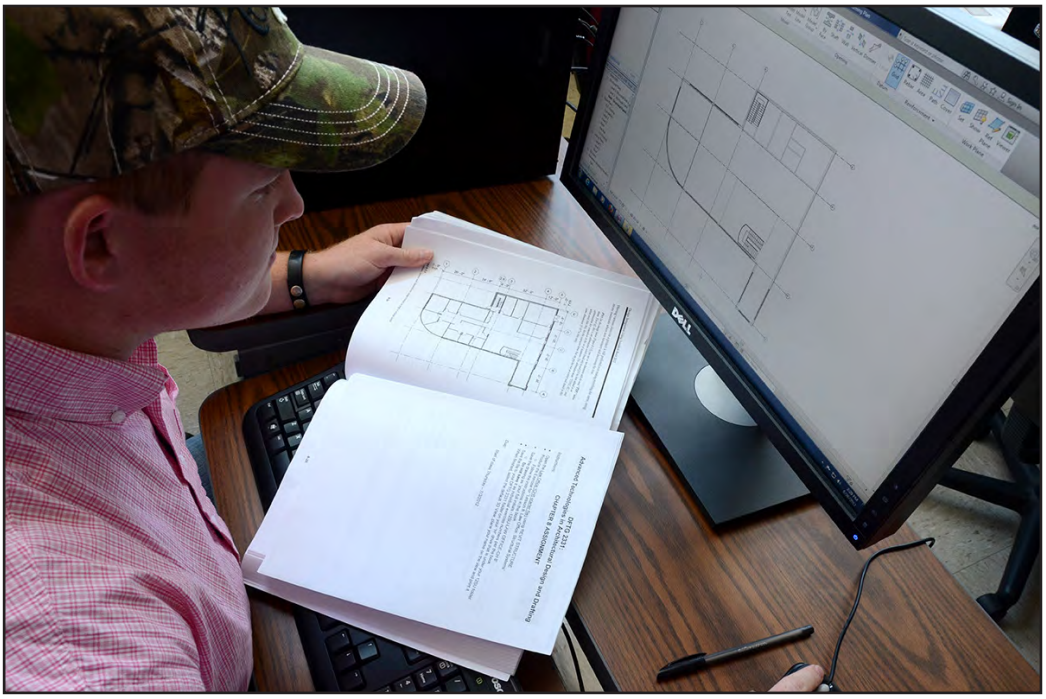
Semester 2			Credits
GISC	2320	Intermediate Geographic Information Systems (GIS)	3
DFTG	1357	Specialized Intermediate Computer-Aided Drafting (CAD)	3
DFTG	2340	Solid Modeling/Design	3
MATH	1314	College Algebra	3
		Semester Totals	**12**

Semester 3			Credits
GISC	1301	Cartography and Geography in Geographical Information Systems (GIS) and Global Positioning Systems	3
INDS	1319	Technical Drawing for Interior Designers	3
SRVY	2348	Plane Surveying	3
ACGM	X3XX	Gen Ed Speech Elective Course	3
		Semester Totals	**12**

Semester 4			Credits
DFTG	1341	Intermediate Technical Animation and Rendering	3
DFTG	2319	Intermediate Computer-Aided Drafting	3
DFTG	2330	Civil Drafting	3
ENGL	1301	Composition I	3
		Semester Totals	**12**

Semester 5			Credits
ARCE	1352	Structural Drafting	3
DFTG	2332	Advanced Computer-Aided Drafting	3
DFTG	2338	Final Project-Advanced Drafting	3
PSYC	2301	General Psychology	3
		Semester Totals	**12**

Program Totals 60



Architectural/Civil Drafting Technology

Whether it's as large as a high-rise building or as small as a shed, nothing can be built without first envisioning a plan — a blueprint, sketch or drawing detailing everything a project needs for completion. Drafting is a universal language; it is the common language used in many major industries as a first step to bringing this vision to life. TSTC Architectural/Civil Drafting students prepare for drafting applications in commercial architecture; building structures; mechanical, electrical, and plumbing systems for buildings; site work; and many other areas of construction-related drafting. During your educational training at TSTC, you will use the latest in computer software and hardware to gain valuable experience utilizing today's most popular drafting tool — Computer-Aided Drafting, or CAD, systems.

Architectural/Civil Drafting is available at the Waco campus.

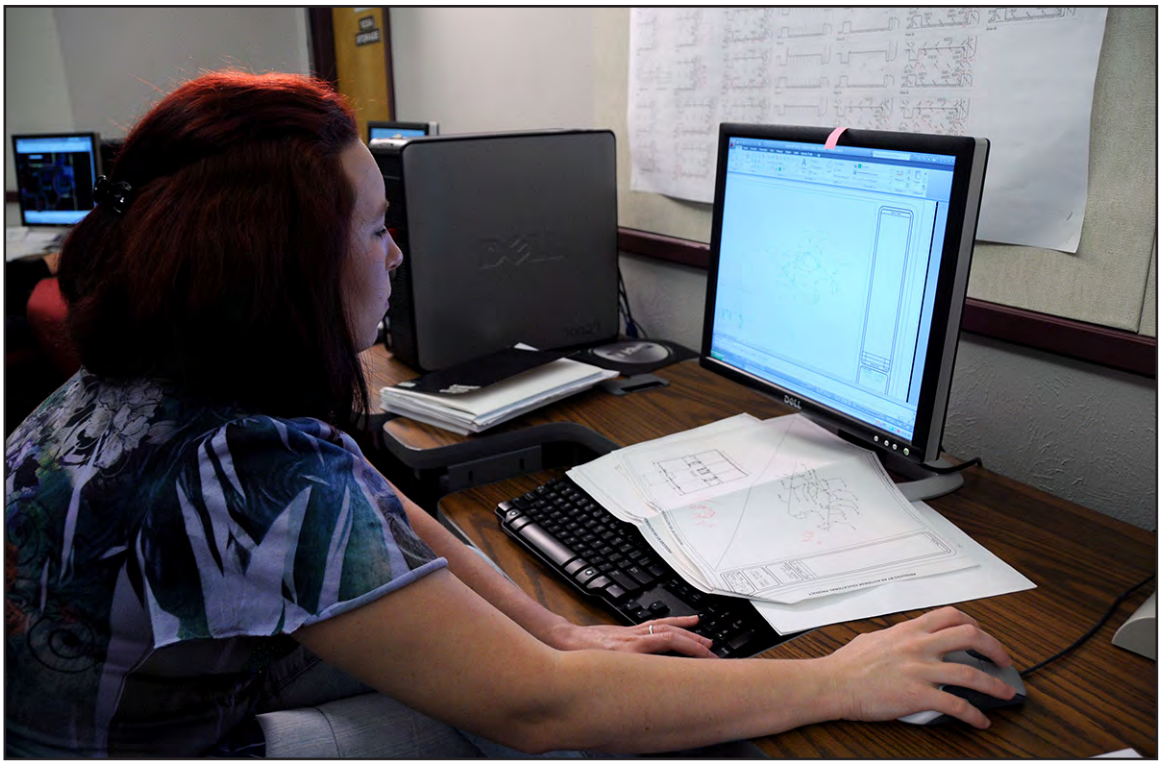
Architectural/Civil Drafting Technology
Associate of Applied Science Degree

Semester 1			Credits
DFTG	1305	Technical Drafting	3
DFTG	1309	Basic Computer-Aided Drafting	3
DFTG	1370	Technical Mathematics Applications in Drafting	3
ITSC	1309	Integrated Software Applications I	3
ENGL	1301	Composition I	3
		Semester Totals	**15**

Semester 2			Credits
ARCE	1303	Architectural Materials and Methods of Construction	3
ARCE	1342	Codes, Specifications, and Contract Documents	3
DFTG	1317	Architectural Drafting-Residential	3
DFTG	2319	Intermediate Computer-Aided Drafting	3
ACGM	X3XX	Gen Ed Social/Behavioral Science Elective	3
		Semester Totals	**15**

Semester 3			Credits
DFTG	2328	Architectural Drafting-Commercial	3
DFTG	2331	Advanced Technologies in Architectural Design & Drafting	3
SRVY	1301	Introduction to Surveying	3
ACGM	X3XX	Gen Ed Humanities/Fine Arts Elective	3
ACGM	X3XX	Gen Ed Elective	3
		Semester Totals	**15**

Semester 4			Credits
ARCE	1352	Structural Drafting	3
ARCE	2352	Mechanical and Electrical Systems	3
DFTG	2330	Civil Drafting	3
DFTG	2338	Final Project-Advanced Drafting	3
ACGM	X3XX	Gen Ed Natural Science/Math Elective	3
		Semester Totals	**15**
		Program Totals	**60**



Auto Collision & Management Technology

The auto-body industry continues to be big business — with nearly $27.9 billion in sales in 2009, said the Automotive Service Association. And that doesn't count the additional 6,285 franchised dealerships with body shops generating an estimated $7.2 billion in that same year, according to the National Automobile Dealership Association. That's why the auto-body industry is a great career choice for those seeking a relatively stable job with above average wages. At TSTC, you'll get the crucial hands-on experience that can make you irresistible to employers. The Auto Collision program offers general auto collision curriculum and specializations in auto-body refinishing, collision repair and sheet metal fabrication. For quicker entry into the industry, certificate programs are available. Advanced certificate programs are also available.

Auto Collision & Management Technology is available at the Harlingen and Waco campuses.

Auto Collision & Management Technology Generalist Specialization - Harlingen only
Associate of Applied Science Degree

Semester 1			Credits
ABDR	1371	Basic Paint	3
ABDR	1419	Basic Metal Repair	4
ABDR	1411	Vehicle Measurement and Damage Repair Procedures	4
ABDR	1215	Vehicle Trim and Hardware	2
ACGM	X3XX	Gen Ed Social/Behavioral Science Elective	3
		Semester Totals	**16**

Semester 2			Credits
ABDR	1307	Collision Repair Welding	3
ABDR	2345	Vehicle Safety Systems	3
ABDR	1441	Structural Analysis and Damage Repair I	4
ABDR	2453	Color Analysis and Paint Matching	4
ACGM	X3XX	Gen Ed Natural Science/Math Elective	3
		Semester Totals	**17**

Semester 3			Credits
ABDR	1542	Structural Analysis and Damage Repair II	5
ABDR	1349	Automotive Plastic & Sheet Molded Compound Repair	3
ABDR	2551	Specialized Refinishing Techniques	5
ENGL	1301	Composition I	3
		Semester Totals	**16**

Semester 4			Credits
ABDR	2255	Collision Repair Estimating	2
ABDR	2357	Collision Repair Shop Management	3
ACGM	x3xx	Gen Ed Humanities/Fine Arts Elective	3
ACGM	X3XX	Gen Ed Elective	3
		Semester Totals	**11**
		Program Totals	**60**

Auto Collision & Management Technology Generalist Specialization Certificate - Harlingen only

Semester 1			Credits
ABDR	1371	Basic Paint	3
ABDR	1419	Basic Metal Repair	4
ABDR	1411	Vehicle Measurement and Damage Repair Procedures	4
ABDR	1215	Vehicle Trim and Hardware	2
		Semester Totals	**13**

Semester 2			Credits
ABDR	1307	Collision Repair Welding	3
ABDR	2345	Vehicle Safety Systems	3
ABDR	1441	Structural Analysis & Damage Repair I	4
ABDR	2453	Color Analysis and Paint Matching	4
		Semester Totals	**14**
		Program Totals	**27**

Auto Collision & Management Technology
Generalist Specialist Certificate 2 - Harlingen only

Semester 1			Credits
ABDR	1371	Basic Paint	3
ABDR	1419	Basic Metal Repair	4
ABDR	1411	Vehicle Measurement and Damage Repair Procedures	4
ABDR	1215	Vehicle Trim and Hardware	2
		Semester Totals	**13**

Semester 2			Credits
ABDR	1307	Collision Repair Welding	3
ABDR	2345	Vehicle Safety Systems	3
ABDR	1441	Structural Analysis and Damage Repair I	4
ABDR	2453	Color Analysis and Paint Matching	4
		Semester Totals	**14**

Semester 3			Credits
ABDR	1542	Structural Analysis and Damage Repair II	5
ABDR	1349	Automotive Plastic and Sheet Molded Compound Repair	3
ABDR	2551	Specialized Refinishing Techniques	5
		Semester Totals	**13**

Program Totals 40

Auto Collision & Management Technology
Refinishing Specialization
Associate of Applied Science Degree - Waco only

Semester 1			Credits
ABDR	1215	Vehicle Trim and Hardware	2
ABDR	1349	Automotive Plastic and Sheet Molded Compound Repair	3
ABDR	1371	Basic Paint	3
ABDR	1203	Vehicle Design and Structural Analysis	2
ENGL	1301	Composition I	3
		Semester Totals	**13**

Semester 2			Credits
ABDR	1419	Basic Metal Repair	4
ABDR	1458	Intermediate Refinishing	4
ABDR	1431	Basic Refinishing	4
ACGM	X3XX	Gen Ed Natural Science/Math Elective	3
ACGM	X3XX	Gen Ed Social/Behavioral Science Elective	3
		Semester Totals	**18**

Semester 3			Credits
ABDR	2255	Collision Repair Estimating	2
ABDR	2371	Refinishing Process I	3
ABDR	2449	Advanced Refinishing	4
ABDR	2551	Specialized Refinishing Techniques	5
ACGM	x3xx	Gen Ed Humanities/Fine Arts Elective	3
		Semester Totals	**17**

Semester 4			Credits
ABDR	2357	Collision Repair Shop Management	3
ABDR	1266	Practicum	2
ABDR	2453	Color Analysis and Paint Matching	4
ACGM	X3XX	Gen Ed Elective	3
		Semester Totals	**12**

Program Totals 60

Auto Collision & Management Technology
Auto Collision Refinishing Certificate - Waco only

Semester 1			Credits
ABDR	1215	Vehicle Trim and Hardware	2
ABDR	1349	Automotive Plastic and Sheet Molded Compound Repair	3
ABDR	1371	Basic Paint	3
ABDR	1203	Vehicle Design and Structural Analysis	2
POFT	1325	Business Math Using Technology	3
		Semester Totals	**13**

Semester 2			Credits
ABDR	1419	Basic Metal Repair	4
ABDR	1458	Intermediate Refinishing	4
ABDR	1431	Basic Refinishing	4
POFT	1301	Business English	3
		Semester Totals	**15**

Semester 3			Credits
ABDR	2255	Collision Repair Estimating	2
ABDR	2371	Refinishing Process I	3
ABDR	2449	Advanced Refinishing	4
ABDR	2551	Specialized Refinishing Techniques	5
		Semester Totals	**14**

Program Totals 42

Auto Collision & Management Technology
Auto Body Refinishing
Advanced Technical Certificate - Waco only

Semester 1			Credits
ABDR	1458	Intermediate Refinishing	4
ABDR	1431	Basic Refinishing	4
		Semester Totals	**8**

Semester 2			Credits
ABDR	2371	Refinishing Process I	3
ABDR	2449	Advanced Refinishing	4
ABDR	2551	Specialized Refinishing Techniques	5
		Semester Totals	**12**

Semester 3			Credits
ABDR	1266	Practicum	2
ABDR	2453	Color Analysis and Paint Matching	4
		Semester Totals	**6**

Program Totals 26

Auto Collision & Management Technology
Repair Specialization
Associate of Applied Science Degree - Waco only

Semester 1			Credits
ABDR	1215	Vehicle Trim and Hardware	2
ABDR	1349	Automotive Plastic and Sheet Molded Compound Repair	3
ABDR	1371	Basic Paint	3
ABDR	1203	Vehicle Design and Structural Analysis	2
ENGL	1301	Composition I	3
		Semester Totals	**13**

Semester 2			Credits
ABDR	2435	Structural Analysis and Damage Repair IV	4
ABDR	1307	Collision Repair Welding	3
ABDR	2255	Collision Repair Estimating	2
ACGM	X3XX	Gen Ed Natural Science/Math Elective	3
ACGM	X3XX	Gen Ed Social/Behavioral Science Elective	3
		Semester Totals	**15**

Semester 3			Credits
ABDR	1323	Front and Rear Wheel Alignment	3
ABDR	1419	Basic Metal Repair	4
ABDR	2447	Advanced Collision Repair Welding	4
ACGM	x3xx	Gen Ed Humanities/Fine Arts Elective	3
ACGM	X3XX	Gen Ed Elective	3
		Semester Totals	**17**

Semester 4			Credits
ABDR	2359	Structural Sectioning	3
ABDR	2402	Auto Body Mechanical and Electrical Service	4
ABDR	1542	Structural Analysis and Damage Repair II	5
ABDR	2357	Collision Repair Shop Management	3
		Semester Totals	**15**

Program Totals 60

Auto Collision & Management Technology
Auto Collision Repair
Advanced Technology Certificate - Waco only

Semester 1			Credits
ABDR	2435	Structural Analysis & Damage Repair IV	4
ABDR	1307	Collision Repair Welding	3
		Semester Totals	**7**

Semester 2			
ABDR	1323	Front and Rear Wheel Alignment	3
ABDR	2447	Advanced Collision Repair Welding	4
		Semester Totals	**7**

Semester 4			
ABDR	2359	Structural Sectioning	3
ABDR	2402	Auto Body Mechanical and Electrical Service	4
ABDR	1542	Structural Analysis and Damage Repair II	5
		Semester Totals	**12**

Program Totals 26

Auto Collision & Management Technology
Auto Collision Repair Certificate 2 - Waco only

Semester 1			Credits
ABDR	1215	Vehicle Trim and Hardware	2
ABDR	1349	Automotive Plastic and Sheet Molded Compound Repair	3
ABDR	1371	Basic Paint	3
ABDR	1203	Vehicle Design and Structural Analysis	2
		Semester Totals	**10**

Semester 2			Credits
ABDR	2435	Structural Analysis and Damage Repair IV	4
ABDR	1307	Collision Repair Welding	3
ABDR	2255	Collision Repair Estimating	2
POFT	1325	Business Math Using Technology	3
		Semester Totals	**12**

Semester 3			Credits
ABDR	1323	Front and Rear Wheel Alignment	3
ABDR	1419	Basic Metal Repair	4
POFT	1301	Business English	3
		Semester Totals	**10**

Semester 4			Credits
ABDR	2359	Structural Sectioning	3
ABDR	2402	Auto Body Mechanical and Electrical Service	4
ABDR	1542	Structural Analysis and Damage Repair II	5
		Semester Totals	**12**

Program Totals 44

Auto Collision & Management
Sheet Metal Fabrication
Enhanced Skills Certificate - Waco only

Semester 1			Credits
ABDR	1359	Sheet Metal Fabrication I	3
ABDR	2305	Sheet Metal Fabrication II	3
		Semester Totals	**6**

Program Totals 6

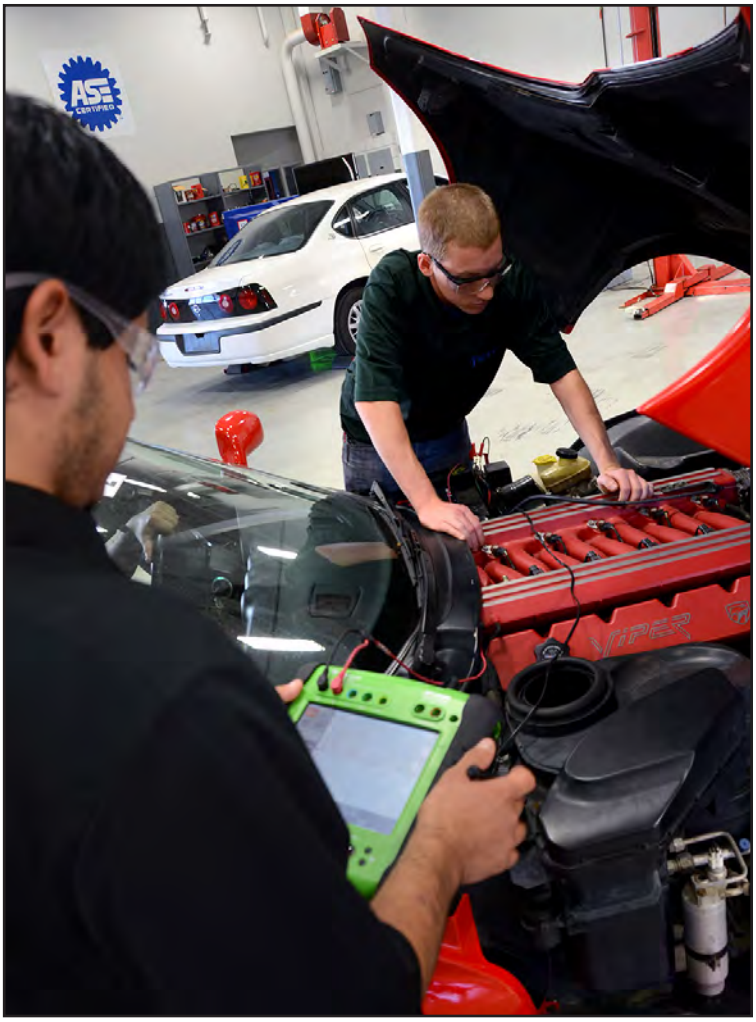
Automotive Technology

The Automotive Technology Program at TSTC features approximately $3 million worth of the latest equipment and laboratories. The program is certified by the National Automotive Technicians Education Foundation and instructors are certified by the National Institute of Automotive Service Excellence, bringing years of industry experience to the classroom. Students receive intensive, hands-on training, spending more than 60 percent of their time in labs, learning by doing, and the curriculum is guided by an advisory board of industry leaders, helping to ensure that the training students receive is right on target with what industry needs. Automotive Technology offers specializations in general automotive, maintenance and light repair, shop management and customer service, advanced vehicle fuel systems and Ford, Toyota and Chrysler specialty programs. For quicker entry into the industry, certificates are available.

Automotive Technology is available at the Harlingen, Sweetwater, and Waco campuses.

Automotive Technology
Associate of Applied Science Degree

Semester 1			Credits
AUMT	1305	Introduction to Automotive Technology	3
AUMT	1307	Automotive Electrical Systems	3
AUMT	1416	Automotive Suspension and Steering Systems	4
ACGM	X3XX	Gen Ed Elective	3
		Semester Totals	13



Semester 2			Credits
AUMT	1310	Automotive Brake Systems	3
AUMT	1345	Automotive Climate Control Systems	3
AUMT	1419	Automotive Engine Repair	4
ACGM	X3XX	Gen Ed Math/Natural Science Course	3
ACGM	X3XX	Gen Ed Social/Behavioral Sciences Course	3
		Semester Totals	16

Semester 3			Credits
AUMT	2321	Automotive Electrical Diagnosis and Repair	3
AUMT	2413	Automotive Drive Train and Axles	4
AUMT	2417	Automotive Engine Performance Analysis I	4
ACGM	X3XX	Gen Ed Elective	3
ACGM	X3XX	Gen Ed Humanities/Fine Arts Course	3
		Semester Totals	17

Semester 4			Credits
DEMR	2334	Advanced Diesel Tune-Up and Troubleshooting	3
AUMT	2328	or Automotive Service	
AUMT	2357	or Automotive Alternative Fuels	
AUMT	2337	Automotive Electronics	3
AUMT	2425	Automotive Automatic Transmission and Transaxle	4
AUMT	2434	Automotive Engine Performance Analysis II	4
		Semester Totals	14
		Program Totals	60

Automotive Technology
Automotive Technician Certificate 1 - Harlingen only

Semester 1			Credits
AUMT	1305	Introduction to Automotive Technology	3
AUMT	1307	Automotive Electrical Systems	3
AUMT	1416	Automotive Suspension and Steering Systems	4
		Semester Totals	10

Semester 2			Credits
AUMT	1310	Automotive Brake Systems	3
AUMT	1345	Automotive Climate Control Systems	3
AUMT	1419	Automotive Engine Repair	4
		Semester Totals	10

Semester 3			
AUMT	2413	Automotive Drive Train and Axles	4
AUMT	2417	Automotive Engine Performance Analysis I	4
AUMT	2321	Automotive Electrical Diagnosis and Repair	3
		Semester Totals	11
		Program Totals	31

Automotive Technology
Automotive Technician Certificate 2

Harlingen, Sweetwater

Semester 1			Credits
AUMT	1305	Introduction to Automotive Technology	3
AUMT	1307	Automotive Electrical Systems	3
AUMT	1416	Automotive Suspension and Steering Systems	4
		Semester Totals	10

Semester 2			Credits
AUMT	1310	Automotive Brake Systems	3
AUMT	1345	Automotive Climate Control Systems	3
AUMT	1419	Automotive Engine Repair	4
		Semester Totals	10

Semester 3			Credits
AUMT	2321	Automotive Electrical Diagnosis and Repair	3
AUMT	2413	Automotive Drive Train and Axles	4
AUMT	2417	Automotive Engine Performance Analysis I	4
		Semester Totals	**11**

Semester 4			Credits
DEMR	2334	Advanced Diesel Tune-Up and Troubleshooting	3
AUMT	2328	or Automotive Service	
AUMT	2357	or Automotive Alternative Fuels	
AUMT	2337	Automotive Electronics	3
AUMT	2425	Automotive Automatic Transmission and Transaxle	4
AUMT	2434	Automotive Engine Performance Analysis II	4
		Semester Totals	**14**

Program Totals 45

Automotive Technology
Chrysler Specialization
Associate of Applied Science Degree - Waco only

Semester 1			Credits
AUMT	1166	Practicum (or Field Experience)-Automobile/ Automotive Mechanics Technology/Technician	1
AUMT	1201	Introduction and Theory of Automotive Technology	2
AUMT	1310	Automotive Brake Systems	3
AUMT	1416	Automotive Suspension and Steering Systems	4
ENGL	1301	Composition I	3
		Semester Totals	**13**

Semester 2			Credits
AUMT	1167	Practicum (or Field Experience)-Automobile/ Automotive Mechanics Technology/Technician	1
AUMT	1307	Automotive Electrical Systems	3
AUMT	1345	Automotive Climate Control Systems	3
AUMT	1419	Automotive Engine Repair	4
ACGM	X3XX	Gen Ed Math/Natural Sciences Course	3
		Semester Totals	**14**

Semester 3			Credits
AUMT	2188	Internship-Automobile/Automotive Mechanics Technology/Technician	1
AUMT	2413	Automotive Drive Train and Axles	4
AUMT	2321	Automotive Electrical Diagnosis and Repair	3
AUMT	2417	Automotive Engine Performance Analysis I	4
ACGM	X3XX	Gen Ed Elective	3
ACGM	X3XX	Gen Ed Humanities/Fine Arts Course	3
		Semester Totals	**18**

Semester 4			Credits
AUMT	2189	Internship-Automobile/Automotive Mechanics Technology/Technician	1
AUMT	2337	Automotive Electronics	3
AUMT	2425	Automotive Automatic Transmission and Transaxle	4
AUMT	2434	Automotive Engine Performance Analysis II	4
ACGM	X3XX	Gen Ed Social/Behavioral Sciences Course	3
		Semester Totals	**15**

Probram Totals 60

Automotive Technology

Ford Maintenance & Light Repair Certificate 1

Semester 1			Credits
AUMT	1305	Introduction to Automotive Technology	3
AUMT	1307	Automotive Electrical Systems	3
AUMT	1416	Automotive Suspension and Steering Systems	4
		Semester Totals	**10**

Semester 2			Credits
AUMT	1310	Automotive Brake Systems	3
AUMT	1345	Automotive Climate Control Systems	3
AUMT	2417	Automotive Engine Performance Analysis I	4
		Semester Totals	**10**

Semester 3			Credits
AUMT	1380	Cooperative Education, Automotive/ Automotive Mechanics Technology/Technician	3
		Semester Totals	**3**

Program Totals 23

Automotive Technology
Automotive Maintenance & Light Repair
Certificate 1 - Waco, Sweetwater

Semester 1			Credits
AUMT	1305	Introduction to Automotive Technology	3
AUMT	1307	Automotive Electrical Systems	3
AUMT	1416	Automotive Suspension and Steering Systems	4
		Semester Totals	**10**

Semester 2			Credits
AUMT	1310	Automotive Brake Systems	3
AUMT	1312	Basic Automotive Service	3
AUMT	1345	Automotive Climate Control Systems	3
AUMT	1419	Automotive Engine Repair	4
		Semester Totals	**13**

Semester 3			Credits
AUMT	2413	Automotive Drive Train and Axles	4
AUMT	2417	Automotive Engine Performance Analysis I	4
AUMT	2321	Automotive Electrical Diagnosis and Repair	3
		Semester Totals	**11**

Program Totals 34

Automotive Technology
Automotive Shop Management & Customer Service
Enhanced Skills Certificate - Waco only

Semester 1			Credits
AUMT	2301	Automotive Management	3
AUMT	2310	Automotive Service Consultant	3
BMGT	1309	Information and Project Management	3
BUSG	2309	Small Business Management/Entrepreneurship	3
		Semester Totals	**12**

Program Totals 12

Automotive Technology
Toyota T-Ten Specialization
Associate of Applied Science Degree - Waco only

Semester 1			Credits
AUMT	1249	Automotive Electronics Theory	2
AUMT	1305	Introduction to Automotive Technology	3
AUMT	1307	Automotive Electrical Systems	3
AUMT	2321	Automotive Electrical Diagnosis and Repair	3
ENGL	1301	Composition I	3
		Semester Totals	**14**

Semester 2			Credits
AUMT	1416	Automotive Suspension and Steering Systems	4
AUMT	1310	Automotive Brake Systems	3
AUMT	1345	Automotive Climate Control Systems.	3
ACGM	X3XX	Gen Ed Social/Behavioral Sciences Course	3
		Semester Totals	**13**

Semester 3			Credits
AUMT	1266	Practicum (or Field Experience)-Automobile/ Automotive Mechanics Technology/Technician	2
		Semester Totals	**2**

Semester 4			Credits
AUMT	1419	Automotive Engine Repair	4
AUMT	2413	Automotive Drive Train and Axles	4
AUMT	2417	Automotive Engine Performance Analysis I	4
ACGM	X3XX	Gen Ed Math/Natural Sciences Course	3
		Semester Totals	**15**

Semester 5			Credits
AUMT	2425	Automotive Automatic Transmission and Transaxle	4
AUMT	2434	Automotive Engine Performance Analysis II	4
BUSI	2301	Business Law I	3
ACGM	X3XX	Gen Ed Humanities/Fine Arts Course	3
		Semester Totals	**14**

Semester 6			Credits
AUMT	2266	Practicum (or Field Experience)-Automobile/ Automotive Mechanics Technology/Technician	2
		Semester Totals	**2**
		Program Totals	**60**

Automotive Technology
Toyota T-Ten Specialist Certificate 2 - Waco only

Semester 1			Credits
AUMT	1249	Automotive Electronics Theory	2
AUMT	1305	Introduction to Automotive Technology	3
AUMT	1307	Automotive Electrical Systems	3
AUMT	2321	Automotive Electrical Diagnosis and Repair	3
		Semester Totals	**11**

Semester 2			Credits
AUMT	1416	Automotive Suspension and Steering Systems	4
AUMT	1310	Automotive Brake Systems	3
AUMT	1345	Automotive Climate Control Systems	3
		Semester Totals	**10**

Semester 3			Credits
AUMT	1266	Practicum (or Field Experience)-Automobile/ Automotive Mechanics Technology/Technician	2
		Semester Totals	**2**

Semester 4			Credits
AUMT	1419	Automotive Engine Repair	4
AUMT	2413	Automotive Drive Train and Axles	4
AUMT	2417	Automotive Engine Performance Analysis I	4
		Semester Totals	**12**

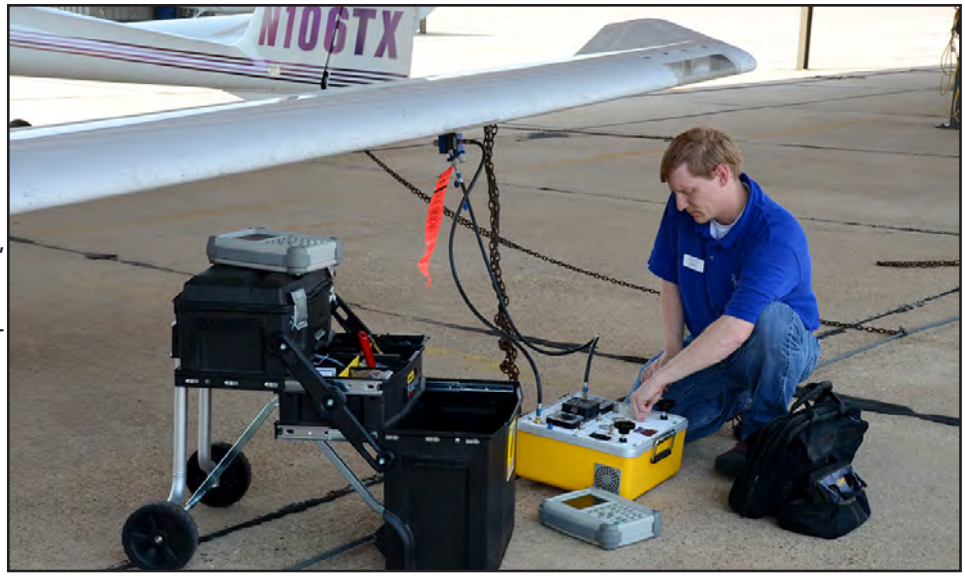
Semester 5			Credits
AUMT	2425	Automotive Automatic Transmission and Transaxle	4
AUMT	2434	Automotive Engine Performance Analysis II	4
		Semester Totals	**8**

Semester 6			Credits
AUMT	2266	Practicum (or Field Experience)-Automobile/ Automotive Mechanics Technology/Technician	2
		Semester Totals	**2**
		Program Totals	**45**

Automotive Technology
Automotive Advanced Vehicle Fuel Systems - Waco only

Semester 1			Credits
AUMT	2407	Hybrid Systems Diagnostics	4
AUMT	2357	Automotive Alternative Fuels	3
AUMT	2470	Automotive Compression Ignition Engine & Fuel Systems	4
		Semester Totals	**11**
		Program Totals	**11**

Avionics Technology



A relatively unknown career path in the aviation industry just happens to be one of the most exciting and challenging careers: Avionics. Avionics technicians are responsible for installing, maintaining and repairing navigational and communication equipment, which takes a strong education and plenty of skills. At TSTC, students get real world, hands-on experience working in the facility. The program provides students with the technical education needed to prepare to obtain the Federal Communication Commission's General Radio-Telephone Operator's License. In addition, the program also offers a certificate program that focuses on flightline maintenance – and everything you need for a successful career in Avionics. For quicker entry into the industry, a certificate in Ramp Testing is also available.

The Ramp Testing Certificate teaches students to analyze the operation of avionics systems aboard aircraft, isolate malfunctioning equipment and remove and repair faulty units.

Avionics is available at the Waco campus.

Avionics Technology
Associate of Applied Science Degree

Semester 1			Credits
AVNC	1303	Introduction to Aviation Electronic Systems	3
AVNC	1343	Aviation Electrical and Electronic Systems Installation	3
IEIR	1371	Electrical Principles & Applications	3
ENGL	1301	Composition I	3
		Semester Totals	**12**

Semester 2			Credits
AVNC	1353	Operational Testing of Aviation Electronic Systems	3
AVNC	2308	Aviation Electrical and Electronics Systems Installation II	3
CETT	1325	Digital Fundamentals	3
MATH	1332	Contemporary Mathematics	3
		Semester Totals	**12**

Semester 3			Credits
AVNC	1306	FAA Regulations for Avionics Certified Repair Station	3
AVNC	1391	Installation & Operational Testing of Avionics & Pilot-Static Systems	3
CETT	1329	Solid State Devices	3
ACGM	X3XX	Gen Ed Humanities/Fine Arts Course	3
		Semester Totals	**12**

Semester 4			Credits
AVNC	2304	Foundations in Avionics Equipment Component Level Repairs	3
AVNC	2357	Aviation Communication Component Level Repair	3
CSIR	1355	Industry Certifications	3
ACGM	X3XX	Gen Ed Social/Behavioral Sciences Course	3
		Semester Totals	**12**

Semester 5			Credits
AVNC	2345	Aviation Navigational Equipment Component Level Repair	3
AVNC	2350	Aviation Pulsed RF Equipment Component Level Repair	3
AVNC	2355	Advanced Aviation Electronics Troubleshooting	3
ACGM	X3XX	Gen Ed Elective	3
		Semester Totals	**12**

Program Totals 60

Avionics Technology
Avionics Ramp Testing Certificate 1

Semester 1			Credits
AVNC	1303	Introduction to Aviation Electronic Systems	3
AVNC	1343	Aviation Electrical and Electronic Systems Installation	3
IEIR	1371	Electrical Principles & Applications	3
		Semester Totals	**9**

Semester 2			Credits
AVNC	1353	Operational Testing of Aviation Electronic Systems	3
AVNC	2308	Aviation Electrical and Electronics Systems Installation II	3
CETT	1329	Solid State Devices	3
		Semester Totals	**9**

Semester 3			Credits
AVNC	1306	FAA Regulations for Avionics Certified Repair Station	3
AVNC	1391	Installation & Operational Testing of Avionics & Pilot-Static Systems	3
CETT	1325	Digital Fundamentals	3
CSIR	1355	Industry Certifications	3
		Semester Totals	**12**

Program Totals 30

Biology

The Department of Biology offers courses needed for the (ADN) preparatory program, LVN program, as well as for all other allied health fields. Biology faculty serve as student advisors for all programs listed above. General information regarding all allied health programs, including course pre-requisites, size, scheduling and course requirements will be provided for any student interested in obtaining an allied health degree.

Biology is available at the Harlingen campus.

Biology
Associate of Science

Semester 1			Credits
ENGL	1301	Composition I	3
BIOL	1306	Biology for Science Major I (lec)	3
BIOL	1106	Biology for Science Major I (lab)	1
HIST	1301	United States History I	3
SPCH	X3XX	Speech Elective	3
		Semester Totals	**13**

Semester 2			Credits
ENGL	1302	Composition II	3
BIOL	1307	Biology for Science Major II (lec)	3
BIOL	1107	Biology for Science Major II (lab)	1
HIST	1302	United States History II	3
MATH	1413	College Alegbra	3
		Semester Totals	**13**

Semester 3			Credits
ACGM	X3XX	Social/Behavioral Science Elective	3
CHEM	1311	General Chemistry (lecture)	3
CHEM	1111	General Chemistry (lab)	1
ACGM	X3XX	Fine Arts Elective	3
ACGM	X3XX	Fine Arts Elective	4
		Semester Totals	**14**

Semester 4			Credits
ACGM	X4XX	Approved Elective	4
GOVT	2301	American Government I	3
ACGM	X3XX	Humanities Elective	3
ACGM	X3XX	Approved Elective	3
		Semester Totals	**13**

Semester 5			Credits
CHEM	1312	General Chemistry II (lecture)	3
CHEM	1112	General Chemistry II (lab)	1
GOVT	2306	Texas Government	3
		Semester Totals	**7**

Program Totals 60

Biomedical Equipment Technology

First-rate equipment, experienced staff and an advisory board comprised of top industry names are just a few of the benefits available at TSTC. Biomedical equipment technicians work on equipment such as defibrillators, heart monitors, medical imaging equipment (X-rays, CAT scanners and ultrasound equipment), voice-controlled operating tables and electric wheelchairs, so the industry needs sharp, professional technicians that can inspect, calibrate, maintain, troubleshoot and repair this critical medical equipment. Students in the Biomedical Equipment Technology Program gain knowledge and hands-on experience working with everything from the simplest suction pump to the most sophisticated laboratory equipment, cardiac monitors, X-ray and ultrasound equipment. An enhanced skills certificate in Medical Imaging is also available.

Biomedical Equipment Technology is available at the Harlingen, Marshall and Waco campuses.

Biomedical Equipment Technology
Associate of Applied Science Degree

Semester 1			Credits
BIOM	1101	Biomedical Equipment Technology	1
BIOM	1270	Shop Skills for Biomedical Equipment Technicians	2
CETT	1303	DC Circuits	3
ITSC	1309	Integrated Software Applications I	3
MATH	1332	Contemporary Mathematics I	3
		Semester Totals	**12**

Semester 2			Credits
BIOM	1309	Applied Biomedical Equipment Technology	3
BIOM	1315	Medical Equipment Networks	3
ITNW	1325	or Fundamentals of Networking Technologies	
CETT	1305	AC Circuits	3
ENGL	1301	Composition I	3
ACGM	X3XX	Gen Ed Math/Natural Science Course	3
		Semester Totals	**15**

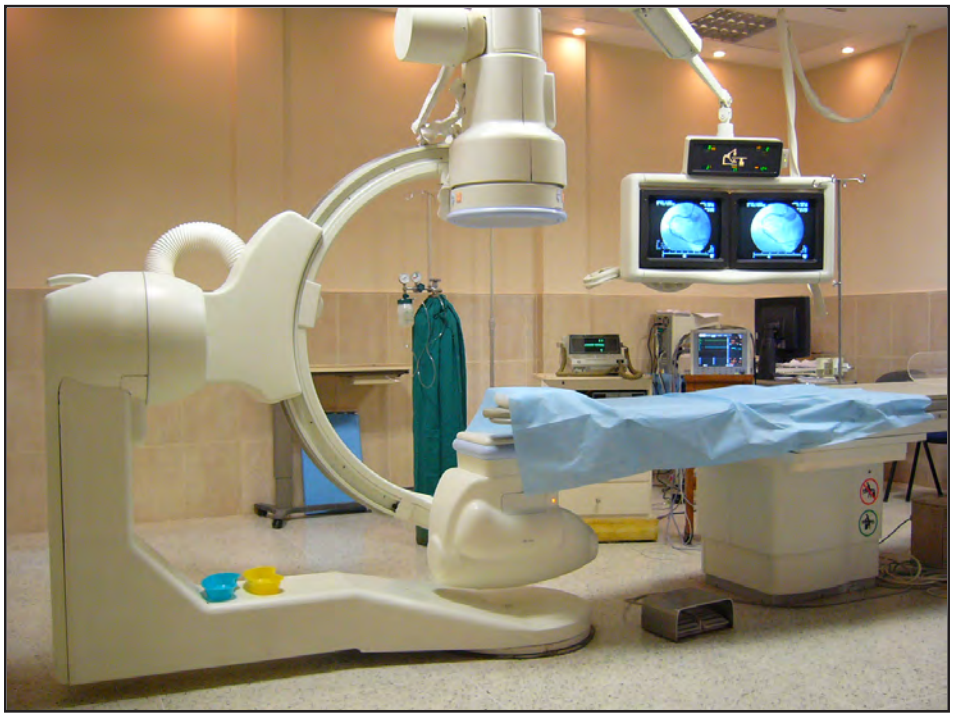
Semester 3			Credits
BIOM	1341	Medical Circuits/Troubleshooting	3
BIOM	2301	Safety in Health Care Facilities	3
BIOM	2311	General Medical Equipment I	3
BIOM	2319	Fundamentals of X-Ray and Medical Imaging Systems	3
CETT	1325	Digital Fundamentals	3
		Semester Totals	**15**

Semester 4			Credits
BIOM	2343	General Medical Equipment II	3
BIOM	1355	or Medical Electronic Applications	
BIOM	2215	Physiological Instruments I	2
BIOM	2231	Biomedical Clinical Instrumentation	2
BIOM	X2XX	Approved Biomedical Elective Course	2
ACGM	X3XX	Gen Ed Social/Behavioral Science Course	3
		Semester Totals	**12**

Semester 5			Credits
BIOM	2388	Internship-Biomedical Technology/Technician	3
ACGM	X3XX	Gen Ed Humanities/Fine Arts Course	3
		Semester Totals	**6**
		Program Totals	**60**

Biomedical Equipment Technology
Medical Imaging Specialization - Waco only

Semester 1			Credits
BIOM	1350	Diagnostic Ultrasound Imaging System	3
BIOM	2333	Digital Radiography	3
BIOM	2345	Advanced Imaging Systems	3
BIOM	2347	RF/X-Ray System	3
		Semester Totals	**12**
		Program Totals	**12**



Building Construction Technology

TSTC's Building Construction Program offers several options that can help you specialize, brush up your skills or move you on a faster track to build a career in this field. Students in this technology get crucial hands-on experience on the latest tools in the industry, backed by a knowledgeable staff and advisors in key positions within the industry. Specializations are available in Management and Project Management & Inspection. For quicker entry into the industry, certificates are also available.

Building Construction Technology is available at the Harlingen and Waco campuses.

Building Construction Technology
Building Construction Certificate 1 - Harlingen only

Semester 1			Credits
CNBT	1300	Residential and Light Commercial Blueprint Reading	3
CNBT	1315	Field Engineering I	3
CNBT	1316	Construction Technology I	3
DFTG	1313	Drafting for Specific Occupations	3
		Semester Totals	**12**

Semester 2			Credits
CNBT	1342	Building Codes and Inspections	3
CNBT	1350	Construction Technology II	3
OSHT	1305	OSHA Regulations-Construction Industry	3
		Semester Totals	**9**

Semester 3			Credits
CNBT	1311	Construction Methods and Materials I	3
CNBT	1346	Construction Estimating I	3
CNBT	2339	Construction Technology IV	3
CNBT	2342	Construction Management I	3
		Semester Totals	**12**

Program Totals 33

Building Construction Technology
Building Construction Craftsman Certificate 1
Waco, Williamson County

Semester 1			Credits
CNBT	1300	Residential and Light Commercial Blueprint Reading	3
CNBT	1315	Field Engineering I	3
CNBT	1316	Construction Technology I	3
TECM	1303	Technical Calculations	3
		Semester Totals	**12**

Semester 2			Credits
CNBT	1313	Concrete I	3
CNBT	1342	Building Codes and Inspections	3
CNBT	2342	Construction Management I	3
OSHT	1305	OSHA Regulations-Construction Industry	3
		Semester Totals	**12**

Semester 3			Credits
CRPT	1311	Roof Systems	3
CRPT	1341	Exterior Finish Systems	3
PFPB	2308	Piping Standards and Materials	3
CNBT	1302	Mechanical, Plumbing & Electrical Systems in Construction I	3
		Semester Totals	**12**

Program Totals 36

Building Construction Technology Management Specialization
Associate of Applied Science Degree - Harlingen only

Semester 1			Credits
CNBT	1300	Residential and Light Commercial Blueprint Reading	3
CNBT	1315	Field Engineering I	3
CNBT	1316	Construction Technology I	3
DFTG	1313	Drafting for Specific Occupations	3
ACGM	X3XX	Gen Ed Math/Natural Science Course	3
		Semester Totals	**15**

Semester 2			Credits
CNBT	1342	Building Codes and Inspections	3
CNBT	2342	Construction Management I	3
OSHT	1305	OSHA Regulations-Construction Industry	3
CNBT	1350	Construction Technology II	3
ACGM	X3XX	Gen Ed Social/Behavioral Science Course	3
		Semester Totals	**15**

Semester 3			Credits
CNBT	1311	Construction Methods and Materials I	3
CNBT	2339	Construction Technology IV	3
CNBT	2317	Green Building	3
ACGM	X3XX	Gen Ed Elective Course	3
ACGM	X3XX	Gen Ed Elective Course	3
		Semester Totals	**15**

Semester 4			Credits
CNBT	1346	Construction Estimating I	3
CNBT	2344	Construction Management II	3
CNBT	2310	Commercial/Industrial Blueprint Reading	3
CNBT	2337	Construction Estimating II	3
ACGM	X3XX	Gen Ed Humanities/Fine Arts Course	3
		Semester Totals	**15**

Program Totals 60

Building Construction Technology
Project Management & Inspection Specialization
Associate of Applied Science Degree - Waco only

Semester 1			Credits
CNBT	1300	Residential and Light Commercial Blueprint Reading	3
CNBT	1315	Field Engineering I	3
CNBT	1316	Construction Technology I	3
TECM	1303	Technical Calculations	3
ACGM	X3XX	Gen Ed Math/Natural Science Course	3
		Semester Totals	**15**

Semester 2			Credits
CNBT	1342	Building Codes and Inspections	3
CNBT	2342	Construction Management I	3
OSHT	1305	OSHA Regulations-Construction Industry	3
CNBT	1313	Concrete I	3
ACGM	X3XX	Gen Ed Social/Behavioral Science Course	3
		Semester Totals	**15**

Semester 3			Credits
CRPT	1311	Roof Systems	3
CRPT	1341	Exterior Finish Systems	3
PFPB	2308	Piping Standards and Materials	3
ACGM	X3XX	Gen Ed Elective Course	3
ACGM	X3XX	Gen Ed Elective Course	3
		Semester Totals	**15**

Semester 4			Credits
CNBT	1346	Construction Estimating I	3
CNBT	2344	Construction Management II	3
WDWK	1300	Beginning Woodworking	3
CNBT	1302	Mechanical, Plumbing & Electrical Systems in Construction I	3
ACGM	X3XX	Gen Ed Humanities/Fine Arts Course	3
		Semester Totals	**15**

Program Totals 60

Business Applications Programming

The maturation of network technology has made possible the distribution of data and computing over a variety of hardware and software platforms, and a growing number of businesses and organizations are using the Internet to collaborate with customers, clients and suppliers. The Business Applications Programming degree gives you the skills needed to begin as an entry-level programmer with skills applicable to a client/server environment. The curriculum for this specialization begins with fundamental programming, database and networking concepts. Students will receive training using programming languages such as, C++, C#, Visual Basic, Java and ASP, and hands-on training with Server-based database implementation and applications, including Microsoft SQL Server, Microsoft IIS, Oracle 11g, and ASP application server. Microsoft Corporation offers a series of examinations leading to Microsoft Certified Solutions Developer (MCSD) and other Microsoft certifications, which students are encouraged to pursue.

Business Applications Programming is available at the Waco campus.

Business Applications Programming Associate of Applied Science Degree

Semester 1			Credits
ACNT	1303	Introduction to Accounting I	3
ITSE	1329	Programming Logic and Design	3
MATH	1314	College Algebra	3
PSYC	2301	General Psychology	3
		Semester Totals	**12**

Semester 2			Credits
ITSE	1302	Computer Programming	3
ITSE	1307	Introduction to C++ Programming	3
ITSW	1307	Introduction to Database	3
ENGL	1301	Composition I	3
		Semester Totals	**12**

Semester 3			Credits
ITSE	2317	Java Programming	3
ITSE	2331	Advanced C++ Programming	3
ITSE	2334	Advanced Visual Basic.NET Programming	3
ITSE	2338	C# Database Development with ADO.NET	3
		Semester Totals	**12**

Semester 4			Credits
INEW	1340	ASP.NET Programming	3
INEW	2330	Comprehensive Software Project: Planning and Design	3
INEW	2338	Advanced Java Programming	3
ITSE	2333	Implementing a Database on Microsoft SQL Server	3
		Semester Totals	**12**

Semester 5			Credits
INEW	2332	Comprehensive Software Project: Coding, Testing, and Implementation	3
ITSE	1392	Special Topics in Computer Programming	3
ENGL	2311	Technical Writing	3
HUMA	1301	Introduction to Humanities I	3
		Semester Totals	**12**

Program Totals 60

Business Management Technology

The Business Management Technology program prepares students for occupations in the business industry. Specializations in Office Management or Operations Management prepare students for office positions such as executive assistant or first-line supervisor and manager of production, respectively. Many industries continue to seek for applicants with a college degree related to the business industry. Graduates are skilled in desktop publishing, integrated software applications, database management, records and information management, administrative office management, project management, and the management of human resources. For the Office Management specialization, courses in business and management principles, customer relationship and human resources management would provide graduates the knowledge and understanding of interactive responsibilities such as planning conferences, working with clients and other staff members. The Operations Management specialization offers courses in quality, facilities, and strategic management, providing graduates the knowledge and understanding of the interactive responsibilities such as planning, prioritizing and the coordination of people and resources to accomplish specific goals.

Business Management is available at the Harlingen campus.

Business Management Technology Operation Management Specialization Associate of Applied Science Degree

Semester 1			Credits
BCIS	1305	Business Computer Applications	3
BUSI	1301	Business Principles	3
ACGM	X3XX	Gen Ed Humanities/Fine Arts Course	3
ACGM	X3XX	Gen Ed Social/Behavioral Science Course	3
		Semester Totals	**12**

Semester 2			Credits
ECON	2301	Principles of Macroeconomics	3
ENGL	1301	Composition I	3
MATH	1314	College Algebra	3
SPCH	X3XX	Gen Ed Speech Course	3
		Semester Totals	**12**

Semester 3			Credits
ACCT	2301	Principles of Financial Accounting	3
BMGT	1327	Principles of Management	3
ECON	2302	Principles of Microeconomics	3
POFI	1349	Spreadsheets	3
		Semester Totals	**12**

Semester 4			Credits
HRPO	2301	Human Resources Management	3
ACCT	2302	Principles of Managerial Accounting	3
BMGT	2331	Production and Operations Management	3
BMGT	1306	Principles of Purchasing	3
		Semester Totals	**12**

Semester 5			Credits
BMGT	1331	Production and Operations Management	3
BMGT	2341	Strategic Management	3
LMGT	1325	Wearhouse and Distribution Center Management	3
BMGT	1309	Information and Project Management	3
		Semester Totals	**12**

Program Totals 60

Business Management Technology Office Management Specialization Associate of Applied Science Degree

Semester 1			Credits
BCIS	1305	Business Computer Applications	3
BUSI	1301	Business Principles	3
ACGM	X3XX	Gen Ed Humanities/Fine Arts Course	3
ACGM	X3XX	Gen Ed Social/Behavioral Science Course	3
		Semester Totals	**12**

Semester 2			Credits
ECON	2301	Principles of Macroeconomics	3
ENGL	1301	Composition I	3
MATH	1314	College Algebra	3
SPCH	X3XX	Gen Ed Speech Course	3
		Semester Totals	**12**

Semester 3			Credits
ACCT	2301	Principles of Financial Accounting	3
BMGT	1327	Principles of Management	3
ECON	2302	Principles of Microeconomics	3
POFI	1349	Spreadsheets	3
		Semester Totals	**12**

Semester 4			Credits
HRPO	2301	Human Resources Management	3
ACCT	2302	Principles of Managerial Accounting	3
LAWT	1301	Copyright and Ethical Issues	3
ITSC	2321	Integrated Software Applications II	3
		Semester Totals	**12**

Semester 5			Credits
POFT	1319	Records and Information Management I	3
MRKG	1301	Customer Relationship Management	3
ITSC	1315	Project Management Software	3
BMGT	1325	Office Management	3
		Semester Totals	**12**

Program Totals 60

Chemical Dependency Counseling

The Chemical Dependency Counseling Program at TSTC facilitates the development of the skills necessary for success in the chemical dependency counseling services industry. The program focuses on clinical evaluations, treatment planning, referrals, service coordination, individual and group counseling, documentation, professional and ethical responsibilities, and client, family and community education. With this knowledge base, students will be prepared to work as counselor interns as they strive toward licensure requirements. Graduates of the program find work opportunities through the criminal justice system, substance abuse treatment centers or hospitals. For quicker entry into the industry, a certificate is also available.

Chemical Dependency Counseling is available at the Abilene, Breckenridge and Brownwood campuses.

Chemical Dependency Counseling
Associate of Applied Science Degree

Semester 1			Credits
DAAC	1319	Substance-Related and Addictive Disorders	3
PSYT	1313	Psychology of Personal Adjustment	3
PSYC	2301	General Psychology	3
ACGM	X3XX	Gen Ed Elective	3
ACGM	X3XX	Gen Ed Elective	3
		Semester Totals	**15**

Semester 2			Credits
DAAC	1309	Assessment Skill of Alcohol and Other Drug Addictions	3
DAAC	1311	Counseling Theories	3
DAAC	2306	Substance Abuse Prevention I	3
DAAC	2307	Addicted Family Intervention	3
DAAC	2343	Current Issues	3
		Semester Totals	**15**

Semester 3			Credits
DAAC	1304	Pharmacology of Addiction	3
DAAC	1305	Co-Occurring Disorders	3
DAAC	1317	Basic Counseling Skills	3
ACGM	X3XX	Gen Ed Humanities/Fine Arts Course	3
		Semester Totals	**12**

Semester 4			Credits
CJSA	1325	Criminology	3
DAAC	2301	Therapeutic Communities in a Criminal Justice Setting	3
DAAC	2341	Counseling Alcohol and Other Drug Addictions	3
DAAC	2354	Dynamics of Group Counseling	3
		Semester Totals	**12**

Semester 5			Credits
DAAC	2366	Practicum (or Field Experience)-Substance Abuse /Addiction Counseling	3
ACGM	X3XX	Gen Ed Math/Science Course	3
		Semester Totals	**6**
		Program Totals	**60**

Chemical Dependency Counseling
Chemical Dependency Counseling Certificate 1

Semester 1			Credits
DAAC	1319	Substance-Related and Addictive Disorders	3
DAAC	2301	Therapeutic Communities in a Criminal Justice Setting	3
DAAC	2307	or Addicted Family Intervention	
DAAC	2341	Counseling Alcohol and Other Drug Addictions	3
DAAC	2354	Dynamics of Group Counseling	3
DAAC	1317	or Basic Counseling Skills	
		Semester Totals	**12**

Semester 2			Credits
DAAC	1311	Counseling Theories	3
CJSA	1325	or Criminology	
DAAC	1309	Assessment Skill of Alcohol and Other Drug Addictions	3
DAAC	2343	Current Issues	3
DAAC	2366	Practicum (or Field Experience)-Substance Abuse/ Addiction Counseling	3
		Semester Totals	**12**
		Program Totals	**24**

Chemical Technology

Dozens of industries need the vital skills of chemical/environmental technicians. You'll find them at the heart of laboratories in petrochemical plants, environmental operations, semiconductor manufacturing factories, water purification facilities and many other places. TSTC students learn hands-on skills in Chemical Technology that can put them first in the job market. Taught by experienced staff and guided by an advisory board with top industry names, you can be assured you're getting the best possible education. TSTC's Chemical Technology students learn the basic chemical processes and have access to equipment such as chromatographs, spectrometers and mass spectrophotometers, as well as work in a wet chemical laboratory. With an Associate of Applied Science degree in Chemical/Environmental Laboratory Technology, you can look forward to excellent career opportunities and outstanding starting salaries.

Chemical Technology is available at the Harlingen and Waco campuses.

Chemical Technology
Associate of Applied Science Degree

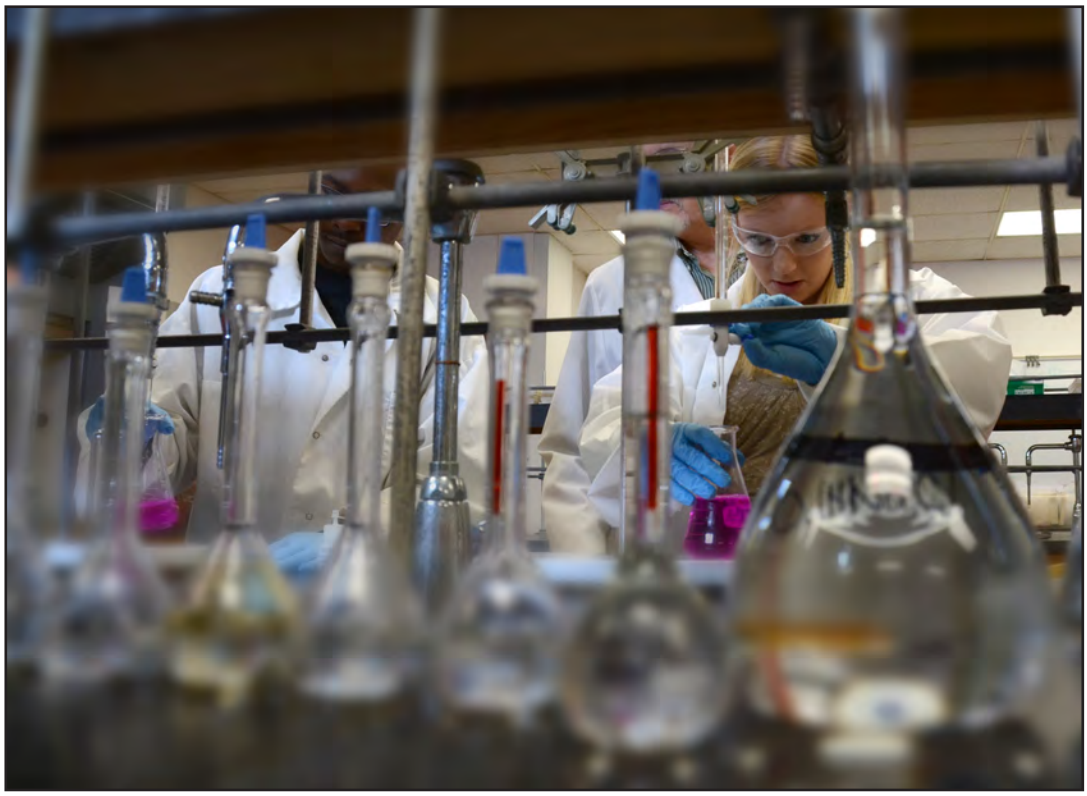
Semester 1			Credits
CTEC	1205	Chemical Calculations I	2
CTEC	1113	Introduction to Chemical Technology	1
SCIT	1414	Applied General Chemistry I	4
ENGL	1301	Composition I	3
MATH	1314	College Algebra	3
		Semester Totals	**13**

Semester 2			Credits
CTEC	1206	Chemical Calculations II	2
CTEC	1345	Chemical Laboratory Safety	3
SCIT	1415	Applied General Chemistry II	4
ACGM	X3XX	Gen Ed Humanities/Fine Arts Course	3
		Semester Totals	**12**

Semester 3			Credits
SCIT	1543	Applied Analytical Chemistry I	5
SCIT	2401	Applied Organic Chemistry I	4
ACGM	X3XX	Gen Ed Social/Behavioral Science Course	3
		Semester Totals	**12**

Semester 4			Credits
CTEC	1441	Applied Instrumental Analysis I	4
SCIT	2402	Applied Organic Chemistry II	4
CTEC	2441	or Polymers I	
ACGM	X4XX	Gen Ed Approved Science Course	4
		Semester Totals	**12**

Semester 5			Credits
CTEC	2333	Comprehensive Studies in Chemical Technology	3
CTEC	2431	Applied Instrumental Analysis II	4
CTEC	2445	Unit Operations	4
CTEC	2110	or Process Equipment Trainer	
PTAC	1332	and Process Instrumentation I	
		Semester Totals	**11**
		Program Totals	**60**



Cloud & Data Center Management

The Cloud & Data Center Management Program covers skills such as server and network maintenance and deployment, cloud computing and cloud storage, private, public, and hybrid cloud operation and deployments, virtualization, clustering, network storage, hosting, co-location strategies, analytics, high-speed networking, Software Defined Networking (SDN), troubleshooting skills, security principles and procedures, data center cooling and powering techniques, and Network Operations Center (NOC) and command center strategies, and programming and scripting. Students in the program will be exposed to the heavy hitters of the industry, including Dell, HP, IBM, EMC, NetApp, Brocade, Mellanox, Cisco, Pica8, Juniper, CRAY, Microsoft, VMware, Citrix, Nagios, Solarwinds, Mirantis (OpenStack), and more.

Cloud & Data Center Computing is available at the Waco campus.

Cloud & Data Center Computing
Associate of Applied Science Degree

Semester 1			Credits
ITNW	1325	Fundamentals of Networking Technologies	3
ITSC	1325	Personal Computer Hardware	3
ITSC	1374	Help Desk: Customer Service Skills	3
MATH	1332	Contemporary Mathematics I	3
		Semester Totals	**12**

Semester 2			Credits
ITNW	1345	Implementing Network Directory Services	3
ITNW	2313	Networking Hardware	3
ITSE	1329	Programming Logic and Design	3
ENGL	1301	Composition I	3
		Semester Totals	**12**

Semester 3			Credits
ITNW	1313	Computer Virtualization	3
ITSC	1316	Linux Installation and Configuration	3
ITSE	1359	Introduction to Scripting Languages	3
ENGL	2311	Technical & Business Writing	3
		Semester Totals	**12**

Semester 4			Credits
ITNW	2352	Administering SQL Server	3
ITNW	2354	Internet/Intranet Server	3
ITSY	1342	Information Technology Security	3
ACGM	X3XX	Gen Ed Humanities/Fine Arts Course	3
		Semester Totals	**12**

Semester 5			Credits
ITSC	2325	Advanced Linux	3
ITNW	2373	High Performance Computing Systems Support	3
ITNW	2376	Cloud Deployment and Infrastructure Management	3
ACGM	X3XX	Gen Ed Social/Behavioral Science Course	3
		Semester Totals	**12**

Program Totals 60

Computer-Aided Drafting & Design Technology

Drafters prepare technical drawings and plans used by production and construction workers to build everything from manufactured products such as toys, toasters, industrial machinery, and spacecraft to structures such as houses, office buildings, and oil and gas pipelines. Drafters' drawings provide visual guidelines; show the technical details of the products and structures; and specify dimensions, materials, and procedures. Drafters fill in technical details using drawings, rough sketches, specifications, codes, and calculations previously made by engineers, surveyors, architects, or scientists. Drafters use technical handbooks, tables, calculators, and computers to complete their work. The Computer-Aided Drafting & Design Program offers the technical skills needed for a career in this essential field. In our hands-on learning environment, students utilize computer programs such as AutoCAD, Inventor, Revit and AutoCAD Civil 3D. For quicker entry into the industry, a certificate in Mechanical Drafting is also available.

The Computer-Aided Drafting & Design Technology program is available at the Abilene, Brownwood, Marshall, North Texas Center, and Sweetwater campuses.

Computer-Aided Drafting & Design Technology
Associate of Applied Science Degree

Semester 1			Credits
DFTG	1305	Technical Drafting	3
DFTG	1309	Basic Computer-Aided Drafting	3
SRVY	1301	Introduction to Surveying	3
POFI	1301	or Computer Applications I	
ACGM	X3XX	Gen Ed Math/Natural Science Course	3
		Semester Totals	**12**

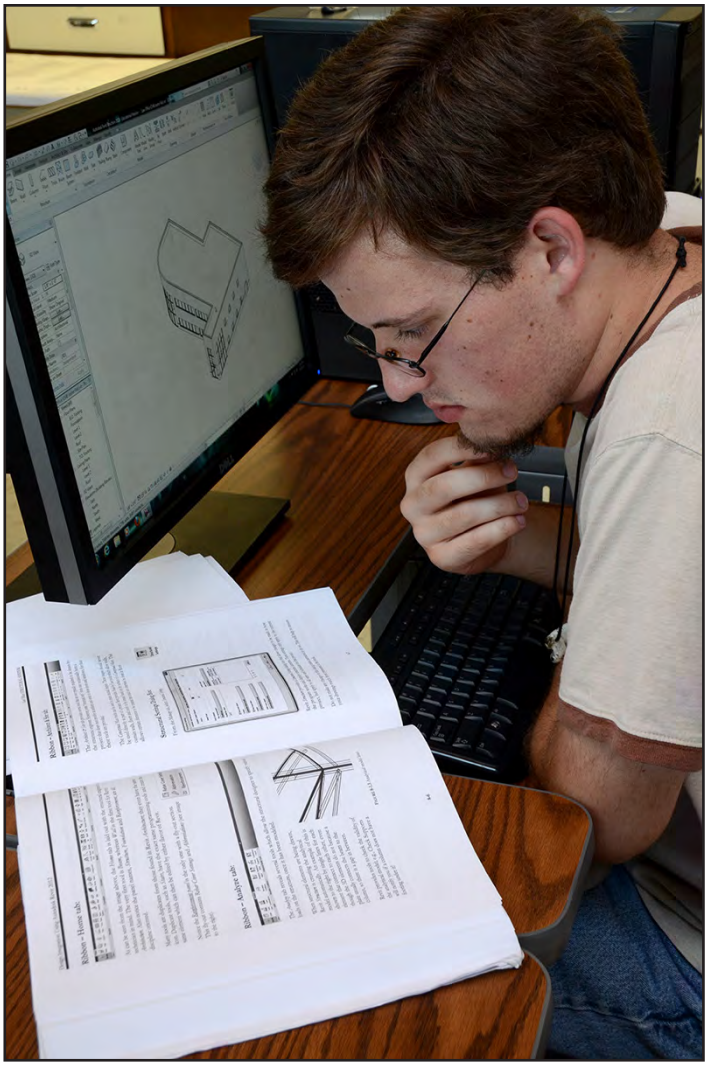
Semester 2			Credits
DFTG	1317	Architectural Drafting-Residential	3
DFTG	1333	Mechanical Drafting	3
DFTG	2319	Intermediate Computer-Aided Drafting	3
DFTG	2340	Solid Modeling/Design	3
		Semester Totals	**12**

Semester 3			Credits
ARCE	1352	Structural Drafting	3
DFTG	1329	Electro-Mechanical Drafting	3
DFTG	2330	Civil Drafting	3
ACGM	X3XX	Gen Ed Elective Course	3
		Semester Totals	**12**

Semester 4			Credits
DFTG	2302	Machine Drafting	3
DFTG	2323	Pipe Drafting	3
MCHN	1326	or Introduction to Computer-Aided Manufacturing (CAM)	
DFTG	2332	Advanced Computer-Aided Drafting	3
ACGM	X3XX	Gen Ed Social/Behavioral Science Course	3
		Semester Totals	**12**

Semester 5			Credits
DFTG	2357	Advanced Technologies in Pipe Design and Drafting	3
DFTG	2338	or Final Project-Advanced Drafting	
DFTG	2386	Internship-Drafting & Design Technology/ Technician, General	3
ACGM	X3XX	Gen Ed Elective Course	3
ACGM	X3XX	Gen Ed Humanities/Fine Arts Course	3
		Semester Totals	**12**

Program Totals 60



Computer-Aided Drafting & Design Technology
CAD Mechanical Drafting Technician Certificate 2

Marshall, North Texas only

Semester 1			Credits
DFTG	1305	Technical Drafting	3
DFTG	1309	Basic Computer-Aided Drafting	3
DFTG	1325	Blueprint Reading and Sketching	3
POFI	1301	Computer Applications I	3
		Semester Totals	**12**

Semester 2			Credits
DFTG	1333	Mechanical Drafting	3
DFTG	2319	Intermediate Computer-Aided Drafting	3
DFTG	2340	Solid Modeling/Design	3
MCHN	1326	Introduction to Computer-Aided Manufacturing (CAM)	3
		Semester Totals	**12**

Semester 3			Credits
DFTG	1329	Electro-Mechanical Drafting	3
DFTG	2302	Machine Drafting	3
DFTG	2332	Advanced Computer-Aided Drafting	3
DFTG	2338	Final Project-Advanced Drafting	3
		Semester Totals	**12**

Program Totals 36

Computer-Aided Manufacturing

TSTC's Computer-Aided Manufacturing program has a proven track record for helping students acquire the skills to manufacture world-class ultra-precision machined components and the skills needed in the manufacturing sector to fill thousands of high-paying positions. At TSTC, you can develop the skills and knowledge sought by manufacturing industries, including commercial and military aircraft, medical, telecommunication, automotive and oil tool manufacturing. Students of the Computer-Aided Manufacturing program progress through a series of machine tool operation courses to develop and challenge their process skills using conventional and Computer Numerical Controlled, or CNC machines. You will also learn about the various materials used in today's manufacturing industry. Today's machinists can interpret complex drawings, select the appropriate materials and perform the machining processes to transform engineering concepts into quality, working components. For quicker entry into the industry, certificates are also available.

Computer-Aided Manufacturing is available at the Marshall and North Texas Center campuses.

Computer-Aided Manufacturing
Computer-Aided Manufacturing Machinist
Associate of Applied Science Degree

Semester 1			Credits
DFTG	1325	Blueprint Reading and Sketching	3
MCHN	1438	Basic Machine Shop I	4
MCHN	1343	Machine Shop Mathematics	3
MCHN	2303	Fundamentals of Computer Numerical Controlled (CNC) Machine Controls	3
ACGM	X3XX	Gen Ed English Elective	3
		Semester Totals	**16**

Semester 2			Credits
DFTG	1309	Basic Computer-Aided Drafting	3
MCHN	1452	Intermediate Machining I	4
MCHN	2331	Operation of CNC Turning Centers	3
ACGM	X3XX	Gen Ed Math/Natural Sciences Course	3
ACGM	X3XX	Gen Ed Elective	3
		Semester Totals	**16**

Semester 3			Credits
MCHN	1326	Introduction to Computer-Aided Manufacturing (CAM)	3
MCHN	2434	Operation of CNC Machining Centers	4
ACGM	X3XX	Gen Ed Humanities/Fine Arts Course	3
MCHN	2341	Advanced Machining I	3
		Semester Totals	**13**

Semester 4			Credits
DFTG	1333	Mechanical Drafting	3
POFI	1301	Computer Applications I	3
MCHN	2335	Advanced CNC Machining	3
WLDG	1337	Introduction to Welding Metallurgy	3
ACGM	X3XX	Gen Ed Social/Behavioral Sciences Course	3
		Semester Totals	**15**

Program Totals 60

Computer-Aided Manufacturing
Computer-Aided Manufacturing Certificate 1 -
Marshall only

Semester 1			Credits
DFTG	1325	Blueprint Reading and Sketching	3
MCHN	1343	Machine Shop Mathematics	3
MCHN	1438	Basic Machine Shop I	4
MCHN	2303	Fundamentals of Computer Numerical Controlled (CNC) Machine Controls	3
		Semester Totals	**13**

Semester 2			Credits
DFTG	1309	Basic Computer-Aided Drafting	3
WLDG	1337	Introduction to Welding Metallurgy	3
		Semester Totals	**6**

Program Totals 19

Computer-Aided Manufacturing
Machinist Certificate 2

Semester 1			Credits
DFTG	1325	Blueprint Reading and Sketching	3
MCHN	1343	Machine Shop Mathematics	3
MCHN	1438	Basic Machine Shop I	4
MCHN	2303	Fundamentals of Computer Numerical Controlled (CNC) Machine Controls	3
		Semester Totals	**13**

Semester 2			Credits
DFTG	1309	Basic Computer-Aided Drafting	3
MCHN	1452	Intermediate Machining I	4
MCHN	2331	Operation of CNC Turning Centers	3
WLDG	1337	Introduction to Welding Metallurgy	3
		Semester Totals	**13**

Semester 3			Credits
MCHN	1326	Introduction to Computer-Aided Manufacturing (CAM)	3
MCHN	2341	Advanced Machining I	3
MCHN	2434	Operation of CNC Machining Centers	4
POFI	1301	Computer Applications I	3
		Semester Totals	**13**

Program Totals 39

Computer Maintenance Technology

For those who want to enter the computer maintenance field, TSTC's Computer Maintenance Technology Program provides an in-depth education in all aspects of computer systems maintenance and integration, including computer hardware components, operating systems and peripheral devices. Students learn computer operations, electronics, troubleshooting, repair skills and much more. The curriculum also covers Local and Wide Area Networks (LANs and WANs), data communications, telecommunications, computer integration home integand other skills, including designing, installing and maintaining computer systems in stand-alone, LAN and WAN environments. For quicker entry into the industry, a general Computer Maintenance Technology certificate, and a certificate specializing in home integration are also available.

Computer Maintenance Technology is available at the Harlingen and Waco campuses.

Computer Maintenance Technology
Associate of Applied Science Degree

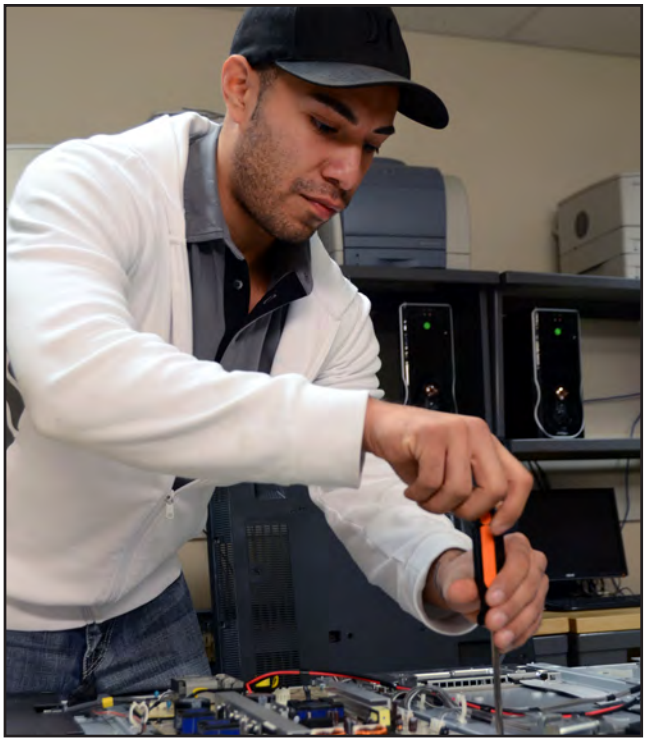
Semester 1			Credits
CPMT	1304	Microcomputer System Software	3
ITNW	1325	Fundamentals of Networking Technologies	3
ITSC	1325	Personal Computer Hardware	3
CPMT	1311	or Introduction to Computer Maintenance	
ACGM	X3XX	Gen Ed Natural Science/Math Elective	3
		Semester Totals	**12**

Semester 2			Credits
CPMT	1345	Computer Systems Maintenance	3
ITNW	1354	Implementing and Supporting Servers	3
ITSC	1321	Intermediate PC Operating Systems	3
ENGL	1301	Composition I	3
		Semester Totals	**12**

Semester 3			Credits
CPMT	1307	Electronic and Computer Skills	3
CPMT	1349	Computer Networking Technology	3
CPMT	1371	or Introduction to MAC Operating Systems	
ITSC	2339	Personal Computer Help Desk Support	3
ACGM	X3XX	Gen Ed Humanities/Fine Arts Elective	3
		Semester Totals	**12**

Semester 4			Credits
CPMT	1347	Computer System Peripherals	3
CPMT	2302	Home Technology Integration	3
ITSY	1300	Fundamentals of Information Security	3
GAME	1301	or Computer Ethics	
ACGM	X3XX	Elective	3
		Semester Totals	**12**

Semester 5			Credits
CPMT	2333	Computer Integration	3
CPMT	2345	Computer System Troubleshooting	3
CPMT	2350	Industry Certification Preparation	3
ACGM	X3XX	Elective	3
		Semester Totals	**12**
		Program Totals	**60**



Computer Maintenance Technology
Computer Maintenance Technician Certificate 1

Semester 1			Credits
CPMT	1311	Introduction to Computer Maintenance	3
CPMT	1304	Microcomputer System Software	3
CPMT	1345	Computer Systems Maintenance	3
CPMT	1307	Electronic and Computer Skills	3
CPMT	1371	Introduction to MAC Operating Systems	3
CPMT	1349	or Computer Networking Technology	
ITNW	1325	Fundamentals of Networking Technologies	3
		Semester Totals	**18**
		Program Totals	**18**

Computer Maintenance Technology
Home Integration Certificate 1 - Waco only

Semester 1			Credits
CPMT	1307	Electronic and Computer Skills	3
CPMT	1349	Computer Networking Technology	3
CPMT	2302	Home Technology Integration	3
ITSC	1325	Personal Computer Hardware	3
		Semester Totals	**12**

Semester 2			Credits
CPMT	1304	Microcomputer System Software	3
ITNW	1354	Implementing and Supporting Servers	3
ITSC	2339	Personal Computer Help Desk Support	3
ITSY	1300	Fundamentals of Information Security	3
		Semester Totals	**12**

Semester 3			Credits
CPMT	2370	Home Automation	3
CPMT	2371	Audio/Video Networks	3
CSIR	1359	Digital Data Communication	3
EEIR	1307	Introductory Security Systems	3
		Semester Totals	**12**
		Program Totals	**36**

Computer Network Maintenance

These days, computers are so vital to society that "downtime" can literally strangle business and industry. That's why companies seek professionals with the knowledge and foresight to eliminate downtime through proper computer setup, installation and maintenance. Businesses rely on skilled computer maintenance technicians to keep their computer systems up and running. To help meet that need, TSTC offers the Computer Maintenance Technology Program, in which you can get an in-depth education in all aspects of computer systems integration. The program focuses on computer hardware components, operating systems and peripheral devices. While studying computer maintenance at TSTC, you can learn computer operations, electronics, troubleshooting and repair skills. The curriculum also covers Local and Wide Area Networks (LANs and WANs), data communications, telecommunications and computer integration. You can gain hands-on experience designing, installing and maintaining computer systems in stand-alone, LAN and WAN environments. You can also learn to integrate equipment for a variety of applications, such as those involving the World Wide Web, multimedia and data acquisition.

Computer Network Maintenance is available at the Marshall and North Texas campuses.

Computer Network Maintenance
Associate of Applied Science Degree

Semester 1			Credits
ITNW	1325	Fundamentals of Networking Technologies	3
CPMT	1307	Electronic and Computer Skills	3
ITSC	1325	Personal Computer Hardware	3
ACGM	X3XX	Gen Ed Mathematics Course	3
		Semester Totals	**12**

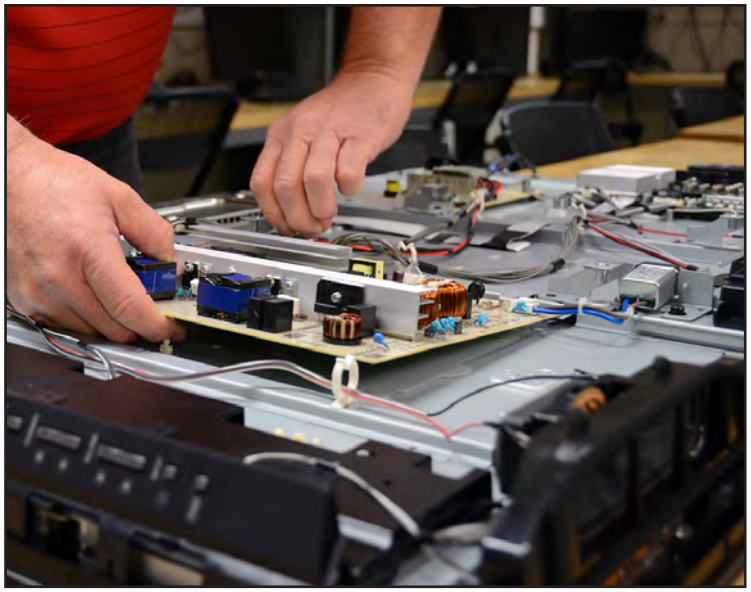
Semester 2			Credits
ITNW	1308	Implementing and Supporting Client Operating Systems	3
CPMT	1304	Microcomputer System Software	3
ITNW	1345	Implementing Network Directory Services	3
ACGM	X3XX	Gen Ed English Course	3
		Semester Totals	**12**

Semester 3			Credits
CPMT	1345	Computer Systems Maintenance	3
CPMT	1349	Computer Networking Technology	3
ITSC	2339	Personal Computer Help Desk Support	3
ACGM	X3XX	Gen Ed Elective Course	3
		Semester Totals	**12**

Semester 4			Credits
CPMT	2345	Computer System Troubleshooting	3
ITNW	1358	Network+	3
ITSY	1300	Fundamentals of Information Security	3
ACGM	X3XX	Gen Ed Humanities/Fine Arts Course	3
		Semester Totals	**12**

Semester 5			Credits
CPMT	2388	Internship-Computer Installation and Repair Technology/Technician	3
ITSC	1315	Project Management Software	3
ITSY	1342	Information Technology Security	3
ACGM	X3XX	Gen Ed Social/Behavioral Science Course	3
		Semester Totals	**12**

Program Totals 60



Computer Network Maintenance
Computer Network Maintenance Certificate 2

Semester 1			Credits
CPMT	1307	Electronic and Computer Skills	3
ITNW	1325	Fundamentals of Networking Technologies	3
ITSC	1325	Personal Computer Hardware	3
ITSY	1300	Fundamentals of Information Security	3
		Semester Totals	**12**

Semester 2			Credits
CPMT	1345	Computer Systems Maintenance	3
CPMT	1349	Computer Networking Technology	3
ITNW	1308	Implementing and Supporting Client Operating Systems	3
ITSC	2339	Personal Computer Help Desk Support	3
		Semester Totals	**12**

Semester 3			Credits
CPMT	2345	Computer System Troubleshooting	3
CPMT	2388	Internship-Computer Installation and Repair Technology/Technician	3
ITNW	1358	Network+	3
ITSC	1315	Project Management Software	3
		Semester Totals	**12**

Program Totals 36

Computer Networking & Security Technology

The focus of the Computer Networking & Security Technology Program is the implementation and protection of data system networks that are connected to the Internet. Students in the program will gain the skills/knowledge required to prevent, defend, detect, and respond to cyber-attacks and threats. Students will also learn how to install and configure network devices (switches, routers, firewalls, wireless routers, access points, cabling), end-user workstations/devices and network servers that control, monitor or provide user services on internal or external networks.

Computer Networking & Security Technology is available at the Harlingen campus.

Computer Networking & Security Associate of Applied Science Degree

Semester 1			Credits
CPMT	1311	Introduction to Computer Maintenance	3
ITNW	1325	Fundamentals of Networking Technologies	3
ITNW	1354	Implementing and Supporting Servers	3
ENGL	1301	Composition I	3
		Semester Totals	**12**

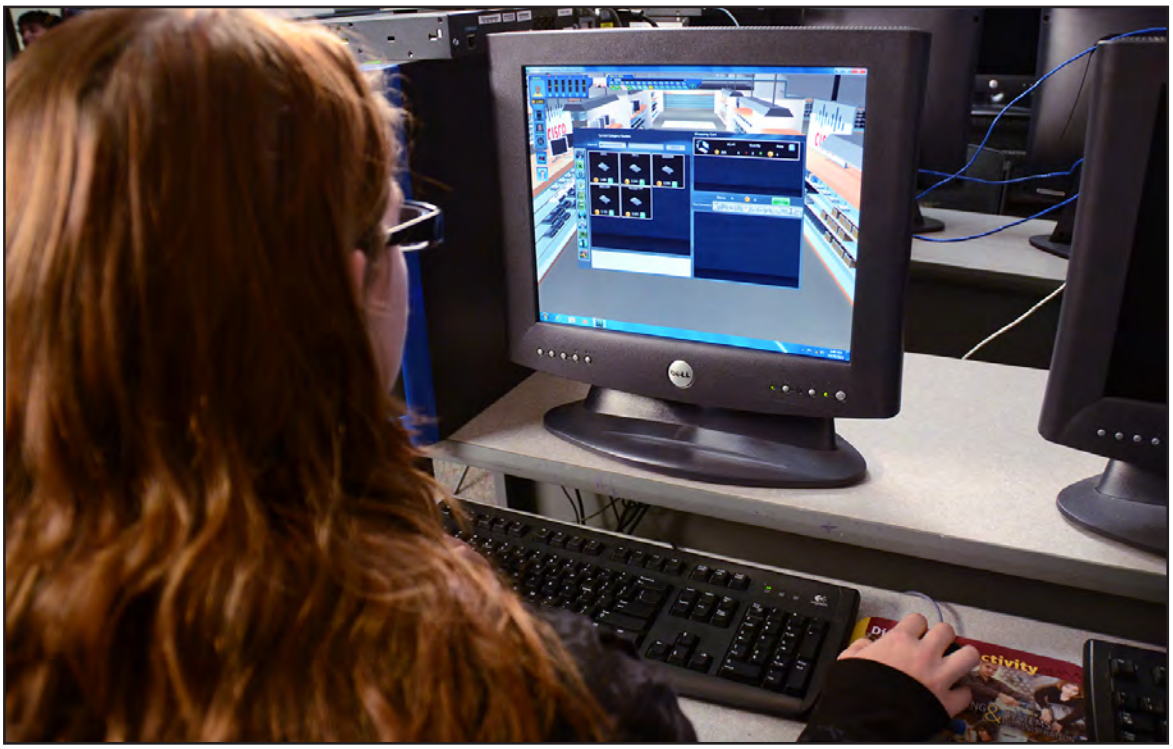
Semester 2			Credits
ITNW	2321	Networking with TCP/IP	3
ITNW	2359	Web Server Support and Maintenance	3
ITSC	1316	Linux Installation and Configuration	3
MATH	1314	College Algebra	3
		Semester Totals	**12**

Semester 3			Credits
ITNW	2312	Routers	3
ITSC	2325	Advanced Linux	3
ITSY	1342	Information Technology Security	3
ACGM	X3XX	Gen Ed Humanities/Fine Arts Course	3
		Semester Totals	**12**

Semester 4			Credits
ITNW	1313	Computer Virtualization	3
ITSY	2301	Firewalls and Network Security	3
ITSY	2330	Intrusion Detection	3
ACGM	X3XX	Gen Ed Elective	3
		Semester Totals	**12**

Semester 5			Credits
ITNW	2350	Enterprise Network	3
ITSE	1359	Introduction to Scripting Languages	3
ITSY	2359	Security Assessment and Auditing	3
ACGM	X3XX	Gen Ed Social/Behavioral Science Course	3
		Semester Totals	**12**

Program Totals 60



Computer Networking & Systems Administration

The Computer Networking & Systems Administration (CNS) program prepares technicians to build, manage and maintain communication systems through a variety of associate degrees and certifications. Through classroom instruction and hands-on training, students learn everything from client and server operating systems to Cisco equipment, Linux and much more. The two-year CNS program includes classroom and laboratory instruction that focuses on building extensive experience in Microsoft and System Administration, and you can choose the overall CNS program, or a CISCO specialization. For quicker entry into the industry, certificates in Computer Networking & Systems and Computer Tech Support also offered.

Computer Networking & Systems Administration is offered at the Abilene, Brownwood, Marshall, North Texas Center, Waco and Williamson County campuses.

Computer Networking & Systems Administration Associate of Applied Science Degree

Semester 1			Credits
ITNW	1308	Implementing and Supporting Client Operating Systems	3
ITNW	1325	Fundamentals of Networking Technologies	3
ITSC	1325	Personal Computer Hardware	3
ACGM	X3XX	Gen Ed Math/Natural Science Course	3
		Semester Totals	**12**

Semester 2			Credits
ITNW	1358	Network+	3
ITNW	1345	Implementing Network Directory Services	3
ITSY	1300	Fundamentals of Information Security	3
ACGM	X3XX	Gen Ed English Course	3
		Semester Totals	**12**

Semester 3			Credits
ITNW	2312	Routers	3
ITSY	1342	Information Technology Security	3
ITSC	1316	Linux Installation and Configuration	3
ACGM	X3XX	Gen Ed Elective Course	3
		Semester Totals	**12**

Semester 4			Credits
ITCC	1340	Switching Basics	3
ITNW	2335	Network Troubleshooting and Support	3
ITNW	2354	Internet/Intranet Server	3
ACGM	X3XX	Gen Ed Humanities/Fine Arts Course	3
		Semester Totals	**12**

Semester 5			Credits
ITSY	2330	Intrusion Detection	3
ITNW	2352	Administering SQL Server	3
ITSC	2386	Internship-Computer and Information Sciences, General	3
ACGM	X3XX	Gen Ed Social/Behavioral Science Course	3
		Semester Totals	**12**

Program Totals 60

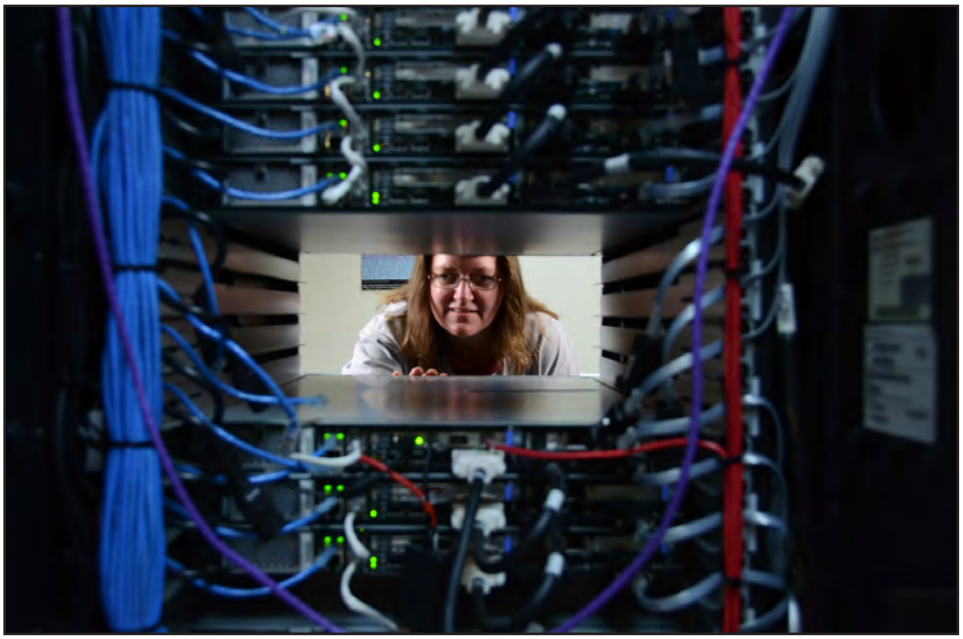
Computer Networking & Systems Administration Certificate 2 - Marshall and North Texas Center only

Semester 1			Credits
ITCC	1340	Switching Basics	3
ITNW	1308	Implementing and Supporting Client Operating Systems	3
ITNW	1325	Fundamentals of Networking Technologies	3
ITSY	1300	Fundamentals of Information Security	3
		Semester Totals	**12**

Semester 2			Credits
ITNW	1345	Implementing Network Directory Services	3
ITNW	2312	Routers	3
ITSC	1316	Linux Installation and Configuration	3
ITSY	1342	Information Technology Security	3
		Semester Totals	**12**

Semester 3			Credits
ITNW	2335	Network Troubleshooting and Support	3
ITNW	2354	Internet/Intranet Server	3
ITSC	2386	Internship-Computer and Information Sciences, General	3
ITSY	2330	Intrusion Detection	3
		Semester Totals	**12**

Program Totals 36



Computer Networking & Systems Administration CISCO Specialization
Associate of Applied Science Degree - Waco only

Semester 1			Credits
ITNW	1308	Implementing and Supporting Client Operating Systems	3
ITNW	1325	Fundamentals of Networking Technologies	3
ITSC	1325	Personal Computer Hardware	3
ACGM	X3XX	Gen Ed Math/Natural Science Course	3
		Semester Totals	**12**

Semester 2			Credits
ITCC	1301	Cisco Exploration 1-Network Fundamentals	3
ITNW	1345	Implementing Network Directory Services	3
ITSY	1300	Fundamentals of Information Security	3
ACGM	X3XX	Gen Ed English Course	3
		Semester Totals	**12**

Semester 3			Credits
ITCC	1304	Cisco Exploration 2-Routing Protocols and Concepts	3
ITNW	1313	Computer Virtualization	3
ITSC	1316	Linux Installation and Configuration	3
ACGM	X3XX	Gen Ed Elective Course	3
		Semester Totals	**12**

Semester 4			Credits
ITCC	2308	Cisco Exploration 3-LAN Switching and Wireless	3
ITNW	2335	Network Troubleshooting and Support	3
ITNW	2354	Internet/Intranet Server	3
ACGM	X3XX	Gen Ed Humanities/Fine Arts Course	3
		Semester Totals	**12**

Semester 5			Credits
ITCC	2310	Cisco Exploration 4-Accessing the WAN	3
ITNW	2352	Administering SQL Server	3
ITSC	2386	Internship-Computer and Information Sciences, General	3
ACGM	X3XX	Gen Ed Social/Behavioral Science Course	3
		Semester Totals	**12**

Program Totals 60

Computer Networking & Systems Administration Computer Tech Support Certificate 1 -
Waco and Williamson County

Semester 1			Credits
ITSC	1301	Introduction to Computers	3
ITSC	1309	Integrated Software Applications I	3
ITSC	1325	Personal Computer Hardware	3
ITSY	1300	Fundamentals of Information Security	3
		Semester Totals	**12**

Semester 2			Credits
ITNW	1308	Implementing and Supporting Client Operating Systems	3
ITNW	1325	Fundamentals of Networking Technologies	3
ITSC	2339	Personal Computer Help Desk Support	3
ITSE	1301	Web Design Tools	3
		Semester Totals	**12**

Program Totals 24

Computer Science Technology

Some of the hottest careers in the job market these days are within the Information Technology sector. That's why the Business Applications Program at TSTC makes sense for a great career choice. Students in this program get a practical, hands-on education that teaches them the technical skills required in the IT field. In addition to technical skills, the student's training centers on the development of logic, problem solving and soft skills. CST provides specialized training in Business Applications Programming that focuses on career expectations leading to a variety of positions, from program analyst and database administrator, to consultant, systems analyst and customer engineer.

Computer Science Technology is available at the Harlingen campus.

Computer Science Technology Associate of Science

Semester 1			Credits
COSC	1336	Programming Fundamentals I	3
ENGL	1301	Composition I	3
MATH	1314	College Algebra	3
ACGM	X3XX	Gen Ed Humanities/Fine Arts	3
		Semester Totals	**12**

Semester 2			Credits
GOVT	2305	Federal Government	3
ENGL	1302	Composition II	3
MATH	2312	Pre-Calculus*	3
COSC	1337	Programming Fundamentals II	3
		Semester Totals	**12**

Semester 3			Credits
COSC	2325	Computer Organization	3
MATH	2413	Calculus I	4
GOVT	2306	Texas Government	3
ACGM	X3XX	Language, Phil, and Culture Elective	3
		Semester Totals	**13**

Semester 4			Credits
COSC	2336	Programming Fundamentals III	3
PHYS	2325	University Physics I	3
PHYS	2125	University Physics Lab I	1
HIST	1301	U.S. History I	3
		Semester Totals	**10**

Semester 5			Credits
PHYS	2326	University Physics II	3
PHYS	2126	University Physics Lab II	1
ACGM	X3XX	Gen Ed Social/Behavioral Science Elective	3
SPCH	X3XX	Gen Ed Speech Elective	3
HIST	1301	U.S. History II	3
		Semester Totals	**13**

Program Totals 60

Culinary Arts

As a Culinary Arts student at TSTC, you'll not only learn how to mix the right ingredients together to whip up appetizing meals, you'll also learn the dozens of associated tasks that can give you a competitive edge above others in the job market. TSTC's Culinary Arts program offers students a superior education in all phases of the food service industry. Students get the benefit of practical, hands-on instruction, experienced award-winning chefs and staff, top advisors and much more for food service careers in a program designed to prepare successful professionals for today and tomorrow. TSTC's Culinary Arts program covers cooking, baking, food preparation, purchasing, cost analysis and service. The Culinary Arts department at TSTC teaches food related topics including nutrition, sanitation and safety, food service equipment, baking and quantity procedures. For quicker entry into the industry, Culinary Assistant, Culinary Specialist and Culinarian certificates are available.

Culinary Arts is available at the Abilene, East Williamson County Higher Education Center, Harlingen, and Waco campuses.

Culinary Arts
Associate of Applied Science Degree - Abilene, Harlingen, Waco

Semester 1			Credits
CHEF	1205	Sanitation and Safety	2
IFWA	1205	Food Service Equipment and Planning	2
IFWA	1217	Food Production and Planning	2
IFWA	1318	Nutrition for the Food Service Professional	3
ACGM	X3XX	Gen Ed Humanities/Fine Arts Course	3
		Semester Totals	**12**

Semester 2			Credits
IFWA	1401	Food Preparation I	4
PSTR	1301	Fundamentals of Baking	3
RSTO	1304	Dining Room Service	3
ACGM	X3XX	Gen Ed Social/Behavioral Science Course	3
		Semester Totals	**13**

Semester 3			Credits
IFWA	1427	Food Preparation II	4
CHEF	1340	Meat Preparation and Cooking	3
RSTO	2407	Catering	4
PSTR	2431	or Advanced Pastry Shop	
ACGM	X3XX	Gen Ed Elective	3
		Semester Totals	**14**

Semester 4			Credits
CHEF	1445	International Cuisine	4
RSTO	2301	Principles of Food and Beverage Controls	3
RSTO	1313	Hospitality Supervision	3
ACGM	X3XX	Gen Ed Elective	3
		Semester Totals	**13**

Semester 5			Credits
RSTO	2505	Management of Food Production and Service	5
ACGM	X3XX	Gen Ed Math/Natural Science Course	3
		Semester Totals	**8**
		Program Totals	**60**

Culinary Arts
Culinarian Certificate 2 - Waco, Williamson County

Semester 1			Credits
CHEF	1205	Sanitation and Safety	2
IFWA	1205	Food Service Equipment and Planning	2
IFWA	1217	Food Production and Planning	2
IFWA	1318	Nutrition for the Food Service Professional	3
		Semester Totals	**9**

Semester 2			Credits
IFWA	1401	Food Preparation I	4
PSTR	1301	Fundamentals of Baking	3
RSTO	1304	Dining Room Service	3
		Semester Totals	**10**

Semester 3			Credits
IFWA	1427	Food Preparation II	4
CHEF	1340	Meat Preparation and Cooking	3
RSTO	2407	Catering	4
PSTR	2431	or Advanced Pastry Shop	
		Semester Totals	**11**

Semester 4			Credits
CHEF	1445	International Cuisine	4
RSTO	2301	Principles of Food and Beverage Controls	3
RSTO	1313	Hospitality Supervision	3
		Semester Totals	**10**
		Program Totals	**40**

Culinary Arts
Culinary Assistant Certificate 1 -
Waco, Williamson County

Semester 1			Credits
CHEF	1205	Sanitation and Safety	2
IFWA	1205	Food Service Equipment and Planning	2
IFWA	1217	Food Production and Planning	2
IFWA	1318	Nutrition for the Food Service Professional	3
		Semester Totals	**9**

Semester 2			Credits
IFWA	1401	Food Preparation I	4
PSTR	1301	Fundamentals of Baking	3
RSTO	1304	Dining Room Service	3
		Semester Totals	**10**

Program Totals 19

Culinary Arts
Culinary Specialist Certificate 1 - Harlingen, Waco

Semester 1			Credits
CHEF	1205	Sanitation and Safety	2
IFWA	1205	Food Service Equipment and Planning	2
IFWA	1217	Food Production and Planning	2
IFWA	1318	Nutrition for the Food Service Professional	3
		Semester Totals	**9**

Semester 2			Credits
IFWA	1401	Food Preparation I	4
PSTR	1301	Fundamentals of Baking	3
RSTO	1304	Dining Room Service	3
		Semester Totals	**10**

Semester 3			Credits
IFWA	1427	Food Preparation II	4
CHEF	1340	Meat Preparation and Cooking	3
PSTR	2431	Advanced Pastry Shop	4
RSTO	2407	or Catering	
		Semester Totals	**11**

Program Totals 30

Cyber Security

There's a strong demand for those who understand the importance of protecting a company's data. It takes specialized skills and in-depth knowledge of computer networking, operating systems and administration, encryption, firewalls and much more — skills you can learn at TSTC. Backed by experienced staff and an advisory committee of field experts guiding the curriculum, you'll get an education that can put you in the forefront when it's hiring time.

With specializations in general cyber security and digital forensics, the Cyber Security program covers computer technology, networking fundamentals and ethical issues. Students will learn how to protect electronic data through both offensive and defensive tactics. Firewalls, VPN and computer forensics are a vital part of the program, but computer maintenance courses are also offered, providing students with needed hardware knowledge. Students will also take courses covering Linux platforms, Microsoft operating systems and software suites, and Cisco networking systems. For quicker entry into the field a certificate is also available.

Cyber Security is available at the Marshall, North Texas Center, Williamson County and Waco campuses.

Cyber Security
Cyber Security Specialization
Associate of Applied Science Degree

Semester 1			Credits
ITSC	1325	Personal Computer Hardware	3
ITSY	1300	Fundamentals of Information Security	3
ITSE	1329	Programming Logic and Design	3
ENGL	1301	Composition I	3
		Semester Totals	**12**

Semester 2			Credits
ITNW	1325	Fundamentals of Networking Technologies	3
ITSY	2343	Computer System Forensics	3
ITDF	1300	Introduction to Digital Forensics	3
MATH	1332	Contemporary Mathematics I	3
		Semester Totals	**12**

Semester 3			Credits
ITCC	1301	Cisco Exploration 1-Network Fundamentals	3
ITNW	1358	or Network+	
ITSC	1316	Linux Installation and Configuration	3
ITNW	1345	Implementing and Supporting Servers	3
ENGL	2311	Technical & Business Writing	3
		Semester Totals	**12**

Semester 4			Credits
ITSY	1342	Information Technology Security	3
ITCC	1304	Cisco Exploration 2-Routing Protocols and Concepts	3
ITNW	2312	or Routers	
ITSY	2301	Firewalls and Network Security	3
ACGM	X3XX	Gen Ed Humanities/Fine Arts Course	3
		Semester Totals	**12**

Semester 5			Credits
ITSY	2330	Intrusion Detection	3
ITCC	2308	Cisco Exploration 3-LAN Switching and Wireless	3
ITNW	2335	or Network Troubleshooting and Support	
ITSY	2359	Security Assessment and Auditing	3
ACGM	X3XX	Gen Ed Social/Behavioral Science Course	3
		Semester Totals	**12**

Program Totals 60

Cyber Security
Certificate 2

Semester 1			Credits
ITNW	1325	Fundamentals of Networking Technologies	3
ITSC	1325	Personal Computer Hardware	3
ITSE	1329	Programming Logic and Design	3
ITSY	1300	Fundamentals of Information Security	3
		Semester Totals	**12**

Semester 2			Credits
ITCC	1301	Cisco Exploration 1-Network Fundamentals	3
ITNW	1358	or Network+	
ITDF	1300	Introduction to Digital Forensics	3
ITNW	1345	Implementing Network Directory Services	3
ITSY	2343	Computer System Forensics	3
		Semester Totals	**12**

Semester 3			Credits
ITCC	1304	Cisco Exploration 2-Routing Protocols and Concepts	3
ITNW	2312	or Routers	
ITSC	1316	Linux Installation and Configuration	3
ITSY	1342	Information Technology Security	3
ITSY	2301	Firewalls and Network Security	3
		Semester Totals	**12**

Semester 4			Credits
ITCC	2308	Cisco Exploration 3-LAN Switching and Wireless	3
ITNW	2335	or Network Troubleshooting and Support	
ITSY	2330	Intrusion Detection	3
ITSY	2359	Security Assessment and Auditing	3
		Semester Totals	**9**

Program Totals 45

Cyber Security
Digital Forensics Specialization
Associate of Applied Science Degree - Waco only

Semester 1			Credits
ITSC	1325	Personal Computer Hardware	3
ITSY	1300	Fundamentals of Information Security	3
CJSA	1327	Fundamentals of Criminal Law	3
ENGL	1301	Composition I	3
		Semester Totals	**12**

Semester 2			Credits
ITNW	1325	Fundamentals of Networking Technologies	3
ITSY	2343	Computer System Forensics	3
ITDF	1300	Introduction to Digital Forensics	3
MATH	1332	Contemporary Mathematics I	3
		Semester Totals	**12**

Semester 3			Credits
ITNW	2321	Networking with TCP/IP	3
ITDF	1305	Digital Data Storage Forensics	3
ITSY	2301	Firewalls and Network Security	3
ENGL	2311	Technical & Business Writing	3
		Semester Totals	**12**

Semester 4			Credits
ITSY	1342	Information Technology Security	3
ITDF	2325	Digital Forensics Tools	3
ITSY	1342	Information Technology Security	3
ACGM	X3XX	Gen Ed Humanities/Fine Arts Course	3
		Semester Totals	**12**

Semester 5			Credits
ITSY	2330	Intrusion Detection	3
ITDF	2330	Digital Forensics Analysis	3
ITDF	2335	Comprehensive Digital Forensics Project	3
ACGM	X3XX	Gen Ed Social/Behavioral Science Course	3
		Semester Totals	**12**
		Program Totals	**60**

Cyber Security
Digital Forensics Specialist
Advanced Technical Certificate - Waco only

Semester 1			Credits
CJSA	1327	Fundamentals of Criminal Law	3
ITDF	1300	Introduction to Digital Forensics	3
ITDF	1305	Digital Data Storage Forensics	3
ITSY	1300	Fundamentals of Information Security	3
		Semester Totals	**12**

Semester 2			Credits
ITDF	2320	Digital Forensics Collection	3
ITDF	2325	Digital Forensics Tools	3
ITDF	2330	Digital Forensics Analysis	3
ITDF	2335	Comprehensive Digital Forensics Project	3
ITSY	1342	Information Technology Security	3
		Semester Totals	**15**

Program Totals 27

Database & Web Programming

TSTC provides the knowledge and skills needed to develop programming solutions that allow dynamic web pages to interact with databases. The Database & Web Programming Technology Program also provides instruction in general programming solutions. The program presents hands-on experience with programming languages (C++, Visual Basic, PHP and Java), database systems (Access, MySQL, Microsoft SQL Server), and the design and implementation of websites. The Database &Web programming prepares students for jobs such as: Computer Programmer, Software Developer, Applications Developer, Web Programmer, Database Programmer, Internet Programmer and Computer Software Engineer. An advanced technical certificate, Database Administration Programming, is for those who wish to add to their existing knowledge base. Students must have prior programming experience to enroll in this program.

Database & Web Programming Technology is available at the Abilene and Brownwood locations. The Database Administration Programming certificate is available at the Abilene, Brownwood Waco and Willaimson County campuses.

Database & Web Programming Associate of Applied Science Degree -

Abilene and Brownwood

Semester 1			Credits
ITSE	1311	Beginning Web Programming	3
ITSE	1359	Introduction to Scripting Languages	3
ITSE	1302	Computer Programming	3
ITSW	1307	Introduction to Database	3
ACGM	X3XX	Gen Ed Elective Course	3
		Semester Totals	**15**

Semester 2			Credits
ITSE	2317	Java Programming	3
ITSE	2333	Implementing a Database on Microsoft SQL Server	3
ITSE	2409	Database Programming	4
ITNW	2352	Administering SQL Server	3
ACGM	X3XX	Gen Ed Elective Course	3
		Semester Totals	**16**

Semester 3			Credits
ITSE	1347	Programming with Visual Basic.Net	3
ITSE	1350	System Analysis and Design	3
ITSE	1372	Mobile Application Development	3
ITSE	2447	Advanced Database Programming	4
ACGM	X3XX	Gen Ed Social/Behavioral Science Course	3
		Semester Totals	**16**

Semester 4			Credits
INEW	2332	Comprehensive Software Project: Coding, Testing, and Implementation	3
ITSE	2386	or Internship-Computer Programming/ Programmer, General	
ITSE	2459	Advanced Computer Programming	4
ACGM	X3XX	Gen Ed Math/Natural Science Course	3
ACGM	X3XX	Gen Ed Humanities/Fine Arts Course	3
		Semester Totals	**13**
		Program Totals	**60**

Database & Web Programming Database Administration Programming Advanced Technical Certificate -

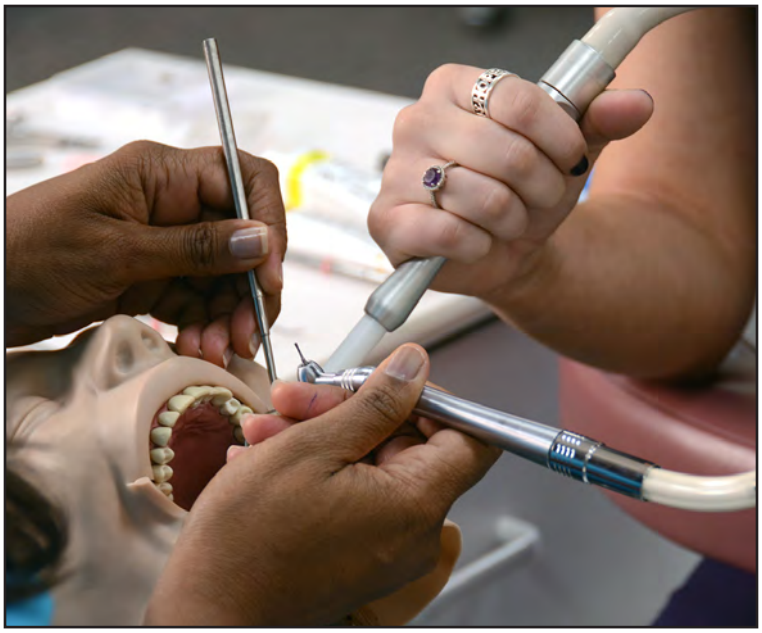
Waco, Williamson County

Semester 1			Credits
ITSE	1303	Introduction to MySQL	3
ITSE	1346	Database Theory and Design	3
ITSE	2333	Implementing a Database on Microsoft SQL Server	3
ITSE	2354	Advanced Oracle PL/SQL	3
		Semester Totals	**12**

Semester 2			Credits
ITSE	2409	Database Programming	4
ITSE	2346	Oracle: Application I	3
ITSE	2356	Oracle Database Administration I	3
ITSW	2337	Advanced Database	3
		Semester Totals	**13**

Semester 3			Credits
ITSE	2447	Advanced Database Programming	4
ITSE	2348	Oracle: Applications II	3
ITSE	2358	Oracle Database Administration II	3
ITSE	2459	Advanced Computer Programming	4
		Semester Totals	**14**
		Program Totals	**39**

Dental Assistant



As a TSTC Dental Assistant student, you can learn the latest skills and techniques with experienced faculty members who provide individualized instruction and attention, as well as hands-on training. The Certificate of Completion program focuses on teaching you the skills needed on the job; skills like measuring blood pressure, taking X-rays, preparing study models and applying four-handed dentistry techniques.

Dental Assistant is available at the Harlingen and Waco campuses.

Dental Assistant
Certificate 1

Semester 1			Credits
DNTA	1213	Emergency Management	2
DNTA	1305	Dental Radiology	3
DNTA	1351	Dental Office Management	3
DNTA	1415	Chairside Assisting	4
		Semester Totals	**12**

Semester 2			Credits
DNTA	1245	Preventive Dentistry	2
DNTA	1453	Dental Assisting Applications	4
DNTA	1660	Clinical-Dental Assisting/Assistant	6
		Semester Totals	**12**
		Program Totals	**24**

Dental Laboratory Technology

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 the program Dental Laboratory Technician 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, and match color and placement of teeth for natural look and comfortable fit.

Dental Laboratory Technology is available at the Harlingen campus.

Dental Laboratory Technician
Certificate 1

Semester 1			Credits
DLBT	1201	Dental Anatomy and Tooth Morphology	2
DLBT	1205	Dental Materials	2
DLBT	1209	Removable Partial Denture Techniques I	2
DLBT	1213	Complete Denture Techniques I	2
DLBT	1217	Fixed Restorative Techniques I	2
DLBT	1291	Special Topics in Dental Laboratory Technician	2
DLBT	2241	Dental Ceramics I	2
		Semester Totals	**14**

Semester 2			Credits
DLBT	2204	Removable Partial Denture Techniques II	2
DLBT	2207	Complete Denture Techniques II	2
DLBT	2211	Fixed Restorative Techniques II	2
DLBT	2242	Dental Ceramics II	2
DLBT	2244	Introduction to Orthodontic Procedures	2
DLBT	2430	Special Project in Dental Laboratory Procedures	4
		Semester Totals	**14**
		Program Totals	**28**

Dental Hygiene

The Dental Hygiene program at TSTC prepares students for the industry of preventative dentistry with a well-rounded curriculum including preventative dental hygiene, pharmacology, periodontology, pathology, dental nutrition and more. Dental Hygiene students at TSTC are able to fulfill their clinical experiences at a beautiful state-of-the-art dental clinic on campus. The students utilize the 13-chair clinic to receive over 600 hours of instruction in a 1-faculty-to-5-student ratio. External clinical experiences also allow a wide variety of patient treatment. Graduates of the program are well prepared to successfully complete the National Dental Hygiene Board and the Western Regional Board Examination, and the Texas Jurisprudence Examination for licensure.

Dental Hygiene is available at the Harlingen campus.

Dental Hygiene
Associate Applied Science Degree

Semester 1			Credits
BIOL	2101	Anatomy & Physiology I Lab	1
BIOL	2301	Anatomy & Physilolgy I	3
CHEM	1105	Introductory Chemistry I lab	1
CHEM	1305	Introductory Chemistry I	3
		Semester Totals	**8**

Semester 2			Credits
DHYG	1227	Preventive Dental Hygiene Care	2
DHYG	1301	Orofacial Anatomy, Histology & Embryology	3
DHYG	1331	Preclinical Dental Hygiene	3
BIOL	2302	Anatomy & Physiology II	3
BIOL	2102	Anatomy & Physiology II Lab	1
		Semester Totals	**12**

Semester 3			Credits
DHYG	1211	Periodontology	2
DHYG	1260	Clinical - Dental Hygiene/Hygienist	2
DHYG	1304	Dental Radiology	3
BIOL	2120	Microbiology for Non-Science Majors lab	1
BIOL	2320	Microbiology for Non-Science Majors	3
ACGM	X3Xx	Gen Ed Humanities/Fine Arts Course	3
		Semester Totals	**14**

Semester 4			Credits
DHYG	1319	Dental Materials	3
DHYG	1235	Pharmacology for the Dental Hygienist	2
DHYG	1261	Clinical - Dental Hygiene/Hygienist	2
SOCI	1301	Sociology	3
		Semester Totals	**10**

Semester 5			Credits
DHYG	1215	Community Dentistry	2
DHYG	1239	General and Oral Pathology	2
DHYG	2360	Clinical - Dental Hygiene/Hygienist	3
DHYG	2201	Contemporary Dental Hygiene Care I	2
PSYC	2301	General Psychology	3
		Semester Totals	**12**

Semester 6			Credits
DHYG	2153	Dental Hygiene Practice	1
DHYG	2361	Clinical - Dental Hygiene/Hygienist	3
DHYG	1207	General and Dental Nutrition	2
ENGL	1301	Composition I	3
SPCH	X3XX	Speech Elective	3
		Semester Totals	**12**

Program Totals 68

Diesel Equipment Technology

TSTC's Diesel Equipment Technology Program offers several avenues of entry into the workforce: Off-Highway Equipment, Heavy Truck, John Deere Construction & Forestry and Outdoor Power Equipment. TSTC's field-experienced faculty members work closely with related diesel industries to develop curriculum that meets workforce demands. Diesel Equipment Technology students will learn diesel engine testing and repair, brake systems, HVAC troubleshooting and repair, electrical systems, hydraulics, failure analysis, and more. Because of the vast uses of highly advanced pneumatic, hydraulic and electronic systems technology, industry needs quality-trained technicians to repair and maintain the equipment, and TSTC students learn from skilled craftsmen who have actual field experience. For quicker entry into the industry, certificates are also available.

Diesel Equipment Technology is available at the Marshall, Fort Bend Technical Center, North Texas Center, Sweetwater, and Waco campuses.

Diesel Equipment Technology Heavy Truck Specialization Associate of Applied Science Degree -

Waco, Fort Bend, Sweetwater

Semester 1			Credits
DEMR	1301	Shop Safety and Procedures	3
DEMR	1410	Diesel Engine Testing and Repair I	4
DEMR	2412	Diesel Engine Testing and Repair II	4
DEMR	1317	Basic Brake Systems	3
ENGL	1301	Composition I	3
		Semester Totals	**17**

Semester 2			Credits
DEMR	1305	Basic Electrical Systems	3
DEMR	1316	Basic Hydraulics	3
DEMR	1321	Power Train I	3
DEMR	1323	Heating, Ventilation, and Air Conditioning (HVAC) Troubleshooting and Repair	3
ACGM	X3XX	Gen Ed Math/Natural Sciences Course	3
		Semester Totals	**15**

Semester 3			Credits
DEMR	1447	Power Train II	4
DEMR	1327	Tractor Trailer Service and Repair	3
DEMR	1330	Steering and Suspension I	3
DEMR	1329	or Preventative Maintenance	
DEMR	1380	Cooperative Education-Diesel Mechanics Technology/ Technician	3
DEMR	2348	or Failure Analysis	
ACGM	X3XX	Gen Ed Social/Behavioral Sciences Course	3
		Semester Totals	**16**

Semester 4			Credits
DEMR	2332	Electronic Controls	3
DEMR	2334	Advanced Diesel Tune-Up and Troubleshooting	3
ACGM	X3XX	Gen Ed Humanities/Fine Arts Course	3
ACGM	X3XX	Gen Ed Elective	3
		Semester Totals	**12**
		Program Totals	**60**

Diesel Equipment Technology Heavy Truck Certificate 1 -

Marshall, North Texas Center, Fort Bend, Waco

Semester 1			Credits
DEMR	1301	Shop Safety and Procedures	3
DEMR	1410	Diesel Engine Testing and Repair I	4
DEMR	2412	Diesel Engine Testing and Repair II	4
DEMR	1317	Basic Brake Systems	3
		Semester Totals	**14**

Semester 2			Credits
DEMR	1305	Basic Electrical Systems	3
DEMR	1316	Basic Hydraulics	3
DEMR	1321	Power Train I	3
DEMR	1323	Heating, Ventilation, and Air Conditioning (HVAC) Troubleshooting and Repair	3
		Semester Totals	**12**

Semester 3			Credits
DEMR	1447	Power Train II	4
DEMR	1327	Tractor Trailer Service and Repair	3
DEMR	1330	Steering and Suspension I	3
DEMR	1329	or Preventative Maintenance	
		Semester Totals	**10**
		Program Totals	**36**

Diesel Equipment Technology
Heavy Truck Certificate 2 - Sweetwater only

Semester 1			Credits
DEMR	1301	Shop Safety and Procedures	3
DEMR	1410	Diesel Engine Testing and Repair I	4
DEMR	2412	Diesel Engine Testing and Repair II	4
DEMR	1317	Basic Brake Systems	3
		Semester Totals	**14**

Semester 2			Credits
DEMR	1305	Basic Electrical Systems	3
DEMR	1316	Basic Hydraulics	3
DEMR	1321	Power Train I	3
DEMR	1323	Heating, Ventilation, and Air Conditioning (HVAC) Troubleshooting and Repair	3
		Semester Totals	**12**

Semester 3			Credits
DEMR	1447	Power Train II	4
DEMR	1327	Tractor Trailer Service and Repair	3
DEMR	1330	Steering and Suspension I	3
DEMR	1329	or Preventative Maintenance	3
		Semester Totals	**10**

Semester 4			Credits
DEMR	1380	Cooperative Education-Diesel Mechanics Technology	3
DEMR	2348	or Failure Analysis	3
DEMR	2332	Electronic Controls	3
DEMR	2334	Advanced Diesel Tune-Up and Troubleshooting	3
		Semester Totals	**9**

Program Totals 45

Diesel Equipment Technology
John Deere Construction & Forestry
Associate of Applied Science Degree - Waco only

Semester 1			Credits
DEMR	1301	Shop Safety and Procedures	3
DEMR	1410	Diesel Engine Testing and Repair I	4
DEMR	2412	Diesel Engine Testing and Repair II	4
ENGL	1301	Composition I	3
		Semester Totals	**14**

Semester 2			Credits
DEMR	1305	Basic Electrical Systems	3
DEMR	1316	Basic Hydraulics	3
DEMR	1321	Power Train I	3
DEMR	1323	Heating, Ventilation, and Air Conditioning (HVAC) Troubleshooting and Repair	3
PHYS	1315	Physical Science	3
		Semester Totals	**15**

Semester 3			Credits
DEMR	1680	Cooperative Education-Diesel Mechanics Technology	6
		Semester Totals	**6**

Semester 4			Credits
DEMR	2335	Advanced Hydraulics	3
DEMR	2344	Automatic Power Shift and Hydrostatic Transmissions II	3
HEMR	1401	Tracks and Undercarriages	4
ACGM	X3XX	Gen Ed Humanities/Fine Arts Elective	3
		Semester Totals	**13**

Semester 5			Credits
DEMR	2332	Electronic Controls	3
DEMR	2348	Failure Analysis	3
ACGM	X3XX	Gen Ed Social/Behavioral Science Elective	3
BUSI	2301	Business Law	3
		Semester Totals	**12**

Program Totals 60

Diesel Equipment Technology
Off Highway Equipment Specialization
Associate of Applied Science Degree -
Marshall, North Texas Center, Waco

Semester 1			Credits
DEMR	1301	Shop Safety and Procedures	3
DEMR	1410	Diesel Engine Testing and Repair I	4
DEMR	2412	Diesel Engine Testing and Repair II	4
DEMR	1317	Basic Brake Systems	3
ENGL	1301	Composition I	3
		Semester Totals	**17**

Semester 2			Credits
DEMR	1305	Basic Electrical Systems	3
DEMR	1316	Basic Hydraulics	3
DEMR	1321	Power Train I	3
DEMR	1323	Heating, Ventilation, and Air Conditioning (HVAC) Troubleshooting and Repair	3
ACGM	X3XX	Gen Ed Math/Natural Sciences Course	3
		Semester Totals	**15**

Semester 3			Credits
HEMR	1401	Tracks and Undercarriages	4
AGME	1353	Harvesting Equipment	3
HEMR	1304	or Natural Gas Compression	
DEMR	2335	Advanced Hydraulics	3
DEMR	2344	Automatic Power Shift & Hydrostatic Transmission II	3
ACGM	X3XX	Gen Ed Social/Behavioral Sciences Course	3
		Semester Totals	**16**

Semester 4			Credits
DEMR	2332	Electronic Controls	3
DEMR	2334	Advanced Diesel Tune-Up and Troubleshooting	3
ACGM	X3XX	Gen Ed Humanities/Fine Arts Course	3
ACGM	X3XX	Gen Ed Elective	3
		Semester Totals	**12**

Program Totals 60

Diesel Equipment Technology
Off-Highway Equipment Certificate 1 -
Marshall, North Texas Center, Waco

Semester 1			
DEMR	1301	Shop Safety and Procedures	3
DEMR	1410	Diesel Engine Testing and Repair I	4
DEMR	2412	Diesel Engine Testing and Repair II	4
DEMR	1317	Basic Brake Systems	3
		Semester Totals	**14**

Semester 2			Credits
DEMR	1305	Basic Electrical Systems	3
DEMR	1316	Basic Hydraulics	3
DEMR	1321	Power Train I	3
DEMR	1323	Heating, Ventilation, and Air Conditioning (HVAC) Troubleshooting and Repair	3
		Semester Totals	**12**

Semester 3			Credits
AGME	1353	Harvesting Equipment	3
HEMR	1304	or Natural Gas Compression	
HEMR	1401	Tracks and Undercarriages	4
DEMR	2344	Automatic Power Shift and Hydrostatic Transmission II	3
		Semester Totals	**10**
		Program Totals	**36**

Diesel Equipment Technology
Outdoor Power Equipment Certificate 1 - Waco only

Semester 1			Credits
DEMR	1225	Small Air Cooled Engines	2
DEMR	1301	Shop Safety and Procedures	3
DEMR	1305	Basic Electrical Systems	3
SMER	1434	Small Engine Two Stroke Overhaul	4
		Semester Totals	**12**

Semester 2			Credits
DEMR	1316	Basic Hydraulics	3
DEMR	1321	Power Train I	3
SMER	1437	Small Engine Four Stroke Engine	4
		Semester Totals	**10**
		Program Totals	**22**

Digital Arts

TSTC's Digital Arts program is training students as concept artists for the entertainment industry. This premium program focuses on drawing, both traditionally and electronically. Students work closely with industry leaders to learn all of the skills necessary to work in this highly competitive and creative field. The Digital Arts program prepares students to produce the quality of artwork needed to satisfy the demand of the entertainment industry as well as equip them with the tools to grow as creative thinkers and innovators. The program is an intense, fast-paced conceptual and skill-based program targeted at those students with a passion for art and technology. The program consists of attending conferences and workshops that act as a necessary supplement to complete the curriculum.

Digital Arts is available at the Abilene campus.

Digital Arts
Associate of Applied Science Degree

Semester 1			Credits
ARTC	1302	Digital Imaging I	3
ARTT	1201	Conceptual Figure Drawing	2
ARTT	1251	Interpretive Figure Drawing	2
GAME	1314	Character Sculpting	3
ACGM	X3XX	Gen Ed Humanities/Fine Arts Course	3
		Semester Totals	**13**

Semester 2			Credits
ARTC	1309	Basic Illustration	3
ARTC	1310	Design Concepts	3
ARTC	1321	Illustration Techniques I	3
MATH	1332	Contemporary Mathematics I	3
		Semester Totals	**12**

Semester 3			Credits
ARTC	2301	Illustration Techniques II	3
ARTC	2340	Computer Illustration II	3
GAME	2336	Lighting, Shading, and Texture	3
ACGM	X3XX	Gen Ed English Elective Course	3
		Semester Totals	**12**

Semester 4			Credits
ARTC	1305	Basic Graphic Design	3
ARTV	1345	3-D Modeling and Rendering I	3
INDS	1301	Basic Elements of Design	3
ACGM	X3XX	Gen Ed Social/Behavioral Sciences Course	3
		Semester Totals	**12**

Semester 5			Credits
ARTC	2305	Digital Imaging II	3
ARTC	2335	Portfolio Development for Graphic Design	3
ARTC	2366	or Practicum (or Field Experience)-Commercial & Advertising Art	
ARTV	1211	Storyboard	2
ACGM	X3XX	Gen Ed Humanities/Fine Arts Course	3
		Semester Totals	**11**
		Program Totals	**60**

Digital Media Design

While you watch commercials, do you think to yourself, "I could do that better..." When you pass by a billboard, do you say to yourself, "I can't even read that?" In the Digital Media Design Program, our goal is to inspire and teach a new generation of media artists how to be employable in the print, photography, videography, and web design industries. We'll show you the techniques necessary to produce quality media design, and equip you with tools to grow as creative thinkers and innovators. Students in this program will manipulate sound, still images, 3D images, animations and digital video on computers. This program will provide training in desktop publishing, painting, drawing, scanning, color correction, solids modeling, animation, sound editing, non-linear video editing, and web page creation. For quicker entry into industry a certificate is available.

Digital Media Design is available at the Abilene and Harlingen campuses.

Digital Media Design
Associate of Applied Science Degree

Semester 1			Credits
ARTC	1302	Digital Imaging I	3
ARTC	1317	Design Communication I	3
ARTV	1345	or 3-D Modeling and Rendering I	
GRPH	1359	Vector Graphics for Production	3
ACGM	X3XX	Gen Ed Elective	3
		Semester Totals	**12**

Semester 2			Credits
ARTC	1313	Digital Publishing I	3
ARTC	2347	Design Communication II	3
ACGM	X3XX	Gen Ed Humanities/Fine Arts Course	3
ACGM	X3XX	Gen Ed Math/Natural Sciences Course	3
		Semester Totals	**12**

Semester 3			Credits
ARTC	2305	Digital Imaging II	3
ARTC	2313	Digital Publishing II	3
ARTV	1351	Digital Video	3
PHTC	1311	Fundamentals of Photography	3
		Semester Totals	**12**

Semester 4			Credits
ARTV	2341	Advanced Digital Video	3
IMED	1316	Web Design I	3
IMED	1345	Interactive Digital Media I	3
ACGM	X3XX	Gen Ed Social/Behavioral Sciences Course	3
		Semester Totals	**12**

Semester 5			Credits
ARTC	2335	Portfolio Development for Graphic Design	3
IMED	2315	Web Design II	3
MRKG	2349	Advertising and Sales Promotion	3
ARTV	2345	or 3-D Modeling and Rendering II	
ACGM	X3XX	Gen Ed Math/Natural Sciences Course	3
		Semester Totals	**12**

Program Totals 60

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 program allows students to gain specialized training in one of four developed educational areas of emphasis, and 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. For quicker entry into the industry, a certificate is also available.

Education & Training is available at the Harlingen campus.

Education & Training
Associate of Applied Science Degree

Semester 1			Credits
EDTC	1301	Educational Systems	3
EDTC	1341	Instructional Technology and Computer Applications	3
ENGL	1301	Composition I	3
HIST	1301	United States History I	3
		Semester Totals	**12**

Semester 2			Credits
CDEC	1359	Children with Special Needs	3
EDTC	2311	Instructional Practices and Effective Learning Environments	3
HIST	1302	United States History II	3
SPCH	1315	Public Speaking	3
		Semester Totals	**12**

Semester 3			Credits
EDTC	1307	Introduction to Teaching Reading	3
TECA	1354	Child Growth & Development	3
GOVT	2305	Federal Government	3
MATH	1314	College Algebra	3
WECM	X3XX	Area of Emphasis Course 1	3
		Semester Totals	**15**

Semester 4			Credits
EDTC	1374	Teaching Math and Science in the Elementary School	3
EDTC	2317	Guiding Student Behavior	3
ACGM	X3XX	Gen Ed Humanities/Fine Arts Course	3
WECM	X3XX	Area of Emphasis Course 2	3
		Semester Totals	**12**

Semester 5			Credits
EDTC	1364	Practicum (or Field Experience)-Teacher Assistant/Aide	3
CDEC	1318	Wellness of the Young Child	3
ACGM	X3XX	Gen Ed Social/Behavioral Science Course	3
		Semester Totals	**9**

Program Totals 60

Education & Training
Certificate 2

Semester 1			Credits
EDTC	1301	Educational Systems	3
EDTC	1341	Instructional Technology and Computer Applications	3
HIST	1301	United States History I	3
SPCH	X3XX	Speech Elective	3
		Semester Totals	**12**

Semester 2			Credits
CDEC	1318	Wellness of the Young Child	3
CDEC	1359	Children with Special Needs	3
EDTC	2311	Instructional Practices and Effective Learning Environments	3
HIST	1302	United States History II	3
ENGL	1301	Composition I	3
		Semester Totals	**15**

Semester 3			Credits
EDTC	2317	Guiding Student Behavior	3
TECA	1354	Child Growth & Development	3
GOVT	2305	Federal Government	3
MATH	1314	College Algebra	3
ACGM	X3XX	Gen Ed Humanities/Fine Arts Course	3
		Semester Totals	**15**

Semester 4			Credits
EDTC	1164	Practicum (or Field Experience)-Teacher Assistant/Aide	1
WECM	X3XX	Area of Emphasis Course	3
ACGM	X3XX	Gen Ed Social/Behavioral Science Course	3
		Semester Totals	**7**

Program Totals 49

Area of Emphasis Courses

EDTC	1321	Bilingual Education	3
EDTC	1325	Multicultural Education	3
CDEC	1321	Infant and Toddler	3
CDEC	1356	Emergent Literacy	3
EDTC	1373	Writing Problems	3
EDTC	2305	Reading Problems	3
CDEC	2340	Instructional Techniques	3
EDTC	1375	Issues in Special Needs Education	3

Electrical Construction

The Electrical Construction certificate program offers specific coursework in residential and commercial wiring systems. The program also provides training opportunities to aid individuals interested in earning licenses specific to the electrical field. The program requires extensive hands-on work with electrical distribution and service applications. Curriculum teaches students blueprint reading, technical calculations, electrical safety and theory, residential and commercial wiring and more. Most graduates will begin their careers as assistants to experienced electricians, installing electrical wiring in new construction and servicing wiring in existing structures. After the initial training period, graduates should be prepared to assume supervisory responsibilities.

Electrical Construction is available at the East Williamson County Higher Education Center and Waco campuses.

Electrical Construction
Certificate 1

Semester 1			Credits
CNBT	1300	Residential and Light Commercial Blueprint Reading	3
CNBT	1346	Construction Estimating I	3
ELPT	1329	Residential Wiring	3
ITSC	1309	Integrated Software Applications I	3
TECM	1303	Technical Calculations	3
		Semester Totals	**15**

Semester 2			Credits
EECT	1300	Technical Customer Service	3
ELPT	1225	National Electrical Code I	2
ELPT	1311	Basic Electrical Theory	3
ELPT	1345	Commercial Wiring	3
OSHT	1305	OSHA Regulations-Construction Industry	3
		Semester Totals	**14**

Semester 3			Credits
ELPT	1340	Master Electrician Exam Review I	3
ELPT	1341	Motor Control	3
ELPT	1357	Industrial Wiring	3
ELPT	2305	Motors and Transformers	3
		Semester Totals	**12**

Program Totals 41

Electrical Lineworker Technology

A power line technician, or lineman, does everything from climbing great heights to working during storms. Because of the strong need to fill shortages, TSTC is working with industry to provide skilled technicians through its Electrical Lineworker Technology Program. Students in the program will get plenty of hands-on instruction, learning to use the actual tools of the trade with equipment such as hotline sticks, digger derrick, pole and bucket trucks, cant hooks and more. The curriculum is shaped with the help of industry advisers who actually work in the business. This ensures all students receive instruction that easily translates into job skills employers seek today. Students learn everything from live-line safety and climbing skills to electrical theory, troubleshooting distribution systems and even commercial drivers license driving skills.

Electrical Lineworker Technology is available at the Marshall and Waco campuses.

Electrical Lineworker Technology
Electrical Lineworker Management
Associate of Applied Science Degree - Marshall only

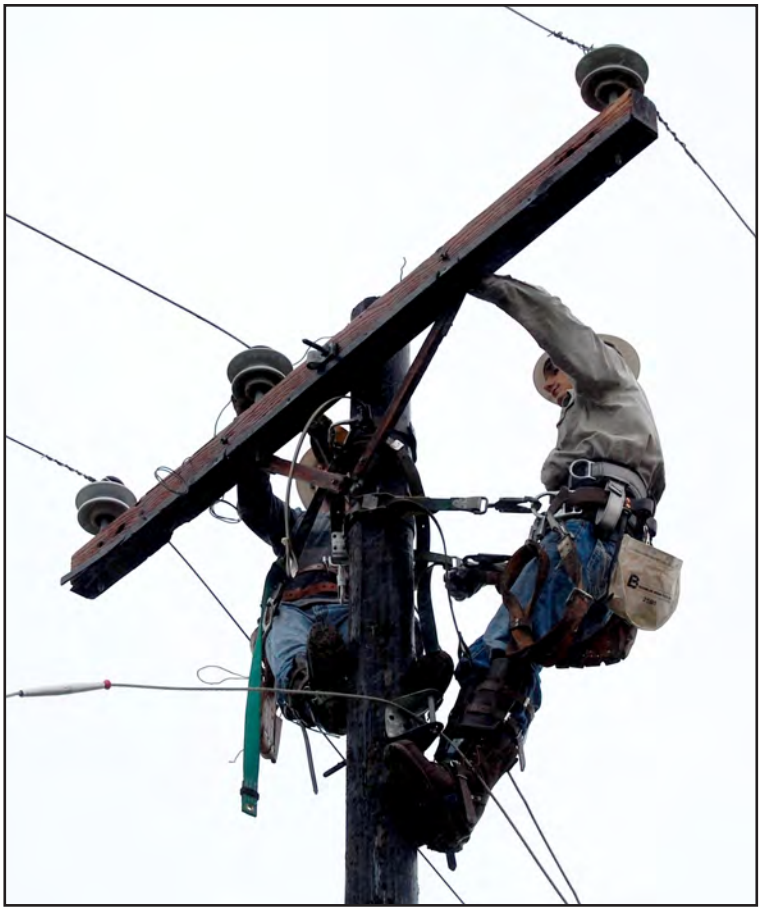
Semester 1			Credits
BMGT	1309	Information and Project Management	3
LNWK	1301	Orientation and Line Skill Fundamentals	3
LNWK	1311	Climbing Skills	3
ENGL	1301	Composition I	3
MATH	1316	Plane Trigonometry	3
		Semester Totals	**15**

Semester 2			Credits
CVOP	1301	Commercial Drivers License Driving Skills	3
ELPT	1311	Basic Electrical Theory	3
LNWK	2321	Live Line Safety	3
LNWK	2322	Distribution Line Construction	3
		Semester Totals	**12**

Semester 3			Credits
BMGT	2309	Leadership	3
BMGT	2347	Critical Thinking and Problem Solving	3
DFTG	1325	Blueprint Reading and Sketching	3
ELPT	2339	Electrical Power Distribution	3
ACGM	X3XX	Gen Ed Humanities/Fine Arts Course	3
		Semester Totals	**15**

Semester 4			Credits
ELPT	2323	Transformers	3
LNWK	2324	Troubleshooting Distribution Systems	3
ACGM	X3XX	Gen Ed Social/Behavioral Science Course	3
ACGM	X3XX	Gen Ed Math/Natural Science Course	3
		Semester Totals	**12**

Semester 5			Credits
ELPT	1680	Cooperative Education-Electrical and Power Transmission Installation/Installer, General	6
		Semester Totals	**6**
		Program Totals	**60**



Electrical Lineworker Technology
Electrical Lineworker Certificate 1

Semester 1			Credits
ELPT	1215	Electrical Calculations I	2
LNWK	1241	Distribution Operations	2
LNWK	1301	Orientation and Line Skill Fundamentals	3
LNWK	1311	Climbing Skills	3
		Semester Totals	**10**

Semester 2			Credits
CVOP	1301	Commercial Drivers License Driving Skills	3
ELPT	1311	Basic Electrical Theory	3
LNWK	2321	Live Line Safety	3
LNWK	2322	Distribution Line Construction	3
		Semester Totals	**12**

Semester 3			Credits
LNWK	1231	Transformer Connections	2
ELPT	2323	or Transformers	
LNWK	2324	Troubleshooting Distribution Systems	3
OSHT	1305	OSHA Regulations-Construction Industry	3
		Semester Totals	**8**

Semester 4			Credits
ELPT	1680	Cooperative Education-Electrical and Power Transmission Installation/Installer, General	6
		Semester Totals	**6**
		Program Totals	**36**

Electrical Power & Controls

The Electrical Power & Controls program offers instruction in engineering and design; installation and calibration; maintenance, testing and troubleshooting; computer instrumentation and robotic interfacing. Through intensive classroom instruction and hands-on experience in high-tech labs, students gain a solid foundation in basic electrical concepts, motors and control applications, then advance to electronics, measurement and calibration, electrical codes and automated control systems. Knowledge is developed through extensive work with equipment, including DC and AC motors, PLCs, speed drive systems and computer software packages for engineering, designing and drafting. For quicker entry into the industry, a general certificate and an Owens-Illinois Industrial certificate are also available.

Electrical Power & Controls is available at the Marshall, Waco, North Texas Center and Williamson County campuses.

Electrical Power & Controls
Associate of Applied Science Degree -
North Texas Center, Waco

Semester 1			Credits
DFTG	1313	Drafting for Specific Occupations	3
CETT	1303	DC Circuits	3
INTC	1341	Principles of Automatic Control	3
OSHT	1320	Energy Industrial Safety	3
INTC	1355	or Unit Operations	
ACGM	X3XX	Gen Ed Elective Course	3
		Semester Totals	**15**

Semester 2			Credits
ELPT	1341	Motor Control	3
ELPT	2319	Programmable Logic Controllers I	3
ELPT	2323	Transformers	3
CETT	1305	AC Circuits	3
ACGM	X3XX	Gen Ed Humanities/Fine Arts Course	3
		Semester Totals	**15**

Semester 3			Credits
ELPT	1351	Electrical Machines	3
ELPT	2335	Electrical Theory and Devices	3
ACGM	X3XX	Gen Ed Elective Course	3
ACGM	X3XX	Gen Ed Social/Behavioral Science Course	3
ACGM	X3XX	Gen Ed Mathematics Course	3

Semester 4			Credits
CETT	1325	Digital Fundamentals	3
ELPT	2331	AC/DC Drives	3
ELPT	2339	Electrical Power Distribution	3
ELPT	1357	or Industrial Wiring	
ELPT	2343	Electrical Systems Design	3
ELPT	2347	Electrical Testing and Maintenance	3
		Semester Totals	**15**
		Program Totals	**60**

Electrical Power & Controls
Industrial Controls Technology
Associate of Applied Science Degree - North Texas Center

Semester 1			Credits
CETT	1303	DC Circuits	3
INMT	1317	Industrial Automation	3
POFI	1301	Computer Applications I	3
ACGM	X3XX	Gen Ed Mathematics Course	3
		Semester Totals	**12**

Semester 2			Credits
CETT	1305	AC Circuits	3
ELPT	1341	Motor Control	3
INTC	1341	Principles of Automatic Control	3
ENGL	1301	Composition I	3
		Semester Totals	**12**

Semester 3			Credits
CETT	1341	Solid State Circuits	3
ELPT	2331	AC/DC Drives	3
INTC	1343	Application of Industrial Automatic Controls	3
HUMA	1301	Introduction to Humanities I	3
		Semester Totals	**12**

Semester 4			Credits
ELPT	1351	Electrical Machines	3
ELPT	2319	Programmable Logic Controllers I	3
INTC	2339	Instrument and Control Review	3
PTRT	1301	Introduction to Petroleum Industry	3
		Semester Totals	**12**

Semester 5			Credits
ELPT	2355	Programmable Logic Controllers II	3
INTC	2330	Instrumentation Systems Troubleshooting	3
ACGM	X3XX	Gen Ed Math/Natural Science Course	3
PSYC	2301	General Psychology	3
		Semester Totals	**12**
		Program Totals	**60**

Electrical Power & Controls
Industrial Electrical Systems Certificate 1 -
Williamson County

Semester 1			Credits
ELPT	1221	Introduction to Electrical Safety and Tools	2
ELPT	1225	National Electrical Code I	2
ELPT	1329	Residential Wiring	3
CETT	1303	DC Circuits	3
TECM	1303	Technical Calculations	3
		Semester Totals	**13**

Semester 2			Credits
ELPT	1341	Motor Control	3
ELPT	1345	Commercial Wiring	3
ELPT	2305	Motors and Transformers	3
CETT	1305	AC Circuits	3
INMT	1305	Introduction to Industrial Maintenance	3
		Semester Totals	**15**
		Program Totals	**28**

Electrical Power & Controls
Owens-Illinois Industrial Technician
Certificate 1 - Waco

Semester 1			Credits
ELPT	1215	Electrical Calculations I	2
ELPT	1311	Basic Electrical Theory	3
ELPT	2305	Motors and Transformers	3
HYDR	1345	Hydraulics and Pneumatics	3
WLDG	1407	Introduction to Welding Using Multiple Processes	4
		Semester Totals	**15**

Semester 2			Credits
ELPT	1364	Practicum (or Field Experience)-Electrical and Power Transmission Installation/Installer, General	3
INTC	1380	or Cooperative Education-Instrumentation Technology/ Technician	
ELPT	2331	AC/DC Drives	3
INMT	1305	or Introduction to Industrial Maintenance	
ELPT	1341	Motor Control	3
ELPT	2319	Programmable Logic Controllers I	3
		Semester Totals	**12**

Program Totals 27

Electromechanical Technology

The Electromechanical Technology Program is a merging of various systems and controls, both mechanical and electrical. The program combines computers, control systems, electrical systems and mechanical systems, and gives students the opportunity to learn the principles and skills required to enter the industry. In the lab setting, students receive hands-on experience with top-notch !equipment and systems. They learn to troubleshoot and repair industrial equipment, and study the skills, tips, and tricks to make them successful in this exciting field. For quicker entry into the industry, a general and a downhole tool certificate are also available.

Electromechanical Technology is available at the Brownwood, Harlengin, Ingleside and Sweetwater campuses.

Electromechanical Technology
Electromechanical Technology Technician
Associate of Applied Science Degree - Sweetwater

Semester 1			Credits
CETT	1303	DC Circuits	3
RBTC	1343	Robotics	3
ACGM	X3XX	Gen Ed Humanities/Fine Arts Course	3
ACGM	X3XX	Gen Ed Math/Natural Science Course	3
		Semester Totals	**12**

Semester 2			Credits
CETT	1305	AC Circuits	3
CETT	1325	Digital Fundamentals	3
ELMT	1305	Basic Fluid Power	3
RBTC	2339	Robot Programming and Diagnostics	3
ACGM	X3XX	Gen Ed Social/Behavioral Science Course	3
		Semester Totals	**15**

Semester 3			Credits
CETT	1329	Solid State Devices	3
ELMT	1301	Programmable Logic Controllers	3
ENER	2325	SCADA and Networking	3
INMT	1317	Industrial Automation	3
ACGM	X3XX	Gen Ed Elective Course	3
		Semester Totals	**15**

Semester 4			Credits
ELMT	2333	Industrial Electronics	3
ELMT	2239	Advanced Programmable Logic Controllers	2
ELMT	2341	Electromechanical Systems	3
RBTC	1341	Vision Systems	3
ACGM	X3XX	Gen Ed Elective Course	3
		Semester Totals	**14**

Semester 5			Credits
ELMT	2480	Cooperative Education-Electromechanical Technology/ Electromechanical Engineering Technology	4
ELMT	1491	or Special Topics in Electromechanical Technology	
		Semester Totals	**4**
		Program Totals	**60**

Electromechanical Technology
Technician Certificate 2 - Sweetwater

Semester 1			
CETT	1303	DC Circuits	3
RBTC	1343	Robotics	3
TECM	1303	Technical Calculations	3
		Semester Totals	**9**

Semester 2			
CETT	1305	AC Circuits	3
CETT	1325	Digital Fundamentals	3
ELMT	1305	Basic Fluid Power	3
RBTC	2339	Robot Programming and Diagnostics	3
		Semester Totals	**12**

Semester 3			
CETT	1329	Solid State Devices	3
ELMT	1301	Programmable Logic Controllers	3
ENER	2325	SCADA and Networking	3
INMT	1317	Industrial Automation	3
		Semester Totals	**12**

Semester 4			
ELMT	2333	Industrial Electronics	3
ELMT	2239	Advanced Programmable Logic Controllers	2
ELMT	2341	Electromechanical Systems	3
RBTC	1341	Vision Systems	3
		Semester Totals	**11**
		Program Totals	**44**

Electromechanical Technology
Technician Certificate 1 - Brownwood (Starting Fall 2016)

Semester 1	Credits		
ELMT	1305	Basic Fluid Power	3
ELMT	2341	Electromechanical Systems	3
ELPT	1311	Basic Electrical Theory	3
ENER	1430	Basic Mechanical Skills for Energy	4
INTC	1357	AC/DC Motor Control	3
MCHN	1416	Machine Tool Repair	4
		Semester Totals	**20**
		Program Totals	**20**

Electromechanical Technology
Downhole Tool Technician Certificate 1 - Sweetwater

Semester 1			Credits
ENER	1430	Basic Mechanical Skills for Energy	4
MCHN	1416	Machine Tool Repair	4
PTRT	1307	Recovery and Production Methods	3
PTRT	1413	Industrial Safety	4
PTRT	1471	Downhole Tool Redressing	4
		Semester Totals	**19**
		Program Totals	**19**

Electromechanical Technology
Wind Energy Technology
Associate of Applied Science Degree -

Harlingen, Ingleside and Sweetwater

Semester 1			Credits
CETT	1303	DC Circuits	3
WIND	1300	Introduction to Wind Energy	3
WIND	1302	Wind Safety	3
ACGM	X3XX	Gen Ed Math/Natural Science Course	3
		Semester Totals	**12**

Semester 2			Credits
CETT	1305	AC Circuits	3
CETT	1325	Digital Fundamentals	3
ELMT	1305	Basic Fluid Power	3
WIND	2310	Wind Turbine Materials and Electro-Mechanical Equipment	3
ACGM	X3XX	Gen Ed Social/Behavioral Science Course	3
		Semester Totals	**15**

Semester 3			Credits
ELMT	1301	Programmable Logic Controllers	3
ENER	2325	SCADA and Networking	3
INMT	1317	Industrial Automation	3
ACGM	X3XX	Gen Ed Approved Elective	3
ACGM	X3XX	Gen Ed Humanities/Fine Arts Course	3
		Semester Totals	**15**

Semester 4			Credits
ELMT	2341	Electromechanical Systems	3
ELMT	2335	or Certified Electronics Technician Training	
WIND	2455	Wind Turbine Troubleshooting and Repair	4
WIND	2459	Wind Power Delivery System	4
ACGM	X3XX	Gen Ed Elective Course	3
		Semester Totals	**14**

Semester 5			Credits
ELMT	2480	Cooperative Education-Electromechanical Technology/ Electromechanical Engineering Technology	4
ELMT	1491	or Special Topics in Electromechanical Technology	
		Semester Totals	**4**

Program Totals 60

Electromechanical Technician
Wind Energy Technician Certificate 1 -

Harlingen, Ingleside and Sweetwater

Semester 1			Credits
CETT	1303	DC Circuits	3
TECM	1303	Technical Calculations	3
WIND	1300	Introduction to Wind Energy	3
WIND	1302	Wind Safety	3
		Semester Totals	**12**

Semester 2			Credits
CETT	1305	AC Circuits	3
CETT	1325	Digital Fundamentals	3
ELMT	1305	Basic Fluid Power	3
WIND	2310	Wind Turbine Materials and Electro-Mechanical Equipment	3
		Semester Totals	**12**

Semester 3			Credits
ELMT	1301	Programmable Logic Controllers	3
ELMT	2335	Certified Electronics Technician Training	3
ENER	2325	or SCADA and Networking	
INMT	1317	Industrial Automation	3
ELMT	1491	Special Topics in Wind Energy	4
WIND	2459	or Wind Power Delivery System	
		Semester Totals	**13**

Program Totals 37

Electromechanical Technician
Wind Energy Technician Certificate 2 - Sweetwater

Semester 1			Credits
CETT	1303	DC Circuits	3
TECM	1303	Technical Calculations	3
WIND	1300	Introduction to Wind Energy	3
WIND	1302	Wind Safety	3
		Semester Totals	**12**

Semester 2			Credits
CETT	1305	AC Circuits	3
CETT	1325	Digital Fundamentals	3
ELMT	1305	Basic Fluid Power	3
WIND	2310	Wind Turbine Materials and Electro-Mechanical Equipment	3
		Semester Totals	**12**

Semester 3			Credits
ELMT	1301	Programmable Logic Controllers	3
ENER	2325	SCADA and Networking	3
INMT	1317	Industrial Automation	3
ELMT	1491	Special Topics in Wind Energy	4
		Semester Totals	**13**

Semester 4			Credits
ELMT	2341	Electromechanical Systems	3
ELMT	2335	or Certified Electronics Technician Training	
WIND	2455	Wind Turbine Troubleshooting and Repair	4
WIND	2459	Wind Power Delivery System	4
		Semester Totals	**11**

Program Totals 48

Electronic Communications Technology

The Electronic Communications Technology Program is recognized by the Texas Skill Standards Board, and students can get industry-endorsed training preparing them to earn certifications and licenses pertinent to their careers. Curriculum offers students hands-on work-competency skills and knowledge that employers agree are required for success in the field. The Electronic Communications offers a variety of specializations, including a general Electronic Communications pathway, Global Communication Systems Installer, or Wireless Communications Electronics, all of which can lead to an excellent and exciting career. For those looking to take a step further, an advanced certificate in Smart Grid Enhancement is also available.

Electronic Communications Technology is available at the Waco campus.

Electronic Communications Technology Associate of Applied Science Degree

Semester 1			Credits
CETT	1307	Fundamentals of Electronics	3
CETT	1321	Electronic Fabrication	3
IEIR	1371	Electrical Principles and Applications	3
ENGL	1301	Composition I	3
ACGM	X3XX	Gen Ed Math/Natural Science Course	3
		Semester Totals	**15**

Semester 2			Credits
CETT	1349	Digital Systems	3
CSIR	2301	Communication Electronics Components	3
EECT	1340	Telecommunications Transmission Media	3
ACGM	X3XX	Gen Ed Humanities/Fine Arts Course	3
ACGM	X3XX	Gen Ed Social/Behavioral Science Course	3
		Semester Totals	**15**

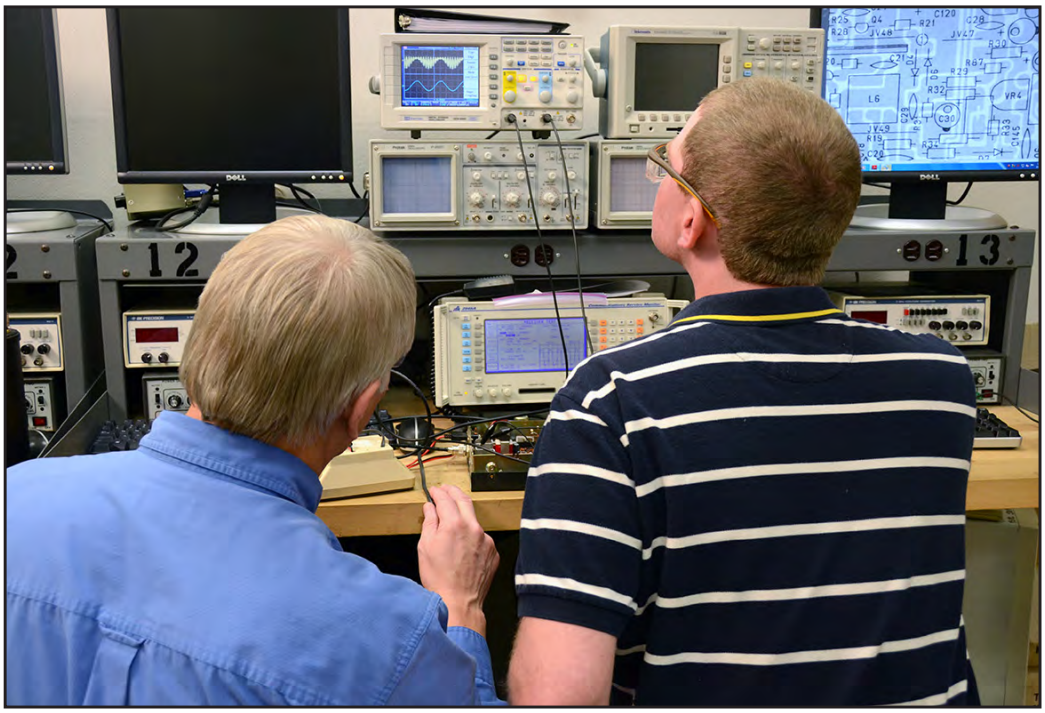
Semester 3			Credits
CSIR	1341	Transceiver Troubleshooting I	3
CSIR	1344	General Communication Circuits I	3
CSIR	2359	Communication Antenna Systems	3
EECT	1300	Technical Customer Service	3
EECT	1342	Telecommunications Outside Plant	3
		Semester Totals	**15**

Semester 4			Credits
CSIR	1355	Industry Certifications	3
CSIR	2343	Transceiver Troubleshooting II	3
EECT	1344	Telecommunications Broadband Systems	3
EECT	2330	Telecommunications Switching	3
ACGM	X3XX	Gen Ed Elective Course	3
		Semester Totals	**15**
		Program Totals	**60**

Electronic Communications Technology Global Communications Systems Installer Certificate 1

Semester 1			Credits
CETT	1302	Electricity Principles	3
CETT	1307	Fundamentals of Electronics	3
CETT	1321	Electronic Fabrication	3
EECT	1340	Telecommunications Transmission Media	3
		Semester Totals	**12**

Semester 2			Credits
CETT	1349	Digital Systems	3
CSIR	2301	Communication Electronics Components	3
CSIR	2359	Communication Antenna Systems	3
EECT	1300	Technical Customer Service	3
EECT	1342	Telecommunications Outside Plant	3
		Semester Totals	**15**
		Program Totals	**27**



Electronic Communications Technology
Smart Grid Enhancement Certificate 1

Semester 1			Credits
EECT	2371	Smart Grid Command and Control I	3
EECT	2373	Automatic Metering Infrastructure/Reading I	3
EECT	2374	Smart Grid Distribution Automation	3
ELPT	1341	Motor Control	3
		Semester Totals	**12**

Semester 2			Credits
EECT	2372	Smart Grid Command and Control II	3
EECT	2377	Automatic Metering Infrastructure/Reading II	3
EECT	2378	Smart Grid Technology	3
ELPT	2319	Programmable Logic Controllers I	3
		Semester Totals	**12**
		Program Totals	**24**

Electronic Communications Technology
Wireless Communications Electronics Certificate 1

Semester 1			Credits
CETT	1302	Electricity Principles	3
CETT	1307	Fundamentals of Electronics	3
CETT	1321	Electronic Fabrication	3
EECT	1340	Telecommunications Transmission Media	3
		Semester Totals	**12**

Semester 2			Credits
CETT	1349	Digital Systems	3
CSIR	1341	Transceiver Troubleshooting I	3
CSIR	2301	Communication Electronics Components	3
EECT	1300	Technical Customer Service	3
		Semester Totals	**12**

Semester 3			Credits
CSIR	1344	General Communication Circuits I	3
CSIR	1355	Industry Certifications	3
CSIR	2343	Transceiver Troubleshooting II	3
CSIR	2359	Communication Antenna Systems	3
		Semester Totals	**12**
		Program Totals	**36**

Electronics Technology

Electronics Technicians perform inspections, conduct tests and collect data in quality control, or assist in product design, development and manufacturing production. The Electronics Technology at TSTC can provide the technical skills needed to compete in the industry. In TSTC's Electronics program, students get a solid base of electronics courses with a concentration on microprocessor instruction — the framework for almost unlimited electronics applications. Students also will gain the competitive edge by learning LabView, the most up-to-date program used in the industry. The program covers both classroom theory and laboratory work and provides instruction in more advanced electronics applications, such as automatic testing and optoelectronics.

Electronics Technology is available at the Waco campus.

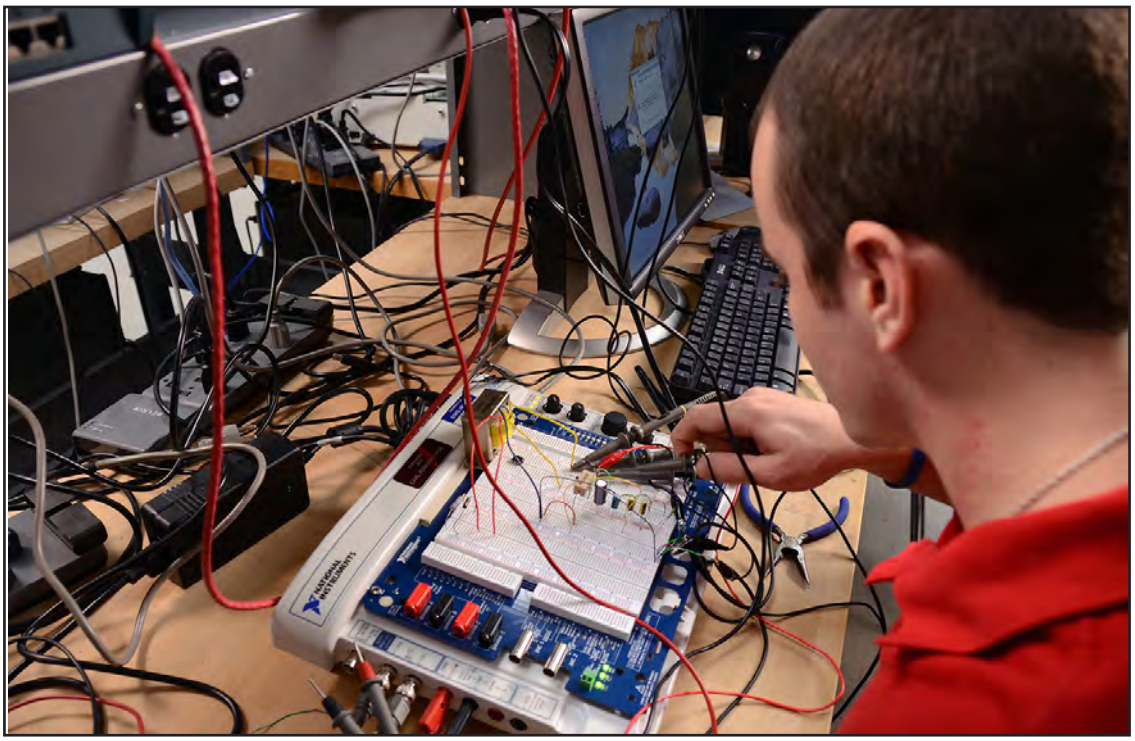
Electronics Technology
Associate of Applied Science

Semester 1			Credits
CETT	1307	Fundamentals of Electronics	3
CETT	1321	Electronic Fabrication	3
IEIR	1371	Electrical Principles and Applications	3
ENGL	1301	Composition I	3
ACGM	X3XX	Gen Ed Math/Natural Science Course	3
		Semester Totals	**15**

Semester 2			Credits
CETT	1349	Digital Systems	3
CSIR	2301	Communication Electronics Components	3
ELPT	1341	Motor Control	3
ACGM	X3XX	Gen Ed Social/Behavioral Science Course	3
ACGM	X3XX	Gen Ed Humanities/Fine Arts Course	3
		Semester Totals	**15**

Semester 3			Credits
CETT	1331	Programming for Discrete Electronic Devices	3
CETT	2339	Amplifier Analysis	3
CSIR	1341	Transceiver Troubleshooting I	3
CSIR	1344	General Communication Circuits I	3
EECT	1371	Power Source Design	3
		Semester Totals	**15**

Semester 4			Credits
CETT	1357	Linear Integrated Circuits	3
CETT	2449	Research and Project Design	4
EECT	2275	Automatic Testing	2
ELPT	2319	Programmable Logic Controllers I	3
ACGM	X3XX	Gen Ed Elective	3
		Semester Totals	**15**
		Program Totals	**60**



Emergency Medical Services

Emergency Medical Services
Paramedic
Associate of Applied Science Degree - Abilene only

Semester 1			Credits
ACGM	X3XX	Gen Ed Elective Course	3
EMSP	1261	Clinical - Emergency Medical Technology/Technician (EMT Paramedic)	2
EMSP	1501	Emergency Medical Technician	5
EMSP	2237	Emergency Procedures	2
		Semester Totals	**12**

Semester 2			Credits
EMSP	1355	Trauma Management	3
EMSP	1356	Patient Assessment and Airway Management	3
EMSP	1438	Introduction to Advanced Practice	4
MDCA	1313	Medical Terminology	3
BIOL	2404	Anatomy & Physiology	4
		Semester Totals	**17**

Semester 3			Credits
EMSP	2161	Clinical - Emergency Medical Technology/Technician (EMT Paramedic)	1
EMSP	2167	Practicum (or Field Experience) - Emergency Medical Technology/Technician (EMT Paramedic)	1
EMSP	2205	EMS Operations	2
EMSP	2330	Special Populations	3
EMSP	2434	Medical Emergencies	4
ACGM	X3XX	Gen Ed Elective Course	3
		Semester Totals	**14**

Semester 4			Credits
EMSP	2143	Assessment Based Management	1
EMSP	2162	Clinical - Emergency Medical Technology/Technician (EMT Paramedic)	1
EMSP	2168	Practicum (or Field Experience) - Emergency Medical Technology/Technician (EMT Paramedic)	1
EMSP	2248	Emergency Pharmacology	2
EMSP	2444	Cardiology	4
ACGM	X3XX	Gen Ed Humanities/Fine Arts Course	3
		Semester Totals	**12**

Semester 5			Credits
EMSP	2163	Clinical - Emergency Medical Technology/Technician (EMT Paramedic)	1
EMSP	2169	Practicum (or Field Experience) - Emergency Medical Technology/Technician (EMT Paramedic)	1
ACGM	X3XX	Gen Ed Social/Behavioral Science Course	3
		Semester Totals	**5**
		Program Totals	**60**

Emergency Medical Services
Emergency Medical Services - EMT
Certificate 1 - Abilene, Sweetwater, Breckenridge

Semester 1			Credits
EMSP	1261	Clinical - Emergency Medical Technology/Technician (EMT Paramedic)	2
EMSP	1501	Emergency Medical Technician	5
EMSP	2237	Emergency Procedures	2
		Semester Totals	**9**

Semester 2			Credits
MDCA	1313	Medical Terminology	3
SCIT	1407	Applied Human Anatomy and Physiology I	4
		Semester Totals	**7**
		Program Totals	**16**

Emergency Medical Services
Advanced EMT (AEMT)
Certificate 1 -Abilene only

Semester 1			Credits
EMSP	1261	Clinical - Emergency Medical Technology/Technician (EMT Paramedic)	2
EMSP	2237	Emergency Procedures	2
EMSP	1501	Emergency Medical Technician	5
		Semester Totals	**9**

Semester 2			Credits
EMSP	1355	Trauma Management	3
EMSP	1356	Patient Assessment and Airway Management	3
EMSP	1438	Introduction to Advanced Practice	4
MDCA	1313	Medical Terminology	3
		Semester Totals	**13**

Semester 3			Credits
EMSP	2161	Clinical - Emergency Medical Technology/Technician (EMT Paramedic)	1
EMSP	2167	Practicum (or Field Experience) - Emergency Medical Technology/Technician (EMT Paramedic)	1
EMSP	2205	EMS Operations	2
EMSP	2330	Special Populations	3
EMSP	2434	Medical Emergencies	4
		Semester Totals	**11**
		Program Totals	**33**

Emergency Medical Services
Emergency Medical Services - Paramedic
Certificate 2 - Abilene only

Semester 1			Credits
EMSP	1261	Clinical - Emergency Medical Technology/Technician (EMT Paramedic)	2
EMSP	1501	Emergency Medical Technician	5
EMSP	2237	Emergency Procedures	2
		Semester Totals	**9**

Semester 2			Credits
EMSP	1355	Trauma Management	3
EMSP	1356	Patient Assessment and Airway Management	3
EMSP	1438	Introduction to Advanced Practice	4
MDCA	1313	Medical Terminology	3
BIOL	2404	Anatomy and Physiology	4
		Semester Totals	**17**

Semester 3			Credits
EMSP	2161	Clinical - Emergency Medical Technology/Technician (EMT Paramedic)	1
EMSP	2167	Practicum (or Field Experience) - Emergency Medical Technology/Technician (EMT Paramedic)	1
EMSP	2205	EMS Operations	2
EMSP	2330	Special Populations	3
EMSP	2434	Medical Emergencies	4
		Semester Totals	**11**

Semester 4			Credits
EMSP	2143	Assessment Based Management	1
EMSP	2162	Clinical - Emergency Medical Technology/Technician (EMT Paramedic)	1
EMSP	2168	Practicum (or Field Experience) - Emergency Medical Technology/Technician (EMT Paramedic)	1
EMSP	2248	Emergency Pharmacology	2
EMSP	2444	Cardiology	4
		Semester Totals	**9**

Semester 5			Credits
EMSP	2163	Clinical - Emergency Medical Technology/Technician (EMT Paramedic)	1
EMSP	2169	Practicum (or Field Experience) - Emergency Medical Technology/Technician (EMT Paramedic)	1
		Semester Totals	**2**

Program Totals 48

Engineering

The Engineering program supports and enhances the college's technical education mission by providing Texas industry with employees who perform well at the entry level by virtue of their competence in mathematical manipulations and problem solving techniques using engineering principles. The Engineering program prepares graduates for advancement in the workplace through superior science and mathematics-based problem-solving skills, and facilitates progress toward successful completion of further educational goals and/or lifelong learning experiences.

Engineering is available at the Harlingen campus.

Engineering
Associate of Science

Semester 1			Credits
ENGL	1301	Composition I	3
HIST	1301	United States History I	3
MATH	2312	Precalculus	3
ENGR	1201	Introduction to Engineering	2
		Semester Totals	**11**

Semester 2			Credits
MATH	2413	Calculus I	4
ENGL	1302	Composition II	3
CHEM	1311	General Chemistry I (lec)	3
CHEM	1111	General Chemistry I (lab)	1
		Semester Totals	**11**

Semester 3			Credits
ENGR	2304	Programming for Engineering	3
MATH	2414	Calculus II	4
PHYS	2325	University Physic I (lec)	3
PHYS	2125	University Physic Laboratory I (lab)	1
GOVT	2306	Texas Government	3
		Semester Totals	**14**

Semester 4			Credits
ECON	230X	Economics (ECON-2301 or ECON-2302)	3
MATH	2415	Calculus III	4
ENGR	2301	Engineering Mechanics I Statics	3
PHYS	2326	University Physic II (lecture)	3
PHYS	2126	University Physic Laboratory II (lab)	1
		Semester Totals	**14**

Semester 5			Credits
ENGR	2305	Circuit Analysis I	3
ENGR	2105	Circuit Anaylsis I (lab)	1
ACGM	X3XX	Fine Arts Elective	3
ACGM	X3XX	Humanities Elective	3
		Semester Totals	**10**

Program Totals 60

Environmental Technology

In TSTC's Environmental Technology, students receive unique hands-on training in the practical skills needed to establish a career in a small- to mid-sized company or as part of an established team at a large corporation. Students can choose a specialization in Environmental Health & Safety, or Compliance, and receive training in government regulations about the generation and disposal of hazardous materials, gain the skills to properly treat, store and dispose of materials generated by industrial processes, and learn how to perform proper remedial actions if problems occur in the material management process. Curriculum involves extensive training in safety compliance standards outlined by the U.S. Department of Transportation and the Environmental Protection Agency. Students can also earn the certifications to enter controlled waste sites when necessary to fulfill job duties.

Environmental Technology is available at the Breckenridge and Waco campuses.

Environmental Technology
Environmental Health and Safety
Associate of Applied Science - Breckenridge only

Semester 1			Credits
EPCT	1205	Environmental Regulations Overview	2
EPCT	1311	Introduction to Environmental Science	3
ACGM	X3XX	Gen Ed Social/Behavioral Science Elective	3
ACGM	X3XX	Gen Ed Elective	3
		Semester Totals	**11**

Semester 2			Credits
OSHT	2401	OSHA Regulations-General Industry	4
EPCT	1317	Environmental Geology	3
AGCR	1197	Special Topics in Natural Resources	1
ACGM	X3XX	Gen Ed Humanities/Fine Arts Elective	3
		Semester Totals	**11**

Semester 3			Credits
EPCT	2237	Site Assessment	2
EPCT	1472	Environmental Biology	4
GISC	1311	Introduction to Geographic Information Systems (GIS)	3
FITT	1196	Special Topics in Parks, Recreation	1
ACGM	X3XX	Gen Ed Natural Science/Math Elective	3
		Semester Totals	**13**

Semester 4			Credits
EPCT	1243	Treatment, Remediation, and Disposal Techniques	2
EPCT	1249	Environmental Regulation Interpretation and Applications	2
EPCT	1344	Environmental Sampling and Analysis	3
EPCT	1327	Basic Water Works Operation	3
ACGM	X3XX	Gen Ed Elective	3
		Semester Totals	**13**

Semester 5			Credits
EPCT	1301	Hazardous Waste Operations and Emergency Response (HAZWOPER) Training and Related Topics	3
EPCT	1347	Waste Minimization and Pollution Prevention	3
EPCT	1328	Basic Wastewater Operations	3
EPCT	2388	Internship	3
		Semester Totals	**12**

Program Totals 60

Environmental Technology
Compliance Specialization
Associate of Applied Science - Waco only

Semester 1			Credits
EPCT	1205	Environmental Regulations Overview	2
EPCT	1307	Introduction to Environmental Safety and Health	3
ACGM	X3XX	Gen Ed Social/Behavioral Science Elective	3
ACGM	X3XX	Gen Ed Elective	3
		Semester Totals	**11**

Semester 2			Credits
OSHT	2401	OSHA Regulations-General Industry	4
ITSC	1309	Integrated Software Applications I	3
EPCT	2233	Environmental Toxicology	3
ACGM	X3XX	Gen Ed Humanities/Fine Arts Elective	3
		Semester Totals	**13**

Semester 3			Credits
EPCT	2237	Site Assessment	2
NUCP	1319	Radiation Physics	3
ACGM	X3XX	Gen Ed Natural Science/Math Elective	3
ACGM	X3XX	Gen Ed Elective	3
		Semester Totals	**11**

Semester 4			Credits
EPCT	1243	Treatment, Remediation, and Disposal Techniques	2
EPCT	1249	Environmental Regulation Interpretation and Applications	2
EPCT	1344	Environmental Sampling and Analysis	3
OSHT	1305	OSHA Regulations-Construction Industry	3
EPCT	1341	Principles of Industrial Hygiene	3
		Semester Totals	**13**

Semester 5			Credits
EPCT	1301	Hazardous Waste Operations and Emergency Response (HAZWOPER) Training and Related Topics	3
EPCT	1347	Waste Minimization and Pollution Prevention	3
EPCT	2331	Industrial Hygiene Applications	3
OSHT	2320	Safety Training Presentation Techniques	3
		Semester Totals	**12**

Program Totals 60

Facilities Maintenance & Management

It takes a team of individuals to keep any large facility operational. From electrical systems and air conditioning, to safety procedures or everyday repairs, today's large facilities need skilled, educated technicians to keep things running smoothly. TSTC's Facilities Maintenance & Management students immerse themselves in a cross-disciplinary program with intensive coursework and hands-on experience in everything from basic hydraulics and building codes and inspections, to commercial wiring and electrical theory. Backed by knowledgeable staff and an advisory committee of industry experts who help keep the program current, you can gain the competitive advantage needed to succeed in this dynamic field.

Facilities Maintenance & Management is available at the Waco campus

Facilities Maintenance & Management
Associate of Applied Science

Semester 1			Credits
CBFM	2313	Building Maintenance Management	3
CNBT	2310	Commercial/Industrial Blueprint Reading	3
ELPT	1311	Basic Electrical Theory	3
INMT	1305	Introduction to Industrial Maintenance	3
ACGM	X3XX	Gen Ed Social/Behavioral Science Elective	3
		Semester Totals	**15**

Semester 2			Credits
ELPT	1341	Motor Control	3
HYDR	1305	Basic Hydraulics	3
INMT	2303	Pumps, Compressors & Mechanical Drives	3
PFPB	2308	Piping Standards and Materials	3
MATH	1314	College Algebra	3
		Semester Totals	**15**

Semester 3			Credits
CBFM	1303	Boiler Maintenance	3
CNBT	1302	Mechanical, Plumbing & Electrical Systems in Construction I	3
INMT	2301	Machinery Installation	3
RBTC	1309	Pneumatics	3
ENGL	1301	Composition I	3
		Semester Totals	**15**

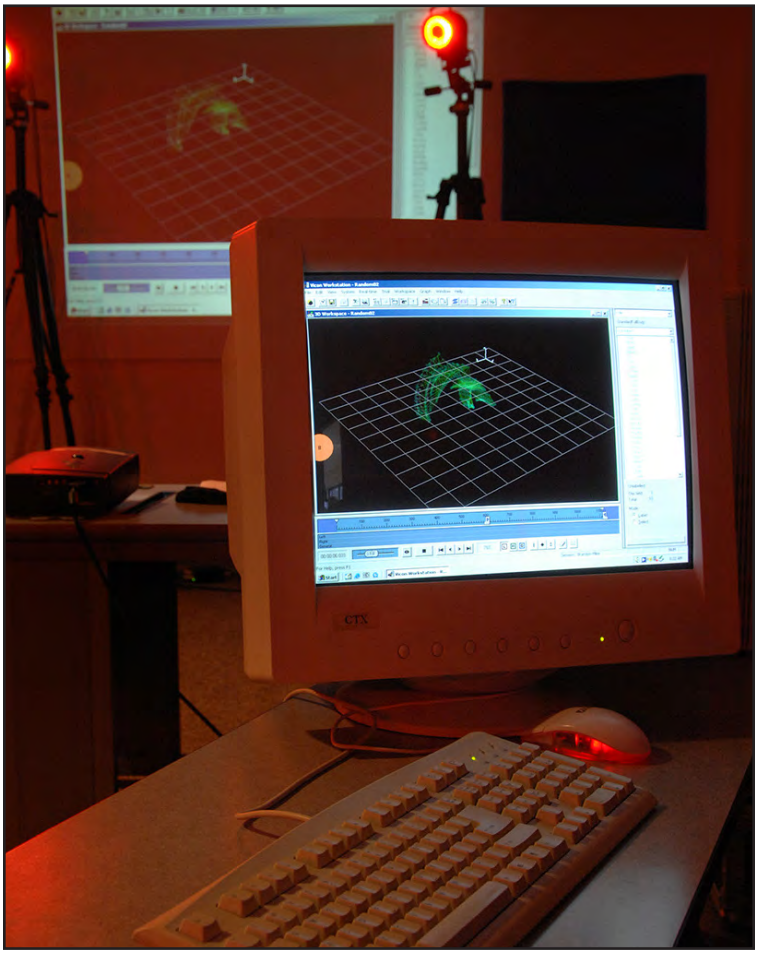
Semester 4			Credits
CNBT	1342	Building Codes and Inspections	3
ENTC	1349	Reliability and Maintainability	3
INMT	2345	Industrial Troubleshooting	3
PHYS	1310	Fundamentals of Physics	3
ACGM	X3XX	Gen Ed Humanities/Fine Arts Elective	3
		Semester Totals	**15**

Program Totals 60

Graphics, Gaming & Simulation Programming

The Graphics, Gaming & Simulation Programming degree is designed to prepare students for entry into the world of graphics and simulation programming. Gaming and interactive media design is used in several segments of Information Technology, including game design and creation, educational enhancement, industrial training, aerospace simulation and global defense. The curriculum for this degree plan includes instruction on C++ and C# for XNA design. After mastering the fundamentals of C++, the student moves into advanced applications of C++ in animation programming, multi-user interface programming, advanced mathematical applications and artificial intelligence. Additionally, tools such as OpenGL and DirectX are included in this curriculum. In this specialization, students learn to design and create systems to meet the graphics and simulation programming needs of business and industry.

Graphics, Gaming & Simulation Programming is offered at the Harlingen and Waco campuses.



Graphics, Gaming & Simulation Programming
Associate of Applied Science

Semester 1			Credits
GAME	1303	Introduction to Game Design and Development	3
ITSE	1307	Introduction to C++ Programming	3
ENGL	1301	Composition I	3
MATH	1314	College Algebra	3
		Semester Totals	**12**

Semester 2			Credits
GAME	1336	Introduction to 3D Game Modeling	3
ITSE	2331	Advanced C++ Programming	3
ACGM	X3XX	Gen Ed Social/Behavioral Science Course	3
MATH	1316	Plane Trigonometry	3
		Semester Totals	**12**

Semester 3			Credits
GAME	1343	Game and Simulation Programming I	3
GAME	1349	OpenGL Programming I	3
ITSE	2345	Data Structures	3
ACGM	X3XX	Gen Ed Humanities/Fine Arts Course	3
		Semester Totals	**12**

Semester 4			Credits
GAME	1353	Multi-User Game Programming I	3
GAME	1359	Game and Simulation Programming II	3
GAME	2303	Artificial Intelligence Programming I	3
GAME	2341	Game Scripting	3
		Semester Totals	**12**

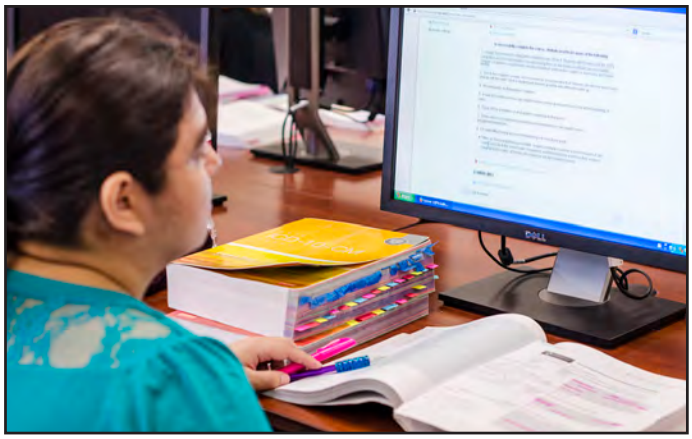
Semester 5			Credits
GAME	2333	Game and Simulation Programming III	3
GAME	2347	Advanced Game Programming	3
GAME	2353	OpenGL Programming II	3
GAME	2359	Game and Simulation Group Project	3
		Semester Totals	**12**

Program Totals 60

Health Information Technology

In the Health Information Technology Program, students learn how to transcribe code, analyze and protect medical information. Doctors and other healthcare professionals need accurate records to treat their patients, and professionals in the Health Information Technology industry make that possible. Health information technology careers are found in a variety of settings including: Healthcare facilities, consulting firms, government agencies, and insurance companies, healthcare IS/IT vendors, pharmaceutical companies, as well as many other environments. For quicker entry into the industry, certificate programs are available in Medical Office Specialist and Medical Information Specialist/Transcriptionist.

Health Information Technology is available at the Abilene, Breckenridge, Brownwood, Harlingen, and Sweetwater campuses.



Health Information Technology
Associate of Applied Science

Semester 1			Credits
HITT	1204	IT for Health Professions	2
HITT	1301	Health Data Content and Structure	3
HITT	1305	Medical Terminology I	3
BIOL	2401	Anatomy & Physiology I	4
BIOL	2101	or Anatomy & Physiology I Lab	
BIOL	2301	and Anatomy & Physiology I	
		Semester Totals	**12**

Semester 2			Credits
HITT	1253	Legal and Ethical Aspects of Health Information	2
HITT	1341	Coding and Classification Systems	3
HITT	1345	Health Care Delivery Systems	3
BIOL	2402	Anatomy & Physiology II	4
BIOL	2102	or Anatomy & Physiology II Lab	1
BIOL	2302	and Anatomy & Physiology II	3
		Semester Totals	**12**

Semester 3			Credits
HITT	1311	Health Information Systems	3
HITT	1342	Ambulatory Coding	3
MDCA	1302	Human Disease/Pathophysiology	3
ACGM	X3XX	Gen Ed Humanities/Fine Arts Course	3
		Semester Totals	**12**

Semester 4			Credits
HITT	2335	Coding and Reimbursement Methodologies	3
HITT	2339	Health Information Organization and Supervision	3
HITT	2443	Quality Assessment and Performance Improvement	4
ACGM	X3XX	Gen Ed Social/Behavioral Sciences Course	3
		Semester Totals	**13**

Semester 5			Credits
HITT	2249	RHIT Competency Review	2
HITT	2346	Advanced Medical Coding	3
HITT	2366	Practicum (or Field Experience)- Health Information/ Medical Records Technology/Technician	3
HITT	2166	or Practicum (or Field Experience)-Health Information/ Medical Records Technology/Technician	
HITT	2266	and Practicum (or Field Experience)- Health Information/ Medical Records Technology/Technician	
ACGM	X3XX	Gen Ed Elective Course	3
		Semester Totals	**11**

Program Totals 60

Health Information Technology
Medical Information Transcriptionist
Certificate 1 - Harlingen only

Semester 1			Credits
HITT	1301	Health Data Content and Structure	3
HITT	1305	Medical Terminology I	3
HITT	1311	Health Information Systems	3
MDCA	1321	Administrative Procedures	3
		Semester Totals	**12**

Semester 2			Credits
HITT	2331	Medical Terminology-Advanced	3
HITT	1342	Ambulatory Coding	3
MDCA	1343	Medical Insurance	3
MRMT	1307	Medical Transcription I	3
		Semester Totals	**12**

Semester 3			Credits
HITT	1266	Practicum (or Field Experience)-Health Information/ Medical Records Technology/Technician	2
MRMT	2433	Medical Transcription II	4
		Semester Totals	**6**

Program Totals 30

Health Information Technology
Medical Office Specialist
Certificate 2 - Sweetwater, Abilene, Breckenridge, Brownwood

Semester 1			Credits
HITT	1204	IT for Health Professions	2
HITT	1301	Health Data Content and Structure	3
HITT	1305	Medical Terminology I	3
MDCA	1302	Human Disease/Pathophysiology	3
		Semester Totals	**11**

Semester 2			Credits
HITT	1253	Legal and Ethical Aspects of Health Information	2
HITT	1341	Coding and Classification Systems	3
HITT	1342	Ambulatory Coding	3
BIOL	2401	Anatomy & Physiology I	4
		Semester Totals	**12**

Semester 3			Credits
HITT	1311	Health Information Systems	3
HITT	2335	Coding and Reimbursement Methodologies	3
HITT	2366	Practicum (or Field Experience)-Health Information/ Medical Records Technology/Technician	3
BIOL	2402	Anatomy & Physiology II	4
		Semester Totals	**13**

Program Totals 36

Heating, Ventilation, & Air Conditioning Technology

TSTC offers hands-on training on high efficiency commercial and residential heating and air-conditioning equipment, heat pumps, commercial refrigeration equipment and a 200-ton chilled water A/C system to teach students of the Heating, Ventilation, & Air Conditioning Technology the skills needed to enter the industry. The program is backed by experienced faculty, many of whom are active members of professional organizations such as North American Technician Excellence and Air Conditioning Contractors of America, and is guided by an advisory board of current industry members, ensuring that students get the latest training available. The laboratory facilities at TSTC include high efficiency commercial and residential heating and air conditioning equipment, energy efficient heat pumps, commercial refrigeration equipment, direct digital and pneumatic controls and a large chilled water system. Students of the Heating, Ventilation, & Air Conditioning Technology can choose between three specializations: Commercial, Indoor Environmental & Product Refrigeration and Residential Light Commercial Specialization. For quicker entry into the industry, certificates are also available in HVAC Technician, Indoor Environmental & Product Refrigeration and Refrigeration Mechanic.

Heating, Ventilation, & Air Conditioning Technology is available at the East Williamson County Higher Education Center, Fort Bend Technical Center, Harlingen, Marshall, North Texas Center and Waco.

Heating, Ventilation, & Air Conditioning Technology Commercial Specialization Associate of Applied Science -

Waco, Fort Bend County, Williamson County

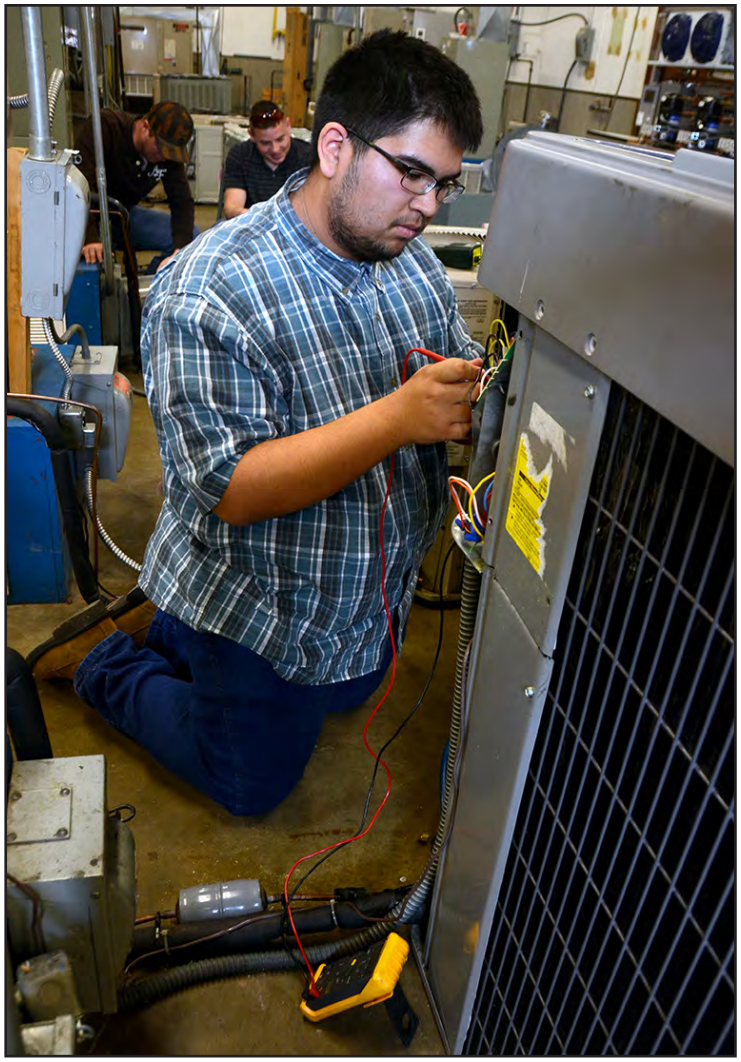
Semester 1			Credits
HART	1301	Basic Electricity for HVAC	3
HART	1307	Refrigeration Principles	3
HART	1310	HVAC Shop Practices and Tools	3
ENGL	1301	Composition I	3
		Semester Totals	**12**

Semester 2			Credits
HART	1303	Air Conditioning Control Principles	3
HART	1341	Residential Air Conditioning	3
HART	1345	Gas and Electric Heating	3
ACGM	X3XX	Gen Ed Math/Natural Science Course	3
		Semester Totals	**12**

Semester 3			Credits
HART	2336	Air Conditioning Troubleshooting	3
HART	2342	Commercial Refrigeration	3
HART	2349	Heat Pumps	3
ACGM	X3XX	Gen Ed Social/Behavioral Science Course	3
		Semester Totals	**12**

Semester 4			Credits
HART	2345	Residential Air Conditioning Systems Design	3
HART	2331	Advanced Electricity for HVAC	3
HART	2343	Industrial Air Conditioning	3
ACGM	X3XX	Gen Ed Humanities/Fine Arts Course	3
		Semester Totals	**12**

Semester 5			Credits
HART	2302	Commercial Air Conditioning System Design	3
HART	2334	Advanced Air Conditioning Controls	3
HART	2358	Testing, Adjusting and Balancing HVAC Systems	3
ACGM	X3XX	Gen Ed Elective Course	3
		Semester Totals	**12**
		Program Totals	**60**



Heating, Ventilation, & Air Conditioning Technology Indoor Environmental & Product Refrigeration Associate of Applied Science - North Texas Center

Semester 1			Credits
HART	1301	Basic Electricity for HVAC	3
HART	1307	Refrigeration Principles	3
HART	1356	EPA Certification	3
ENGL	1301	Composition I	3
		Semester Totals	**12**

Semester 2			Credits
HART	1303	Air Conditioning Control Principles	3
HART	1341	Residential Air Conditioning	3
HART	1345	Gas and Electric Heating	3
ACGM	X3XX	Gen Ed Math/Natural Science Course	3
		Semester Totals	**12**

Semester 3			Credits
HART	2336	Air Conditioning Troubleshooting	3
HART	2342	Commercial Refrigeration	3
HART	2338	Air Conditioning Installation and Setup	3
ACGM	X3XX	Gen Ed Social/Behavioral Science Course	3
		Semester Totals	**12**

Semester 4			Credits
HART	2345	Residential Air Conditioning Systems Design	3
HART	2341	Commercial Air Conditioning	3
HART	2349	Heat Pumps	3
ACGM	X3XX	Gen Ed Humanities/Fine Arts Course	3
		Semester Totals	**12**

Semester 5			Credits
HART	2357	Specialized Commercial Refrigeration	3
HART	2380	Cooperative Education	3
HART	2358	Testing, Adjusting and Balancing HVAC Systems	3
ACGM	X3XX	Gen Ed Elective Course	3
		Semester Totals	**12**

Program Totals 60

Heating, Ventilation, & Air Conditioning Technology Residential Light Commercial Specialization Associate of Applied Science - Harlingen only

Semester 1			Credits
HART	1301	Basic Electricity for HVAC	3
HART	1307	Refrigeration Principles	3
HART	1351	Energy Management	3
ENGL	1301	Composition I	3
		Semester Totals	**12**

Semester 2			Credits
HART	1303	Air Conditioning Control Principles	3
HART	1341	Residential Air Conditioning	3
HART	1345	Gas and Electric Heating	3
ACGM	X3XX	Gen Ed Math/Natural Science Course	3
		Semester Totals	**12**

Semester 3			Credits
HART	2336	Air Conditioning Troubleshooting	3
HART	2342	Commercial Refrigeration	3
HART	1300	Duct Fabrication and Design	3
ACGM	X3XX	Gen Ed Social/Behavioral Science Course	3
		Semester Totals	**12**

Semester 4			Credits
HART	2345	Residential Air Conditioning Systems Design	3
HART	2350	HVAC Zone Controls	3
HART	2338	Air Conditioning Installation and Setup	3
ACGM	X3XX	Gen Ed Humanities/Fine Arts Course	3
		Semester Totals	**12**

Semester 5			Credits
MAIR	1349	Refrigeration, Window Units and Freezers	3
RBPT	2335	Residential Environmental Quality	3
HART	2301	Air Conditioning and Refrigeration Codes	3
ACGM	X3XX	Gen Ed Elective Course	3
		Semester Totals	**12**

Program Totals 60

Heating, Ventilation, & Air Conditioning Technology Indoor Environmental & Product Refrigeration Certificate 1 - North Texas Center only

Semester 1			Credits
HART	1301	Basic Electricity for HVAC	3
HART	1307	Refrigeration Principles	3
HART	1303	Air Conditioning Control Principles	3
HART	1356	EPA Recovery Certification Preparation	3
		Semester Totals	12

Semester 2			Credits
HART	1341	Residential Air Conditioning	3
HART	1345	Gas and Electric Heating	3
HART	2342	Commercial Refrigeration	3
HART	2338	Air Conditioning Installation and Startup	3
		Semester Totals	**12**

Program Totals 24

Heating, Ventilation, & Air Conditioning Technology Technician Certificate 1 - Fort Bend County, North Texas, Waco, and Williamson County

Semester 1			Credits
CNBT	1300	Residential and Light Commercial Blueprint Reading	3
HART	1301	Basic Electricity for HVAC	3
HART	1307	Refrigeration Principles	3
HART	1310	HVAC Shop Practices and Tools	3
		Semester Totals	**12**

Semester 2			Credits
HART	1303	Air Conditioning Control Principles	3
HART	1341	Residential Air Conditioning	3
HART	1345	Gas and Electric Heating	3
CNBT	1302	Mechanical, Plumbing & Electrical Systems in Construction I	3
RBPT	1370	or Building Envelope Inspection	
		Semester Totals	**12**

Semester 3			Credits
HART	2336	Air Conditioning Troubleshooting	3
HART	2342	Commercial Refrigeration	3
HART	2349	Heat Pumps	3
RBPT	2350	Residential Retrofit Strategies	3
PFPB	2308	or Piping Standards and Materials	
		Semester Totals	**12**

Program Totals 36

Heating, Ventilation, & Air Conditioning Technology
Refrigeration Mechanic
Certificate1 - Harlingen only

Semester 1			Credits
HART	1301	Basic Electricity for HVAC	3
HART	1307	Refrigeration Principles	3
HART	1351	Energy Management	3
		Semester Totals	**9**

Semester 2			Credits
HART	1300	HVAC Duct Fabrication	3
HART	1303	Air Conditioning Control Principles	3
HART	1345	Gas and Electric Heating	3
		Semester Totals	**9**

Semester 3			Credits
HART	1341	Residential Air Conditioning	3
HART	2342	Commercial Refrigeration	3
MAIR	1349	Refrigerators, Freezers, Window Air Conditioners	3
		Semester Totals	**9**

Program Totals 27

Industrial Maintenance

The Industrial Maintenance Program is designed by industry experts and employers. The courses in this program are directed at cutting edge mechanical and electrical operations, providing you with knowledge and skills in hydraulics, pneumatics, pumps and compressors, machinery installation and alignment, programmable logic controllers, motor controls, electrical installation and wiring, air conditioning and refrigeration, machine shop, power transmissions, troubleshooting and welding. The classroom learning is supplemented with hands-on training utilizing real-world equipment to provide you with the skills and technical background needed to be successful in most industrial environments. Students can choose a general Industrial Maintenance track, or specialize in Electrical Industrial Maintenance. For quicker entry into the industry, general and electrical industrial maintenance certificates are also available.

Industrial Maintenance is available at the East Williamson County Higher Education Center, Marshall, North Texas Center, and Waco campuses.

Industrial Maintenance Electrical Specialization Associate of Applied Science - Marshall, North Texas Center

Semester 1			Credits
DFTG	1325	Blueprint Reading and Sketching	3
ELPT	1311	Basic Electrical Theory	3
INMT	1305	Introduction to Industrial Maintenance	3
WLDG	1337	Introduction to Welding Metallurgy	3
ACGM	X3XX	Gen Ed Social/Behavioral Science Course	3
		Semester Totals	**15**

Semester 2			Credits
ELPT	1341	Motor Control	3
HYDR	1305	Basic Hydraulics	3
INMT	2303	Pumps, Compressors & Mechanical Drives	3
HART	1307	Refrigeration Principles	3
ACGM	X3XX	Gen Ed Math/Natural Science Course	3
		Semester Totals	**15**

Semester 3			Credits
ELPT	2319	Programmable Logic Controllers I	3
INMT	2301	Machinery Installation	3
RBTC	1309	Pneumatics	3
ELPT	1345	Commercial Wiring	3
ENGL	1301	Composition I	3
		Semester Totals	**15**

Semester 4			Credits
INMT	2345	Industrial Troubleshooting	3
ELPT	1351	Electrical Machines	3
ELPT	2331	AC/DC Drives	3
ACGM	X3XX	Gen Ed Humanities/Fine Arts Course	3
ACGM	X3XX	Gen Ed Elective Course	3
		Semester Totals	**15**

Program Totals 60

Industrial Maintenance Industrial Maintenance Mechanic Certificate 1 - Waco, East Williamson County

Semester 1			Credits
DFTG	1325	Blueprint Reading and Sketching	3
ELPT	1311	Basic Electrical Theory	3
HYDR	1301	Rigging and Conveying Systems	3
INMT	1305	Introduction to Industrial Maintenance	3
		Semester Totals	**12**

Semester 2			Credits
ELPT	1341	Motor Control	3
HYDR	1305	Basic Hydraulics	3
INMT	2303	Pumps, Compressors & Mechanical Drives	3
CBFM	1303	Boiler Maintenance	3
		Semester Totals	**12**

Semester 3			Credits
INMT	1355	Industrial Power Plant Systems	3
INMT	2301	Machinery Installation	3
RBTC	1309	Pneumatics	3
PFPB	2308	Piping Standards and Materials	3
		Semester Totals	**12**

Program Totals 36

Industrial Maintenance
Industrial Maintenance Mechanic-Electrical
Certificate 2 - Marshall, North Texas Center

Semester 1			Credits
DFTG	1325	Blueprint Reading and Sketching	3
ELPT	1311	Basic Electrical Theory	3
INMT	1305	Introduction to Industrial Maintenance	3
WLDG	1337	Introduction to Welding Metallurgy	3
		Semester Totals	**12**

Semester 2			Credits
ELPT	1341	Motor Control	3
HART	1307	Refrigeration Principles	3
HYDR	1305	Basic Hydraulics	3
INMT	2303	Pumps, Compressors & Mechanical Drives	3
		Semester Totals	**12**

Semester 3			Credits
ELPT	1345	Commercial Wiring	3
ELPT	2319	Programmable Logic Controllers I	3
INMT	2301	Machinery Installation	3
RBTC	1309	Pneumatics	3
		Semester Totals	**12**

Semester 4			Credits
ELPT	1351	Electrical Machines	3
ELPT	2331	AC/DC Drives	3
INMT	2345	Industrial Troubleshooting	3
		Semester Totals	**9**

Program Totals 45

Industrial Maintenance
Mechanical Specialization
Associate of Applied Science - Waco, East Williamson County

Semester 1			Credits
DFTG	1325	Blueprint Reading and Sketching	3
ELPT	1311	Basic Electrical Theory	3
INMT	1305	Introduction to Industrial Maintenance	3
HYDR	1301	Rigging and Conveying Systems	3
ACGM	X3XX	Gen Ed Social/Behavioral Science Course	3
		Semester Totals	**15**

Semester 2			Credits
ELPT	1341	Motor Control	3
CBFM	1303	Boiler Maintenance	3
INMT	2303	Pumps, Compressors & Mechanical Drives	3
HYDR	1305	Basic Hydraulics	3
ACGM	X3XX	Gen Ed Math/Natural Science Course	3
		Semester Totals	**15**

Semester 3			Credits
ELPT	2319	Programmable Logic Controllers I	3
INMT	2301	Machinery Installation	3
RBTC	1309	Pneumatics	3
PFPB	2308	Piping Standards and Materials	3
ENGL	1301	Composition I	3
		Semester Totals	**15**

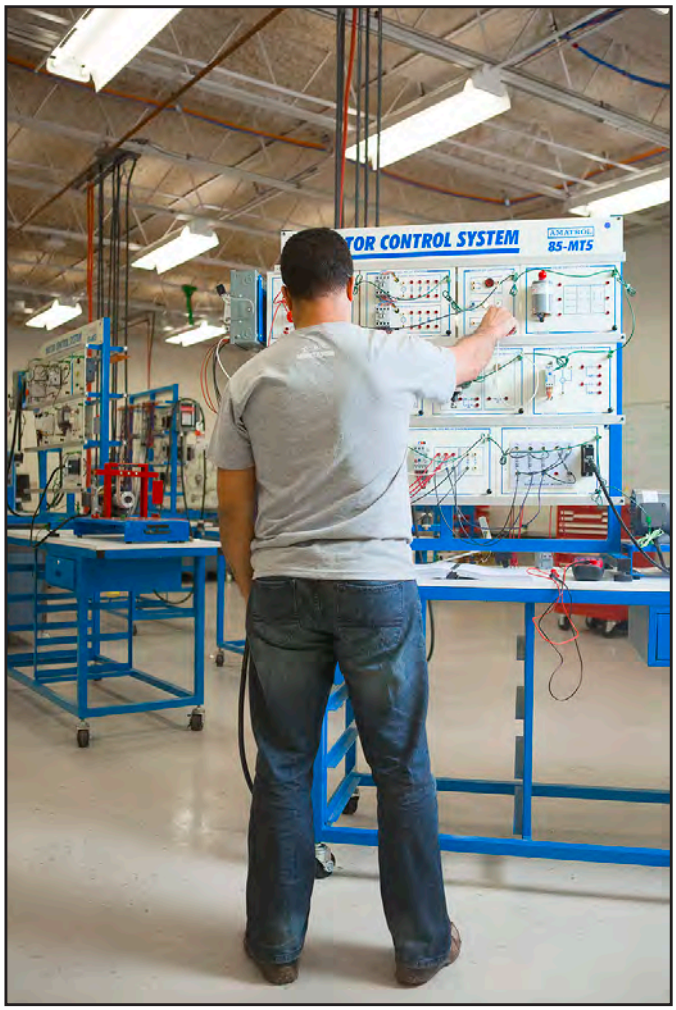
Semester 4			Credits
INMT	2345	Industrial Troubleshooting	3
INMT	1355	Industrial Power Plant Systems	3
ENTC	1349	Reliability and Maintainability	3
ACGM	X3XX	Gen Ed Humanities/Fine Arts Course	3
ACGM	X3XX	Gen Ed Elective Course	3
		Semester Totals	**15**

Program Totals 60

Industrial Systems Technology

Industrial technology touches every aspect of our lives—impacting products from candies to computers and industries from petrochemical to pharmaceutical. For the uniquely skilled individual who can maintain the variety of devices that support all of these operations, opportunities are unlimited. TSTC offers a curriculum designed to help you learn mechanical applications for industries ranging from manufacturing to food processing, pharmaceutical production to health care facility operations. ISE graduates discover impressive career opportunities in an array of facilities ... from chemical plants to universities and hospitals to utility providers. As a graduate of the Industrial Systems Technology Program, you can apply skills targeting pumps, valves, motors, steam turbines, air compressors, hydraulic presses, pneumatic equipment, conveyor systems and more.

Industrial Systems Technology is available at the Harlingen campus.



Industrial Systems Technology
Certificate 1 - 8 week program

Semester 1			Credits
CETT	1303	DC Circuits	3
CETT	1305	AC Circuits	3
CETT	1325	Digital Fundamentals	3
ELMT	1305	Basic Fluid Power	3
		Semester Totals	**12**

Semester 2			Credits
ELMT	1301	Programmable Logic Controllers	3
INMT	1317	Industrial Automation	3
INTC	1341	Principles of Automatic Control	3
RBTC	2347	Computer Integrated Manufacturing	3
EECT	1307	Convergence Technologies	3
		Semester Totals	**15**
		Program Totals	**27**

Instrumentation Technology

TSTC's Instrumentation Technology Program can help you learn the complex skills needed to work in the field. The Instrumentation option encompasses theory, operation, calibration practices and design of automated control systems. Students get a solid foundation in basic electrical and electronic concepts, digital computers and control systems, as well as intensive, hands-on training in laboratories supplied with industry-standard equipment.

Instrumentation Technology is available at the Waco campus.

Instrumentation Technology
Associate of Applied Science

Semester 1			Credits
CETT	1303	DC Circuits	3
DFTG	1313	Drafting for Specific Occupations	3
ENGL	1301	Composition I	3
MATH	1316	Plane Trigonometry	3
		Semester Totals	**12**

Semester 2			Credits
CETT	1305	AC Circuits	3
ELPT	1341	Motor Control	3
INTC	1341	Principles of Automatic Control	3
ACGM	X3XX	Gen Ed Humanities/Fine Arts Course	3
		Semester Totals	**12**

Semester 3			Credits
ELPT	2319	Programmable Logic Controllers I	3
INTC	1355	Unit Operations	3
INTC	2336	Distributed Control and Programmable Logic	3
ACGM	X3XX	Gen Ed Social/Behavioral Science Course	3
		Semester Totals	**12**

Semester 4			Credits
INTC	1356	Instrumentation Calibration	3
INTC	1358	Flow and Measurement Calibration	3
INTC	1370	Power Supply	3
INTC	2333	Instrumentation Systems Installation	3
		Semester Totals	**12**

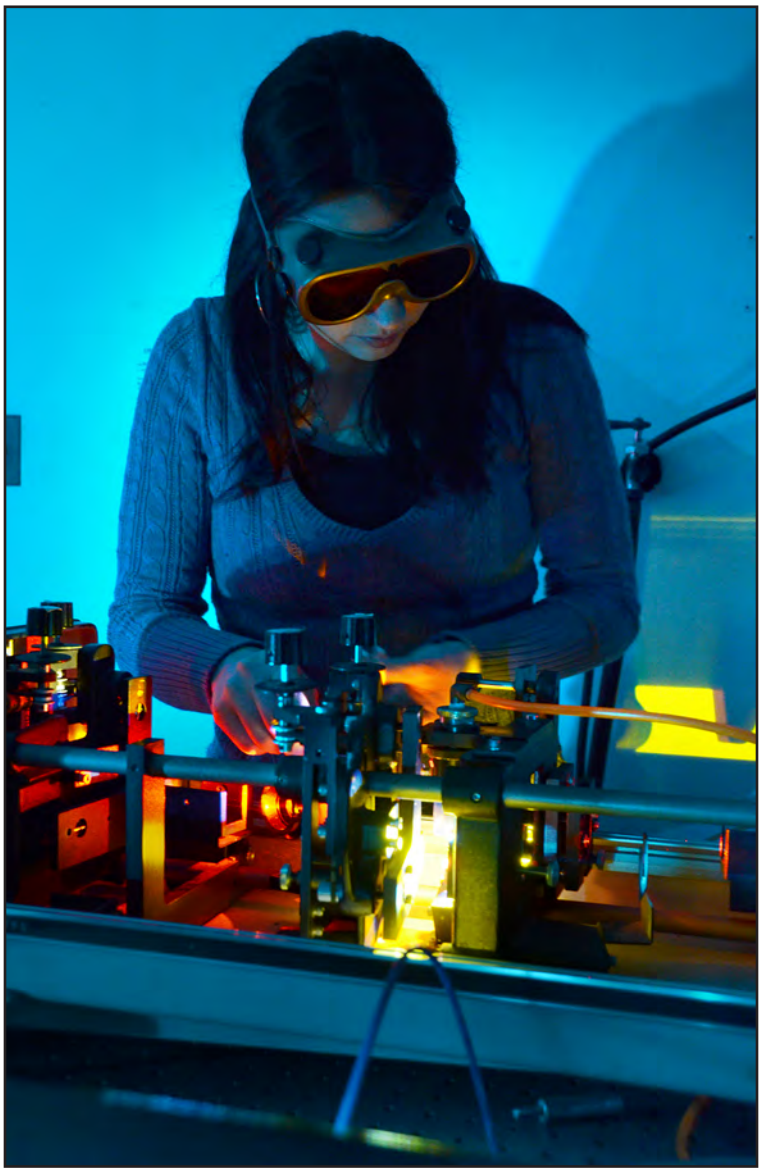
Semester 5			Credits
INTC	1348	Analytical Instrumentation	3
INTC	1371	Special Topics in Instrumentation Technology/Technician	3
INTC	2350	Fieldbus Process Control Systems	3
PHYS	1310	Elementary Physics	3
		Semester Totals	**12**

Program Totals 60

Laser Electro-Optics Technology

In the two-year Laser Electro-Optics Technology Program, you can develop an understanding and proficiency in lasers, electro-optics, optics, electronics and vacuum science. With access to laboratory equipment valued at over $40 million, students build extensive knowledge and skills while working toward the Associate of Applied Science degree, and they master the skills necessary to work in areas such as research and development.

Laser Electro-Optics Technology is available at the Waco campus.



Laser Electro-Optics Technology
Associate of Applied Science

Semester 1			Credits
CETT	1303	DC Circuits	3
LOTT	1271	Math for Photonics Technicians	2
LOTT	1344	Fundamentals of Laser and Laser Safety	3
LOTT	1443	Geometrical Optics	4
ENGL	1301	Composition I	3
		Semester Totals	**15**

Semester 2			Credits
CETT	1305	AC Circuits	3
LOTT	2436	Wave Optics	4
LOTT	2445	Continuous Wave and Pulsed Lasers	4
NANO	1205	Nano Technology	2
HUMA	1301	Introduction to Humanities I	3
		Semester Totals	**16**

Semester 3			Credits
CETT	1379	Solid State Components and Applications Technology	3
SMFT	1471	Vacuum Thin Films	4
CHEM	1305	Introductory Chemistry I	3
CHEM	1105	Introductory Chemistry Laboratory I	1
PHYS	1310	Elementary Physics	3
		Semester Totals	**14**

Semester 4			Credits
LOTT	2432	Laser Maintenance and Repair	4
LOTT	2435	Electro-Optic Devices	4
SMFT	2450	Vacuum Thin Films	4
PSYC	2301	General Psychology	3
		Semester Totals	**15**

Program Totals 60

Logistics Technology

Without an efficient system to facilitate the packing and transporting of goods and services, Texas's economy would grind to a halt. Today's logistics systems are technologically advanced and require skilled technicians to keep them operating smoothly. Logisticians analyze and coordinate an organizations' supply chain-the system that moves a product from supplier to consumer. They manage the entire life cycle of a product, which includes how a product is acquired, distributed, allocated and delivered.

Logistics Technology is available at the North Texas Center campus.

Logistics Technology
Associate of Applied Science

Semester 1			Credits
BMGT	1313	Principles of Purchasing	3
ITSC	1309	Integrated Software Applications I	3
LMGT	1319	Introduction to Business Logistics	3
LMGT	1321	Introduction to Materials Handling	3
ACGM	X3XX	Gen Ed English Elective	3
		Semester Totals	**15**

Semester 2			Credits
LMGT	1323	Domestic and International Transportation Management	3
LMGT	1341	Freight Loss and Damage Claims	3
LMGT	1349	Materials Requirement Planning	3
ACGM	X3XX	Gen Ed Math/Natural Science Course	3
ACGM	X3XX	Gen Ed Speech Elective	3
		Semester Totals	**15**

Semester 3			Credits
BMGT	1309	Information and Project Management	3
LMGT	1346	Radio Frequency Identification (RFID) Wireless Information Systems	3
LMGT	2330	International Logistics Management	3
LMGT	2334	Principles of Traffic Management	3
ACGM	X3XX	Gen Ed Social/Behavioral Science Course	3
		Semester Totals	**15**

Semester 4			Credits
LMGT	1325	Warehouse and Distribution Center Management	3
LMGT	1340	Contemporary Logistics Issues	3
LMGT	2388	Internship: Logistics and Materials Management	3
BMGT	2303	or Problem Solving and Decision Making	
POFT	1300	Career Exploration/Planning	3
HUMA	1301	Introduction to Humanities I	3
		Semester Totals	**15**

Program Totals 60

Mathematics

The Mathematics Department supports and enhances TSTC's technical education mission; to provide Texas industry with employees who perform well at the entry level by their competence in mathematics and problem solving techniques using principles of physics and mathematics; to prepare graduates for advancement in the workplace through the acquisition of science and mathematics-based problem-solving skills; and to facilitate progress toward successful completion of further educational goals and/or lifelong learning experiences.

Mathematics is available at the Harlingen campus.

Mathematics
Associate of Science

Semester 1			Credits
MATH	1314	College Algebra	3
ENGL	1301	Composition I	3
HIST	1301	United States History I	3
		Semester Totals	**9**

Semester 2			Credits
MATH	2312	Pre-Calculus	3
ENGL	1302	Composition II	3
HIST	1301	United States History I	3
ACGM	X3XX	Life and Physcial Science Elective	3
		Semester Totals	**12**

Semester 3			Credits
MATH	2413	Calculus I	4
SPCH	X3XX	Speech Elective	3
ACGM	X3XX	Life and Physical Science Elective	3
ACGM	X3XX	Language Philosophy Culture Elective	3
		Semester Totals	**13**

Semester 4			Credits
MATH	2414	Calculus II	4
GOVT	2305	Federal Government	3
ACGM	X3XX	Social/Behavioral Science Elective	3
ACGM	X3XX	Fine Arts Elective	3
		Semester Totals	**13**

Semester 5			Credits
MATH	2415	Calculus III	4
GOVT	2306	Texas Government	3
MATH	X3XX	Math Elective	3
CORE	X3XX	Core Elective	3
		Semester Totals	**13**

Program Totals 60

Mechanical/Electrical Drafting Technology

Demand for drafters varies by specialization, and nothing in the industry is more exciting than mechanical/electronic drafting. No longer are the pen and pencil the standard for drafters. Today in this field, student drafters are taught Computer-Aided Drafting (CAD) and can produce industrial drawings utilized in industry to produce all types of products. All students receive instruction in both two- and three-dimensional CAD systems. Students focus on drafting applications in mechanical, electro-mechanical, process piping, printed circuit board design and many other areas of manufacturing and electronic-related drafting. Students will be exposed to the hottest drawing software on the market including AutoCad, Solid Works and Inventor.

Mechanical/Electrical Drafting Technology is offered at the Waco campuses.

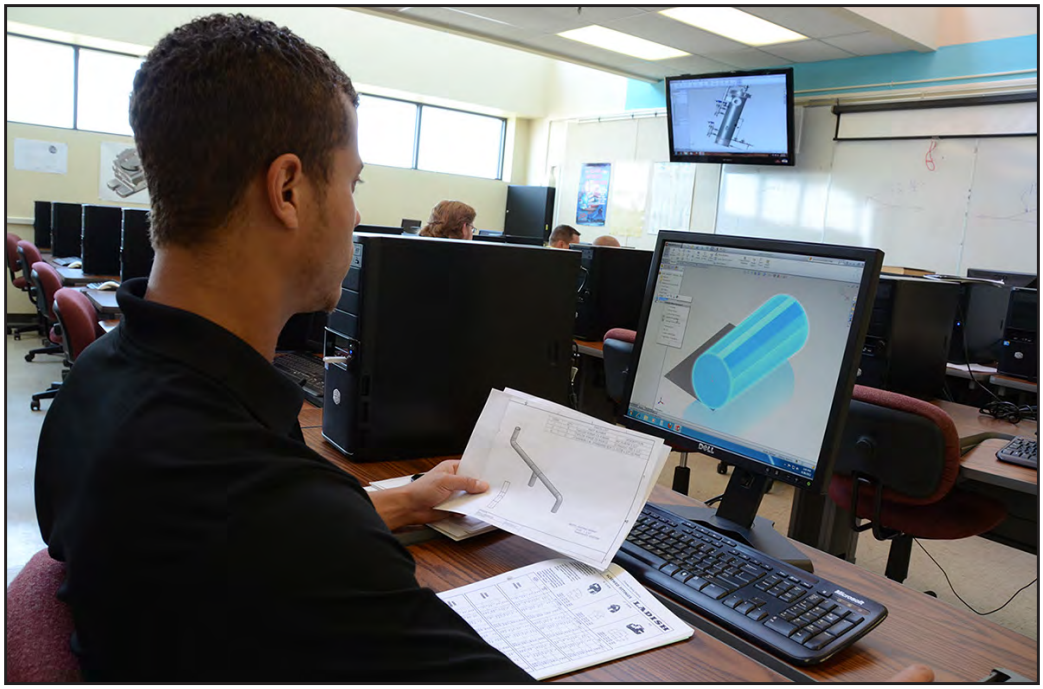
Mechanical/Electrical Drafting Technology
Associate of Applied Science

Semester 1			Credits
DFTG	1305	Technical Drafting	3
DFTG	1309	Basic Computer-Aided Drafting	3
DFTG	1370	Technical Mathematics Applications in Drafting	3
ITSC	1309	Integrated Software Applications I	3
ENGL	1301	Composition I	3
		Semester Totals	**15**

Semester 2			Credits
DFTG	1329	Electro-Mechanical Drafting	3
DFTG	1345	Parametric Modeling and Design	3
DFTG	2319	Intermediate Computer-Aided Drafting	3
INMT	1319	Manufacturing Processes	3
PHYS	1310	Elementary Physics	3
		Semester Totals	**15**

Semester 3			Credits
DFTG	1358	Electrical/Electronics Drafting	3
DFTG	2302	Machine Drafting	3
DFTG	2335	Advanced Technologies in Mechanical Design and Drafting	3
ACGM	X3XX	Gen Ed Humanities/Fine Arts Elective	3
ACGM	X3XX	Gen Ed Social/Behavioral Science Elective	3
		Semester Totals	**15**

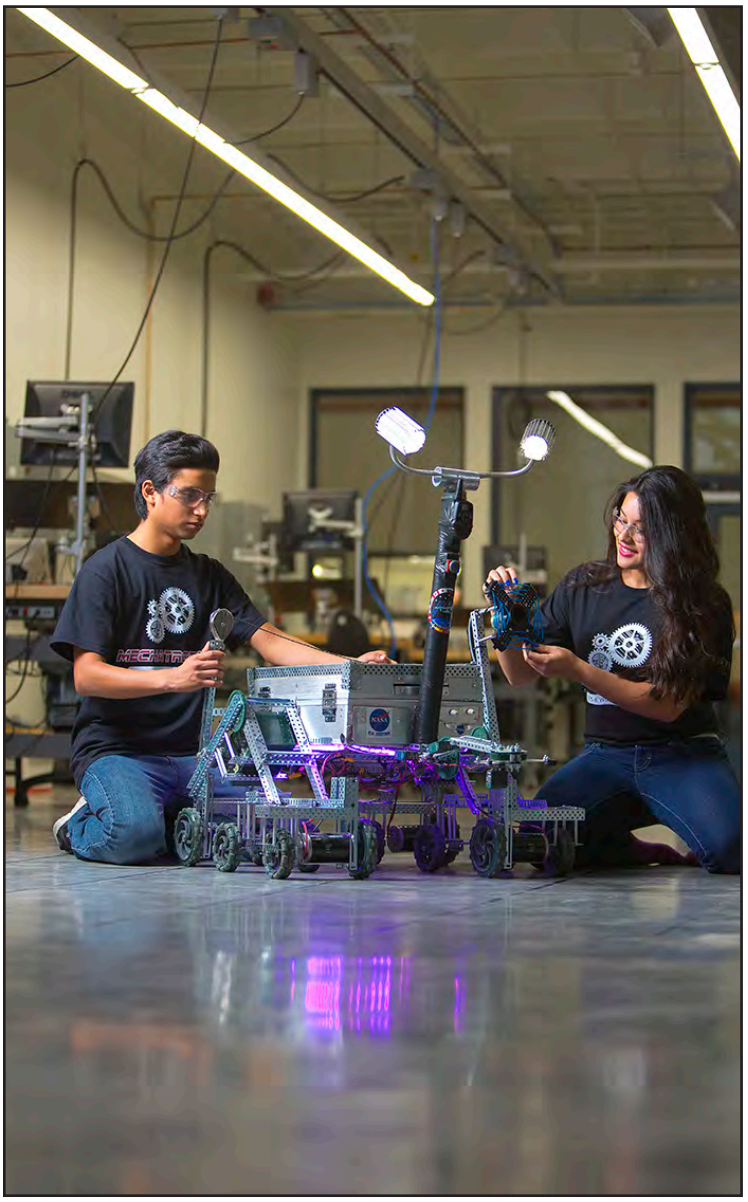
Semester 4			Credits
DFTG	2306	Machine Design	3
DFTG	2323	Pipe Drafting	3
DFTG	2338	Final Project-Advanced Drafting	3
DFTG	2350	Geometric Dimensioning and Tolerancing	3
ACGM	X3XX	Gen Ed Elective	3
		Semester Totals	**15**
		Program Totals	**60**



Mechatronics Technology

Mechatronics is a interdisciplinary field involving mechanical, instrumentation, electronic, robotics/automation, computer components and control systems. Because industrial applications are becoming increasingly multidisciplinary, today's technicians need skills that cross a variety of disciplines. Mechatronics courses combine various disciplines to teach students a holistic approach to developing solutions for engineering applications. Skills found under the Mechatronics Technology umbrella includes practical knowledge in the integration of electrical systems, fluid power, electronics, computer controls, PLCs, instrumentation, robotics and information technology.

Mechatronics Technology is available at the Harlingen campus.



Mechatronics Technology
Associate of Applied Science

Semester 1			Credits
CETT	1303	DC Circuits	3
RBTC	1343	Robotics	3
ENGL	1301	Composition I	3
MATH	1314	College Algebra	3
		Semester Totals	**12**

Semester 2			Credits
CETT	1305	AC Circuits	3
CETT	1325	Digital Fundamentals	3
ELMT	1305	Basic Fluid Power	3
CHEM	1311	General Chemistry I	3
CHEM	1111	General Chemistry I (lab)	1
		Semester Totals	**13**

Semester 3			Credits
ELMT	1301	Programmable Logic Controllers	3
ELMT	2333	Industrial Electronics	3
INMT	1317	Industrial Automation	3
MFGT	1406	Mechanical Principles in Automated Manufacturing	4
		Semester Totals	**13**

Semester 4			Credits
INTC	1341	Principles of Automatic Control	3
MFGT	2459	Industrial Automation II	4
ACGM	X3XX	Gen Ed Social/Behavioral Science Course	3
SPCH	X3XX	Gen Ed Speech Elective Course	3
		Semester Totals	**13**

Semester 5			Credits
ELMT	2341	Electromechanical Systems	3
RBTC	2347	Computer Integrated Manufacturing	3
ACGM	X3XX	Gen Ed Humanities/Fine Arts Course	3
		Semester Totals	**9**

Program Totals 60

Medical Assistant

Medical Assistants are generalists, handling both administrative and clinical duties and reporting directly to an office manager, physician, or other health practitioner. Medical Assistants perform many administrative duties. They answer telephones, greet patients, update and file patient medical records, fill out insurance forms, handle correspondence, schedule appointments, arrange for hospital admission and laboratory services, and handle billing and bookkeeping.

Clinical duties vary according to state law and include taking medical histories and recording vital signs, explaining treatment procedures to patients, preparing patients for examination, and assisting the physician during the examination.

The Medical Assistant program at TSTC is fully accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP) www.caahep.org.

Medical Assistant is available at the Harlingen campus.

Medical Assistant
Associate of Applied Science

Semester 1			Credits
HITT	1301	Health Data Content and Structure	3
HITT	1311	Health Information Systems	3
MDCA	1417	Procedures in a Clinical Setting	4
BIOL	2101	Anatomy & Physiology Lab I	1
BIOL	2301	Anatomy & Physiology I	3
		Semester Totals	**14**

Semester 2			Credits
HITT	1305	Medical Terminology I	3
MDCA	1348	Pharmacology & Administration of Medications	3
MDCA	1352	Medical Assistant Laboratory Procedures	3
BIOL	2102	Anatomy & Physiology Lab II	1
BIOL	2302	Anatomy & Physiology II	3
		Semester Totals	**13**

Semester 3			Credits
MDCA	1302	Human Disease/Pathophysiology	3
MDCA	1343	Medical Insurance	3
PLAB	1323	Phlebotomy	3
ACGM	X3XX	Gen Ed Social/Behavioral Sciences Course	3
		Semester Totals	**12**

Semester 4			Credits
MDCA	1154	Medical Assisting Credentialing Exam Review	1
MDCA	1321	Administrative Procedures	3
MDCA	1460	Clinical - Medical/Clinical Assistant	4
ENGL	1301	Composition I	3
		Semester Totals	**11**

Semester 5			Credits
BIOL	2120	Microbiology for Non Science Majors Lab	1
BIOL	2320	Microbiology for Non Science Majors	3
SPCH	X3XX	Speech Elective	3
ACGM	X3XX	Gen Ed Humanities/Fine Arts Course	3
		Semester Totals	**10**

Program Totals 60

Medical Assistant
Certificate 2

Semester 1			Credits
HITT	1301	Health Data Content and Structure	3
HITT	1311	Health Information Systems	3
MDCA	1417	Procedures in a Clinical Setting	4
BIOL	2301	Anatomy & Physiology I	3
BIOL	2101	Anatomy & Physiology I Lab	1
		Semester Totals	**14**

Semester 2			Credits
HITT	1305	Medical Terminology I	3
MDCA	1348	Pharmacology & Administration of Medications	3
MDCA	1352	Medical Assistant Laboratory Procedures	3
BIOL	2302	Anatomy & Physiology II	3
BIOL	2102	Anatomy & Physiology II Lab	1
		Semester Totals	**13**

Semester 3			Credits
MDCA	1302	Human Disease/Pathophysiology	3
MDCA	1343	Medical Insurance	3
PLAB	1323	Phlebotomy	3
ACGM	X3XX	Social/Behavioral Science Elective	3
		Semester Totals	**12**

Semester 4			Credits
MDCA	1154	Medical Assisting Credentialing Exam Review	1
MDCA	1321	Administrative Procedures	3
MDCA	1460	Clinical - Medical/Clinical Assistant	4
ENGL	1301	Composition I	3
		Semester Totals	**11**

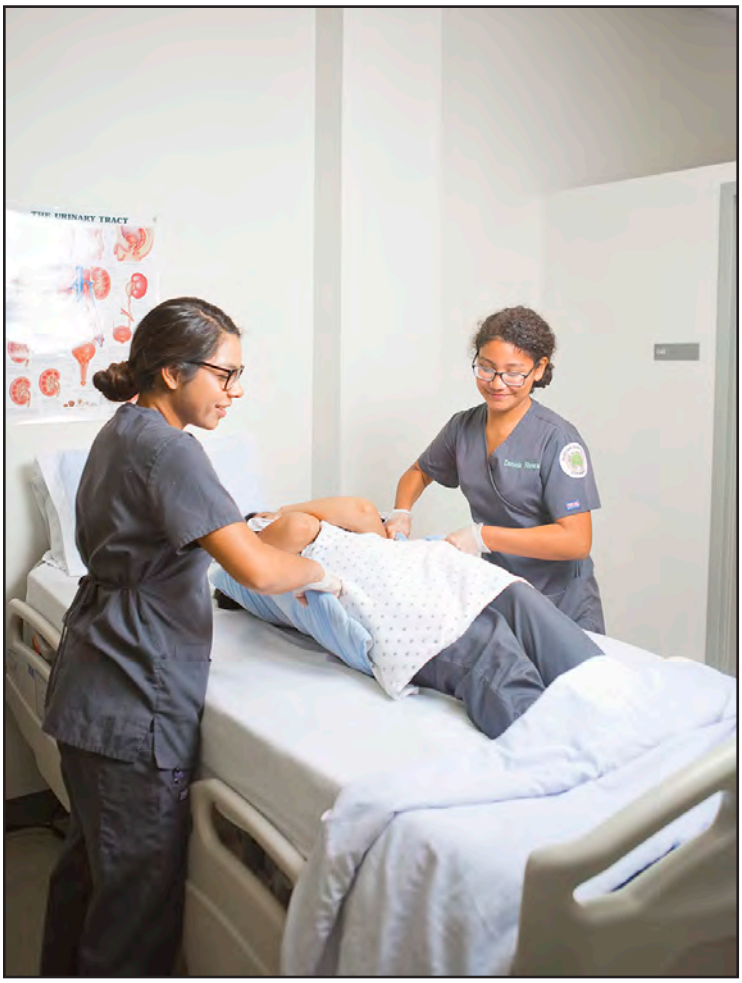
Program Totals 50

Nurse Assistant

Nurse Assistants are trained healthcare professionals that assist the licensed nurse in caring for patients. Nurse Assistants are sometimes called nurse aides or Certified Nurse Aid (CNA). The primary responsibility of a Nurse Assistant is to provide basic bedside care, such as personal hygiene, making beds, taking vital signs, assisting in feeding, serving trays, answering call lights and ambulating patients. The Nurse Assistant can work in a variety of health care settings such as hospitals, long term care centers, rehabilitation centers, clinics, and home health agencies, and is also trained to help patients with attaining and maintaining independence, and with psychosocial and emotional needs.

Nurse Assistant students at TSTC participate in clinical rotations at long term care centers. After successfully completing the requirements for state registry, students are eligible to take the state written and skills exam to become a Certified Nurse Assistant in the state of Texas.

The Nurse Assistant program is available at the Harlingen campus.



Nurse Assistant
Certificate 1

Semester 1			Credits
HITT	1305	Medical Terminology I	3
TECM	1301	Industrial Mathematics	3
POFT	1301	Business English	3
		Semester Totals	**9**

Semester 2			Credits
NURA	1401	Nurse Aide for Health Care	4
NURA	1360	Clinical-Nursing Assistant/Aide and Patient Care Assistant/Aide	3
		Semester Totals	**7**
		Program Totals	**16**

Occupational Safety Compliance Technology

The Occupational Safety Compliance Technician program offers an in-depth study of current Occupational Safety and Health Administration and Texas Workers' Compensation Commission regulations, including maintaining accident and illness records. Safety compliance technicians are responsible for interpreting and implementing safety regulations, policies and procedures and for enforcing government safety codes. The Occupational Safety Compliance Technician curriculum includes instruction on the hazards of machines, safe work methods, first aid and cardiopulmonary resuscitation procedures, and focuses on the skills and knowledge needed to help companies prevent industrial and occupational injuries. As a safety compliance technician, students can learn to anticipate, recognize, evaluate and control industrial health hazards and arrange plant layout for safety.

Occupational Safety Compliance Technology is available at the Waco campus.

Occupational Safety Compliance Technology
Associate of Applied Science

Semester 1			Credits
ACGM	X3XX	Gen Ed Social/Behavioral Science Course	3
EPCT	1205	Environmental Regulations Overview	2
EPCT	1307	Introduction to Environmental Safety and Health	3
ACGM	X3XX	Gen Ed Elective Course	3
		Semester Totals	**11**

Semester 2			Credits
ITSC	1309	Integrated Software Applications I	3
OSHT	1213	Accident Prevention, Inspection, and Investigation	2
ACGM	X3XX	Gen Ed Humanities/Fine Arts Course	3
OSHT	2401	OSHA Regulations-General Industry	4
		Semester Totals	**12**

Semester 3			Credits
NUCP	1319	Radiation Physics	3
OSHT	1209	Physical Hazards Control	2
CHEM	1406	Introductory Chemistry I	4
ACGM	X3XX	Gen Ed Elective Course	3
		Semester Totals	**12**

Semester 4			Credits
EPCT	1341	Principles of Industrial Hygiene	3
OSHT	1221	Fire Protection Systems	2
OSHT	1305	OSHA Regulations-Construction Industry	3
OSHT	1316	Material Handling	3
OSHT	2209	Safety Program Management	2
		Semester Totals	**13**

Semester 5			Credits
EPCT	2331	Industrial Hygiene Applications	3
OSHT	2320	Safety Training Presentation Techniques	3
OSHT	2370	First Aid	3
OSHT	2388	Internship-Occupational Safety and Health Technology/Technician	3
		Semester Totals	**12**
		Program Totals	**60**

Pharmacy Technician

Pharmacy technicians are vital to the future of the pharmacy and its customers. Working under the direction of a licensed pharmacist, pharmacy technicians assist pharmacists in their daily functions, allowing pharmacists to spend more time addressing patient questions, cross-referencing prescribed medications and interactions, and ensuring that the patient receives the correct drug therapy.

In hospitals, technicians take on added responsibilities such as reading patient charts, preparing medications, delivering prescribed medications to patients and copying detailed information about those medications onto patient profiles.

The Pharmacy Technican program is available at the Waco campus.

Pharmacy Technician
Certificate 2

Semester 1			Credits
ITSC	1309	Integrated Software Applications I	3
PHRA	1205	Drug Classification	2
PHRA	1209	Pharmaceutical Mathematics I	2
PHRA	1301	Introduction to Pharmacy	3
PHRA	1313	Community Pharmacy Practice	3
		Semester Totals	**13**

Semester 2			Credits
PHRA	1247	Pharmaceutical Mathematics II	2
PHRA	1345	Compounding Sterile Preparations and Aseptic Technique	3
PHRA	1349	Institutional Pharmacy Practice	3
PHRA	2461	Clinical - Pharmacy Technician/Assistant	4
		Semester Totals	**12**

Semester 3			Credits
PHRA	1202	Pharmacy Law	2
PHRA	1243	Pharmacy Technician Certification Review	2
PHRA	1441	Pharmacy Drug Therapy and Treatment	4
PHRA	2462	Clinical - Pharmacy Technician/Assistant	4
		Semester Totals	**12**

Program Totals 37

Physics

The Associate of Science 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 discipline, such as Astronomy, Geophysics or any engineering field.

Physics is available at the Harlingen campus.

Physics
Associate of Science

Semester 1			Credits
MATH	2312	Pre-Calculus	3
ENGL	1301	Composition I	3
HIST	1301	United States History I	3
ACGM	X3XX	Fine Arts Elective	3
		Semester Totals	**12**

Semester 2			Credits
ENGL	1302	Composition II	3
HIST	1302	United States History I	3
SPCH	X3XX	Speech Elective	3
CHEM	1311	General Chemistry I (lecture)	3
CHEM	1111	General Chemistry I (lab)	1
		Semester Totals	**13**

Semester 3			Credits
GOVT	2305	Federal Government	3
MATH	2413	Calculus I	4
CHEM	1312	General Chemistry I (lecture)	3
CHEM	1112	General Chemistry I (lab)	1
ACGM	X3XX	Social/Behavioral Science Elective	3
		Semester Totals	**14**

Semester 4			Credits
MATH	2414	Calculus II	4
PHYS	2325	University Physic I (lecture)	3
PHYS	2125	University Physic Laboratory I (lab)	1
ACGM	X3XX	Language Philosophy Culture Elective	3
		Semester Totals	**11**

Semester 5			Credits
PHYS	2326	University Physic II (lecture)	3
PHYS	2126	University Physic Laboratory II (lab)	1
GOVT	2306	Texas Government	3
CORE	X3XX	Core Elective	3
		Semester Totals	**10**

Program Totals 60

Plumbing & Pipefitting Technology

Plumbing & Pipefitting Technology is designed to help students learn the ins and outs of this important, well-paying field. This specialization can help you get in and on your way in a hurry through a one-year, intensive training program to help you build the skill base needed to succeed in the industry. The Plumbing & Pipefitting Technology certificate progresses from basic to advanced coursework in plumbing, piping, construction, fabrication, rigging, welding and more. And at TSTC, your college credits can count toward the hours needed to obtain a state license.

Plumbing & Pipefitting Technology is available at the East Williamson County Higher Education Center and Waco campuses.

Plumbing & Pipefitting Technology Certificate 1

Semester 1			Credits
CNBT	1300	Residential and Light Commercial Blueprint Reading	3
PFPB	1323	Plumbing Codes I	3
PFPB	2308	Piping Standards and Materials	3
PFPB	2309	Residential Construction Plumbing I	3
PFPB	2349	Field Measuring, Sketching, and Layout	3
		Semester Totals	**15**

Semester 2			Credits
PFPB	1321	Plumbing Maintenance and Repair	3
PFPB	1347	Backflow Prevention	3
PFPB	2336	Commercial Construction and Fixture Setting	3
PFPB	2343	Advanced Pipe Practices	3
		Semester Totals	**12**

Semester 3			Credits
CNBT	1680	Cooperative Education-Construction Engineering Technology/Technician	6
		Semester Totals	**6**
		Program Totals	**33**

Process Operations

A process technician is a key member of a team of people responsible for planning, analyzing, and controlling the production of products from the acquisition of raw materials through the production and distribution of products to customers in a variety of process industries. Process Operations Technicians are responsible for efficient and safe operation of all process equipment within the plant, monitoring of all process and utility systems and equipment to ensure they operate within their proper parameters, collection of product and utility samples and performing lab analysis to ensure products meet specifications, preparation of equipment and systems for maintenance activities, and more. Process Operations students will learn the function and use of pumps, tanks, valves and instrumentation associated with various process systems; knowledge of process variables, indicators and controllers, troubleshooting tools and troubleshooting steps to solve problems in a simple process system; and will be able to demonstrate the proper use of safety, health and environmental equipment.

Process Operations is available at the Marshall campus.

Process Operations
Associate of Applied Science

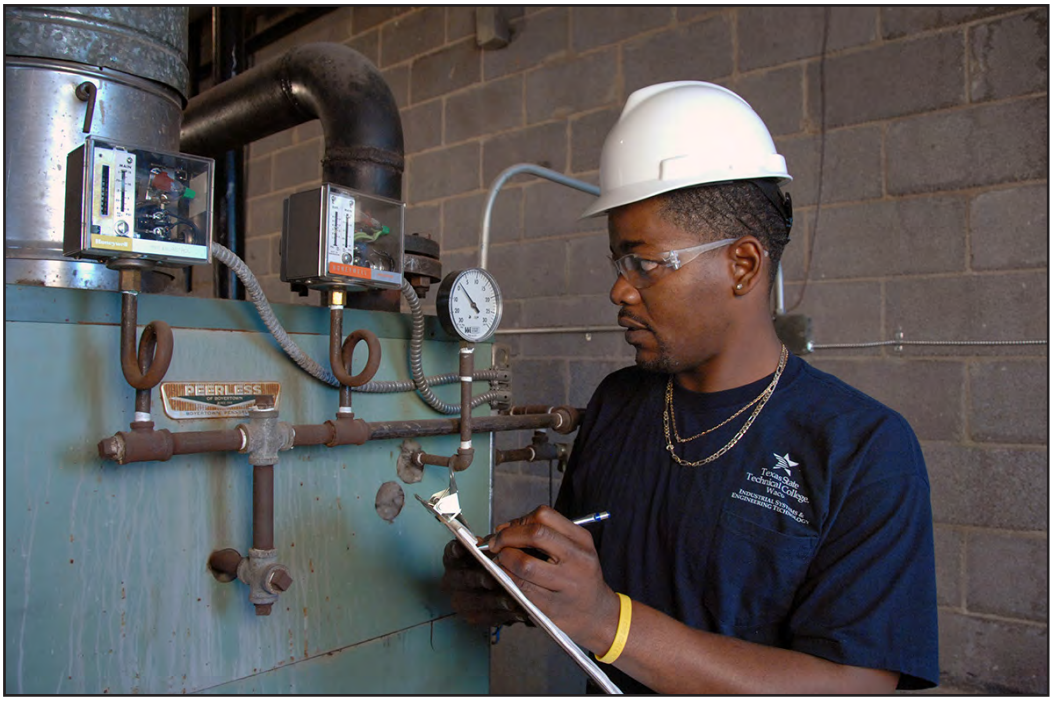
Semester 1			Credits
PTAC	1302	Introduction To Process Technology	3
PTAC	1308	Safety, Health, and Environment I	3
PTAC	1332	Process Instrumentation I	3
ACGM	X3XX	Gen Ed Mathematics Course	3
		Semester Totals	**12**

Semester 2			Credits
POFI	1301	Computer Applications I	3
PTAC	1310	Process Technology I-Equipment	3
PTAC	2314	Principles of Quality	3
SCIT	1318	Applied Physics	3
		Semester Totals	**12**

Semester 3			Credits
PTAC	2336	Process Instrumentation II	3
PTRT	1301	Introduction to Petroleum Industry	3
ENGL	1301	Composition I	3
PSYC	2301	General Psychology	3
		Semester Totals	**12**

Semester 4			Credits
PTAC	2420	Process Technology II-Systems	4
PTAC	2438	Process Technology III-Operations	4
CHEM	1411	General Chemistry I	4
		Semester Totals	**12**

Semester 5			Credits
CTEC	2386	Internship-Chemical Technology/Technician	3
BMGT	2347	or Critical Thinking and Problem Solving	
CTEC	2387	Internship-Chemical Technology/Technician	3
INMT	1317	or Industrial Automation	
PTAC	2346	Process Troubleshooting	3
HUMA	1301	Introduction to Humanities I	3
		Semester Totals	**12**
		Program Totals	**60**



Professional Cooking

At TSTC you'll train with our faculty, who are all professional chefs, and learn basic and specialized culinary principles and techniques. You'll receive hands-on experience in food preparation and learn the professionalism required for on-the-job success. Menu planning, catering, butchering skills, sauce creation, sugar and chocolate work, cake decorating, and the artistry of plate presentation are just some of the skills you will learn at TSTC.

Professional Cooking is available at the Abilene campus.

Professional Cooking
Associate of Applied Science Degree

Semester 1			Credits
CHEF	1205	Sanitation and Safety	2
CHEF	1340	Meat Preparation and Cooking	3
CHEF	1300	Professional Cooking and Meal Service	3
ACGM	X3XX	Gen Ed Requirement	3
IFWA	1318	Nutrition for the Food Service Professional	3
		Semester Totals	**14**

Semester 2			Credits
CHEF	1341	American Regional Cuisine	3
CHEF	2236	Charcuterie	2
CHEF	1445	International Cuisine	4
PSTR	1301	Fundamentals of Baking	3
ACGM	X3XX	Gen Ed Requirement	3
		Semester Totals	**15**

Semester 3			Credits
PSTR	2431	Advanced Pastry Shop	4
CHEF	2302	Saucier	3
RSTO	2407	Catering	4
ACGM	X3XX	Gen Ed Requirement	3
		Semester Totals	**14**

Semester 4			Credits
RSTO	1313	Hospitality Supervision	3
RSTO	2301	Principles of Food and Beverage Controls	3
RSTO	2505	Management of Food Production and Service	5
ACGM	X3XX	Gen Ed Requirement	3
ACGM	X3XX	Gen Ed Requirement	3
		Semester Totals	**17**
		Program Totals	**60**

Professional Cooking
Food Service Technology
Certificate 1

Semester 1			Credits
CHEF	1205	Sanitation and Safety	2
CHEF	1401	Basic Food Preparation	4
CHEF	1314	A La Carte Cooking	3
CHEF	1391	Special Topics in Culinary Arts/Chef Training	3
		Semester Totals	**12**

Semester 2			Credits
IFWA	1319	Meat Identifying and Processing	3
PSTR	1342	Quantity Bakeshop Production	3
		Semester Totals	**6**
		Program Totals	**18**

PLEASE NOTE: CURRICULUM CHANGING TO CULINARY ARTS IN SPRING 2016.

Professional Office Technology

The Office Technology Program at TSTC is tailored to meet the growing needs of individuals either currently working or those seeking entry-level positions in office administration. The Professional Office Technology degree is designed to equip graduates with the knowledge and skills necessary to run an organization efficiently. Students learn computer software applications, communication skills (both verbal and written), and critical thinking skills. Students also become proficient in typing, presentations (both visual and verbal), office procedures, and the ability to work independently in this ever-changing world of technology.

Office Technology is offered at the Marshall campus.

Professional Office Technology
Associate of Applied Science

Semester 1			Credits
ACNT	1303	Introduction to Accounting I	3
BMGT	1301	Supervision	3
POFI	2301	Word Processing	3
ENGL	1301	Composition I	3
		Semester Totals	**12**

Semester 2			Credits
ACNT	1311	Introduction to Computerized Accounting	3
POFI	1349	Spreadsheets	3
POFI	2331	Desktop Publishing	3
SPCH	1315	Public Speaking	3
		Semester Totals	**12**

Semester 3			Credits
HRPO	2301	Human Resources Management	3
ITSW	1310	Introduction to Presentation Graphics Software	3
POFT	1319	Records and Information Management I	3
ACGM	X3XX	Humanities/Fine Arts Elective	3
		Semester Totals	**12**

Semester 4			Credits
HRPO	1311	Human Relations	3
ITSW	1307	Introduction to Database	3
MRKG	1301	Customer Relationship Management	3
ACGM	X3XX	Natural Science/Math Elective	3
		Semester Totals	**12**

Semester 5			Credits
BMGT	1309	Information and Project Management	3
BMGT	1341	Business Ethics	3
POFT	2331	Administrative Systems	3
ACGM	X3XX	Social/Behavioral Science Elective	3
		Semester Totals	12
		Program Totals	**60**

Radiation Protection Technology

Radiation Protection Technology at TSTC can give you the technical education you need to enter this intriguing field. As a student specializing in Radiation Protection, you can learn to properly handle, store and use ionizing and nonionizing sources and work with a vast array of highly sensitive and accurate measurement equipment to determine levels of radiation. The curriculum also focuses on understanding the processes that cause radiation damage and how to develop programs to evaluate hazards and protect the environment. In addition, students gain first-hand experience through an optional cooperative training program. Students looking to further their knowledge can choose an advanced certificate in Health Physics.

Radiation Protection is available at the Waco campus

Radiation Protection Technology
Associate of Applied Science

Semester 1			Credits
EPCT	1307	Introduction to Environmental Safety and Health	3
NUCP	1319	Radiation Physics	3
ENGL	1301	Composition I	3
ACGM	X3XX	Gen Ed Social/Behavioral Science Course	3
		Semester Totals	**12**

Semester 2			Credits
EPCT	1205	Environmental Regulations Overview	2
IRAD	1301	Radiation Detection Measurement I	3
ITSC	1309	Integrated Software Applications I	3
MATH	1314	College Algebra	3
		Semester Totals	**11**

Semester 3			Credits
IRAD	2271	Radiation Detection Measurements II	2
NUCP	2301	Radiation Protection I	3
CHEM	1406	Introductory Chemistry I	4
ACGM	X3XX	Gen Ed Humanities/Fine Arts Course	3
		Semester Totals	**12**

Semester 4			Credits
NUCP	1241	Personnel and Environmental Monitoring	2
NUCP	1271	Introduction to Nuclear Systems	2
NUCP	2311	Radioactive Waste Disposal and Management	3
NUCP	1391	Special Topics in Nuclear/Nuclear Power Technology/Technician	3
NUCP	2302	Radiation Protection II	3
		Semester Totals	**13**

Semester 5			Credits
NUCP	2331	Radiation Protection III	3
NUCP	2379	Reactor Physics	3
EPCT	1301	Hazardous Waste Operations and Emergency Response (HAZWOPER) Training and Related Topics	3
OSHT	2320	Safety Training Presentation Techniques	3
		Semester Totals	**12**

Program Totals 60

Radiation Protection Technology
Health Physics
Advanced Technical Certificate

Semester 1			Credits
EPCT	1301	Hazardous Waste Operations and Emergency Response (HAZWOPER) Training and Related Topics	3
IRAD	1301	Radiation Detection Measurement I	3
NUCP	1391	Special Topics in Nuclear/Nuclear Power Technology/Technician	3
NUCP	2301	Radiation Protection I	3
NUCP	2302	Radiation Protection II	3
WECM	X3XX	IRAD or NUCP Elective	3
		Semester Totals	**18**

Program Totals 18

Precision Machining Technology

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 Precision Machining Technology at TSTC, guides students through a series of machine operation courses to develop and challenge their skills using conventional and Computer Numerical Controlled (CNC) machines. Students also learn about the various materials used in today's manufacturing industry, and use the following machines: Horizontal and vertical mills, engine lathes, drill presses, shapers, surface and pedestal grinders. Students learn to program and operate Computer-Aided Machines such as the CNC mills and lathes, and learn related skills such as precision measurement, blueprint reading, and the heat treatment of metals. For quicker entry into the industry, a Machining certificate is also available.

Precision Machining Technology is available at the East Williamson County Higher Education Center, Fort Bend Technical Center, Waco and campuses.

Precision Machining Technology
Associate of Applied Science

Semester 1			Credits
DFTG	1325	Blueprint Reading and Sketching	3
MCHN	1201	Beginning Machine Shop	2
MCHN	1320	Precision Tools and Measurement	3
MATH	1314	College Algebra	3
ACGM	X3XX	Gen Ed Social/Behavioral Sciences Course	3
		Semester Totals	**14**

Semester 2			Credits
ENTC	1371	Engineering Computer Graphics I	3
INMT	1319	Manufacturing Processes	3
MCHN	1438	Basic Machine Shop I	4
MCHN	2444	Computerized Numerical Control Programming	4
MATH	1316	Plane Trigonometry	3
		Semester Totals	**17**

Semester 3			Credits
MCHN	1326	Introduction to Computer-Aided Manufacturing (CAM)	3
MCHN	1452	Intermediate Machining I	4
MCHN	2335	Advanced CNC Machining	3
ENGL	1301	Composition I	3
		Semester Totals	**13**

Semester 4			Credits
ENTC	2310	Machine Design	3
MCHN	2338	Advanced Computer-Aided Manufacturing (CAM)	3
MCHN	2341	Advanced Machining I	3
MCHN	2471	Specialized Equipment & Processes	4
ACGM	X3XX	Gen Ed Humanities/Fine Arts Course	3
		Semester Totals	**16**
		Program Totals	**60**

Precision Machining Technology
Machining
Certificate 1

Semester 1			Credits
DFTG	1325	Blueprint Reading and Sketching	3
MCHN	1201	Beginning Machine Shop	2
MCHN	1320	Precision Tools and Measurement	3
MCHN	1343	Machine Shop Mathematics	3
		Semester Totals	**11**

Semester 2			Credits
ENTC	1371	Engineering Computer Graphics I	3
INMT	1319	Manufacturing Processes	3
MCHN	1438	Basic Machine Shop I	4
MCHN	2444	Computerized Numerical Control Programming	4
		Semester Totals	**14**

Semester 3			Credits
MCHN	1326	Introduction to Computer-Aided Manufacturing (CAM)	3
MCHN	1452	Intermediate Machining I	4
MCHN	2335	Advanced CNC Machining	3
MCHN	2471	Specialized Equipment and Processes	4
		Semester Totals	**14**
		Program Totals	**39**

Registered Nursing

Registered Nurses (RN) provide and coordinate patient care, educate patients and the public about various health conditions, and provide advice and emotional support to patients and their family members. RNs work in hospitals, physicians' offices, home healthcare services and nursing care facilities. They also work in correctional facilities, schools, summer camps and the military. Registered Nursing students working towards an LVN-RN Transition degree learn a holistic approach to nursing, where one not only cares for the patient but also for the family. Students participate in an active learning environment, including simulation learning labs and are led by instructors with a medical/surgical background. The job outlook for nurses is exceptional, with choices in areas such as: Hospitals, nursing homes, home health providers, insurance companies, and telemedicine.

Registered Nursing is available at the Brownwood and Harlingen campuses.

Registered Nursing
LVN-RN Transition
Associate of Applied Science

Semester 1			Credits
BIOL	2401	Anatomy & Physiology I	4
BIOL	2301	or Anatomy & Physiology I	
BIOL	2101	and Anatomy & Physiology I	
ENGL	1301	Composition I	3
PSYC	2314	Lifespan Growth & Development	3
ACGM	X3XX	Gen Ed Humanities/Fine Arts Course	3
		Semester Totals	**13**

Semester 2			Credits
BIOL	2402	Anatomy & Physiology II	4
BIOL	2302	or Anatomy & Physiology II	
BIOL	2102	and Anatomy & Physiology II	
PSYC	2301	General Psychology	3
BIOL	2420	Microbiology for Non-Science Majors	4
BIOL	2320	or Microbiology for Non-Science Majors	
BIOL	2120	and Microbiology for Non-Science Majors	
		Semester Totals	**11**

Semester 3			Credits
RNSG	1210	Introduction to Community-Based Nursing	2
RNSG	1227	Transition to Professional Nursing	2
RNSG	1261	Clinical-Registered Nursing/Registered Nurse	2
RNSG	1300	Health Assessment Across the Lifespan	3
RNSG	1301	Pharmacology	3
		Semester Totals	**12**

Semester 4			Credits
RNSG	1343	Complex Concepts of Adult Health	3
RNSG	1362	Clinical-Registered Nursing/Registered Nurse	3
RNSG	1412	Nursing Care of the Childbearing and Childrearing Family	4
RNSG	2213	Mental Health Nursing	2
		Semester Totals	**12**

Semester 5			Credits
RNSG	1463	Clinical-Registered Nursing/Registered Nurse	4
RNSG	2221	Professional Nursing: Leadership and Management	2
RNSG	2230	Professional Nursing Review and Licensure Preparation	2
RNSG	1207	or Nursing Jurisprudence	
RNSG	2432	Enhanced Concepts of Adult Health	4
		Semester Totals	**12**

Program Totals 60

Residential Energy Management

The Residential Energy Efficiency Specialist Certificate program offers a specialization in energy checks and home energy efficiency. With new regulations created daily throughout the nation and Texas, the Residential Energy Efficiency Specialist program certifies and trains those in the building and construction trades to perform energy audits, improve home efficiency and execute other important energy-related functions. This is a great program for homeowners interested in learning how to maximize the efficiency of their homes.

Residential Energy Management is available at the Waco campus.

Residential Energy Management
Residential Energy Efficiency Specialist
Certificate 1

Semester 1			Credits
CNBT	1302	Mechanical, Plumbing & Electrical Systems in Construction I	3
CNBT	2317	Green Building	3
RBPT	1370	Building Envelope Inspection	3
SOLR	1371	Instruction to Solar and Alternative Energy Technology	3
		Semester Totals	**12**

Semester 2			Credits
OSHT	1305	OSHA Regulations-Construction Industry	3
RBPT	2325	Energy Rating Systems for Homes	3
RBPT	2329	Residential Verification and Rating	3
RBPT	2359	Residential Building Performance Consulting	3
		Semester Totals	**12**
		Program Totals	**24**

Robotics Technology

TSTC's Robotics Technology Program prepares students for a job in this exploding career field. This option emphasizes the study of complex mechanical systems in computer-integrated manufacturing or CIM environments. Focusing on automated manufacturing processes and the role of robots and associated supporting equipment, coursework covers motion programming, vision and conveyor systems; computer networking; PLC programming; automated sorting; sensor systems; and computer integration.

Robotics Technology is available at the Waco campus.

Robotics Technology
Associate of Applied Science

Semester 1			Credits
CETT	1303	DC Circuits	3
ENGL	1301	Composition I	3
MATH	1316	Plane Trigonometry	3
ACGM	X3XX	Gen Ed Social/Behavioral Science Course	3
		Semester Totals	**12**

Semester 2			Credits
CETT	1305	AC Circuits	3
ELPT	1341	Motor Control	3
INTC	1341	Principles of Automatic Control	3
RBTC	1343	Robotics	3
		Semester Totals	**12**

Semester 3			Credits
CETT	1325	Digital Fundamentals	3
DFTG	1313	Drafting for Specific Occupations	3
ELPT	2319	Programmable Logic Controllers I	3
PHYS	1310	Elementary Physics	3
		Semester Totals	**12**

Semester 4			Credits
INTC	2336	Distributed Control and Programmable Logic	3
RBTC	2339	Robot Programming and Diagnostics	3
RBTC	2347	Computer Integrated Manufacturing	3
ACGM	X3XX	Gen Ed Humanities/Fine Arts Course	3
		Semester Totals	**12**

Semester 5			Credits
ELPT	1351	Electrical Machines	3
RBTC	1341	Vision Systems	3
RBTC	1345	Robot Interfacing	3
RBTC	2345	Robot Application, Set-up, and Testing	3
		Semester Totals	**12**

Program Totals 60

Software & Business Management Accounting

In the Software & Business Management Accounting Program, students are introduced to several types of software that are used in the business world. Students learn management concepts and techniques, along with the basics of computerized accounting, payroll accounting and small business accounting. Students will gather valuable skills through real-world projects, and attend labs staffed by highly trained instructors to assist the students with any problems. A degree in Software & Business Accounting is versatile, with opportunities in numerous work environments. For quicker entry into the industry, certificates specializing in Software & Business Accounting are available.

Software & Business Management Accounting is available at the Abilene and Brownwood campuses.

Software & Business Management Accounting Associate of Applied Science

Semester 1			Credits
BUSG	1315	Small Business Operations	3
POFI	2301	Word Processing	3
POFT	1321	Business Math	3
ACGM	X3XX	General Education Elective	3
		Semester Totals	**12**

Semester 2			Credits
ACNT	1325	Principles of Accounting I	3
BMGT	1327	Principles of Management	3
POFI	2340	Advanced Word Processing	3
ACGM	X3XX	Gen Ed Humanities/Fine Arts Elective	3
		Semester Totals	**12**

Semester 3			Credits
ACNT	1329	Payroll and Business Tax Accounting	3
ITSW	1304	Introduction to Spreadsheets	3
ITSW	1310	Introduction to Presentation Graphics Software	3
ACGM	X3XX	Gen Ed Natural Science/Math Elective	3
		Semester Totals	**12**

Semester 4			Credits
ACNT	1311	Introduction to Computerized Accounting	3
BUSG	1302	E-Business Management	3
ITSW	2334	Advanced Spreadsheets	3
ACGM	X3XX	Gen Ed Social/Behavioral Science Elective	3
		Semester Totals	**12**

Semester 5			Credits
ACNT	2302	Accounting Capstone	3
BMGT	1345	Communication Skills for Managers	3
ITSW	2386	Internship-Data Processing and Data Processing Technology/Technician	3
ACGM	X3XX	Gen Ed Elective	3
		Semester Totals	**12**

Program Totals 60

Software & Business Management Accounting Software & Business Accounting Specialist Certificate 1

Semester 1			Credits
ACNT	1325	Principles of Accounting I	3
BUSG	1315	Small Business Operations	3
POFI	2301	Word Processing	3
POFT	1321	Business Math	3
		Semester Totals	**12**

Semester 2			Credits
ACNT	1329	Payroll and Business Tax Accounting	3
BMGT	1327	Principles of Management	3
ITSW	1304	Introduction to Spreadsheets	3
POFI	2340	Advanced Word Processing	3
		Semester Totals	**12**

Semester 3			Credits
ACNT	1311	Introduction to Computerized Accounting	3
BMGT	1345	Communication Skills for Managers	3
ITSW	1310	Introduction to Presentation Graphics Software	3
ITSW	2334	Advanced Spreadsheets	3
		Semester Totals	**12**

Program Totals 36

Software & Business Management Accounting
Software Accounting & Management Professional Certificate 2

Semester 1			Credits
ACNT	1325	Principles of Accounting I	3
BUSG	1315	Small Business Operations	3
POFI	2301	Word Processing	3
POFT	1321	Business Math	3
		Semester Totals	**12**

Semester 2			Credits
ACNT	1329	Payroll and Business Tax Accounting	3
BMGT	1327	Principles of Management	3
ITSW	1304	Introduction to Spreadsheets	3
POFI	2340	Advanced Word Processing	3
		Semester Totals	**12**

Semester 3			Credits
ACNT	1311	Introduction to Computerized Accounting	3
BMGT	1345	Communication Skills for Managers	3
ITSW	1310	Introduction to Presentation Graphics Software	3
ITSW	2334	Advanced Spreadsheets	3
		Semester Totals	**12**

Semester 4			Credits
ACNT	2302	Accounting Capstone	3
BUSG	1302	E-Business Management	3
ITSW	2386	Internship-Data Processing and Data Processing Technology/Technician	3
		Semester Totals	**9**

Program Totals 45

Software Development Technology

Software Development Technology is a challenging field that offers a variety of career opportunities. As a Software Development Technician, you have the freedom to choose your particular niche in the computer industry. You can major in software development or simply specialize in Windows programming or UNIX programming. As varied as the career opportunities are, so is your earning potential. This degree provides an effective mix of courses to create well balanced computer programmers; we focus on concepts and techniques that are applicable to any programming language as well as detailed functionalities of the programming languages C, C++, C#.NET, Visual Basic.NET, ADO.NET, and Java, and the database systems: MS Access and SQL Server. For quicker entry into the industry, a certificate in Software Development is also available. For students looking to further their knowledge of software development, an advanced certificate in Mobile Applications Programming is also available.

Software Development is available at the Marshall and Waco campuses.

Software Development Technology
Associate of Applied Science - Marshall only

Semester 1			Credits
ITSE	1329	Programming Logic and Design	3
ITSW	1307	Introduction to Database	3
POFT	1329	Beginning Keyboarding	3
ACGM	X3XX	Gen Ed Mathematics Course	3
		Semester Totals	**12**

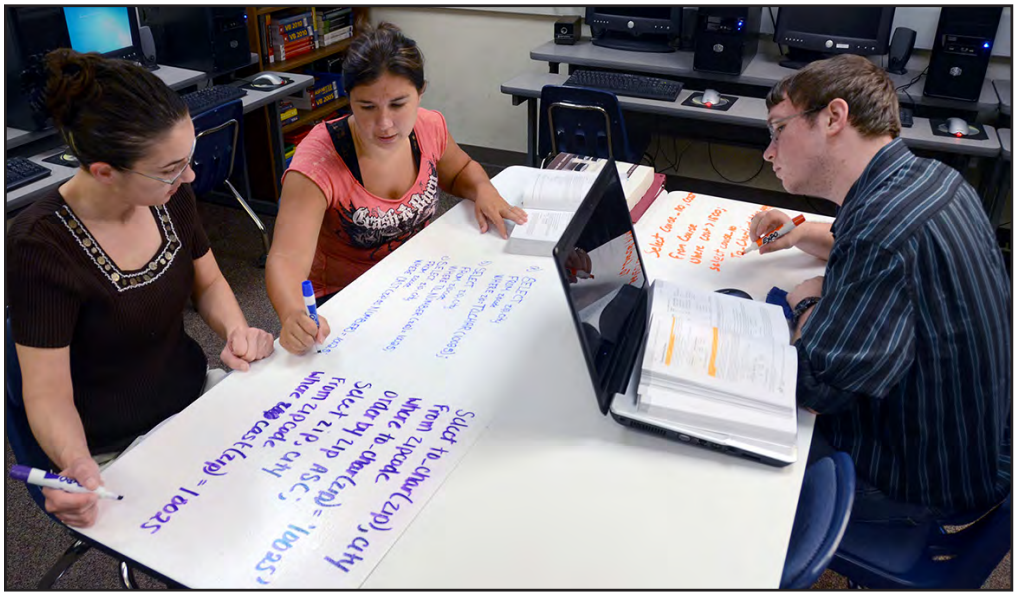
Semester 2			Credits
ITSE	1307	Introduction to C++ Programming	3
ITSE	1359	Introduction to Scripting Languages	3
ITNW	1308	Implementing and Supporting Client Operating Systems	3
MATH	1314	College Algebra	3
		Semester Totals	**12**

Semester 3			Credits
ITSE	1330	Introduction to C# Programming	3
ITSE	2331	Advanced C++ Programming	3
ITSW	2337	Advanced Database	3
ENGL	1301	Composition I	3
		Semester Totals	**12**

Semester 4			Credits
ITSE	1306	PHP Programming	3
ITSE	1332	Introduction to Visual Basic.NET Programming	3
ITSE	2353	Advanced C# Programming	3
ENGL	2341	Forms of Literature	3
HUMA	1301	or Introduction to Humanities I	
		Semester Totals	**12**

Semester 5			Credits
INEW	2332	Comprehensive Software Project: Coding, Testing, and Implementation	3
ITSE	2386	or Internship-Computer Programming/ Programmer, General	
ITSE	2310	iOS Application Programming	3
ITSE	2334	Advanced Visual Basic.NET Programming	3
ACGM	X3XX	Gen Ed Social/Behavioral Science Course	3
		Semester Totals	**12**

Program Totals 60



Software Development Technology
Software Development
Certificate 2 - Marshall only

Semester 1			Credits
ITSE	1307	Introduction to C++ Programming	3
ITSE	1329	Programming Logic and Design	3
ITSE	1359	Introduction to Scripting Languages	3
ITNW	1308	Implementing and Supporting Client Operating Systems	3
		Semester Totals	**12**

Semester 2			Credits
ITSE	1306	PHP Programming	3
ITSE	1330	Introduction to C# Programming	3
ITSE	1332	Introduction to Visual Basic.NET Programming	3
ITSE	2331	Advanced C++ Programming	3
		Semester Totals	**12**

Semester 3			Credits
ITSE	2310	iOS Application Programming	3
ITSE	2317	Java Programming	3
ITSE	2334	Advanced Visual Basic.NET Programming	3
ITSE	2353	Advanced C# Programming	3
		Semester Totals	**12**

Program Totals 36

Software Development Technology
Mobile Applications Programming
Advanced Technical Certificate - Waco only

Semester 1			Credits
ITSE	2310	iOS Application Programming	3
IMED	2351	Digital Media Programming	3
		Semester Totals	**6**

Semester 2			Credits
ITSE	2305	Windows Programming	3
ITSE	2357	Advanced Object-Oriented Programming	3
		Semester Totals	**6**

Semester 3			Credits
ITSE	2371	Advanced iOS Programming	3
ITSE	2343	Advanced Windows Programming	3
		Semester Totals	**6**

Program Totals 18

Solar Energy Technology

Harnessing the sun's power to convert it into electricity is not a new concept, but only in recent years has the technology has really taken off. The rising cost of fossil fuels on both the pocketbook and the environment has spurred interest in renewable resources, such as solar energy. Perhaps that's why the future looks so bright for those in the solar energy industry. TSTC is one of just a handful of colleges in the nation to offer an associate degree in Solar Energy Technology. Students will learn both Solar Photovoltaic (generating electricity) and Solar Thermal (heating fluids) in a program designed to give students a hands-on experience before they've even entered the job market. TSTC students get access to a live learning lab on the 216-kilowatt solar roof of TSTC's Electronics Center. Combined with knowledgeable, experienced staff and an advisory committee comprised of solar industry professionals, you can get the education and experience you need for a successful, exciting career in Solar Energy Technology.

Solar Energy Technology is available at the Waco campus.

Solar Energy Technology
Associate of Applied Science

Semester 1			Credits
CNBT	1302	Mechanical, Plumbing & Electrical Systems in Construction I	3
CNBT	2317	Green Building	3
IEIR	1371	Electrical Principles and Applications	3
RBPT	1370	Building Envelope Inspection	3
SOLR	1371	Introduction to Solar and Alternative Energy Technologies	3
		Semester Totals	**15**

Semester 2			Credits
ELPT	1329	Residential Wiring	3
OSHT	1305	OSHA Regulations-Construction Industry	3
RBPT	2325	Energy Rating Systems for Homes	3
RBPT	2329	Residential Verification and Rating	3
RBPT	2359	Residential Building Performance Consulting	3
		Semester Totals	**15**

Semester 3			Credits
ELPT	1345	Commercial Wiring	3
SOLR	1373	Foundations of Solar Thermal	3
SOLR	2374	Solar System Equipment and Components	3
ENGL	1301	Composition I	3
ACGM	X3XX	Gen Ed Humanities/Fine Arts Course	3
		Semester Totals	**15**

Semester 4			Credits
CNBT	1346	Construction Estimating I	3
SOLR	1272	Foundations of Solar Photovoltaic Power Generation	2
SOLR	2175	Solar System Design, Installation, Troubleshooting and Repair	1
BUSI	2301	Business Law	3
ACGM	X3XX	Gen Ed Math/Natural Science Course	3
ACGM	X3XX	Gen Ed Social/Behavioral Science Course	3
		Semester Totals	**15**
		Program Totals	**60**

Surgical Technology

Surgical 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. 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. This program provides classroom education and supervised clinical experience. 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.

Surgical Technology is available at the Harlingen campus.

Surgical Technology
Associate of Applied Science

Semester 1			Credits
HITT	1305	Medical Terminology I	3
BIOL	2301	Anatomy & Physiology I	3
BIOL	2101	Anatomy & Physiology I	1
MATH	1314	College Algebra	3
		Semester Totals	**10**

Semester 2			Credits
BIOL	2302	Anatomy & Physiology II	3
BIOL	2102	Anatomy & Physiology II	1
ENGL	1301	Composition I	3
SPCH	X3XX	Gen Ed Speech Elective	3
		Semester Totals	**10**

Semester 3			Credits
BIOL	2320	Microbiology for Non-Science Majors (lec)	3
BIOL	2120	Microbiology for Non-Science Majors (lab)	1
PSYC	2301	General Psychology	3
ACGM	X3XX	Gen Ed Humanities/Fine Arts Course	3
		Semester Totals	**10**

Semester 4			Credits
SRGT	1405	Introduction to Surgical Technology	4
SRGT	1409	Fundamentals of Perioperative Concepts and Techniques	4
SRGT	1460	Clinical-Surgical Technology/Technologist	4
		Semester Totals	**12**

Semester 5			Credits
SRGT	1244	Technological Sciences for the Surgical Technologist	2
SRGT	1441	Surgical Procedures I	4
SRGT	1461	Clinical-Surgical Technology/Technologist	4
		Semester Totals	**10**

Semester 6			Credits
SRGT	1442	Surgical Procedures II	4
SRGT	2462	Clinical-Surgical Technology/Technologist	4
		Semester Totals	**8**
		Program Totals	**60**

Surveying Technology

The Land Surveying Technology associate degree puts students on a path to a successful career. At TSTC, students get enhanced instruction and hands-on experience that surveying specialists need to lead the industry pack. Surveying Technology students will use the latest in GIS, GPS, and surveying software and hardware. Each student will also complete an intensive hands-on curriculum that stresses the basics of GIS and Surveying through advanced applications. Included in the GIS curriculum are related courses in computer programming, databases, and computer-aided drafting. For quicker entry into the industry, a Survey Field Technician certificate is also available.

Surveying Technology is available at the Waco campus.

Surveying Technology
Land Surveying Technology
Associate of Applied Science

Semester 1			Credits
GISC	1311	Introduction to Geographic Information Systems (GIS)	3
SRVY	1301	Introduction to Surveying	3
SRVY	1309	Surveying Measurement	3
ENGL	1301	Composition I	3
		Semester Totals	**12**

Semester 2			Credits
GISC	1301	Cartography and Geography in Geographical Information Systems (GIS) and Global Positioning Systems	3
SRVY	1235	Land Surveying Applications	2
SRVY	1341	Land Surveying	3
SRVY	2343	Surveying-Legal Principles I	3
		Semester Totals	**11**

Semester 3			Credits
SRVY	1315	Surveying Calculations	3
SRVY	1342	Global Positioning System Techniques for Surveying and Mapping	3
SRVY	2309	Computer-Aided Mapping	3
SRVY	2455	Advanced Boundary Project	4
		Semester Totals	**13**

Semester 4			Credits
SRVY	2331	Geodetic Surveying and Mapping	3
SRVY	2335	Geodetic Surveying and Mapping Application	3
ACGM	X3XX	Gen Ed Math/Natural Science Course	3
ACGM	X3XX	Gen Ed Social/Behavioral Science Course	3
		Semester Totals	**12**

Semester 5			Credits
SRVY	2339	Engineering Design Surveying	3
SRVY	2341	Engineering Design Surveying Lab	3
ACGM	X3XX	Gen Ed Elective Course	3
ACGM	X3XX	Gen Ed Humanities/Fine Arts Course	3
		Semester Totals	**12**

Program Totals 60

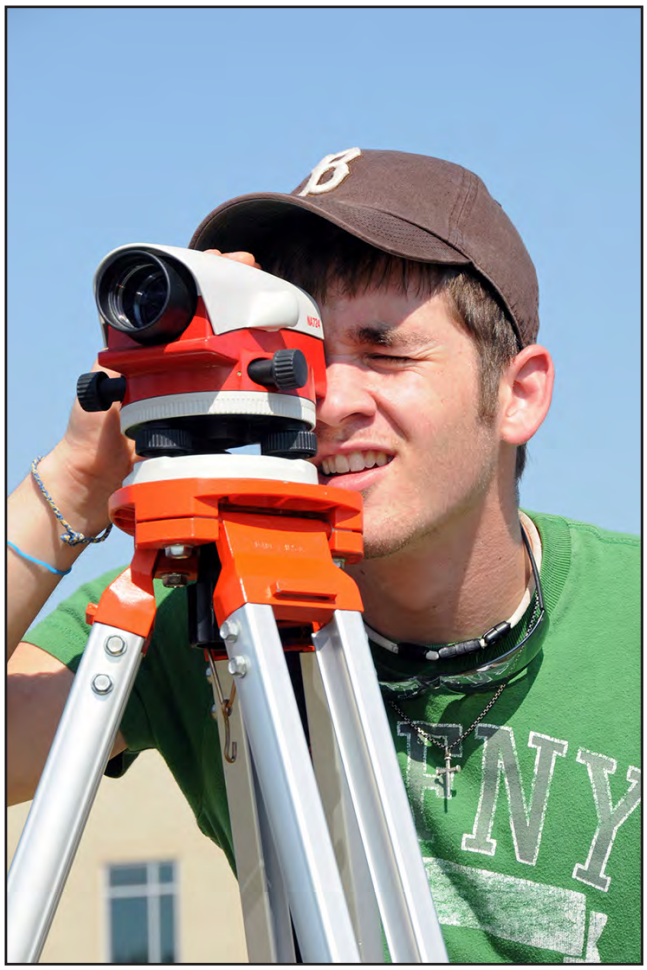
Surveying Technology
Survey Field Technician
Certificate 1

Semester 1			Credits
GISC	1311	Introduction to Geographic Information Systems (GIS)	3
SRVY	1301	Introduction to Surveying	3
SRVY	1309	Surveying Measurement	3
SRVY	2335	Geodetic Surveying and Mapping Application	3
		Semester Totals	**12**

Semester 2			Credits
GISC	1301	Cartography and Geography in Geographical Information Systems (GIS) and Global Positioning Systems	3
SRVY	1235	Land Surveying Applications	2
SRVY	1341	Land Surveying	3
SRVY	2343	Surveying-Legal Principles I	3
		Semester Totals	**11**

Semester 3			Credits
SRVY	1315	Surveying Calculations	3
SRVY	1342	Global Positioning System Techniques for Surveying and Mapping	3
SRVY	2309	Computer-Aided Mapping	3
SRVY	2455	Advanced Boundary Project	4
		Semester Totals	**13**

Program Totals 36



Telecommunications Technology

Telecommunications Technology at TSTC provides superior instruction in the latest industry-standard telecommunications skills and equipment. Students of the Telecommunications Program will learn to design or configure voice and data communications systems, test and evaluate hardware and software, review and evaluate requests for system modifications, provide user support by diagnosing and solving network and device problems, perform preventive maintenance, backup or recovery procedures, install, remove or relocate user connectivity equipment and devices, and much more. For quicker entry into the industry, a Telecommunications certificate is also available.

Telecommunications Technology is available at the Harlingen campus.

Telecommunications Technology
Telecommunications Convergence Technology
Associate of Applied Science

Semester 1			Credits
CETT	1303	DC Circuits	3
EECT	1303	Introduction to Telecommunications	3
ENGL	1301	Composition I	3
ACGM	X3XX	Gen Ed Math/Natural Science Course	3
		Semester Totals	**12**

Semester 2			Credits
CETT	1305	AC Circuits	3
CETT	1325	Digital Fundamentals	3
EECT	1300	Technical Customer Service	3
ACGM	X3XX	Gen Ed Humanities/Fine Arts Course	3
		Semester Totals	**12**

Semester 3			Credits
CSIR	2351	Fiber Optic Communication System Installation and Repair	3
EECT	1307	Convergence Technologies	3
EECT	1340	Telecommunications Transmission Media	3
EECT	1342	Telecommunications Outside Plant	3
		Semester Totals	**12**

Semester 4			Credits
ACGM	X3XX	Gen Ed Social/Behavioral Science Course	3
CSIR	1391	Special Topics in Communications System Installer and Repairer	3
EECT	2335	Telecommunications	3
ITNW	1351	Fundamentals of Wireless LANs	3
		Semester Totals	**12**

Semester 5			Credits
EECT	1344	Telecommunications Broadband Systems	3
EECT	2330	Telecommunications Switching	3
EECT	2333	Telephone Systems	3
ACGM	X3XX	Gen Ed Approved Elective	3
		Semester Totals	**12**

Program Totals 60

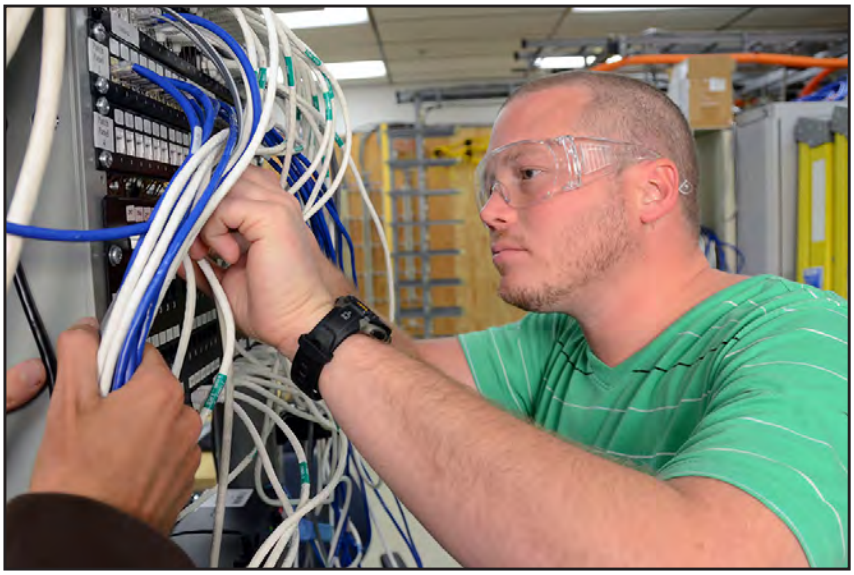
Telecommunications Technology
Telecommunications Specialist
Certificate 1

Semester 1			Credits
CETT	1303	DC Circuits	3
EECT	1303	Introduction to Telecommunications	3
TECM	1303	Technical Calculations	3
		Semester Totals	**9**

Semester 2			Credits
CETT	1305	AC Circuits	3
CETT	1325	Digital Fundamentals	3
EECT	1300	Technical Customer Service	3
POFT	1301	Business English	3
		Semester Totals	**12**

Semester 3			Credits
CSIR	2351	Fiber Optic Communication System Installation and Repair	3
EECT	1307	Convergence Technologies	3
EECT	1340	Telecommunications Transmission Media	3
EECT	1342	Telecommunications Outside Plant	3
		Semester Totals	**12**

Program Totals 33



Tool & Die Technology

Tool & Die Technology students learn to operate milling machines, lathes, grinders, wire electrical discharge machines, and other machine tools, and 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 & 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. For quicker entry into the industry, a Toolmaker certificate is also available.

Tool & Die Technology is available at the Harlingen campus.

Tool & Die Technology
Associate of Applied Science

Semester 1			Credits
MCHN	1302	Print Reading For Machining Trades	3
MCHN	1320	Precision Tools and Measurement	3
MCHN	1343	Machine Shop Mathematics	3
MCHN	1438	Basic Machine Shop I	4
		Semester Totals	**13**

Semester 2			Credits
MCHN	1308	Basic Lathe	3
MCHN	1313	Basic Milling Operations	3
MCHN	2303	Fundamentals of Computer Numerical Controlled (CNC) Machine Controls	3
ACGM	X3XX	Gen Ed Elective	3
		Semester Totals	**12**

Semester 3			Credits
MCHN	1305	Metals and Heat Treatment	3
MCHN	1452	Intermediate Machining I	4
MCHN	2335	Advanced CNC Machining	3
ACGM	X3XX	Gen Ed Social/Behavioral Sciences Course	3
		Semester Totals	**13**

Semester 4			Credits
MCHN	2337	Advanced Milling Operations	3
MCHN	2447	Specialized Tools and Fixtures	4
PLTC	1343	Mold Design and Maintenance	3
ENGL	1301	Composition I	3
		Semester Totals	**13**

Semester 5			Credits
MCHN	2372	Mold, Tool & Die Modification & Repair	3
MATH	1314	College Algebra	3
MATH	1332	or Contemporary Mathematics I	
ACGM	X3XX	Gen Ed Humanities/Fine Arts Course	3
		Semester Totals	**9**
		Program Totals	**60**

Tool & Die Technology
Toolmaker
Certificate 2

Semester 1			Credits
MCHN	1302	Print Reading For Machining Trades	3
MCHN	1320	Precision Tools and Measurement	3
MCHN	1343	Machine Shop Mathematics	3
MCHN	1438	Basic Machine Shop I	4
		Semester Totals	**13**

Semester 2			Credits
MCHN	1308	Basic Lathe	3
MCHN	1313	Basic Milling Operations	3
MCHN	2303	Fundamentals of Computer Numerical Controlled (CNC) Machine Controls	3
		Semester Totals	**9**

Semester 3			Credits
MCHN	1305	Metals and Heat Treatment	3
MCHN	1452	Intermediate Machining I	4
MCHN	2335	Advanced CNC Machining	3
MCHN	2337	Advanced Milling Operations	3
		Semester Totals	**13**

Semester 4			Credits
MCHN	2372	Mold, Tool & Die Modification & Repair	3
MCHN	2447	Specialized Tools and Fixtures	4
PLTC	1343	Mold Design and Maintenance	3
		Semester Totals	**10**
		Program Totals	**45**

Turfgrass & Landscape Management

The Golf Course Superintendent's Association of America estimates there are nearly 15,000 golfing facilities in the United States, employing well over 300,000 people in the nation. At the golf course — and anywhere turfgrass and landscaping is highlighted — there's much going on behind the scenes to make it that way. The laboratory-intensive program includes extensive instruction in turfgrass management, golf course and landscape maintenance, landscape installation and plant knowledge. Within walking distance of the classroom, there is a four-hole golf course, including bunkers, greenhouses and native plant beds and turf plots, all designed to maximize your hands-on learning experience. For quicker entry into the industry, a certificate in Turfgrass & Landscape Management is also available.

Turfgrass & Landscape Management is available at the Waco campus.

Turfgrass & Landscape Management Associate of Applied Science

Semester 1			Credits
HALT	1305	Horticultural Soils	3
HALT	1324	Turfgrass Science and Management	3
HORT	1401	Horticulture	4
ENGL	1301	Composition I	3
		Semester Totals	**13**

Semester 2			Credits
HALT	1220	Horticultural Calculations	2
HALT	1325	Landscape Plant Material	3
HALT	1327	Horticultural Equipment Management	3
HALT	2318	Soil Fertility and Fertilizers	3
		Semester Totals	**11**

Semester 3			Credits
HALT	1313	Economic Entomology	3
HALT	1333	Landscape Irrigation	3
HALT	2315	Landscape Management	3
HALT	2323	Horticultural Pest Control	3
		Semester Totals	**12**

Semester 4			Credits
HALT	1307	Plant Diseases	3
HALT	1322	Landscape Design	3
HALT	1346	or Specialized Turfgrass Management	
ACGM	X3XX	Gen Ed Humanities/Fine Arts Course	3
ACGM	X3XX	Gen Ed Elective	3
		Semester Totals	**12**

Semester 5			Credits
HALT	1345	Golf/Sports Field/Park Management	3
HALT	1351	Landscape Business Operations	3
HALT	2310	Advanced Landscape Irrigation	3
ACGM	X3XX	Gen Ed Social/Behavioral Science Course	3
		Semester Totals	**12**
		Program Totals	**60**

Turfgrass & Landscape Management Certificate 2

Semester 1			Credits
HALT	1305	Horticultural Soils	3
HALT	1324	Turfgrass Science and Management	3
HORT	1401	Horticulture	4
WECM	X3XX	Approved Technical Elective	3
		Semester Totals	**13**

Semester 2			Credits
HALT	1220	Horticultural Calculations	2
HALT	1325	Landscape Plant Material	3
HALT	1327	Horticultural Equipment Management	3
HALT	2318	Soil Fertility and Fertilizers	3
		Semester Totals	**11**

Semester 3			Credits
HALT	1313	Economic Entomology	3
HALT	1333	Landscape Irrigation	3
HALT	2323	Horticultural Pest Control	3
WECM	X3XX	Approved Technical Elective	3
		Semester Totals	**12**
		Program Totals	**36**

Visual Communication Technology

From concept to creation, designers and photographers must develop compelling work to stand out in today's competitive advertising market. To succeed in this field, you must be able to capture a viewer's attention not only in traditional mediums, such as newspapers and magazines, but also on the web and in publications on the Internet. TSTC takes students from the drawing board through the studio and to the computer with its Visual Communication program. Here students learn how to affect an audience through digital photography and design, whether on a billboard, in a magazine ad, in a brochure or on a post card. TSTC offers two, five-semester associate degrees paths in either Design or Digital Photography. The program emphasizes the technical and practical aspects of preparing camera-ready art for reproduction for both print and other mediums. Students learn many of today's electronic illustration, design, developing and retouching programs, including InDesign, Illustrator, Photoshop and others. All degrees include a solid framework of courses that lead to advanced design, imaging and advertising assignments. The Design track emphasizes in-depth print and E-publishing skills, while the Digital Photography track focuses on commercial photography, both in the studio and on location. The coursework for both tracks is taught using industry-standard software backed by experienced staff.

Visual Communication Technology is available at the Waco campus.

Visual Communication Technology Design Specialization Associate of Applied Science

Semester 1			Credits
ARTC	1302	Digital Imaging I	3
ARTC	1305	Basic Graphic Design	3
ENGL	1301	Composition I	3
ACGM	X3XX	Gen Ed Social/Behavioral Sciences Course	3
		Semester Totals	12

Semester 2			Credits
ARTC	1313	Digital Publishing I	3
ARTC	2305	Digital Imaging II	3
GRPH	1359	Vector Graphics for Production	3
ARTC	2317	Typographic Design	3
		Semester Totals	12

Semester 3			Credits
ARTC	1310	Design Concepts	3
ARTC	1349	Art Direction I	3
ARTC	2313	Digital Publishing II	3
ACGM	X3XX	Gen Ed Math/Natural Sciences Course	3
		Semester Totals	12

Semester 4			Credits
ARTC	1359	Visual Design for New Media	3
ARTC	1317	Design Communication I	3
ARTC	2349	Art Direction II	3
ARTC	2388	Internship	3
		Semester Totals	12

Semester 5			Credits
ARTC	2333	Publication Design	3
ARTC	2335	Portfolio Development for Graphic Design	3
ACGM	X3XX	Gen Ed Elective Course	3
ACGM	X3XX	Gen Ed Humanities/Fine Arts Course	3
		Semester Totals	12
		Program Totals	60

Visual Communication Technology Photography Specialization Associate of Applied Science

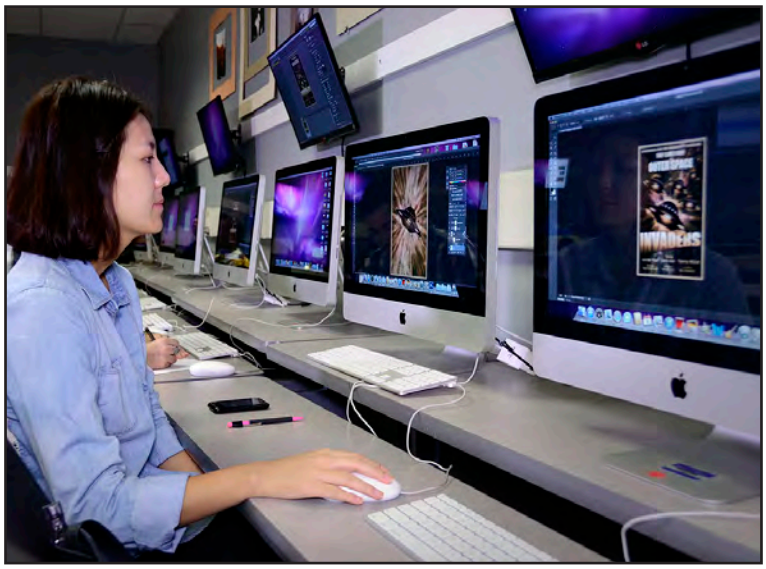
Semester 1			Credits
ARTC	1302	Digital Imaging I	3
ARTC	1305	Basic Graphic Design	3
ENGL	1301	Composition I	3
ACGM	X3XX	Gen Ed Social/Behavioral Sciences Course	3
		Semester Totals	12

Semester 2			Credits
ARTC	1313	Digital Publishing I	3
ARTC	2305	Digital Imaging II	3
GRPH	1359	Vector Graphics for Production	3
PHTC	1311	Fundamentals of Photography	3
		Semester Totals	12

Semester 3			Credits
ARTC	1310	Design Concepts	3
PHTC	1345	Illustrative Photography	3
PHTC	1340	Photographic Retouching I	3
ACGM	X3XX	Gen Ed Math/Natural Sciences Course	3
		Semester Totals	12

Semester 4			Credits
PHTC	1343	Expressive Photography	3
PHTC	2340	Photographic Studio Management	3
PHTC	1353	Portraiture I	3
PHTC	1371	Commercial Photography	3
		Semester Totals	12

Semester 5			Credits
ARTC	2333	Publication Design	3
ARTC	2335	Portfolio Development for Graphic Design	3
ACGM	X3XX	Gen Ed Elective Course	3
ACGM	X3XX	Gen Ed Humanities/Fine Arts Course	3
		Semester Totals	12
		Program Totals	60



Vocational Nursing

The nursing profession is a large part of the high-demand healthcare field. In the Vocational Nursing program, students participate in an innovative learning environment that helps develop their caregiving skills. Instruction consists of classroom, simulation learning labs, interactive online sessions, virtual clinical and on-site healthcare clinical. In the simulation learning lab, students practice the skills and techniques introduced in their classes and they will be challenged to work through real-world scenarios. After time in the simulation learning labs, students move to clinical sites at hospitals, nursing homes and doctors' offices where they experience the reality and pace of the nursing profession. Graduates in the Vocational Nursing program have many employment opportunities to consider such as: Hospitals, nursing homes, home healthcare, doctors' offices and insurance companies.

Vocational Nursing is available at the Breckenridge, Harlingen and Sweetwater campuses.

Vocational Nursing Certificate 2

Semester 1			Credits
BIOL	2401	Anatomy & Physiology I	4
BIOL	2301	or Anatomy & Physiology I	
BIOL	2101	and Anatomy & Physiology I	
BIOL	2402	Anatomy & Physiology II	4
BIOL	2302	or Anatomy & Physiology II	
BIOL	2102	and Anatomy & Physiology II	
VNSG	1327	Essentials of Medication Administration	3
BIOL	1322	or Nutrition & Diet Therapy	
HPRS	1206	Essentials of Medical Terminology	2
HITT	1305	or Medical Terminology I	
		Semester Totals	**13**

Semester 2			Credits
VNSG	1261	Clinical-Licensed Practical/Vocational Nurse Training	2
VNSG	1304	Foundations of Nursing	3
VNSG	1331	Pharmacology	3
VNSG	1402	Applied Nursing Skills I	4
		Semester Totals	**12**

Semester 3			Credits
VNSG	1230	Maternal-Neonatal Nursing	2
VNSG	1329	Medical-Surgical Nursing I	3
VNSG	1462	Clinical-Licensed Practical/Vocational Nurse Training	4
VNSG	2413	Applied Nursing Skills II	4
		Semester Totals	**13**

Semester 4			Credits
VNSG	1119	Leadership and Professional Development	1
VNSG	1334	Pediatrics	3
VNSG	1432	Medical-Surgical Nursing II	4
VNSG	2463	Clinical-Licensed Practical/Vocational Nurse Training	4
		Semester Totals	**12**
		Program Totals	**50**

Web Design & Development

Designers and developers work within a variety of settings to gather information and program content and design a site that's effective and easy to use. The online two-year associate degree in Web Design & Development offers targeted coursework in website design, production, programming, applications and maintenance, as well as the practical hands-on experience needed to understand the technology. And since the program web-based you can take it from anywhere. The program includes curriculum specific to graphic and Web design, Web development, computer science and computer networking. The curriculum also covers languages and software including XHTML, HTML, JavaScript, PHP, CSS, ColdFusion, Adobe Flash, Fireworks and Dreamweaver. Students not only learn instruction in Web page design and composition, they develop a portfolio and participate in a real-world project that moves them to the top of the class when employers seek candidates. Students also learn basic and intermediate Web page programming, database theory and design, and even Internet commerce, among other subjects.

Web Design & Development is available at the Waco campus.

Web Design & Development
Associate of Applied Science

Semester 1			Credits
ARTC	1302	Digital Imaging I	3
ARTC	1305	Basic Graphic Design	3
ITSE	1301	Web Design Tools	3
ITSE	1329	Programming Logic and Design	3
		Semester Totals	**12**

Semester 2			Credits
IMED	1316	Web Design I	3
ITSE	1311	Beginning Web Programming	3
ENGL	1301	Composition I	3
MATH	1332	Contemporary Mathematics I	3
		Semester Totals	**12**

Semester 3			Credits
ITSE	1306	PHP Programming	3
ITSE	1359	Introduction to Scripting Languages	3
ITSE	2313	Web Authoring	3
HUMA	1301	Introduction to Humanities I	3
		Semester Totals	**12**

Semester 4			Credits
IMED	2315	Web Design II	3
IMED	2351	Digital Media Programming	3
INEW	2334	Advanced Web Programming	3
WEB	X3XX	Approved Technical Web Course	3
		Semester Totals	**12**

Semester 5			Credits
IMED	2311	Portfolio Development	3
IMED	2388	Internship-Digital Communication and Media/Multimedia	3
ENGL	2311	Technical Writing	3
PSYC	2301	General Psychology	3
		Semester Totals	**12**

Program Totals 60

Welding Technology

The welding programs at TSTC emphasize the development of real, hands-on welding, layout and fitting skills. With extensive exposure to welding practices and principles, students can better understand not only how welding processes work, but also why certain welding processes are used. Welding Technology offers Combination Welding students instruction on plasma torches for oxy-acetylene and air carbon arc cutting. Students also gain extensive skills and knowledge through simulated industrial welder qualification tests with the following processes: SMAW, GMAW, FCAW (gas and self-shielded), GTAW and SAW. With general welding or specialized programs such as Combination welding, Combination and Pipe welding, Multicraft, Pipe welding, and Structural welding available, there are many different options for those wanting to enter the welding industry. For quicker entry into the industry, certificates are also available.

Welding Technology is available at the Breckenridge, Brownwood, East Williamson County Higher Education Center, Harlingen, Marshall, North Texas Center, Sweetwater, and Waco campuses.

Welding Technology
Associate of Applied Science -

Harlingen, Waco, East Williamson County

Semester 1			Credits
WLDG	1407	Introduction to Welding Using Multiple Processes	4
WLDG	1313	Introduction to Blueprint Reading for Welders	3
WLDG	1428	Introduction to Shielded Metal Arc Welding (SMAW)	4
ENGL	1301	Composition I	3
		Semester Totals	**14**

Semester 2			Credits
WLDG	1417	Introduction to Layout and Fabrication	4
WLDG	1434	Introduction to Gas Tungsten Arc (GTAW) Welding	4
WLDG	1457	Intermediate Shielded Metal Arc Welding (SMAW)	4
ACGM	X3XX	Gen Ed Elective Course	3
		Semester Totals	**15**

Semester 3			Credits
WLDG	1435	Introduction to Pipe Welding	4
WLDG	1337	Introduction to Welding Metallurgy	3
WLDG	2413	Intermediate Welding Using Multiple Processes	4
WLDG	2443	Advanced Shielded Metal Arc Welding (SMAW)	4
		Semester Totals	**15**

Semester 4			Credits
WLDG	1327	Welding Codes and Standards or	
WLDG	2355	Advanced Welding Metallurgy	3
WLDG	2406	Intermediate Pipe Welding or	
WLDG	2432	Welding Automation	4
MATH	1332	Contemporary Mathematics	3
ACGM	X3XX	Gen Ed Humanities/Fine Arts Course	3
ACGM	X3XX	Gen Ed Social/Behavioral Sciences Course	3
		Semester Totals	**16**

Program Totals 60

Welding Technology
Combination Welding
Certificate 1 - Harlingen, Waco, East Williamson County

Semester 1			Credits
WLDG	1407	Introduction to Welding Using Multiple Processes	4
WLDG	1313	Introduction to Blueprint Reading for Welders	3
WLDG	1428	Introduction to Shielded Metal Arc Welding (SMAW)	4
		Semester Totals	**11**

Semester 2			Credits
WLDG	1417	Introduction to Layout and Fabrication	4
WLDG	1434	Introduction to Gas Tungsten Arc (GTAW) Welding	4
WLDG	1457	Intermediate Shielded Metal Arc Welding (SMAW)	4
		Semester Totals	**12**

Semester 3			Credits
WLDG	1435	Introduction to Pipe Welding	4
WLDG	2413	Intermediate Welding Using Multiple Processes	4
WLDG	2443	Advanced Shielded Metal Arc Welding (SMAW)	4
		Semester Totals	**12**

Program Totals 35

Welding Technology

Combination & Pipe Welding
Certificate 2 - Waco only

Semester 1			Credits
WLDG	1407	Introduction to Welding Using Multiple Processes	4
WLDG	1313	Introduction to Blueprint Reading for Welders	3
WLDG	1428	Introduction to Shielded Metal Arc Welding (SMAW)	4
		Semester Totals	**11**

Semester 2			Credits
WLDG	1417	Introduction to Layout and Fabrication	4
WLDG	1434	Introduction to Gas Tungsten Arc (GTAW) Welding	4
WLDG	1457	Intermediate Shielded Metal Arc Welding (SMAW)	4
		Semester Totals	**12**

Semester 3			Credits
WLDG	1435	Introduction to Pipe Welding	4
WLDG	2413	Intermediate Welding Using Multiple Processes	4
WLDG	2443	Advanced Shielded Metal Arc Welding (SMAW)	4
		Semester Totals	**12**

Semester 4			Credits
WLDG	2406	Intermediate Pipe Welding	4
WLDG	2435	Advanced Layout and Fabrication	4
WLDG	2453	Advanced Pipe Welding	4
		Semester Totals	**12**

Program Totals 47

Welding Technology
Multi-craft Welding
Certificate 2 - Marshall, North Texas Center

Semester 1			Credits
TECM	1303	Technical Calculations	3
WLDG	1407	Introduction to Welding Using Multiple Processes	4
WLDG	1313	Introduction to Blueprint Reading for Welders	3
DFTG	1325	or Blueprint Reading and Sketching	
WLDG	1428	Introduction to Shielded Metal Arc Welding (SMAW)	4
		Semester Totals	**14**

Semester 2			Credits
WLDG	1412	Introduction to Flux Cored Arc Welding (FCAW)	4
WLDG	1417	Introduction to Layout and Fabrication	4
WLDG	1453	or Intermediate Layout and Fabrication	
WLDG	1434	Introduction to Gas Tungsten Arc (GTAW) Welding	4
WLDG	1457	Intermediate Shielded Metal Arc Welding (SMAW)	4
		Semester Totals	**16**

Semester 3			Credits
WLDG	2406	Intermediate Pipe Welding	4
WLDG	2443	Advanced Shielded Metal Arc Welding (SMAW)	4
WLDG	2451	Advanced Gas Tungsten Arc Welding (GTAW)	4
WLDG	2452	Advanced Flux Cored Arc Welding	4
		Semester Totals	**16**

Program Totals 46

Welding Technology

Pipe Welding
Certificate 1 - Sweetwater only

Semester 1			Credits
TECM	1303	Technical Calculations	3
WLDG	1313	Introduction to Blueprint Reading for Welders	3
WLDG	1428	Introduction to Shielded Metal Arc Welding (SMAW)	4
WLDG	1435	Introduction to Pipe Welding	4
		Semester Totals	**14**

Semester 2			Credits
WLDG	1417	Introduction to Layout and Fabrication	4
WLDG	2331	Advanced Blueprint Interpretation and Cost Analysis	3
WLDG	2406	Intermediate Pipe Welding	4
WLDG	2453	Advanced Pipe Welding	4
		Semester Totals	**15**

Program Totals 29

Welding Technology
Advanced Pipe Welding
Advanced Technical Certificate - Waco only

Semester 1			Credits
WLDG	2406	Intermediate Pipe Welding	4
WLDG	2435	Advanced Layout and Fabrication	4
WLDG	2453	Advanced Pipe Welding	4
		Semester Totals	**12**

Program Totals 12

Welding Technology
Structural Welding
Certificate 1 - Breckenridge, Brownwood

Semester 1			Credits
TECM	1303	Technical Calculations	3
WLDG	1407	Introduction to Welding Using Multiple Processes	4
WLDG	1313	Introduction to Blueprint Reading for Welders	3
DFTG	1325	or Blueprint Reading and Sketching	
WLDG	1428	Introduction to Shielded Metal Arc Welding (SMAW)	4
		Semester Totals	**14**

Semester 2			Credits
WLDG	1412	Introduction to Flux Cored Arc Welding (FCAW)	4
WLDG	1417	Introduction to Layout and Fabrication	4
WLDG	1453	or Intermediate Layout and Fabrication	
WLDG	1434	Introduction to Gas Tungsten Arc (GTAW) Welding	4
WLDG	1457	Intermediate Shielded Metal Arc Welding (SMAW)	4
		Semester Totals	**16**

Program Totals 30

COURSE DESCRIPTIONS

TSTC
Texas State Technical College

tstc.edu

Academic Courses

ACCT

ACCT 2301 Principles of Financial Accounting (3-0) This course is an introduction to the fundamental concepts of financial accounting as prescribed by U.S. generally accepted accounting principles (GAAP) as applied to transactions and events that affect business organizations. Students will examine the procedures and systems to accumulate, analyze, measure, and record financial transactions. Students will use recorded financial information to prepare a balance sheet, income statement, statement of cash flows, and statement of shareholders' equity to communicate the business entity's results of operations and financial position to users of financial information who are external to the company. Students will study the nature of assets, liabilities, and owners' equity while learning to use reported financial information for purposes of making decisions about the company. Students will be exposed to International Financial Reporting Standards (IFRS).

ACCT 2302 Principles of Managerial Accounting (3-0) This course is an introduction to the fundamental concepts of managerial accounting appropriate for all organizations. Students will study information from the entity's accounting system relevant to decisions made by internal managers, as distinguished from information relevant to users who are external to the company. The emphasis is on the identification and assignment of product costs, operational budgeting and planning, cost control, and management decision making. Topics include product costing methodologies, cost behavior, operational and capital budgeting, and performance evaluation.

ARTS

ARTS 1301 Art Appreciation (3-0)

ARTS 1313 Foundations of Art (3-0) Introduction to the creative media designed to enhance artistic awareness and sensitivity through the creative and imaginative use of art materials and tools. Includes art history and culture through the exploration of a variety of art works with an emphasis on aesthetic judgment and growth.

ARTS 2316 Painting I (3-0) Exploration of ideas using painting media and techniques.

ARTS 2326 Sculpture I (3-0) Exploration of ideas using sculpture media and techniques.

BCIS

BCIS 1301 Microcomputer Applications (3-0) 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.

BCIS 1305 Business Computer Applications (3-0) Students will study computer terminology, hardware, and software related to the business environment. The focus of this course is on business productivity software applications and professional behavior in computing, including word processing (as needed), spreadsheets, databases, presentation graphics, and business-oriented utilization of the Internet.

BIOL

BIOL 1106 Biology for Science Majors Laboratory I (0-3) This laboratory-based course accompanies Biology 1306, Biology for Science Majors I. Laboratory activities will reinforce the fundamental principles of living organisms, including physical and chemical properties of life, organization, function, evolutionary adaptation, and classification. Study and examination of the concepts of cytology, reproduction, genetics, and scientific reasoning are included.

BIOL 1107 Biology for Science Majors II (lab) (0-3) The diversity and classification of life will be studied, including animals, plants, protists, fungi, and prokaryotes. Special emphasis will be given to anatomy, physiology, ecology, and evolution of plants and animals.

BIOL 1108 Biology for Non-Science Majors Laboratory I (lab) (0-3) This laboratory-based course accompanies BIOL 1308, Biology for Non-Science Majors I. Laboratory activities will reinforce a survey of biological principles with an emphasis on humans, including chemistry of life, cells, structure, function, and reproduction.

BIOL 1109 Biology for Non-Science Majors II (lab) (0-3) This laboratory-based course accompanies BIOL 1309, Biology for Non-Science Majors II. Laboratory activities will reinforce a survey of biological principles with an emphasis on humans, including evolution, ecology, plant and animal diversity, and physiology.

BIOL 1306 Biology for Science Majors I (3-0) Fundamental principles of living organisms will be studied, including physical and chemical properties of life, organization, function, evolutionary adaptation, and classification. Concepts of cytology, reproduction, genetics, and scientific reasoning are included.

BIOL 1307 Biology for Science Majors II (lecture) (3-0) The diversity and classification of life will be studied, including animals, plants, protists, fungi, and prokaryotes. Special emphasis will be given to anatomy, physiology, ecology, and evolution of plants and animals.

BIOL 1308 Biology for Non-Science Majors I (lecture) (3-0) Provides a survey of biological principles with an emphasis on humans, including chemistry of life, cells, structure, function, and reproduction.

BIOL 1309 Biology for Non-Science Majors II (lecture) (3-0) This course will provide a survey of biological principles with an emphasis on humans, including evolution, ecology, plant and animal diversity, and physiology.

BIOL 1322 Nutrition & Diet Therapy (3-0) This course introduces general nutritional concepts in health and disease and includes practical applications of that knowledge. Special emphasis is given to nutrients and nutritional processes including functions, food sources, digestion, absorption, and metabolism. Food safety, availability, and nutritional information including food labels, advertising, and nationally established guidelines are addressed. (Cross-listed as HECO 1322).

BIOL 2101 Anatomy & Physiology I Lab (0-3) The lab provides a hands-on learning experience for exploration of human system components and basic physiology. Systems to be studied include integumentary, skeletal, muscular, nervous, and special senses.

BIOL 2102 Anatomy & Physiology II lab (0-3) The lab provides a hands-on learning experience for exploration of human system components and basic physiology. Systems to be studied include endocrine, cardiovascular, immune, lymphatic, respiratory, digestive (including nutrition), urinary (including fluid and electrolyte balance), and reproductive (including human development and genetics).

BIOL 2120 Microbiology for Non-Science Majors lab (0-3) This course covers basics of culture and identification of bacteria and microbial ecology. This course is primarily directed at pre-nursing and other pre-allied health majors and covers basics of microbiology. Emphasis is on medical microbiology, infectious diseases, and public health.

BIOL 2121 Microbiology for Science Majors (lab) (0-3) This laboratory-based course accompanies Biology 2321, Microbiology for Science Majors. Laboratory activities will reinforce principles of microbiology, including metabolism, structure, function, genetics, and phylogeny of microbes. The course will also examine the interactions of microbes with each other, hosts, and the environment.

BIOL 2301 Anatomy & Physiology I (3-0) Anatomy and Physiology I is the first part of a two course sequence. It is a study of the structure and function of the human body including cells, tissues and organs of the following systems: integumentary, skeletal, muscular, nervous and special senses. Emphasis is on interrelationships among systems and regulation of physiological functions involved in maintaining homeostasis.

BIOL 2302 Anatomy & Physiology II (3-0) Anatomy and Physiology II is the second part of a two-course sequence. It is a study of the structure and function of the human body including the following systems: endocrine, cardiovascular, immune, lymphatic, respiratory, digestive (including nutrition), urinary (including fluid and electrolyte balance), and reproductive (including human development and genetics). Emphasis is on interrelationships among systems and regulation of physiological functions involved in maintaining homeostasis.

BIOL 2320 Microbiology for Non-Science Majors (3-0) This course covers basic microbiology and immunology and is primarily directed at pre-nursing, pre-allied health, and non-science majors. It provides an introduction to historical concepts of the nature of microorganisms, microbial diversity, the importance of microorganisms and acellular agents in the biosphere, and their roles in human and animal diseases. Major topics include bacterial structure as well as growth, physiology, genetics, and biochemistry of microorganisms. Emphasis is on medical microbiology, infectious diseases, and public health.

BIOL 2321 Microbiology for Science Majors (lecture) (3-0) Principles of microbiology, including metabolism, structure, function, genetics, and phylogeny of microbes. The course will also examine the interactions of microbes with each other, hosts, and the environment.

BIOL 2401 Anatomy & Physiology I (2-5) This lecture and lab course should combine all of the elements of BIOL 2301 Anatomy and Physiology I (lecture) and BIOL 2101 Anatomy and Physiology I (lab), including the learning outcomes listed for both courses.

BIOL 2402 Anatomy & Physiology II (2-5) This lecture and lab course should combine all of the elements of BIOL 2302 Anatomy and Physiology II (lecture) and BIOL 2102 Anatomy and Physiology II (lab), including the learning outcomes listed for both courses.

BIOL 2404 Anatomy & Physiology (2-5) 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 2420 Microbiology for Non-Science Majors (3-3) This lecture and lab course should combine all of the elements of BIOL 2320 Microbiology for Non-Science Majors (lecture) and BIOL 2120 Microbiology for Non-Science Majors Laboratory (lab), including the learning outcomes listed for both courses.

BUSI

BUSI 1301 Business Principles (3-0) This course provides a survey of economic systems, forms of business ownership, and considerations for running a business. Students will learn various aspects of business, management, and leadership functions; organizational considerations; and decision-making processes. Financial topics are introduced, including accounting, money and banking, and securities markets. Also included are discussions of business challenges in the legal and regulatory environment, business ethics, social responsibility, and international business. Emphasized is the dynamic role of business in everyday life.

BUSI 2301 Business Law I (3-0) The course provides the student with foundational information about the U.S. legal system and dispute resolution, and their impact on business. The major content areas will include general principles of law, the relationship of business and the U.S. Constitution, state and federal legal systems, the relationship between law and ethics, contracts, sales, torts, agency law, intellectual property, and business law in the global context.

CHEM

CHEM 1111 General Chemistry I (lab) (0-3-1) Basic laboratory experiments supCHEM 1105 Introductory Chemistry I lab (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 1107 Introductory Chemistry Laboratory II (lab) (0-3) Survey course introducing chemistry. Topics may include inorganic, organic, biochemistry, food/physiological chemistry, and environmental/consumer chemistry. Designed for allied health students and for students who are not science majors.

CHEM 1111 General Chemistry I (lab) (0-3) Basic laboratory experiments supporting theoretical principles presented in CHEM 1311; introduction of the scientific method, experimental design, data collection and analysis, and preparation of laboratory reports.

CHEM 1112 General Chemistry II (lab) (0-3) Basic laboratory experiments supporting theoretical principles presented in CHEM 1312; introduction of the scientific method, experimental design, chemical instrumentation, data collection and analysis, and preparation of laboratory reports.

CHEM 1305 Introductory Chemistry I (3-0) 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 1307 Introductory Chemistry II (lecture) (3-0) Survey course introducing chemistry. Topics may include inorganic, organic, biochemistry, food/physiological chemistry, and environmental/consumer chemistry. Designed for allied health students and for students who are not science majors.

CHEM 1311 General Chemistry I (3-0) Fundamental principles of chemistry for majors in the sciences, health sciences, and engineering; topics include measurements, fundamental properties of matter, states of matter, chemical reactions, chemical stoichiometry, periodicity of elemental properties, atomic structure, chemical bonding, molecular structure, solutions, properties of gases, and an introduction to thermodynamics and descriptive chemistry.

CHEM 1312 General Chemistry II (lecture) (3-0) Chemical equilibrium; phase diagrams and spectrometry; acid-base concepts; thermodynamics; kinetics; electrochemistry; nuclear chemistry; an introduction to organic chemistry and descriptive inorganic chemistry.

CHEM 1406 Introductory Chemistry I (3-3) 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 1411 General Chemistry I (3-0) This lecture and lab course should combine all of the elements of 1314 General Chemistry I Lecture and 1111 General Chemistry I Lab, including the learning outcomes listed for both courses.

CHEM 2123 Organic Chemistry I (lab) (3-0) This laboratory-based course accompanies CHEM 2323, Organic Chemistry I. Laboratory activities will reinforce fundamental principles of organic chemistry, including the structure, bonding, properties, and reactivity of organic molecules; and properties and behavior of organic compounds and their derivatives. Emphasis is placed on organic synthesis and mechanisms. Includes study of covalent and ionic bonding, nomenclature, stereochemistry, structure and reactivity, reaction mechanisms, functional groups, and synthesis of simple molecules. Methods for the purification and identification of organic compounds will be examined.

CHEM 2125 Organic Chemistry II (lab) (3-0) This laboratory-based course accompanies CHEM 2325, Organic Chemistry II. Laboratory activities reinforce advanced principles of organic chemistry, including the structure, properties, and reactivity of aliphatic and aromatic organic molecules; and properties and behavior of organic compounds and their derivatives. Emphasis is placed on organic synthesis and mechanisms. Includes study of covalent and ionic bonding, nomenclature, stereochemistry, structure and reactivity, reaction mechanisms, functional groups, and synthesis of simple molecules.

CHEM 2323 Organic Chemistry I (lecture) (3-0) Fundamental principles of organic chemistry will be studied, including the structure, bonding, properties, and reactivity of organic molecules; and properties and behavior of organic compounds and their derivatives. Emphasis is placed on organic synthesis and mechanisms. Includes study of covalent and ionic bonding, nomenclature, stereochemistry, structure and reactivity, reaction mechanisms, functional groups, and synthesis of simple molecules.

CHEM 2325 Organic Chemistry II (lecture) (3-0) Advanced principles of organic chemistry will be studied, including the structure, properties, and reactivity of aliphatic and aromatic organic molecules; and properties and behavior of organic compounds and their derivatives. Emphasis is placed on organic synthesis and mechanisms. Includes study of covalent and ionic bonding, nomenclature, stereochemistry, structure and reactivity, reaction mechanisms, functional groups, and synthesis of simple molecules.

COSC

COSC 1336 Programming Fundamentals I (3-1) This course introduces the fundamental concepts of structured programming, and provides a comprehensive introduction to programming for computer science and technology majors. 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 1337 Programming Fundamentals II (3-1) This course focuses on the object-oriented programming paradigm, emphasizing the definition and use of classes along with fundamentals of object-oriented design. The course includes basic analysis of algorithms, searching and sorting techniques, and an introduction to software engineering processes. Students will apply techniques for testing and debugging software.

COSC 2325 Computer Organization (3-1) The organization of computer systems is introduced using assembly language. Topics include basic concepts of computer architecture and organization, memory hierarchy, data types, computer arithmetic, control structures, interrupt handling, instruction sets, performance metrics, and the mechanics of testing and debugging computer systems. Embedded systems and device interfacing are introduced.

COSC 2336 Programming Fundamentals III (3-1) Further applications of programming techniques, introducing the fundamental concepts of data structures and algorithms. Topics include recursion, fundamental data structures (including stacks, queues, linked lists, hash tables, trees, and graphs), and algorithmic analysis.

DHYG 1227 Preventive Dental Hygiene Care (1-3) The role of the dental hygienist as a therapeutic oral health care provider with emphasis on concepts of disease management, health promotion, communication, and behavior modification.

DHYG 1211 Periodontology (1-2) Normal and diseased periodontium including the structural, functional, and environmental factors. Emphasis on etiology, pathology, treatment modalities, and therapeutic and preventive periodontics.

DHYG 1260 Clinical - Dental Hygiene/Hygienist (0-0) 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 1304 Dental Radiology (2-3) Fundamentals of oral radiography, including techniques, interpretation, quality assurance, and ethics.

DHYG 1319 Dental Materials (2-3) Physical and chemical properties of dental materials including the application and manipulation of the various materials used in dentistry.

DHYG 1235 Pharmacology for the Dental Hygienist (1-2) Classification of drugs and their uses, actions, interactions, side effects, contraindications, with emphasis on dental applications.

DHYG 1261 Clinical - Dental Hygiene/Hygienist (0-8) 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 1215 Community Dentistry (1-4) 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 1239 General and Oral Pathology (1-2) Disturbances in human body development, diseases of the body, and disease prevention measures with emphasis on the oral cavity and associated structures.

DHYG 2360 Clinical - Dental Hygiene/Hygienist (0-0) 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 2201 Contemporary Dental Hygiene Care I (1-3) Dental hygiene care for the medically or dentally compromised patient including supplemental instrumentation techniques.

DHYG 2153 Dental Hygiene Practice (1-0) Emphasis on the laws governing the practice of dentistry and dental hygiene, moral standards, and the ethical standards established by the dental hygiene profession.

Practice settings for the dental hygienist, office operations, and preparation for employment.

DHYG 2361 Clinical - Dental Hygiene/Hygienist (0-0) 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 1207 General and Dental Nutrition (2-0) General nutrition and nutritional biochemistry emphasizing the effect nutrition has on oral health.

ECON

ECON 2301 Principles of Macroeconomics (3-0) An analysis of the economy as a whole including measurement and determination of Aggregate Demand and Aggregate Supply, national income, inflation, and unemployment. Other topics include international trade, economic growth, business cycles, and fiscal policy and monetary policy

ECON 2302 Principles of Microeconomics (3-0) Analysis of the behavior of individual economic agents, including consumer behavior and demand, producer behavior and supply, price and output decisions by firms under various market structures, factor markets, market failures, and international trade.

ENGL

ENGL 1301 Composition I (3-0) Intensive study of and practice in writing processes, from invention and researching to drafting, revising, and editing, both individually and collaboratively. Emphasis on effective rhetorical choices, including audience, purpose, arrangement, and style. Focus on writing the academic essay as a vehicle for learning, communicating, and critical analysis.

ENGL 1302 Composition II (3-0) Intensive study of and practice in the strategies and techniques for developing research-based expository and persuasive texts. Emphasis on effective and ethical rhetorical inquiry, including primary and secondary research methods; critical reading of verbal, visual, and multimedia texts; systematic evaluation, synthesis, and documentation of information sources; and critical thinking about evidence and conclusions.

ENGL 2307 Creative Writing I (3-0) Practical experience in the techniques of imaginative writing. May include fiction, nonfiction, poetry, screenwriting, or drama.

ENGL 2311 Technical & Business Writing (3-0) Intensive study of and practice in professional settings. Focus on the types of documents necessary to make decisions and take action on the job, such as proposals, reports, instructions, policies and procedures, e-mail messages, letters, and descriptions of products and services. Practice individual and collaborative processes involved in the creation of ethical and efficient documents.

ENGL 2321 British Literature (3-0) A survey of the development of British literature from the Anglo-Saxon period to the present. Students will study works of prose, poetry, drama, and fiction in relation to their historical, linquistic, and cultural contexts. Texts will be selected from a diverse group of authors and traditions.

ENGL 2326 American Literature (3-0) A survey of American literature from the period of exploration and settlement to the present. Students will study works of prose, poetry, drama, and fiction in relation to their historical and cultural contexts. Texts will be selected from among a diverse group of authors for what they reflect and reveal about the evolving American experience and character.

ENGL 2331 World Literature (3-0) A survey of world literature from the ancient world to the present. Students will study works of prose, poetry, drama, and fiction in relation to their historical and cultural contexts. Texts will be selected from a diverse group of authors and traditions.

ENGL 2341 Forms of Literature (3-0) The study of one or more literary genres including, but not limited to, poetry, fiction, drama, and film.

ENGR

ENGR 1204 Engineering Graphics I (2-0) 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.

ENGR 2105 Electrical Circuits I Laboratory (0-3) 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.

ENGR 2301 Engineering Mechanics - Statics (3-0) Basic theory of engineering mechanics, using calculus, involving the description of forces, moments, and couples acting on stationary engineering structures; equilibrium in two and three dimensions; free-body diagrams; friction; centroids; centers of gravity; and moments of inertia.

ENGR 2304 Programming for Engineers (3-0) Programming principles and techniques for matrix and array operations, equation solving, and numeric simulations applied to engineering problems and visualization of engineering information; platforms include spreadsheets, symbolic algebra packages, engineering analysis software, and laboratory control software.

ENGR 2305 Electrical Circuits I (3-0) 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.

GOVT

GOVT 2305 Federal Government (3-0) Origin and development of the U.S. Constitution, structure and powers of the national government including the legislative, executive, and judicial branches, federalism, political participation, the national election process, public policy, civil liberties and civil rights.

GOVT 2306 Texas Government (3-0) Origin and development of the Texas constitution, structure and powers of state and local government, federalism and inter-governmental relations, political participation, the election process, public policy, and the political culture of Texas.

HIST

HIST 1301 United States History I (3-0) A survey of the social, political, economic, cultural, and intellectual history of the United States from the pre-Columbian era to the Civil War/Reconstruction period. United States History I includes the study of pre-Columbian, colonial, revolutionary, early national, slavery and sectionalism, and the Civil War/Reconstruction eras. Themes that may be addressed in United States History I include: American settlement and diversity, American culture, religion, civil and human rights, technological change, economic change, immigration and migration, and creation of the federal government.

HIST 1302 United States History II (3-0) A survey of the social, political, economic, cultural, and intellectual history of the United States from the Civil War/Reconstruction era to the present. United States History II examines industrialization, immigration, world wars, the Great Depression, Cold War and post-Cold War eras. Themes that may be addressed in United States History II include: American culture, religion, civil and human rights, technological change, economic change, immigration and migration, urbanization and suburbanization, the expansion of the federal government, and the study of U.S. foreign policy.

HIST 2321 World Civilizations I (3-0) A survey of the social, political, economic, cultural, religious, and intellectual history of the world from the emergence of human cultures through the 15th century. The course examines major cultural regions of the world in Africa, the Americas, Asia, Europe, and Oceania and their global interactions over time. Themes include the emergence of early societies, the rise of civilizations, the development of political and legal systems, religion and philosophy, economic systems and trans-regional networks of exchange. The course emphasizes the development, interaction and impact of global exchange.

HORT

HORT 1401 Horticulture (3-2) Structure, growth, and development of horticultural plants. Examination of environmental effects, basic principles of reproduction, production methods ranging from outdoor to controlled climates, nutrition, and pest management. Laboratory activities will reinforce the structure, growth, and development of horticultural plants

HUMA

HUMA 1301 Introduction to Humanities I (3-0) This stand-alone course is an interdisciplinary survey of cultures focusing on the philosophical and aesthetic factors in human values with an emphasis on the historical development of the individual and society and the need to create.

HUMA 2323 World Cultures (3-0)

MATH

MATH 1314 College Algebra (3-0) In-depth study and applications of polynomial, rational, radical, exponential and logarithmic functions, and systems of equations using matrices. Additional topics such as sequences, series, probability, and conics may be included.

MATH 1316 Plane Trigonometry (3-0) In-depth study and applications of trigonometry including definitions, identities, inverse functions, solutions of equations, graphing, and solving triangles. Additional topics such as vectors, polar coordinates and parametric equations may be included.

MATH 1332 Comtemporary Mathematics (3-0) Topics may include introductory treatments of sets, logic, number systems, number theory, relations, functions, probability and statistics. Appropriate applications are included.

MATH 1350 Fundamentals of Mathematics I (3-0) 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.

MATH 1351 Fundamentals of Mathematics II (3-0) 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 through 8) teacher certification.

MATH 2305 Discrete Mathematics (3-0) A course designed to prepare math, computer science, and engineering majors for a background in abstraction, notation, and critical thinking for the mathematics most directly related to computer science. Topics include: logic, relations, functions, basic set theory, countability and counting arguments, proof techniques, mathematical induction, combinatorics, discrete probability, recursion, sequence and recurrence, elementary number theory, graph theory, and mathematical proof techniques.

MATH 2312 Pre-Calculus Math (3-0) In-depth combined study of algebra, trigonometry, and other topics for calculus readiness.

MATH 2318 Linear Algebra (3-0) Introduces and provides models for application of the concepts of vector algebra. Topics include finite dimensional vector spaces and their geometric significance; representing and solving systems of linear equations using multiple methods, including Gaussian elimination and matrix inversion; matrices; determinants; linear transformations; quadratic forms; eigenvalues and eigenvector; and applications in science and engineering.

MATH 2320 Differential Equations (3-0) Ordinary differential equations, including linear equations, systems of equations, equations with variable coefficients, existence and uniqueness of solutions, series solutions, singular points, transform methods, and boundary value problems; application of differential equations to real-world problems.

MATH 2342 Elementary Statistical Methods (3-0) Collection, analysis, presentation and interpretation of data, and probability. Analysis includes descriptive statistics, correlation and regression, confidence intervals and hypothesis testing. Use of appropriate technology is recommended.

MATH 2413 Calculus I (4-2) Limits and continuity; the Fundamental Theorem of Calculus; definition of the derivative of a function and techniques of differentiation; applications of the derivative to maximizing or minimizing a function; the chain rule, mean value theorem, and rate of change problems; curve sketching; definite and indefinite integration of algebraic, trigonometric, and transcendental functions, with an application to calculation of areas.

MATH 2414 Calculus II (4-2) Differentiation and integration of transcendental functions; parametric equations and polar coordinates; techniques of integration; sequences and series; improper integrals.

MATH 2415 Calculus III (4-2) Advanced topics in calculus, including vectors and vector-valued functions, partial differentiation, Lagrange multipliers, multiple integrals, and Jacobians; application of the line integral, including Green's Theorem, the Divergence Theorem, and Stokes' Theorem.

PHIL

PHIL 2306 Introduction to Ethics (3-0) The systematic evaluation of classical and/or contemporary ethical theories concerning the good life, human conduct in society, morals, and standards of value.

PHYS

PHYS 1101 College Physics I (lab) (0-3) This laboratory-based course accompanies PHYS 1301, College Physics I. Laboratory activities will reinforce fundamental principles of physics, using algebra and trigonometry; the principles and applications of classical mechanics and thermodynamics, including harmonic motion, mechanical waves and sound, physical systems, Newton's Laws of Motion, and gravitation and other fundamental forces; emphasis will be on problem solving.

PHYS 1102 College Physics II (lab) (0-3) This laboratory-based course accompanies PHYS 1302, College Physics II. Laboratory activities will reinforce fundamental principles of physics, using algebra and trigonometry; the principles and applications of electricity and magnetism, including circuits, electrostatics, electromagnetism, waves, sound, light, optics, and modern physics topics; with emphasis on problem solving.

PHYS 1115 Physical Science Laboratory I (lab) (0-2) Course, designed for non-science majors, that surveys topics from physics, chemistry, geology, astronomy, and meteorology. May or may not include a laboratory.

PHYS 1117 Physical Science Laboratory II (lab) (0-2) Course, designed for non-science majors, that surveys topics from physics, chemistry, geology, astronomy, and meteorology. May or may not include a laboratory.

PHYS 1301 College Physics I (lecture) (3-0) Fundamental principles of physics, using algebra and trigonometry; the principles and applications of classical mechanics and thermodynamics, including harmonic motion, mechanical waves and sound, physical systems, Newton's Laws of Motion, and gravitation and other fundamental forces; with emphasis on problem solving.

PHYS 1302 College Physics II (lecture) (3-0) Fundamental principles of physics, using algebra and trigonometry; the principles and applications of electricity and magnetism, including circuits, electrostatics, electromagnetism, waves, sound, light, optics, and modern physics topics; with emphasis on problem solving.

PHYS 1310 Elementary Physics (3-0) Conceptual level survey of topics in physics intended for liberal arts and other non-science majors. May or may not include a laboratory.

PHYS 1315 Physical Science (3-0) Course, designed for non-science majors, that surveys topics from physics, chemistry, geology, astronomy, and meteorology. May or may not include a laboratory.

PHYS 1317 Physical Science II (lecture) (3-0) Course, designed for non-science majors, that surveys topics from physics, chemistry, geology, astronomy, and meteorology. May or may not include a laboratory.

PHYS 1401 College Physics I (lecture + lab) (3-3) This lecture and lab course should combine all of the elements of PHYS 1301 (lecture) and PHYS 1101 (lab), including the learning outcomes listed for both courses.

PHYS 1402 College Physics II (lecture + lab) (3-3) This lecture and lab course should combine all of the elements of PHYS 1302 (lecture) and PHYS 1102 (lab), including the learning outcomes listed for both courses.

PHYS 1415 Physical Science I (lecture + lab) (3-3) Course, designed for non-science majors, that surveys topics from physics, chemistry, geology, astronomy, and meteorology. May or may not include a laboratory.

PHYS 1417 Physical Science II (lecture + lab) (3-3) Course, designed for non-science majors, that surveys topics from physics, chemistry, geology, astronomy, and meteorology. May or may not include a laboratory.

PHYS 2125 University Physics Laboratory I (lab) (1-0) Basic laboratory experiments supporting theoretical principles presented in PHYS 2325 involving the principles and applications of classical mechanics, including harmonic motion and physical systems; experimental design, data collection and analysis, and preparation of laboratory reports.

PHYS 2126 University Physics Laboratory II (lab) (1-0) Laboratory experiments supporting theoretical principles presented in PHYS 2326 involving the principles of electricity and magnetism, including circuits, electromagnetism, waves, sound, light, and optics; experimental design, data collection and analysis, and preparation of laboratory reports.

PHYS 2325 University Physics I (lecture) (3-0) Fundamental principles of physics, using calculus, for science, computer science, and engineering majors; the principles and applications of classical mechanics, including harmonic motion, physical systems and thermodynamics; and emphasis on problem solving.

PHYS 2326 University Physics II (lecture) (3-0) Principles of physics for science, computer science, and engineering majors, using calculus, involving the principles of electricity and magnetism, including circuits, electromagnetism, waves, sound, light, and optics.

PSYC

PSYC 2301 General Psychology (3-0) General Psychology is a survey of the major psychological topics, theories and approaches to the scientific study of behavior and mental processes.

PSYC 2314 Lifespan Growth & Development (3-0) Life-Span Growth and Development is a study of social, emotional, cognitive and physical factors and influences of a developing human from conception to death.

SOCI

SOCI 1301 Sociology (3-0) The scientific study of human society, including ways in which groups, social institutions, and individuals affect each other. Causes of social stability and social change are explored through the application of various theoretical perspectives, key concepts, and related research methods of sociology. Analysis of social issues in their institutional context may include topics such as social stratification, gender, race/ethnicity, and deviance."

SOCI 1306 Social Problems (3-0) Application of sociological principles and theoretical perspectives to major social problems in contemporary society such as inequality, crime and violence, substance abuse, environmental issues, deviance,

or family problems.

SOCI 2319 Minority Studies (3-0) This course studies minority-majority group relations, addressing their historical, cultural, social, economic, and institutional development in the United States. Both sociological and social psychological levels of analysis will be employed to discuss issues including experiences of minority groups within the context of their cultural heritage and tradition, as well as that of the dominant culture. Core concepts to be examined include (but are not limited to) social inequality, dominance/subordination, prejudice, and discrimination. Particular minority groups discussed may include those based on poverty, race/ethnicity, gender, sexual orientation, age, disability, or religion.

SPAN

SPAN 1311 Beginning Spanish I (3-0) Basic Spanish language skills in listening, speaking, reading, and writing within a cultural framework. Students will acquire the vocabulary and grammatical structures necessary to communicate and comprehend at the beginner level.

SPAN 1312 Beginning Spanish II (3-0) Continued development of basic Spanish language skills in listening, speaking, reading, and writing within a cultural framework. Students acquire the vocabulary and grammatical structures necessary to communicate and comprehend at the high beginner to low intermediate level.

SPAN 2311 Intermediate Spanish I (3-0) The consolidation of skills acquired at the introductory level. Further development of proficiency in listening, speaking, reading and writing. Emphasis on comprehension, appreciation, and interpretation of the cultures of the Spanish-speaking world.

SPCH

SPCH 1315 Public Speaking (3-0) Application of communication theory and practice to the public speaking context, with emphasis on audience analysis, speaker delivery, ethics of communication, cultural diversity, and speech organizational techniques to develop students' speaking abilities, as well as ability to effectively evaluate oral presentations.

SPCH 1318 Interpersonal Communication (3-0) Application of communication theory to interpersonal relationship development, maintenance, and termination in relationship contexts including friendships, romantic partners, families, and relationships with co-workers and supervisors.

SPCH 1321 Business & Professional Communication (3-0) Study and application of communication within the business and professional context. Special emphasis will be given to communication competencies in presentations, dyads, teams and technologically mediated formats.

SPCH 2333 Discussion & Small Group Communication (3-0) Discussion and small group theories and techniques as they relate to group process and interaction.

TECA

TECA 1354 Child Growth & Development (3-0) A study of the physical, emotional, social, language, and cognitive factors impacting growth and development of children through adolescence.

Developmental

For contact hour information developmental courses, please consult your adviser.

DMTH

DMTH 0009 Supplemental Math Activities—Reviews fundamentals of mathematics, including operations with whole numbers, number theory, fractions, decimals, percents, basic geometry, ratios, proportions, units of measure, and problem solving. Provides the student an introduction to the fundamentals of algebra.

DMTH 0010 Supplemental Math Activities—A Study of relations and functions, inequalities, algebraic expressions and equations (absolute value, polynomial, radical, rational), with a special emphasis on linear and quadratic expressions and equations.

DMTH 0050 Basic Mathematics—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 Albegra—A study of geometry and elementary algebra involving real numbers, algebraic expressions, equations, inequalities, graphs, slopes, and operations with polynomials.

DMTH 0150 Accelerated Pathway for Math I—Focuses on topics which draw together arithmetic and algebra. Arithmetic topics will be reinforced such as integer, fraction operations, and percents. Introduces the concepts of variables, mathematical expressions, and equation solving. Concepts will be applied to problems related to science, consumer math, and geometry.

DMTH 0200 Intermediate Algebra—This course is a study of relations and functions, inequalities, algebraic expressions and equations (absolute value, polynomial, radical, rational), with a special emphasis on linear and quadratic expressions and equations.

DMTH 0300 Math Emporium—Math Emporium

DMTH 0350 Accelerated Pathway for Math II—A study of topics such as arithmetic operations, basic algebraic concepts and notation, geometry, real and complex number system, relations of functions, inequalities, algebraic expressions and equations (absolute value, polynomial, radical, rational), with a special emphasis on linear and quadratic equations.

DMTH 0800 Mathematics Lab—This course is designed for students to participate in remedial studies on an individual basis. Course content is customized to each student's specific deficiencies. Semester credit hours vary depending on students' specific needs. Course may be repeated for credit.

DMTH 0803 Mathematics Lab—Designed for students to participate in remedial math studies on an individual basis. Customized to each student's specific needs; topics may include basic mathematics, geometry, introductory algebra, and/or intermediate algebra.

DMTH 0804 Mathematics Lab—Provides a review of the fundamentals of mathematics by stressing practical applications. Concepts include whole numbers, number theory, fractions, decimals, percents, English measures, scientific notation and the metric system. Geometry includes angles, lines and geometric figures, plane geometric figures, area volume, the Pythagorea Theorem, and similar and congruent triangles.

DORI

DORI 0100 College Success Skills —Designed to build personal and academic success skills and provide students with self-knowledge essential for workplace success and life-long learning. Topics covered include: an overview of college resources, procedures and policies; the development of an enthusiasm for learning; study and test-taking skills; critical thinking; memory, reading, and note taking skills; self-analysis and self-discipline. (Developmental/No college credit granted)

DVLA

DVLA 0050 Developmental Language Arts—A foundation literacy course that develops reading skills with an emphasis on comprehension and vocabulary development. In addition, it is designed to instruct students in essential written communication skills. It includes studies in the sentence and its parts, punctuation, capitalization, the parts of speech, spelling and language usage. Course will include writing and revision components on a regular basis throughout the semester.

EQEP

EQEP 0010 Embedded Reading, Writing, Math—This course is designed to track student success in programs with contextualized reading, writing, and math skills in first semester technical course work.

INRW

INRW 0010 Integrated Reading and Writing—This is a course designed to advance and integrate critical reading and academic writing skills. No college credit is granted for this course; however, load credit is allowed for determining financial aid for standards of progress. The course fulfills TSI requirements for reading and/or writing.

INRW 0100 Integrated Reading and Writing I—Focuses on development of a proficiency in basic forms of expository writing and critical reading skills in addition to vocabulary and the comprehension strands essential to success in academic and technical fields of study. Emphasis is placed on writing and revising paragraphs (progressing to essays) using standard English and development of fundamental writing skills such as idea generation, organization, style, and utilization. Additionally, students identify and analyze writing selections in the area of vocabulary, main idea, inference, patterns and relationships, and point of view.

INRW 0200 Integrated Reading and Writing II—Emphasis is placed on reading and writing skills that are essential to success in academic and technical/ occupational fields of study. (Developmental/No college credit granted)."

MIRW

MIRW 0150 Modular Integrated Reading and Writing—Multi-level emporium model performance-based course designed to develop students' critical reading and academic writing skills. Focus is on applying critical reading skills for organizing, analyzing, and retaining material and developing written work appropriate to the audience, purpose, situation, and length of the assignment. The course fulfills TSI requirements for reading and writing at differing levels.

NCBM

NCBM 0050 Quick Review Mathematics Lab—Students participate in remedial math studies on an individual basis. Customized to each student's specific needs. Semester credit hours vary depending on student's specific needs. Course may be repeated for credit. The last digit of the course number indicates the semester credit hours. With approval, this course may substitute for a course on the student's TSI plan.

NCBM 0060 Mathematics Lab—This course supplements MATH 1314 College Algebra and is designed for students to participate in remedial studies on an individual basis. Customized to each student's specific needs. (Developmental/No college credit granted.)

NCBR 0050 Reading Lab—Students participate in remedial reading studies on an individual basis. Customized to each student's specific needs. Semester credit hours vary. Course may be repeated for credit. The last digit of the course number indicates the semester credit hours. With approval, this course may substitute for a course of the student's TSI plan.

NCBW 0050 Writing Lab—Students participate in remedial writing studies on an individual basis. Customized to each student's specific needs. Semester credit hours vary. Course may be repeated for credit. The last digit of the course number indicates the semester credit hours. With approval, this course may substitute for a course of the student's TSI plan.

READ

READ 0050 Basic Reading Skills—Provides intensive, diagnostic-based instruction in basic word attack skills, vocabulary development and basic comprehension strands; main idea, major and minor supporting details, information retention, fact/opinion identification, inferences, and critical reading. Individual and group tutoring, counseling, and computer-assisted learning are available.

READ 0200 Reading Skills II—A capstone course that reviews and expands basic reading skills with an emphasis on developing advanced reading skills with contextual application.

READ 080X Reading Lab—Students participate in remedial studies on an individual basis. Customized to each student's specific deficiencies. Semester credit hours vary depending on students' specific needs. Course may be repeated for credit. (Developmental/No college credit granted.)

TECH

TECH 1100 Foundations of Technical Career Success—Examines factors that underlie success in learning and work environments for the students chosen career field. Topics covered include strategic learning, self-management, personal motivation, workplace diversity, and educational/career planning. Techniques such as time management, goal setting, communication strategies, research skills, report writing, and workplace safety practices are covered. Must be taken with three (3) of the following Career Success Seminars (CTEX):

- CTEX 1001 – Test Taking Strategies
- CTEX 1002 – Goal Setting & Time Management
- CTEX 1008 – The Power of Personal Change
- CTEX 1009 – Developing Personal Relations
- CTEX 1012 – Healthy Coping Strategies
- CTEX 1015 – Employment: During & After College
- CTEX 1018 – Personal Financial Management

WRIT

WRIT 0050 Basic Writing Skills—Development of fundamental writing skills such as idea generation, organization, style, utilization of standard English, and revision. Provides instruction in writing standard English with emphasis 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—Instruction in essential written communication skills. Review of grammar and mechanical skills, with emphasis on developing, organizing, and revising paragraphs.

WRIT 0200 Writing Skills II —A capstone course that reviews grammar and mechanical skills, with an emphasis on developing, organizing, and revising essays.

WRIT 0804 Writing Lab—Students participate in remedial studies on an individual basis. Customized to each student's specific needs. Semester credit hours vary depending on students' specific needs. Course may be repeated for credit.

Technical Courses

ABDR

ABDR 1203 Vehicle Design and Structural Analysis (1-2-2) An introduction to the collision repair industry with emphasis on safety, professionalism, and vehicle structural design.

ABDR 1215 Vehicle Trim and Hardware (1-2-2) A study of vehicle trim and glass service.

ABDR 1266 Practicum (0-0-2) Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

ABDR 1307 Collision Repair Welding (2-4-3) A study of collision repair welding and cutting procedures.

ABDR 1323 Front and Rear Wheel Alignment (2-4-3) Study of vehicle steering components including alignment, tire rotation, and balancing.

ABDR 1349 Automotive Plastic and Sheet Molded Compound Repair (2-3-3) A comprehensive course in repair of interior and exterior plastics including the use of various types of adhesives.

ABDR 1359 Sheet Metal Fabrication I (2-3-3) A study of the basic shaping techniques required for fabricating sheet metal parts and pieces. Discussion will include custom cars and street rods.

ABDR 1371 Basic Paint Techniques, Equipment & Environmental Practices (1-6-3) This course teaches students basic paint spray gun adjustments and application techniques. Substrate preparation with emphasis on featheredging, blocking, and metal treatment will be stressed. Emphasis will be placed on safety equipment and environmental practices.

ABDR 1411 Vehicle Measurement and Damage Repair Procedures (2-6-4) Introduction to vehicle measurement and structural alignment equipment.

ABDR 1419 Basic Metal Repair (2-6-4) Covers metal principles and working techniques including proper tool usage and product application.

ABDR 1431 Basic Refinishing (2-6-4) An introduction to current refinishing products, shop safety, and equipment used in the automotive refinishing industry. Emphasis on surface preparation, masking techniques, and refinishing of replacement parts. Prerequisite: ABDR 1371

ABDR 1441 Structural Analysis and Damage Repair I (2-6-4) Training in the roughing and shaping procedures on automotive sheet metal necessary to perform body repairs. Emphasis on the alignment of component parts such as doors, hood, front-end assemblies, and deck lids.

ABDR 1458 Intermediate Refinishing (2-4-4) 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. Prerequisite: ABDR 1371

ABDR 1542 Structural Analysis and Damage Repair II (3-6-5) Continuation of general repair and replacement procedures for damaged structural parts and collision damage. Prerequisite: ABDR 1307, ABDR 1419, ABDR 2435

ABDR 2255 Collision Repair Estimating (1-2-2) An advanced course in collision estimating and development of a damage report utilizing estimating software.

ABDR 2305 Sheet Metal Fabrication II (2-4-3) A study of the advanced shaping techniques required for fabricating sheet metal parts and pieces. Discussion will include custom cars and street rods. Prerequisite: ABDR 1307

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 diagnostic methods used in the collision repair industry.

ABDR 2357 Collision Repair Shop Management (2-3-3) Examination of shop management functions and decision-making processes including planning, organizing, leading and staffing used in collision repair shops to ensure operational profitability.

ABDR 2359 Structural Sectioning (2-4-3) Skill development in the practical application of welded panel replacement and structural sectioning procedures as well as practical equipment applications in structural vehicle straightening, alignment, welding, and corrosion protection. Prerequisite: ABDR 1307, ABDR 1419, ABDR 2435

ABDR 2371 Refinishing Process I (2-4-3) The theory and practical application of spray booth and vehicle pre-spray preparation. Remove and perform final finishing. Apply decals and stripes with emphasis on paint problems and remedies. Prerequisite: ABDR 1458, ABDR 1431

ABDR 2402 Auto Body Mechanical and Electrical Service (2-6-4) A course in the repair, replacement, and/or service of collision damaged mechanical or electrical systems. Topics include drive train removal, reinstallation and service; cooling system service and repair; exhaust system service; and emission control systems. Additional topics include wire and connector repair, reading wiring diagrams, and troubleshooting. Prerequisite: ABDR 1307, ABDR 1419, ABDR 2435

ABDR 2435 Structural Analysis and Damage Repair IV (2-6-4) Continuation of skills development in the repair and replacement of major body units. Prerequisite: ABDR 1203

ABDR 2447 Advanced Collision Repair Welding (2-4-4) Skill development in the use of advanced welding and cutting processes. Emphasizes current welding procedures and specific repair requirements for specialized metals.

ABDR 2449 Advanced Refinishing (2-6-4) Application of multi-stage refinishing techniques. Advanced skill development solving refinishing problems. Application of multi-stage refinishing techniques with emphasis on formula mixing and special spraying techniques. Prerequisite: ABDR 1458, ABDR 1431

ABDR 2453 Color Analysis and Paint Matching (2-6-4) Advanced course in color theory, analysis, tinting, and blending techniques for acceptable paint matching.

ABDR 2551 Specialized Refinishing Techniques (3-6-5) Advanced topics in specialty automotive refinishing. Emphasis on refinishing plastics, fiberglass, aluminum, and galvanized panels as well as custom graphics and current industry innovations.

ACNT

ACNT 1303 Introduction to Accounting I (2-4-3) 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.

ACNT 1311 Introduction to Computerized Accounting (2-4-3) Introduction to utilizing the computer in maintaining accounting records with primary emphasis on a general ledger package.

ACNT 1325 Principles of Accounting I (2-4-3) A study of accounting concepts and their application in transaction analysis and financial statement preparation. Emphasis on the accounting cycle for service and merchandising enterprises.

ACNT 1329 Payroll and Business Tax Accounting (2-2-3) A study of payroll procedures, taxing entities, and reporting requirements of local, state, and federal taxing authorities in a manual and computerized environment. Prerequisite: ACNT 1325

ACNT 2302 Accounting Capstone (2-4-3) Allows students to apply broad knowledge of the accounting profession through discipline specific projects involving the integration of individuals and teams performing activities to simulate workplace situations. Prerequisite: ACNT 1311

AERM

AERM 1107 Aviation Mathematics (0-3-1) Fundamentals of mathematics applied to aircraft principles and operations as required by the Federal Aviation Administration for airframe and powerplant mechanics.

AERM 1107 Aviation Mathematics (0-3-1) Fundamentals of mathematics applied to aircraft principles and operations as required by the Federal Aviation Administration for airframe and powerplant mechanics.

AERM 1109 Aviation Physics (0-2-1) Fundamentals of physics applied to aircraft principles and operations as required by the Federal Aviation Administration for airframe and powerplant mechanics.

AERM 1112 Aviation Drawings (0-2-1) Fundamentals of aviation drawings applied to aircraft principles and operations as required by the Federal Aviation Administration for airframe and powerplant mechanics.

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 and 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 Federal Aviation Administration (FAA) 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, safety procedures, aircraft movement, securing and operations of aircraft, external power equipment, aircraft cleaning, and corrosion control.

AERM 1240 Aircraft Propellers (1-4-2) 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, installation of propellers, and fundamental safety procedures are also addressed. Prerequisite: AERM 1109 or AERM 1315

AERM 1241 Wood, Fabric, and 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 and 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. Prerequisite: AERM 1314

AERM 1247 Airframe Auxiliary Systems (1-4-2) A comprehensive study of airframe auxiliary systems including 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. Prerequisite: AERM 1109 or AERM 1315

AERM 1253 Aircraft Welding (1-2-2) Skill development in repair procedures for steel, magnesium, brass, and aluminum materials. Includes the selection and application of appropriate methods of welding, brazing, and soldering. Fundamentals of safety procedures also addressed. Prerequisite: AERM 1203

AERM 1254 Aircraft Composites (1-4-2) Comprehensive concepts of the inspection and repair of composite, fabric, core, and laminated structural materials including doors, windows, bonded structures, and interior furnishings. Safety procedures to include the handling and storage of composite materials 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 safety also addressed.

AERM 1315 Aviation Science (2-4-3) Fundamentals of mathematics, physics, and drawings as they apply to aircraft principles and operations as required by the Federal Aviation Administration (FAA) for airframe and powerplant mechanics.

AERM 1345 Airframe Electrical Systems (2-4-3) 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 1350 Landing Gear Systems (2-3-3) General principles of inspection, servicing, overhaul, and repair of fixed and retractable landing gear systems and the operation and repair of position and warning systems. Includes coverage of systems, components, operation, and fundamentals of safety procedures.

AERM 1351 Aircraft Turbine Engine Theory (2-4-3) General principles of theory, history, and servicing of turbine engines to include lubrication, instrumentation, auxiliary power units, and exhaust systems. Fundamentals of safety procedures are also addressed. Prerequisite: AERM 1109 or AERM 1315

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 1444 Aircraft Reciprocating Engines (3-4-4) Reciprocating engines, their development, operating principles, and theory. Includes engine instruments, lubrication, and exhaust systems. Also addresses fundamentals of safety. AERM 1109 or AERM 1315

AERM 1449 Hydraulic, Pneumatic, and Fuel Systems (3-4-4) Skill development in inspecting, servicing, and maintaining aircraft fluid systems including hydraulics, pneumatics, and fuel. Application of concepts through detailed maintenance procedures. Fundamentals of safety procedures also addressed. AERM 1109 or AERM 1315

AERM 1452 Aircraft Sheet Metal (2-6-4) Skill development in inspection and repair of sheet metal structures including forming, lay out, and bending of sheet metal and identification, selection, and installation of rivets and fasteners. Fundamentals of safety procedures also addressed. Prerequisite: AERM 1107 and AERM 1112 and AERM 1203) OR (AERM1315 and AERM1203

AERM 1456 Aircraft Powerplant Electrical (2-6-4) General principles of theory, operation, and maintenance of powerplant electrical systems including ignition, starting, and fire protection systems. Fundamentals of safety procedures will also be addressed. Prerequisite: AERM 1314

AERM 2230 FAA Review- Airframe (1-3-2) Review of Federal Aviation Administration subject matter in the General and Airframe curricula with an emphasis on enhancing knowledge and physical skills in preparing for the FAA-required computer, oral and practical examinations. Prerequisite: DC Permission

AERM 2231 Airframe Inspection (1-4-2) 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. Prerequisite: DC Permission

AERM 2234 FAA Review - Powerplant (1-3-2) Federal Aviation Administration subject matter in the General and Powerplant curricula with an emphasis on enhancing knowledge and physical skills in preparing for the FAA-required computer, oral, and powerplant examinations. Prerequisite: DC Permission

AERM 2333 Assembly and Rigging (2-3-3) 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 and Auxiliary Power Units (2-2-3) 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) Comprehensive study in inspection, disassembly, reassembly, and replacement of gas turbine engines, sections, and components including operational troubleshooting, analysis, and safety. Prerequisite: AERM 1351

AGAH

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 and 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 regimens.

AGCR

AGCR 1197 Natural Resources Conservation (Special Topics) (0-3-1) A study of the Rio Grande River and Chisos Mountain Basin's ecosystem and water supply.

AGCR 1341 Forage and Pasture Management (2-4-3) Study of the production and management of forage crops and pastures including establishment, fertilization, weed control, grazing systems, hay, seed production, and harvesting. Prerequisite: AGMG 1400

AGCR 1403 Crop Science (2-4-4) 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. Prerequisite: AGMG 1400

AGCR 2313 Soil and Water Conservation Management (2-2-3) 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 plans.

AGME 1353 Harvesting Equipment (2-4-3) Operation and maintenance including adjustment techniques of harvesting equipment.

AGME 1415 Farm and Ranch Shop Skills I (3-3-4) Study and application of shop skills used in agricultural processes including arc welding, oxyacetylene cutting and welding, drawing and planning projects, tool maintenance, metal working, woodworking, plumbing, and concrete.

AGMG 1311 Introduction to Agribusiness (3-0-3) 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 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 1400 Agricultural Policies, Safety and Codes (3-3-4) 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.

AIRP

AIRP 1215 Private Flight (0-5-2) Flight and ground training to prepare the student for the completion of the Federal Aviation Administration private pilot certificate.

AIRP 1255 Intermediate Flight (0-5-2) Provides students with flight hours and skills necessary to fulfill solo cross-country hours required for the Federal Aviation Administration Commercial Pilot, single engine land, airplane certificate.

AIRP 1301 Air Navigation (2-2-3) Instruction in Visual Flight rules navigation in the National Airspace System. Topics include, flight computers, plotters, and navigation logs and publications. Qualifies as part of a program leading to Federal Aviation Administration Private Pilot certification.

AIRP 1307 Aviation Meteorology (3-0-3) In-depth coverage of meteorological phenomena affecting aircraft flight. Topics include basic concepts of aviation meteorology in the study of temperature, pressure, moisture, stability, clouds, air masses, fronts, thunderstorms, icing, and fog. Also includes analysis and use of weather data for flight planning.

AIRP 1343 Aerodynamics (2-2-3) Study of the general principles of the physical laws of flight. Topics include physical terms and the four forces of flight: lift, weight, thrust, and drag. Aircraft design, stability control, and high-speed flight characteristics are also included.

AIRP 1345 Aviation Safety (3-0-3) A study of the fundamentals essential to the safety of flight. A survey of the aviation industry including decision-making factors, accident reporting, accident investigation, air traffic systems, and aircraft technologies.

AIRP 1372 Dispatch Resource Management (3-0-3) Study of Human Factors in aviation and of the challenges of optimizing communication between diverse workgroups within an airline and the related interpersonal issues; while using available resources viewed from the Aircraft Dispatcher vantage point. Course will also look at operational control, decision-making, communication, and workload management related issues associated with the Aircraft Dispatcher profession. Lastly, Aircraft Dispatcher related aviation incidents and accidents will be explored.

AIRP 1373 Helicopter Aerodynamics (2-2-3) Study of the General Principles of the Physical Laws of Flight. Topics Include Physical Terms and the Four Forces of Flight, Lift, Weight, Thrust, and Drag, Helicopter Design, Aerodynamic forces on rotor airfoils, Stability Control and stability/controllability characteristics, hazardous flight conditions, and overlapping fixed-wing aerodynamics similarities.

AIRP 1417 Private Pilot Ground School (3-2-4) Basic ground school for the Federal Aviation Administration Private Pilot Certificate, providing the student with the necessary aeronautical knowledge that can be used for private pilot certification. Topics include principles of flight, radio procedures, weather, navigation, aerodynamics, and Federal Aviation Administration regulations.

AIRP 1451 Instrument Ground School (3-2-4) A study of basic instrument radio and navigation fundamentals used in instrument flight. Topics include a description and practical use of navigation systems and instruments, charts used for instrument flight, and Federal Aviation Administration regulations. Qualifies as part of a program leading to Federal Aviation Administration certification.

AIRP 1471 Helicopter Instrument Ground School (2-3-3) A study of basic instrument radio and navigation fundamentals used in instrument helicopter flight. Topics include a description and practical use of navigation systems and instruments, charts used for instrument flight, and Federal Aviation Administration regulations. Qualifies as part of a program leading to Federal Aviation Administration certification.

AIRP 2175 Human Factors in Aviation (1-0-1) Instruction in flight physiology, the decision-making process, pilot health maintenance, psychological aspects of flight, human behavior as related to the aircraft flight deck, and aeromedical information of significance to flight crews.

AIRP 2236 Certified Flight Instructor - Airplane (0-5-2) Flight and ground instruction required to qualify for the Federal Aviation Administration Certified Flight Instructor - Airplane certificate. Prerequisite: AIRP 2239

AIRP 2239 Commercial Flight (0-5-2) Flight instruction necessary to qualify for the Federal Aviation Administration Commercial Pilot Certificate. Instruction includes both dual and solo flight training to prepare the student to perform commercial pilot maneuvers. Prerequisite: AIRP 2250

AIRP 2242 Flight Instructor - Instrument Airplane (0-5-2) Flight and ground instruction required to qualify for the Federal Aviation Administration Certified Flight Instructor--Instrument Airplane certificate.

AIRP 2250 Instrument Flight (0-5-2) Preparation for completion of the Federal Aviation Administration Instrument Pilot Rating with mastery of all instrument flight procedures. Prerequisite: AIRP 1215

AIRP 2251 Multi-Engine Flight (0-5-2) Preparation for the multiengine class rating which will be added to a current pilot certificate. Includes explanation and demonstration of all required Federal Aviation Administration normal and emergency operations and procedures. Prerequisite: AIRP 1215

AIRP 2272 Flight Instructor-Instrument Helicopter (0-5-2) Flight and ground instruction required to qualify for the Federal Aviation Administration Certified Flight Instructor--Instrument Rotorcraft certificate.

AIRP 2273 Helicopter Commercial Flight (0-5-2) Helicopter flight instruction necessary to qualify for the Federal Aviation Administration Commercial Pilot Certificate. Instruction includes both dual and solo flight training to prepare the student to perform commercial helicopter pilot maneuvers. Prerequisite: AIRP 2250

AIRP 2274 Helicopter Certified Flight Instructor (0-5-2) Helicopter flight and ground school instruction required to qualify for the Federal Aviation Administration Certified Flight Instructor-Helicopter certificate. Prerequisite: AIRP 2273

AIRP 2331 Advanced Meteorology (3-0-3) Preparation for advanced aviation students to apply knowledge of varying meteorological factors including weather hazards to flight, techniques for minimizing weather hazards, and aviation weather services.

AIRP 2337 Commercial Ground School (2-3-3) A study of advanced aviation topics used for Federal Aviation Administration certification at the commercial

pilot level. Includes preparation for the Federal Aviation Administration Commercial Airplane Practical test.

AIRP 2349 Instructor Ground School (2-2-3) Skill development in the fundamentals of teaching and learning in an aviation- oriented environment. Introduction to the techniques of instruction and analysis of flight maneuvers. Topics include flight instructor responsibilities and Federal Aviation Regulations relating to the instructor rating.

AIRP 2370 Helicopter Systems (2-2-3) Study of helicopter general principles, operation, and application of pneumatic, hydraulic, electrical, fuel, environmental, protection, and warning systems found in helicopters. Emphasis on subsystems, control, and rotor systems.

AIRP 2371 Helicopter Instructor Ground School (2-2-3) Skill development in the fundamentals of teaching and learning in a helicopter oriented environment. Introduction to the techniques of instruction and analysis of helicopter flight maneuvers. Topics include helicopter flight instructor responsibilities and Federal Aviation Regulations relating to the instructor rating.

AIRP 2452 Practical Dispatching I (3-2-4) Study of advanced concepts in weight and balance, performance calculations, avionics, and engine and airplane specifications including Federal Aviation regulations. Preparation for the Federal Aviation Administration Aircraft Dispatcher written examination.

AIRP 2453 Practical Dispatching II (3-2-4) A study of the duties and responsibilities required of an aircraft dispatcher. Topics include instruction in Federal Aviation Administration regulations, flight planning, and company operations for both domestic and international operations. Preparation for the Federal Aviation Administration Practical Test.

AIRP 2455 Propulsion Systems (3-2-4) In-depth coverage of aircraft engine theory and principles of operation of various types of aircraft engines. Topics include propellers, superchargers, engine accessories, controls, and instrumentation.

AIRP 2476 Helicopter Propulsion Systems (3-2-4) In-depth coverage of aircraft engine theory and principles of operation of various types of helicopter engines. Topics include engine components, rotors, engine accessories, engine controls, and helicopter engine instrumentation to include glass cockpit instrumentation.

ARCE

ARCE 1303 Architectural Materials and Methods of Construction (2-2-3) Properties, specifications, vendor references, and uses of materials as related to architectural systems of structures.

ARCE 1342 Codes, Specifications, and Contract Documents (2-3-3) Study of ordinances, codes, and legal documents as they relate to specifications and drawing. Discussion of owner-architect-contractor responsibilities, duties, and legal relationships.

ARCE 1352 Structural Drafting (2-4-3) A study of structural systems including concrete foundations and frames, wood framing and trusses, and structural steel framing systems. Includes detailing of concrete, wood, and steel to meet industry standards including the American Institute of Steel Construction and The American Concrete Institute.

ARCE 2352 Mechanical and Electrical Systems (2-4-3) The properties of building materials (assemblies), specifications, codes, vendor references, and uses of mechanical, plumbing, conveying, and electrical systems as they relate to architecture for residential and commercial construction. Prerequisite: DFTG 2328, DFTG 2331

ARTC

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 process. Topics include basic terminology and graphic design principles.

ARTC 1309 Basic Illustration (2-4-3) Introduction to drawing techniques as they pertain to the commercial illustration industry.

ARTC 1310 Design Concepts (2-4-3) Fundamental techniques in conceptualizing. Includes all procedures from initial research to creating strategies to finalize a solution.

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. Prerequisite: ARTC 1305

ARTC 1317 Design Communication I (2-4-3) Study of design development relating to graphic design terminology, tools and media, and layout and design concepts. Topics include integration of type, images and other design elements, and developing computer skills in industry standard computer programs.

ARTC 1321 Illustration Techniques I (2-4-3) A study of illustration techniques in various media. Emphasis on creative interpretation and the discipline of draftsmanship for visual communication of ideas.

ARTC 1349 Art Direction I (2-4-3) Creation of projects in art direction for advertising graphic campaigns for products, services, or ideas. Topics include all campaign procedures from initial research and creative strategy to final execution and presentation of a comprehensive project. Prerequisite: ARTC 1313, GRPH 1359

ARTC 1359 Visual Design for New Media (2-4-3) Visual design elements as they relate to new media. Emphasizes aesthetics and visual problem solving such as typographic issues, color management, hierarchy of information, image optimization, and effective layout. Prerequisite: ARTC 2313

ARTC 2301 Illustration Techniques II (2-4-3) Advanced study of illustration media and techniques using digital and/or traditional tools. Emphasis on conceptualization and composition.

ARTC 2305 Digital Imaging II (2-4-3) Principles of digital image processing and digital painting. Emphasis on raster-based imaging and the creative aspects of electronic illustration for commercial or fine art applications. Prerequisite: ARTC 1302

ARTC 2313 Digital Publishing II (2-4-3) Includes layout procedures from thumbnails and roughs to final comprehensive and print output. Emphasis on design principles for the creation of advertising and publishing materials, and techniques for efficient planning and documenting projects. Prerequisite: ARTC 1313

ARTC 2317 Typographic Design (2-4-3) Exploration of typographic design including computer generated letterforms as elements of design. Includes theory and techniques of traditional, contemporary, and experimental typography. Prerequisite: ARTC 1302, ARTC 1305

ARTC 2333 Publication Design (2-4-3) Development of skills and advanced knowledge of publishing software, with emphasis on the maintenance of visual continuity in documents for publication. Prerequisite: 5th semester ready

ARTC 2335 Portfolio Development for Graphic Design (2-4-3) Preparation of a portfolio comprised of completed graphic design projects. Evaluation and demonstration of portfolio presentation methods based on the student's specific area of study. Prerequisite: 5th semester ready

ARTC 2340 Computer Illustration II (2-4-3) Advanced use of software applications and/or various media with emphasis on output procedures, the resolution of complex design issues, and concept development.

ARTC 2347 Design Communication II (2-4-3) An advanced study of the design process and art direction. Emphasis on form and content through the selection, creation, and integration of typographic, photographic, illustrative, and design elements. Prerequisite: ARTC 1317 or ARTC 1302

ARTC 2349 Art Direction II (2-4-3) Mastery of advanced art direction projects with emphasis on selected topics in advertising campaigns. Includes written, oral, and visual skills. Prerequisite: ARTC 1349, ARTC 2313

ARTC 2366 Practicum (or Field Experience) - Commercial and Advertising Art (0-0-3) Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

ARTC 2388 Internship - Commercial and Advertising Art (0-0-3) 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: 4th semester ready

ARTT

ARTT 1201 Conceptual Figure Drawing (1-2-2) Introduction to the techniques of drawing the human figure with emphasis on gesture and contour technique. Topics include structure of the human form in relation to drawing body proportions; bone and muscle structure of the human form and the bone and muscle components of human hands and other appendages.

ARTT 1251 Interpretive Figure Drawing (1-2-2) Study of the correct proportions of the human figure and its graphic interpretation. Includes basic human figure and head construction using standard division and proportion techniques. Topics include profile view, three-quarter view, and frontal view of the human head, male or female; head division and proportion techniques for eye, nose, mouth, and ear placement; and the eight head standing figures drawing technique.

ARTV

ARTV 1211 Storyboard (1-2-2) Techniques of storyboarding including organizing a project's content and arranging it in a visual format.

ARTV 1345 3-D Modeling and Rendering I (2-4-3) Techniques of three-dimensional (3-D) modeling utilizing industry standard software. Includes the creation and modification of 3-D geometric shapes, use of a variety of rendering techniques, camera, light sources, texture, and surface mapping.

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 digital video workstation.

ARTV 2341 Advanced Digital Video (2-4-3) Advanced digital video techniques for post-production. Emphasizes integration of special effects and animation for film, video, and the Internet. Exploration of new and emerging compression and video streaming technologies. Prerequisite: ARTV 1351

ARTV 2345 3-D Modeling and Rendering II (2-4-3) A studio course focused on advanced 3-D modeling and rendering techniques using industry standard software, modeling techniques, camera settings, lighting, and surfacing to develop detailed environments. Prerequisite: ARTV 1351

AUMT

AUMT 1166 Practicum (or Field Experience) - Automobile/Automotive Mechanics Technology (0-0-1) Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

AUMT 1167 Practicum (or Field Experience) - Automobile/Automotive Mechanics Technology (0-0-1) Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

AUMT 1201 Introduction and Theory of Automotive Technology (1-3-2) An introductory overview of the automotive service industry including history, safety practices, shop equipment and tools, vehicle subsystems, service publications, professional responsibilities, and automobile maintenance.

AUMT 1249 Automotive Electronics Theory (2-1-2) A course in automotive technology including electrical principles, semiconductor and integrated circuits, digital fundamentals, microcomputer systems, and electrical test equipment.

AUMT 1266 Practicum (or Field Experience) - Automobile/Automotive Mechanics Technology (0-0-2) Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student. Prerequisite: AUMT 1416, AUMT 1345

AUMT 1305 Introduction to Automotive Technology (2-4-3) An introduction to the automotive industry including automotive history, safety practices, shop equipment and tools, vehicle subsystems, service publications, professional responsibilities, and basic automotive maintenance. May be taught manufacturer specific.

AUMT 1307 Automotive Electrical Systems (2-4-3) An overview of automotive electrical systems including topics in operational theory, testing, diagnosis, and repair of, charging and starting systems, and electrical accessories. Emphasis on electrical principles schematic diagrams, and service manuals. May be taught manufacturer specific.

AUMT 1310 Automotive Brake Systems (2-4-3) Operation and repair of drum/disc type brake systems. 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 1312 Basic Automotive Service (2-4-3) Basic automotive service. Includes compliance with safety and hazardous material handling procedures and maintenance of shop equipment.

AUMT 1345 Automotive Climate Control Systems. (2-4-3) Diagnosis and repair of manual/electronic climate control systems. Includes the refrigeration cycle and EPA guidelines for refrigerant handling. May be taught manufacturer specific. Prerequisite: AUMT 1305, AUMT 1307

AUMT 1416 Automotive Suspension and Steering Systems (2-6-4) Diagnosis and repair of automotive suspension and steering systems including electronically controlled systems. Includes component repair, alignment procedures and tire and wheel service. May be taught manufacturer specific.

AUMT 1419 Automotive Engine Repair (2-6-4) Fundamentals of engine operation, diagnosis and repair. Emphasis on identification, inspection, measurements, and disassembly, repair, and reassembly of the engine. May be taught manufacturer specific. Prerequisite: AUMT 1305

AUMT 2188 Internship - Automobile/Automotive Mechanics Technology (0-0-1) 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.

AUMT 2189 Internship - Automobile/Automotive Mechanics Technology (0-0-1) 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: AUMT 2313, AUMT 2417, AUMT 2321

AUMT 2266 Practicum (or Field Experience) - Automobile/Automotive Mechanics Technology (0-0-2) Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student. Prerequisite: AUMT 2425, AUMT 2434

AUMT 2301 Automotive Management (3-0-3) Study of human and customer relations, and customer satisfaction in the automotive service industry. Emphasis on management and building relationships between the service department and the customer.

AUMT 2310 Automotive Service Consultant (2-2-3) Automotive service consulting skills and procedures. Includes vehicle identification, product knowledge, shop operations, warranty service contracts, communications, customer relations, internal relations, and sales skills. Emphasizes courtesy, professionalism, and communications.

AUMT 2321 Automotive Electrical Diagnosis and Repair (2-4-3) 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.

AUMT 2328 Automotive Service (2-4-3) Mastery of automotive service including competencies covered in related courses. May be taught manufacturer specific. Prerequisite: AUMT 2413, AUMT 2417, AUMT 2321

AUMT 2337 Automotive Electronics (2-4-3) Study of electronic principles applied to microcomputers and communication systems. Includes digital fundamentals, and use of electronic test equipment. May be taught manufacturer specific. Prerequisite: AUMT 2413, AUMT 2417,AUMT 2321

AUMT 2357 Automotive Alternative Fuels (2-4-3) A study of the composition and use of various alternative automobile fuels including retrofit procedures and

applications, emission standards, availability, and cost effectiveness. Overview of federal and state regulations concerning fuels.

AUMT 2407 Hybrid Systems Diagnostics (2-6-4) An advanced study of hybrid vehicles and the unique characteristics of hybrid systems. Includes hybrid safety procedures and diagnosis and repair of hybrid systems.

AUMT 2413 Automotive Drive Train and Axles (2-6-4) A study of automotive clutches, clutch operation devices, manual transmissions/ transaxles, and differentials with emphasis on diagnosis and repair. May be taught with manufacturer specific instructions. Prerequisite: AUMT 1310

AUMT 2417 Automotive Engine Performance Analysis I (2-6-4) Theory, operation, diagnosis of drivability concerns, and repair of ignition and fuel delivery systems. Use of current engine performance diagnostic equipment. May be taught with manufacturer specific instructions. Prerequisite: AUMT 1305, AUMT 1307

AUMT 2425 Automotive Automatic Transmission and Transaxle (2-6-4) A study of the operation, hydraulic circuits and electronic controls of modern automatic transmissions and automatic transaxles. Diagnosis, disassembly, and assembly procedures with emphasis on the use of special tools and repair techniques. May be taught manufacturer specific. Prerequisite: AUMT 2413, AUMT 2417, AUMT 2321

AUMT 2434 Automotive Engine Performance Analysis II (2-6-4) Diagnosis and repair of emission systems, computerized engine performance systems, and advanced ignition and fuel systems. Includes use of advanced engine performance diagnostic equipment. May be taught manufacturer specific. Prerequisite: AUMT 2413, AUMT 2417,AUMT 2321

AUMT 2457 Automotive Alternative Fuels (2-6-4) A study of the composition and use of various alternative automobile fuels including retrofit procedures and applications, emission standards, availability, and cost effectiveness. Overview of federal and state regulations concerning fuels.

AUMT 2470 Automotive Compression Ignition Engine & Fuel Systems (2-6-4) Diagnosis and repair of modern light-duty automotive compression ignition engines, air induction systems, fuel systems, and exhaust after treatment systems. Emphasis is placed on the differences between diagnosis and repair of spark-ignition engine systems and compression ignition engine systems.

AVIM

AVIM 1371 Control Tower I (2-3-3) The course will introduce the student to terminal air traffic control (ATC) ground control and limited local control. Students will receive further instruction on flight data processing, information handling, Federal Aviation Administration separation standards, controller techniques, controller to pilot and controller to controller communications. The course will include tabletop and high definition ATC simulation and remote pilot operator training. Prerequisite: AVIM 1470

AVIM 1375 Introduction to Terminal Operations (2-2-3) This course will provide students with fundamentals of radar operations in a terminal environment. Students will learn terminal radar team position responsibilities. They will learn and be required to demonstrate the application of various separation minima, altitude assignments, clearances, strip marking and phraseology, providing for positive control. Instruction and lab exercises will include, but not be limited to, radar identification, vectoring techniques, merging target procedures, radar separation as well as speed control and beacon code assignment. Prerequisite: AVIM 1470

AVIM 1376 Enroute Operations II (2-2-3) This course will provide students with fundamentals of radar operations in the enroute environment. Students will learn enroute team position responsibilities and be required to demonstrate the application of various separation minima, altitude assignments, clearances, strip marking and phraseology, providing for positive control. This will include, but not be limited to, radar identification, vectoring techniques, merging target procedures, radar separation as well as speed control and beacon code assignment. The course will also introduce the student to Traffic Management and its purpose in the National Airspace System. Prerequisite: AVIM 1377

AVIM 1377 Enroute Operations I (2-2-3) This course introduces students to air traffic control non-radar procedures, techniques, and rules. Included are aircraft communication, airspace management, non-radar separation standards for arrivals, departures and over flight traffic. Prerequisite: AVIM 1470

AVIM 1470 Fundamentals of Air Traffic Control 4 0 4 This course introduces the student to transportation management through a time based separation of vehicles. An overview of the organization of the Federal Aviation Administration, an introduction to the FAAO JO 7110.65, terms of reference, general control, flight data management, radio and interphone communications, the air traffic service route and NAVAID's used to manage the air traffic system. The course also includes the application of weather information in the air traffic system, altimeter settings, and automatic terminal information service procedures. The course will conclude with an introduction to clearance delivery procedures.

AVIM 2270 Control Tower Operations (1-3-2) This course will provide students with a comprehensive review of airport traffic control procedures, flight rules, communications procedures, flight assistance service, aviation weather, air navigation, aids to air navigation, and enroute procedures that students are required to know to pass the written portion of the FAA control tower operator exam. Prerequisite: AVIM 2372, AVIM 1375

AVIM 2337 Aviation Law (3-0-3) A study of domestic and international aviation law.

AVIM 2372 Control Tower II (2-3-3) Build on student understanding of terminal air traffic control through lecture and lab simulation of Air Traffic Control problems. Emphasize Air Traffic Control operations in and around a simulated Class D airport. Develop controller-controller coordination and communications with emphasis on accurate situation assessment, and specific Air Traffic Control methodology and problem solving techniques. Prerequisite: AVIM 1371

AVIM 2373 Advanced Terminal Operations (2-3-3) Provide a thorough review of all course objectives to verify student knowledge and student readiness to continue training at the Federal Aviation Administration Air Traffic Control Academy. Reviews will include clearance procedures, pilot to controller communications and coordination, phraseology, data handling, strip marking, aircraft recognition and advanced air traffic control simulation. Prerequisite: AVIM 2372, AVIM 1375

AVNC

AVNC 1303 Introduction to Aviation Electronic Systems (3-0-3) An introduction to the relationship between aviation electronic systems and aircraft flight and navigational systems with emphasis on the operation and function of the systems.

AVNC 1306 FAA Regulations for Avionics Certified Repair Station (3-0-3) This course provides practical experience in the day-to-day operations of a Federal Aviation Administration Certified Repair Station. Students will perform tasks which will include completion of repair station and FAA forms and records, maintenance of technical data and servicing equipment.

AVNC 1343 Aviation Electrical and Electronic Systems Installation (2-4-3) A comprehensive study of and practical experience in the installation of avionic systems in aircraft, mounting electronic equipment, construction and installation of electrical wiring and cables, proper use of tools, selection of materials, and safety.

AVNC 1353 Operational Testing of Aviation Electronic Systems (2-4-3) Operation of ramp test equipment in common usage to text avionic systems. Emphasis on performance of functional checks of aviation electronic systems and any safety concerns.

AVNC 1391 Installation & Operational Testing of Avionics & Pilot-Static Systems (Special Topics) (2-4-3) A practical experience in the planning and execution, and testing of avionics and pitot-static installations. Advanced test equipment will be used where required.

AVNC 2304 Foundations in Avionics Equipment Component Level Repairs (2-4-3) In-depth study of common circuit designs found in modern avionics equipment as well as a study of the electronics theory needed to troubleshoot these circuits.

AVNC 2308 Aviation Electrical and Electronics Systems Installation II (2-4-3) A continuation of AVNC 1343. This course is designed as a study of practical experi-

ence in the installation of avionics systems in aircraft, mounting electronic equipment, construction and installation of electrical wiring and cables, proper use of tools, and selection of materials.

AVNC 2345 Aviation Navigational Equipment Component Level Repair (2-4-3) Skills development in component level repair of modern aviation navigational systems including Very High Frequency Omni Range (VOR)and Instrument Landing Systems (ILS). Emphasis on equipment block diagram and specialized test equipment will be covered in detail.

AVNC 2350 Aviation Pulsed RF Equipment Component Level Repair (2-4-3) Skills development in component level repair of modern aviation pulsed Radio Frequency (RF) systems. Emphasis on equipment block diagram and specialized test equipment will be covered.

AVNC 2355 Advanced Aviation Electronics Troubleshooting (2-4-3) A capstone course designed for students to demonstrate acquired knowledge of avionics systems as well as display techniques required to troubleshoot those systems. The student will face component level repair scenarios.

AVNC 2357 Aviation Communication Component Level Repair (2-4-3) Skills development in component level repair of modern aviation communications and audio equipment. Emphasis on equipment block diagram and specialized test equipment will be covered.

BIOM

BIOM 1101 Biomedical Equipment Technology (1-0-1) Introduction to current biomedical job responsibilities, salaries, and classifications in the health care industry.

BIOM 1270 Shop SKills for Biomedical Equipment Technicians (1-4-2) Skill development in the common repair tools and repair techniques used by the Biomedical Equipment Technician in the healthcare.

BIOM 1309 Applied Biomedical Equipment Technology (2-4-3) Introduction to biomedical instrumentation as related to anatomy and physiology. Includes medical devices for monitoring, diagnosis, and treatment of anatomical systems.

BIOM 1315 Medical Equipment Networks (2-4-3) Identification of basic principles of medical equipment networking. Hardware, software, and connectivity issues of medical equipment in healthcare facilities will be covered.

BIOM 1341 Medical Circuits/Troubleshooting (2-4-3) Development of skills in troubleshooting of medical electronic circuits and utilization of test equipment. Prerequisite: CETT 1303, CETT 1305

BIOM 1350 Diagnostic Ultrasound Imaging System (2-4-3) Diagnostic ultrasound imaging systems. Covers basic systems troubleshooting and problem solving. Prerequisite: CETT 1303 and CETT 1305

BIOM 1355 Medical Electronic Applications (2-4-3) Presentation of sensors, transducers, and supporting circuits used in medical instrumentation devices. Prerequisite: BIOM 2301

BIOM 2215 Physiological Instruments I (1-4-2) Theory of operation, circuit analysis, and troubleshooting physiological instruments. Prerequisite: BIOM 2301

BIOM 2231 Biomedical Clinical Instrumentation (1-4-2) A study of theory, application, and principles of operation of instruments commonly used in a medical laboratory. Prerequisite: BIOM 2301

BIOM 2301 Safety in Health Care Facilities (2-4-3) Study of codes, standards and management principles related to biomedical instrumentation. Emphasizes application of safety test equipment, preventive maintenance procedures, and documentation of work performed. Prerequisite: CETT 1303, CETT 1305

BIOM 2311 General Medical Equipment I (2-4-3) "Analysis of selected current paths from a larger schematic. Discussion of equipment and disassembly and reassembly of equipment. Prerequisite: CETT 1303, CETT 1305

BIOM 2319 Fundamentals of X-Ray and Medical Imaging Systems (2-4-3) Radiation theory and safety hazards, fundamental circuits, and application of X-ray systems including circuit analysis and troubleshooting. Prerequisite: CETT 1303, CETT 1305

BIOM 2333 Digital Radiography (2-4-3) General principles of digital radiography systems. Fundamentals of problem solving, troubleshooting, and analysis of image quality are emphasized. Prerequisite: BIOM 2219

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. Prerequisite: BIOM 2301

BIOM 2345 Advanced Imaging Systems (2-4-3) Principles of operation and repair of computerized tomography (CT), magnetic resonance imaging (MRI), single photon emission computerized tomography, and other advanced imaging modalities. Prerequisite: BIOM 2219

BIOM 2347 RF/X-Ray System (2-4-3) Principles of radiographic and fluoroscopic systems. Prerequisite: BIOM 2219

BIOM 2388 Internship - Biomedical Technology (0-0-3) 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: DC Approval

BMGT

BMGT 1301 Supervision (2-2-3) The role of the supervisor. Includes managerial functions as applied to leadership, counseling, motivation, and human relations skills.

BMGT 1306 Facilities Management (2-4-3) General management and supervision of public buildings, business and industrial facilities, and other complexes requiring supervision and control. Includes fire alarm maintenance, plant maintenance, occupational safety, OSHA rules and regulations, management of maintenance supervisors, and hazardous materials awareness.

BMGT 1309 Information and Project Management (2-4-3) Critical path methods for planning and controlling projects. Includes time/cost tradeoffs, resource utilization, stochastic considerations, task determination, time management, scheduling management, status reports, budget management, customer service, professional attitude, and project supervision.

BMGT 1313 Principles of Purchasing (2-2-3) The purchasing process as it relates to such topics as inventory control, price determination, vendor selection, supply chain management, negotiation techniques, and ethical issues in purchasing.

BMGT 1325 Office Management (2-4-3) Systems, procedures, and practices related to organizing and planning office work, supervising employee performance, and exercising leadership skills.

BMGT 1327 Principles of Management (2-2-3) Concepts, terminology, principles, theories, and issues in the field of management.

BMGT 1331 Production and Operations Management (2-2-3) Fundamentals of techniques used in the practice of production and operations management. Includes location, design, and resource allocation.

BMGT 1341 Business Ethics (2-2-3) Discussion of ethical issues, the development of a moral frame of reference, and the need for an awareness of social responsibility in management practices and business activities. Includes ethical corporate responsibility.

BMGT 1345 Communication Skills for Managers (2-4-3) Comprehensive study of communication skills for managers. Includes techniques in reading, writing, listening, and speaking. Emphasizes clear, concise written and verbal/non-verbal communication. Also covers skills for time management.

BMGT 2303 Problem Solving and Decision Making (2-2-3) Decision-making and problem-solving processes in organizations utilizing logical and creative problem solving techniques. Application of theory is provided by experiential activities using managerial decision tools.

BMGT 2309 Leadership (2-2-3) Leadership and its relationship to management. Prepares the student with leadership and communication skills needed to motivate

and identify leadership styles.

BMGT 2331 Principles of Quality Management (2-4-3) Includes planning and implementing quality programs in an organization and analyzing cost/benefit of quality. Also covers the impact of employee empowerment.

BMGT 2341 Strategic Management (2-4-3) Strategic management process, including analysis of how organizations develop and implement a strategy for achieving organizational objectives in a changing environment.

BMGT 2347 Critical Thinking and Problem Solving (2-2-3) Interpreting data for problem solving and recommending corrective action. Emphasis on a structured approach to critical thinking and problem solving in a team environment.

BUSG

BUSG 1302 E-Business Management (2-4-3) Introduction to business. Includes the internet, infrastructure for electronic commerce, markup languages, web-based tools and software, security issues, and electronic payment systems. Also covers strategies for marketing, sales, and purchasing; legal, ethical, and tax issues; and management functions.

BUSG 1315 Small Business Operations (2-4-3) Operating a small business. Emphasizes management functions including planning, leading, organizing, staffing, and controlling operations.

BUSG 2309 Small Business Management/Entrepreneurship (3-0-3) Starting, operating, and growing a small business. Includes essential management skills, how to prepare a business plan, accounting, financial needs, staffing, marketing strategies, and legal issues.

CBFM

CBFM 1303 Boiler Maintenance (2-2-3) Boiler maintenance procedures with emphasis on the various components associated with boilers.

CBFM 2313 Building Maintenance Management (2-4-3) Management techniques required to direct operations of the engineering and maintenance department. Includes planning and scheduling, delegating responsibilities, purchasing, problem-solving, management by objectives, supervisory training, in-service training, and budget preparation.

CDEC

CDEC 1318 Wellness of the Young Child (2-3-3) Factors impacting the well-being of young children. Includes healthy behavior, food, nutrition, fitness, and safety practices. Focuses on local and national standards and legal implications of relevant policies and regulations. Course content is aligned with State Board of Educator Certification Pedagogy and Professional Responsibilities standards. Requires students to participate in a minimum of 16 hours field experience with children from infancy through age 12 in a variety of settings with varied and diverse populations.

CDEC 1321 The Infant and Toddler (3-0-3) A study of appropriate infant and toddler programs (birth to age 3), including an overview of development, quality routines, learning environments, materials and activities, and teaching/guidance techniques.

CDEC 1356 Emergent Literacy for Early Childhood (2-4-3) An exploration of principles, methods, and materials for teaching language and literacy through a play-based integrated curriculum to children from birth through age eight.

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.

CETT

CETT 1302 Electricity Principles (2-4-3) Principles of electricity including proper use of test equipment, A/C and D/C circuits, and component theory and operations.

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.

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

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 1321 Electronic Fabrication (2-4-3) A study of electronic circuit fabrication techniques including printed circuit boards, wire wrapping, bread boarding, and various soldering techniques.

CETT 1325 Digital Fundamentals (2-4-3) An entry level course in digital electronics to include numbering systems, logic gates, Boolean algebra, and combinational logic. Prerequisite: CETT 1303 or IEIR 1371

CETT 1329 Solid State Devices (2-4-3) A study of diodes, transistor characteristics and other semiconductor devices, including analysis of static and dynamic characteristics, biasing techniques, and thermal considerations. Prerequisite: CETT 1305 or IEIR 1371

CETT 1331 Programming for Discrete Electronic Devices (2-4-3) Introduction to a high level programming language. Includes structured programming and problem solving applicable to discrete electronic devices.

CETT 1341 Solid State Circuits (2-4-3) "A study of various semiconductor devices incorporated in circuits and their applications. Emphasis on circuit construction, measurements, and analysis. Prerequisite: CETT 1305

CETT 1349 Digital Systems (2-4-3) "A course in electronics covering digital systems. Emphasis on application and troubleshooting digital systems. Prerequisite: IEIR 1371 or CETT 1302

CETT 1357 Linear Integrated Circuits (2-4-3) "A study of the characteristics, operations, and testing of linear integrated circuits. Applications include instrumentation and active filtering.Prerequisite: CSIR 2301

CETT 2339 Amplifier Analysis (2-4-3) Advanced study of electronic amplifier applications. Prerequisite: CSIR 2301

CETT 2449 Research and Project Design (2-6-4) Principles of electrical/electronic design, encompassing schematics wiring diagrams, materials lists, operating characteristics, completion schedules, and cost estimates.

CHEF

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 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.

CHEF 1340 Meat Preparation and Cooking (2-4-3) Study of the preparation, storage, and cooking techniques for beef, pork, lamb, poultry, seafood, and game. Includes moist,dry, and combination heat preparation methods as related to both classical and modern methods of preparation of dishes.

CHEF 1341 American Regional Cuisine (2-4-3) A study of the development of regional cuisine's in the United States with emphasis on the similarities in production and service systems. Application of skills to develop, organize, and acquire knowledge of recipe strategies and production systems.

CHEF 1391 Chef Training (Special Topics) (2-4-3) An introduction to nutrition including nutrients, digestion and metabolism, menu planning, recipe modification, dietary guidelines and restrictions, diet and disease, and healthy cooking techniques.

CHEF 1300 Professional Cooking and Meal Service (2-4-3) Technical aspects of food preparation in the commercial kitchen. This will be accomplished by preparing and serving meals according to a production schedule. Emphasis on team work, professionalism, guest relations, and table service.

CHEF 1401 Basic Food Preparation (2-6-4) 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 1445 International Cuisine (2-6-4) The study of classical cooking skills associated with the preparation and service of international and ethnic cuisines. Topics include similarities between food production systems used in the United States and other regions of the world. Prerequisite: CHEF-1205

CHEF 2302 Saucier (2-3-3) Instruction in the preparation of stocks, soups, classical sauces, contemporary sauces, accompaniments, and the pairing of sauces with a variety of foods.

CHEF 2336 Charcuterie (2-4-3) Advanced concepts in the construction of sausages, pates, and related force meat preparations.

CJSA

CJSA 1325 Criminology (3-0-3) Current theories and empirical research pertaining to crime and criminal behavior and its causes, methods of prevention, systems of punishment, and rehabilitation.

CJSA 1327 Fundamentals of Criminal Law (3-0-3) A study of the nature of criminal law; philosophical and historical development; major definitions and concepts; classification of crime; elements of crimes and penalties using Texas statutes as illustrations; criminal responsibility.

CNBT

CNBT 1300 Residential and Light Commercial Blueprint Reading (2-4-3) Introductory blueprint reading for residential and light commercial construction.

CNBT 1302 Mechanical, Plumbing & Electrical Systems in Construction I (2-4-3) A presentation of the basic mechanical, plumbing, and electrical components in construction and their relationship to residential and light commercial buildings.

CNBT 1311 Construction Methods and Materials I (2-4-3) Introduction to construction materials and methods and their applications.

CNBT 1313 Concrete I (2-4-3) Various techniques for concrete utilization in residential and light commercial construction.

CNBT 1315 Field Engineering I (2-4-3) Surveying equipment, sketches, proper field note taking, methods of staking, layout of building site, and horizontal and vertical controls.

CNBT 1316 Construction Technology I (2-4-3) Introduction to site preparation foundations, form work, safety, tools, and equipment.

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) Building codes and standards applicable to building construction and inspection processes.

CNBT 1350 Construction Technology II (2-4-3) Framing in residential and light commercial construction. Includes safety, tools, and equipment used in floor, wall, ceiling, and roof framing methods and systems.

CNBT 1680 Cooperative Education - Construction Engineering Technology (1-0-6) 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.

CNBT 2310 Commercial/Industrial Blueprint Reading (2-4-3) Blueprint reading for commercial/industrial construction. Prerequisite: None

CNBT 2317 Green Building (2-4-3) Methods and materials used for buildings that conserve energy, water, and human resources.

CNBT 2337 Construction Estimating II (2-4-3) Advanced estimating concepts using computer software for construction and crafts.

CNBT 2339 Construction Technology IV (2-4-3) Interior finish for residential and light commercial construction.

CNBT 2342 Construction Management I (2-4-3) Management skills on the job site. Topics include written and oral communications, leadership and motivation, problem solving, and decision making.

CNBT 2344 Construction Management II (2-4-3) A management course in contract documents, safety, planning, scheduling, production control, law and labor issues. Topics include contracts, planning, cost and production peripheral documents, and cost and work analysis.

CPMT

CPMT 1304 Microcomputer System Software (2-4-3) Skill development in the installation, configuration, maintenance and troubleshooting of system software in microcomputers.

CPMT 1307 Electronic and Computer Skills (2-4-3) A study of electronic construction techniques using common hand tools in disassembly, repair, and re-assembly of electronics and computer components.

CPMT 1311 Introduction to Computer Maintenance (2-4-3) Introduction to the installation, configuration, and maintenance of a microcomputer system.

CPMT 1345 Computer Systems Maintenance (2-4-3) A study of the components within a computer system. Development of testing and troubleshooting skills.

CPMT 1347 Computer System Peripherals (2-4-3) Theory and practices involved in computer peripherals, operation and maintenance techniques, and specialized test equipment. Prerequisite: CPMT 1311 or ITSC 1325

CPMT 1349 Computer Networking Technology (2-4-3) Networking fundamentals, terminology, hardware, software, and network architecture. Includes local and wide area networking concepts and networking installations and operations.

CPMT 1371 Introduction to MAC Operating Systems (2-4-3) Introduction to MAC operating systems including installation, configuration, file management, memory and storage management, control of peripheral devices, and use of utilities. Emphasizes hands-on setup, administration, and management of a MAC computer system in a networked environment.

CPMT 2302 Home Technology Integration (2-4-3) A study of integration and maintenance of various home technology subsystems. Includes home automation, security and surveillance, home networks, video and audio networks, and structured wiring.

CPMT 2333 Computer Integration (2-4-3) Integration of hardware, software, and applications. Customization of computer systems for specific applications such as engineering, multimedia, or data acquisition. Prerequisite: ITSC 1321, CPMT 1345

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. Prerequisite: CPMT 1345

CPMT 2350 Industry Certification Preparation (2-4-3) Overview of the objectives for industry specific certification exam(s). Prerequisite: CPMT 1345, CPMT 1347

CPMT 2370 Home Automation (2-4-3) This course is designed to provide skills and knowledge necessary for the design, installation, and maintenance of home automation equipment. Emphasis is placed on lighting, appliance, and heating, ventilation and air conditioning (HVAC) controls. Prerequisite: CPMT 2302

CPMT 2371 Audio/Video Networks (2-4-3) This course is designed to provide the skills and knowledge necessary to design, install, and maintain audio and video networks. Emphasis will be placed on residential audio systems, video networks, and other related home entertainment equipment. Prerequisite: CPMT 2302

CPMT 2388 Internship - Computer Installation and Repair Technology (0-0-3) 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: DC Approval

CRPT

CRPT 1311 Roof Systems (2-4-3) Principles of design and construction of a roof system incorporating gable, hip, valley and intersections. Emphasis given to safe work practices and the use, and maintenance of tools and equipment.

CRPT 1341 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 use, and maintenance of tools and equipment.

CSIR

CSIR 1341 Transceiver Troubleshooting I (2-4-3) Practice in performing testing procedures and troubleshooting radio communications systems.

CSIR 1344 General Communication Circuits I (2-4-3) The basic theory of operation and troubleshooting of communication circuits used in radio communication electronics systems.

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. Prerequisite: CPMT 2302

CSIR 1391 Special Topics in Communications System Installer and Repairer (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, and testing equipment.

CSIR 2301 Communication Electronics Components (2-4-3) Introduction to the theory of vacuum tubes and solid-state devices. Prerequisite: IEIR 1371 or CETT 1302

CSIR 2343 Transceiver Troubleshooting II (2-4-3) A capstone course for the Radio Communication Electronics Specialized Certificate. Includes the advanced troubleshooting skills. Prerequisite: CSIR 1341

CSIR 2351 Fiber Optic Communication System Installation and 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, and testing equipment.

CSIR 2359 Communication Antenna Systems (2-4-3) A course in the testing and troubleshooting procedures for communication antennas systems including combiners, multi couplers, and duplexers. Topics include lightning and grounding requirements as well as troubleshooting radio frequency interference. Prerequisite: IEIR 1371 or CETT 1302

CTEC

CTEC 1113 Introduction to Chemical Technology (0-2-1) Introduction to the educational and professional requirements of the chemical technician. Topics include safety, industrial site visits, chemical literature, and computer applications.

CTEC 1205 Chemical Calculations I 0 4 2 Calculations related to general chemistry emphasizing industry related laboratory skills and competencies.

CTEC 1206 Chemical Calculations II 0 4 2 Calculations related to general chemistry emphasizing industry related laboratory skills and competencies. Prerequisite: SCIT 1415 (Co-Req)

CTEC 1345 Chemical Laboratory Safety (2-3-3) Study of the safety problems encountered in the operation of a chemical laboratory. Topics include chemical and safety regulations, chemical hygiene plans, and safe laboratory procedures.

CTEC 1441 Applied Instrumental Analysis I (2-6-4) Principles of instrumental chemical analysis that includes chromatography, spectroscopy, and electroanalytical chemi Prerequisite: SCIT 1543

CTEC 2110 Process Equipment Trainer (0-2-1) Operation of a product lab including normal operations and troubleshooting of a distillation system or other production lab.

CTEC 2333 Comprehensive Studies in Chemical Technology (2-4-3) Course requiring a special laboratory research project.

CTEC 2386 Internship - Chemical Technology (0-0-3) 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: 5th Semester standing

CTEC 2387 Internship - Chemical Technology (0-0-3) 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: 5th Semester standing

CTEC 2431 Applied Instrumental Analysis II (3-3-4) Advanced topics in instrumental analysis which includes atomic absorption, inductively coupled plasma, nuclear magnetic resonance, gas chromatography/mass spectrometry, liquid chromatography, and infrared spectroscopy. Prerequisite: SCIT 1543

CTEC 2441 Polymers I (2-6-4) Study of the concepts of polymer science which includes classification, structure, properties, synthesis, characterization, and industrial applications. Prerequisite: SCIT 2401

CTEC 2445 Unit Operations (2-6-4) Instruction in the principles of chemical engineering and process equipment with emphasis on scale-up from laboratory bench to pilot plant. Prerequisite: CTEC 1441

CVOP

CVOP 1301 Commercial Drivers License Driving Skills (2-3-3) Overview of the State of Texas Class A Commercial Drivers License driving test. In-depth coverage of in-cab air brake test, proper shifting, right and left-hand turns, movement in traffic, parking of a tractor trailer, highway and city driving, and backward movement and control. Prerequisite: DOT CDL Permit

DAAC

DAAC 1304 Pharmacology of Addiction (3-0-3) Emphasizes pharmacological effects of addiction, tolerance, dependence, cross addiction, drug interaction, withdrawal, and recovery. Describes the psychological and physiological effects of substance use and behaviors.

DAAC 1305 Co-Occurring Disorders (3-0-3) Provides students with an overview of co-occurring psychiatric and substance use disorders and their impact on the individual, family, and community. Includes an integrated approach to address the issues accompanying the illness.

DAAC 1309 Assessment of Substance-Related and Addictive Disorders (2-2-3) Exploration of procedures and tools used to identify substance-related and addictive disorders and assess a client's problems, strengths, deficits, and needs.

DAAC 1311 Counseling Theories (3-0-3) An examination of major theories and current treatment modalities used in the field of counseling.

DAAC 1317 Basic Counseling Skills (2-2-3) An overview and application of the basic counseling skills.

DAAC 1319 Substance-Related and Addictive Disorders (3-0-3) An overview of causes and consequences of substance-related and addictive disorders, the major drug classifications, and the counselor's code of ethics.

DAAC 2301 Therapeutic Communities in a Criminal Justice Setting (2-2-3) A study of therapeutic communities as an approach to rehabilitation of incarcerated substance users.

DAAC 2306 Substance Abuse Prevention I (2-2-3) Examination of substance use disorder prevention.

DAAC 2307 Addicted Family Intervention (3-0-3) Examination of family systems focusing on the effects of addiction and recovery.

DAAC 2341 Counseling Alcohol and Other Drug Addictions (3-0-3) Advanced examination of knowledge, skills, attitudes, techniques, confidentiality and ethical guidelines applied in the counseling, treatment, prevention, and recovery of substance use disorders.

DAAC 2343 Current Issues (3-0-3) Examination of current issues related to substance use and addictive disorders.

DAAC 2354 Dynamics of Group Counseling (2-2-3) Exploration of group counseling skills, techniques, stages of group development, and confidentiality and ethics.

DAAC 2366 Practicum (or Field Experience) - Substance Abuse/Addiction Counseling (0-0-3) Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

DEMR

DEMR 1225 Small Air Cooled Engines (1-2-2) Fundamentals of air cooled engines including repair and testing.

DEMR 1301 Shop Safety and Procedures (2-4-3) A study of shop safety, rules, basic shop tools, and test equipment.

DEMR 1305 Basic Electrical Systems (2-4-3) Basic principles of electrical systems of diesel powered equipment with emphasis on starters, alternators, and batteries.

DEMR 1316 Basic Hydraulics (2-4-3) Fundamentals of hydraulics including components and related systems.

DEMR 1317 Basic Brake Systems (2-4-3) Basic principles of brake systems of diesel powered equipment. Emphasis on maintenance, repairs, and troubleshooting.

DEMR 1321 Power Train I (2-4-3) Fundamental repair and theory of power trains including clutches, transmissions, drive shafts, and differentials. Emphasis on inspection and repair.

DEMR 1323 Heating, Ventilation, and Air Conditioning (HVAC) Troubleshooting and Repair (2-4-3) Introduction to heating, ventilation, and air conditioning theory, testing, and repair. Emphasis on refrigerant reclamation, safety procedures, specialized tools, and repairs.

DEMR 1327 Tractor Trailer Service and Repair (2-4-3) An introduction to and familiarization with components and systems related to tractor trailer service. Emphasis on records required by the Department of Transportation.

DEMR 1329 Preventative Maintenance (2-4-3) An introductory course designed to provide the student with basic knowledge of proper servicing practices. Content includes record keeping and condition of major systems.

DEMR 1330 Steering and Suspension I (2-4-3) A study of design, function, maintenance, and repair of steering and suspension systems. Emphasis on troubleshooting and repair of failed components.

DEMR 1380 Cooperative Education 1 0 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.

DEMR 1410 Diesel Engine Testing and Repair I (2-4-4) An introduction to testing and repairing diesel engines including related systems and specialized tools.

DEMR 1447 Power Train II (2-4-4) Continuation of fundamentals and theory of power train systems. Emphasis on disassembly, inspection, and repair of power train components. Prerequisite: DEMR 1321

DEMR 1680 Cooperative Education - Diesel Mechanics Technology (1-0-6) 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 2332 Electronic Controls (2-4-3) Advanced skills in diagnostic and programming techniques of electronic control systems.

DEMR 2334 Advanced Diesel Tune-Up and Troubleshooting (2-4-3) 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. Prerequisite: DEMR 2412 or AUMT 2417

DEMR 2335 Advanced Hydraulics (2-4-3) Advanced study of hydraulic systems and components including diagnostics and testing of hydraulic systems. Prerequisite: DEMR 1316

DEMR 2344 Automatic Power Shift and Hydrostatic Transmission II (2-4-3) Extended study of the operation, maintenance, and repair of automatic power shift hydrostatic transmissions. Prerequisite: DEMR 2412

DEMR 2348 Failure Analysis (2-4-3) An advanced course designed for analysis of typical part failures on equipment.

DEMR 2412 Diesel Engine Testing and Repair II (2-4-4) Continuation of Diesel Engine Testing and Repair I. Coverage of testing and repairing diesel engines including related systems and specialized tools. Prerequisite: DEMR 1410

DLBT

DLBT 1201 Dental Anatomy and Tooth Morphology (1-3) Study of the anatomy of the head and neck including the maxilla, mandible, and temporomandibular joint. Emphasis on natural dentition, tooth anatomy, form, function, nomenclature, and wax carving.

DLBT 1205 Dental Materials (1-2) Study of dental materials and their uses in the fabrication of all types of dental protheses.

DLBT 1209 Removable Partial Denture Techniques I (1-4) Introduction to removable partial dentures. Topics include temporary partials, treatment partials with wrought clasps, and cast metal partials.

DLBT 1213 Complete Denture Techniques I (1-4) Introduction to the fabrication of complete dentures. Topics include edentulous arch anatomical landmarks, edentulous cast preparation, impressions, trays, baseplates, occlusal rims, and artificial tooth arrangement.

DLBT 1217 Fixed Restorative Techniques I (1-4) Introduction to fixed restorative techniques. Topics include casts with removable dies and fabrication of wax patterns.

DLBT 1291 Special Topics in Dental Laboratory Technician (1-4) 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 2241 Dental Ceramics I (1-4) Introduction to dental ceramic procedures with emphasis on metal substructures and porcelain application. Topics include individual and bridge copings, waxing, casting, and preparation for porcelain adaptation.

DLBT 2204 Removable Partial Denture Techniques II (1-4) Study of the components of removable partial dentures and the methods of surveying and designing and fabricating removable partial dentures.

DLBT 2207 Complete Denture Techniques II (1-4) Comprehensive study and practice of the procedures required to construct complete maxillary and mandibular dentures from the final impression to the finished appliance.

DLBT 2211 Fixed Restorative Techniques II (1-4) Continuation of construction of wax patterns for single unit crowns by spruing, investing, casting, and polishing the metal crown.

DLBT 2242 Dental Ceramics II (1-4) Construction of single and multiple-unit ceramic teeth including characterization and shading of teeth. Emphasis on anterior teeth.

DLBT 2244 Introduction to Orthodontic Procedures (1-4) Introduction to orthodontic dental laboratory procedures. Emphasis on wire bending, soldering, and fabrication of removable acrylic resin appliances.

DLBT 2430 Special Project in Dental Laboratory Procedures (2-8) Culmination of instruction in practical laboratory procedures with the emphasis on specialized areas of choice.

DFTG

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, and auxiliary views.

DFTG 1309 Basic Computer-Aided Drafting (2-4-3) An introduction to computer-aided drafting. Emphasis is placed on setup; creating and modifying geometry; storing and retrieving predefined shapes; placing, rotating, and scaling objects, adding text and dimensions, using layers, coordinate systems, and plot/print to scale.

DFTG 1310 Specialized Basic Computer Aided Drafting (CAD) (2-4-3) A supplemental course to Basic Computer Aided Drafting using an alternative computer-aided drafting (CAD) software to create detail and working drawings.

DFTG 1313 Drafting for Specific Occupations (2-4-3) Discussion of theory and practice with drafting methods and the terminology required to prepare working drawings in specific or various occupational fields.

DFTG 1317 Architectural Drafting - Residential (2-4-3) Architectural drafting procedures, practices, terms, and symbols. Preparation of detailed working drawings for residential structures. Emphasis on light frame construction methods. Prerequisite: DFTG 1305, DFTG 1309

DFTG 1325 Blueprint Reading and Sketching (2-4-3) An introduction to reading and interpreting working drawings for fabrication processes and associated trades. Use of sketching techniques to create pictorial and multiple-view drawings.

DFTG 1329 Electro-Mechanical Drafting (2-4-3) A basic course including layout and design of electro-mechanical equipment from engineering notes and sketches. Prerequisite: DFTG 1309

DFTG 1333 Mechanical Drafting (2-4-3) Study of mechanical drawings using dimensioning and tolerances, sectioning techniques, orthographic projection, and pictorial drawings. Prerequisite: DFTG 1305 or DFTG 1309

DFTG 1341 Intermediate Technical Animation and Rendering (2-4-3) 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 architectural/mechanical models.

DFTG 1345 Parametric Modeling and Design (2-4-3) Parametric-based design software for 3D design and drafting. Prerequisite: DFTG 1309

DFTG 1357 Specialized Intermediate Computer-Aided Drafting (CAD) (2-4-3) A continuation of practices and techniques used in Specialized Basic Computer-Aided Drafting. Emphasizes advanced dimensioning techniques, the development and use of prototype drawings, construction of pictorial drawings, interfacing two-dimensional (2D) and/or three-dimensional (3D) environments and extracting data.

DFTG 1358 Electrical/Electronics Drafting (2-4-3) Electrical and electronic drawings stressing modern representation used for block diagrams, schematic diagrams, logic diagrams, wiring/assembly drawings, printed circuit board layouts, motor control diagrams, power distribution diagrams, and electrical one-line diagrams. Prerequisite: DFTG 2319 (pre or Co)

DFTG 1370 Technical Mathematics Applications in Drafting (2-2-3) Algebraic and trigonometric applications utilized on drafting drawings; along with reading applications of the foot and decimal measuring tapes and the reading and applications of the architectural, engineering and metric scales and their scale factors utilized on respective drafting drawings.

DFTG 2302 Machine Drafting (2-4-3) Production of detail and assembly drawings of machines, threads, gears, utilizing tolerances, limit dimensioning, and surface finishes. Prerequisite: 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. Prerequisite: DFTG 1345 or DFTG 2335

DFTG 2319 Intermediate Computer-Aided Drafting (2-4-3) A continuation of practices and techniques used in basic computer-aided drafting including the development and use of prototype drawings, construction of pictorial drawings, extracting data, and basics of 3D. Prerequisite: DFTG 1309

DFTG 2323 Pipe Drafting (2-4-3) A study of pipe fittings, symbols, specifications and their applications to a piping process system. Creation of symbols and their usage in flow diagrams, plans, elevations, and isometrics. Prerequisite: None

DFTG 2328 Architectural Drafting - Commercial (2-4-3) Architectural drafting procedures, practices, governing codes, terms and symbols, including the preparation of detailed working drawings for a commercial building, with emphasis on commercial construction methods. Prerequisite: ARCE 1303, ARCE 1342, DFTG 1317, DFTG 2319

DFTG 2330 Civil Drafting (2-4-3) An in-depth study of drafting methods and principles used in civil engineering. Prerequisite: SRVY 1301 or SRVY 2348 or POFI 1301

DFTG 2331 Advanced Technologies in Architectural Design and 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. Prerequisite: ARCE 1303, ARCE 1342, DFTG 1317, DFTG 2319

DFTG 2332 Advanced Computer-Aided Drafting (2-4-3) Application of advanced CAD techniques. Prerequisite: DFTG 2319

DFTG 2335 Advanced Technologies in Mechanical Design and Drafting (2-4-3) Use parametric-based software for mechanical design for advanced modeling and analysis. DFTG 2319 can be concurrent

DFTG 2338 Final Project - Advanced Drafting (2-4-3) A drafting course in which students participate in a comprehensive project from conception to conclusion. Prerequisite: DFTG 2319

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. Prerequisite: DFTG 1309

DFTG 2350 Geometric Dimensioning and Tolerancing (2-4-3) "Geometric dimensioning and tolerancing, according to standards, application of various geometric dimensions and tolerances to production drawings. Prerequisite: DFTG 1345 or DFTG 2335

DFTG 2357 Advanced Technologies in Pipe Design and Drafting (2-4-3) Advanced design and production techniques using specialized process plant based design software.

DFTG 2386 Internship - Drafting and Design Technology (0-0-3) 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.

DHYG

DHYG 1227 Preventive Dental Hygiene Care (1-3-2) The role of the dental hygienist as a therapeutic oral health care provider with emphasis on concepts of disease management, health promotion, communication, and behavior modification.

DLBT

DLBT 1201 Dental Anatomy and Tooth Morphology (1-3-2) Study of the anatomy of the head and neck including the maxilla, mandible, and temporomandibular joint. Emphasis on natural dentition, tooth anatomy, form, function, nomenclature, and wax carving.

DNTA

DNTA 1213 Emergency Management (2-1) Management of dental and medical emergencies. Maintenance of medical emergency kit, and recording of vital signs.

DNTA 1305 Dental Radiology (2-3) Introduction to radiation physics, radiation protection, and the operation of radiographic equipment. Instruction in exposure, processing and mounting of dental radiographs, and study of federal and state safety and standard practices.

DNTA 1351 Dental Office Management (2-2) Use computers/and or manual systems to process dental information and interpret and practice learned dental office management skills.

DNTA 1415 Chairside Assisting (2-4) A study of pre-clinical chairside assisting procedures, instrumentation, OSHA and other regulatory agencies' standards.

DNTA 1245 Preventive Dentistry (1-3) The study of nutrition and preventable dental disease and community dental health.

DNTA 1453 Dental Assisting Applications (2-4) An expanded study of dental assisting techniques with emphasis on four-handed dentistry and utilization of armamentarium for general practice and specialty procedures.

DNTA 1660 Clinical - Dental Assisting/Assistant (0-0) A health-related work-based learning experience that enables the student to apply specialized occupational

EDTC

EDTC 1164 Practicum (or Field Experience) - Teacher Assistant/Aide (0-0-1) 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 communication strategies. Topics include the various codes of ethics governing the educational field, the issue of confidentiality, learners' rights and responsibilities, and challenges facing schools.

EDTC 1307 Introduction to Teaching Reading (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 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 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 Technology and Computer Applications (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 (or Field Experience) - Teacher Assistant/Aide (0-0-3) Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

EDTC 1373 Writing Problems (3-0-3) 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 1374 Teaching Math & Science in the Elementary School (2-4-3) 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 1375 Issues in Special Needs Education (3-0-3) An examination of current research, federal and state regulations, and programs for students with exceptionalities within the public school environment. Topics address methods for supporting instructional planning and the implementation of program goals and objectives. Prerequisite: CDEC 1359

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 direct and indirect guidance techniques for use in various school environments. Topics include identification of causes of inappropriate behavior, establishing and managing routines, the environment's role in promoting positive behavior, promoting self-esteem, negotiation/conflict resolution strategies, and enhancing positive self-direction. Emphasis on implementation of a behavior management plan.

EECT

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 Introduction 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 Convergence Technologies (2-4-3) A study of telecommunications convergence technologies including telephone, LAN, WAN, wireless, voice, video, and internet protocol.

EECT 1340 Telecommunications Transmission Media (2-4-3) Fundamentals of telecommunications media, including installation, maintenance, and troubleshooting. Topics address media characteristics and connectorization.

EECT 1342 Telecommunications 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 1371 Power Source Design (2-4-3) Operation and design techniques of electronic power sources with emphasis on component ratings, calculations, and operational parameters of rectifiers, filters, regulators, both discrete and integrated variety. Prerequisite: IEIR 1371 or CETT 1302

EECT 2275 Automatic Testing (1-4-2) Automatic testing and acquisition of data.

Includes topics related to virtual instruments, including applications, benefits, and limitations.

EECT 2330 Telecommunications Switching (2-4-3) The operation of telecommunications switching equipment and related software. Topics include installation, testing, maintenance, and troubleshooting.

EECT 2333 Telephone Systems (2-4-3) Installation and maintenance systems including telephone set, public switched networks, local exchange, networks, transmission media.

EECT 2335 Telecommunications (2-4-3) 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 2371 Smart Grid Command and Control I (2-4-3) An smart grid supervisory command and control system portion of the smart grid infrastructure and the individual components that make up this portion.

EECT 2372 Smart Grid Command and Control II (2-4-3) Evaluate and verify the smart grid command and control data acquisition system portion of the smart gird infrastructure. Construct a smart grid command and control data acquisition system.

EECT 2373 Automatic Metering Infrastructure/Reading I (2-4-3) Introduction to the smart grid automatic metering infrastructure and automatic meter reading systems portion of the smart grid infrastructure and the individual components that make up this portion.

EECT 2374 Smart Grid Distribution Automation (2-4-3) Analyze, install, maintain, verify and troubleshoot smart grid distribution automation systems portion of the smart grid infrastructure and the individual components that make up this portion.

EECT 2377 Automatic Metering Infrastructure/Reading II (2-4-3) Analysis, installation, maintenance, verification, and troubleshooting for the smart grid automatic metering systems/automatic meter reading systems portion of the smart grid communications infrastructure.

EECT 2378 Smart Grid Technology (2-4-3) Construct and integrate the individual smart grid communications systems utilized for the smart grid communications infrastructure.

EEIR

EEIR 1307 Introductory Security Systems (2-4-3) A study of security system components, maintenance, troubleshooting, and repair procedures. Emphasis on the installation of security systems as directed. Prerequisite: CPMT 2302

ELMT

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. Prerequisite: CETT 1325

ELMT 1305 Basic Fluid Power (2-4-3) Basic fluid power course covering pneumatic and hydraulic systems, fluid power symbols, operating theory, components, and basic electrical and manual controls.

ELMT 1491 Electromechanical Technology (Special Topics) (2-4-4) This course is designed to familiarize the student with concepts in electro-mechanical technology specific to wind turbines.

ELMT 2239 Advanced Programmable Logic Controllers (1-4-2) 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

ELMT 2333 Industrial Electronics (2-4-3) 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. Includes presentation of programming schemes.

ELMT 2335 Certified Electronics Technician Training (2-4-3) Review of electronics concepts and principles in preparation for sitting for a certification examination administered by an outside organization or agency. Prerequisite: CETT 1325

ELMT 2341 Electromechanical Systems (2-4-3) Application of electromechanical systems. Emphasizes programmable control devices and solid state systems.

ELMT 2480 Cooperative Education - Electromechanical Technology 1 0 4 Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component.

ELPT 1215 Electrical Calculations I 2 0 2 Introduction to mathematical applications utilized to solve problems in the electrical field. Topics include fractions, decimals, percentages, simple equations, ratio and proportion, unit conversions, and applied geometry.

ELPT 1221 Introduction to Electrical Safety and Tools (1-3-2) Safety rules and regulations. Includes the selection, inspection, use, and maintenance of common tools for electricians.

ELPT 1225 National Electrical Code I 0 4 2 An introductory study of the National Electric Code (NEC) for those employed in fields requiring knowledge of the Code. Emphasis on wiring design, protection, methods, and materials; equipment for general use; and basic calculations.

ELPT 1311 Basic Electrical Theory (2-4-3) Basic theory and practice of electrical circuits. Includes calculations as applied to alternating and direct current.

ELPT 1329 Residential Wiring (2-4-3) Wiring methods for single family and multi-family dwellings. Includes load calculations, service entrance sizing, proper grounding techniques, and associated safety procedures.

ELPT 1340 Master Electrician Exam Review I (2-4-3) Electrical theory, code calculations, and interpretations applicable to becoming a Master Electrician. Emphasizes residential, commercial, and industrial installations using the current edition of the National Electric Code (NEC) and local ordinances. Prerequisite: ELPT 1225

ELPT 1341 Motor Control (2-4-3) Operating principles of solid-state and conventional controls along with their practical applications. Includes braking, jogging, plugging, safety interlocks, wiring, and schematic diagram interpretations. Prerequisite: ELPT 1311 or CETT 1303 or IEIR 1371

ELPT 1345 Commercial Wiring (2-4-3) Commercial wiring methods. Includes overcurrent protection, raceway panel board installation, proper grounding techniques, and associated safety procedures.

ELPT 1351 Electrical Machines (2-2-3) Direct current (DC) motors, single-phase and polyphase alternating current (AC) motors, generators, and alternators. Emphasis on construction, characteristics, efficiencies, starting, and speed control. Prerequisite: ELPT 1341

ELPT 1357 Industrial Wiring (2-4-3) Wiring methods used for industrial installations. Includes motor circuits, raceway and bus way installations, proper grounding techniques, and associated safety procedures.

ELPT 1364 Practicum (or Field Experience) - Electrical and Power Transmission Installation (0-0-3) Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

ELPT 1680 Cooperative Education - Electrical and Power Transmission Installation (1-0-6) 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.

ELPT 2305 Motors and Transformers (2-4-3) Operation of single- and three-

phase motors and transformers. Includes transformer banking, power factor correction, and protective devices.

ELPT 2319 Programmable Logic Controllers I (2-4-3) Fundamental concepts of programmable logic controllers, principles of operation, and numbering systems as applied to electrical controls.

ELPT 2323 Transformers (2-3-3) Transformer types, construction, connections, protection, grounding, and associated safety procedures.

ELPT 2331 AC/DC Drives (2-4-3) Installation and maintenance of alternating current (AC) and direct current (DC) variable speed drives with emphasis on application, operating characteristics, and troubleshooting techniques.

ELPT 2335 Electrical Theory and Devices (2-3-3) Electrical and electronic measuring devices and their applications to the use of electrical power. Includes calculating and balancing single-phase and three-phase systems.

ELPT 2339 Electrical Power Distribution (2-2-3) Design, operation, and technical details of modern power distribution systems including generating equipment, transmission lines, plant distribution, and protective devices. Includes calculations of fault current, system load analysis, rates, and power economics.

ELPT 2343 Electrical Systems Design (2-3-3) Electrical design of commercial and/or industrial projects including building layout, types of equipment, placement, sizing of electrical equipment, and all electrical calculations according to the requirements of the National Electrical Code (NEC).

ELPT 2347 Electrical Testing and Maintenance (2-4-3) Proper and safe use of electrical power equipment test devices and the interpretation of test results. Includes protective relay testing and calibration, direct current (DC) testing, insulation power factor testing, and medium voltage switchgear.

ELPT 2355 Programmable Logic Controllers II (2-2-3) Advanced concepts in programmable logic controllers and their applications and interfacing to industrial controls. Prerequisite: ELPT 2319

EMSP

EMSP 1261 Clinical - Emergency Medical Technology (EMT Paramedic) (0-0-2) 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.

EMSP 1355 Trauma Management (2-3-3) Knowledge and skills in the assessment and management of patients with traumatic injuries.

EMSP 1356 Patient Assessment and Airway Management (2-4-3) Knowledge and skills required to perform patient assessment, airway management, and artificial ventilation.

EMSP 1438 Introduction to Advanced Practice (3-4-4) Fundamental elements associated with emergency medical services to include preparatory practices, pathophysiology, medication administration, and related topics.

EMSP 1501 Emergency Medical Technician 3 8 5 Preparation for certification as an Emergency Medical Technician (EMT).

EMSP 2143 Assessment Based Management 0 4 1 A summative experience covering comprehensive, assessment-based patient care management for the paramedic level.

EMSP 2161 Clinical - Emergency Medical Technology (EMT Paramedic) (0-0-1) 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.

EMSP 2162 Clinical - Emergency Medical Technology (EMT Paramedic) (0-0-1) 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.

EMSP 2163 Clinical - Emergency Medical Technology (EMT Paramedic) (0-0-1) 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.

EMSP 2167 Practicum (or Field Experience) - Emergency Medical Technology (EMT Paramedic) (0-0-1) Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

EMSP 2168 Practicum (or Field Experience) - Emergency Medical Technology (EMT Paramedic) (0-0-1) Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

EMSP 2169 Practicum (or Field Experience) - Emergency Medical Technology (EMT Paramedic) (0-0-1) Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

EMSP 2205 EMS Operations (1-3-2) Knowledge and skills to safely manage multi-casualty incidents and rescue situations; utilize air medical resources; identify hazardous materials and other specialized incidents.

EMSP 2237 Emergency Procedures 0 6 2 "Application of emergency medical procedures. This course was designed to be repeated multiple times to improve student proficiency.

EMSP 2248 Emergency Pharmacology (2-1-2) A study of drug classifications, actions, therapeutic uses, adverse effects, routes of administration, and calculation of dosages.

EMSP 2330 Special Populations (2-3-3) Knowledge and skills necessary to assess and manage ill or injured patients in diverse populations to include neonatology, pediatrics, geriatrics, and other related topics.

EMSP 2434 Medical Emergencies (3-4-4) Knowledge and skills in the assessment and management of patients with medical emergencies, including medical overview, neurology, gastroenterology, immunology, pulmonology, urology, hematology, endocrinology, toxicology, and other related topics.

EMSP 2444 Cardiology (3-3-4) Assessment and management of patients with cardiac emergencies. Includes single and multi-lead ECG interpretation.

ENER

ENER 1430 Basic Mechanical Skills for Energy (2-6-4) Basic mechanical skills using hand and power tools in an industrial environment. Topics inlcude tool use and maintenance, lubrication, measuring, threads and fasteners, bench works, basic mechanical drawings, and basic shop calculations (English and metric). Also addresses rigging procedures to include chain falls, jacks, cable, fulcrum, port-a-power, and come-alongs.

ENER 2325 SCADA and Networking (2-4-3) Topics in Supervisory Control and Data Acquisition (SCADA)systems, Industrial Ethernet communications systems as they apply to industry. Prerequisite: CETT 1325

ENTC

ENTC 1349 Reliability and Maintainability (2-4-3) Equipment reliability and maintainability. Includes development and assessment of maintenance programs.

ENTC 1371 Engineering Computer Graphics I (2-4-3) This course covers the fundamental concepts associated with engineering computer aided design graphics; CAD. Emphasis will be placed on both dimensional analysis and design for manufacturing ability of 3D models. Solid Edge Modeling Software will be utilized.

ENTC 2310 Machine Design (2-3-3) Design considerations for machinery. Includes selection of mechanical components and machine construction principles. Prerequisite: MCHN 2335 or MCHN 2435

EPCT

EPCT 1205 Environmental Regulations Overview (1-4-2) An introduction to the history of the environmental movement, including basic requirements for compliance with the environmental regulations.

EPCT 1243 Treatment, Remediation, and Disposal Techniques (1-4-2) A study of the skills required in treatment, remediation, and disposal processes of solid waste, hazardous materials, and hazardous waste. Emphasizes the technologies applicable in the field.

EPCT 1249 Environmental Regulation Interpretation and Applications (1-4-2) An in-depth study of the major federal and state environmental regulations.

EPCT 1301 Hazardous Waste Operations and Emergency Response (HAZWOPER) Training and Related Topics (2-3-3) Minimum certification requirements in the Code of Federal Regulations (CFR) for a hazardous waste site worker as found in 29 CFR-1910.120 and 40 CFR-264.16.

EPCT 1205 Environmental Regulations Overview (1-4-2) An introduction to the history of the environmental movement, including basic requirements for compliance with the environmental regulations.

EPCT 1307 Introduction to Environmental Safety and Health (2-3-3) An historic overview of environmental safety and health. Emphasis on the use of occupational safety and health codes.

EPCT 1311 Introduction to Environmental Science (2-4-3) An overview of environmental science and current global concerns, and a brief history of environmental ethics, resource use, and conservation. Discussion of fundamental principles of resource economics and environmental health.

EPCT 1317 Environmental Geology (2-4-3) A study of the relationships between earth science and the environment. Emphasizes crustal geological influences on air, water, and soil focusing on the effects on human habitation.

EPCT 1327 Basic Water Works Operation (2-3-3) Study of conventional water treatment plants including administration and management. Emphasis on the operation of motors, pumps, and disinfection in small water plants.

EPCT 1328 Basic Wastewater Operations (2-4-3) Introduction to the information and operational skills needed for wastewater treatment plants.

EPCT 1341 Principles of Industrial Hygiene (2-3-3) Concepts in threshold limits, dose response, and general recognition of occupational hazards, including sampling statistics, calibration, and equipment use. A study of the control of occupational hazards and sample collection and evaluation methods.

EPCT 1344 Environmental Sampling and Analysis (2-3-3) Sampling protocol, procedures, quality control, preservation technology, and field analysis. Emphasis on analysis commonly performed by the field technician.

EPCT 1347 Waste Minimization and Pollution Prevention (2-3-3) Exploration of the options available for source reduction, waste minimization, and pollution prevention including regulatory standards applicable to these activities.

EPCT 1472 Environmental Biology (2-4-4) The relationship between life science and the environment. Emphasizes biological influences on the environment including air, water, and soil. Focuses on the effects on human habitation.

EPCT 2233 Environmental Toxicology (2-3-3) A review of the research determining the systematic health effects of exposures to chemicals. Discussion of risk factors, routes of entry, control measures, and acute and chronic effects.

EPCT 2237 Site Assessment (1-4-2) Research techniques required to perform site assessment. Emphasis on the American Society of Testing Materials (ASTM) and Comprehensive Environmental Response Compensation Liability Act (CERCLA) Super Fund Standards.

EPCT 2331 Industrial Hygiene Applications (2-3-3) A study of the industrial environment and its relation to worker's health. This course provides training in anticipation, recognition, evaluation, and controlling health hazards--particularly chemical, physical, biological, and ergonomic factors existing in the workplace and having injurious effects on workers. The course also introduces training in instrumentation used in monitoring and measuring health hazards in the workplace and covers current issues in industrial hygiene.

EPCT 2388 Internship - Environmental Technology (0-0-3) 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.

FITT

FITT 1196 Parks and Recreation (Special Topics) (0-3-1) A study of the Laguna Madre ecosystem and water and sea turtles.

GAME

GAME 1301 Computer Ethics (2-2-3) A study of ethical issues that apply to computer related professions, intellectual property and privacy issues, 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 Introduction to Game Design and 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 1314 Character Sculpting (2-4-3) Creation of original characters from the drawing stage to sculpting clay status. Explores a variety of poses using clay.

GAME 1336 Introduction to 3D Game Modeling (2-4-3) Architectural spaces and modeling in a real-time game editor. Includes techniques for building, texturing, and lighting a game level to function in realtime. Prerequisite: GAME 1303

GAME 1343 Game and Simulation Programming I (2-4-3) Game and simulation programming. Includes advanced pointer manipulation techniques and pointer applications, points and vectors, sound, and graphics. Prerequisite: ITSE 2331

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. Prerequisite: ITSE 2331

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 a high-level language. Focuses on blocking and asynchronous modes. Prerequisite: GAME 1343

GAME 1359 Game and Simulation Programming II (2-4-3) Design and development of game and simulation programs including user interface design, mathematical elements, image and file structure, and software development techniques. Prerequisite: 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. Prerequisite: GAME 1343

GAME 2333 Game and 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. Prerequisite: GAME 1359

GAME 2336 Lighting, Shading, and Texture (2-4-3) Lighting, shading, and texture painting for 3D models using digital painting techniques. Emphasizes lighting, shading, and texture creation of limited resolution to increase system performance for digital games and simulation models.

GAME 2341 Game Scripting (2-4-3) Scripting languages with emphasis on game concepts and simulations. Prerequisite: ITSE 2331

GAME 2347 Advanced Game Programming (2-4-3) Perform tuning, debugging, designing and testing of software; utilize object-oriented architecture design, implement practices for game play within the software; oversee asset management;

and utilize best coding practices. Prerequisite: Final Semester

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. Prerequisite: GAME 1349

GAME 2359 Game and Simulation Group Project (2-4-3) Creation of a game and/or simulation project utilizing a team approach. Includes the integration of design, art, audio, programming, and quality assurance. Prerequisite: GAME 1353, GAME 2303

GISC

GISC 1301 Cartography and Geography in Geographical Information Systems (GIS) and Global Positioning Systems (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 Geographic Information Systems (GIS) (2-4-3) Introduction to basic concepts of vector GIS using several industry specific software programs including nomenclature of cartography and geography.

GISC 2320 Intermediate Geographic Information Systems (GIS) (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.

GRPH

GRPH 1359 Vector Graphics for Production (2-4-3) A study and use of vector graphics for production. Prerequisite: ARTC 1302 (prereq or coreq)

HALT

HALT 1220 Horticultural Calculations 2 0 2 Problem solving and use of formulas and calculations commonly used in the horticulture industry. Emphasis on mathematical, geometrical, financial, and chemical calculations.

HALT 1301 Principles of Horticulture (2-4-3) An overview of the horticulture industry, plant science, terminology, classification, propagation, environmental responses, and careers and opportunities in the field of horticulture.

HALT 1305 Horticultural Soils (3-0-3) A study of the physical properties of soil including structure and texture. Topics include the origin and development of soils, the composition of a soil horizon, and the interrelationship between soil fertility and plants.

HALT 1307 Plant Diseases (3-0-3) An overview of the factors causing plant diseases. Topics include physiological disorders, fungi, bacteria, viruses, mollicutes, nematodes, parasitic plants, non-pathogenic factors, and control methods. Prerequisite: HALT 1324

HALT 1313 Economic Entomology (3-0-3) An overview of insects and related organisms with an emphasis on destructive, predaceous, parasitic, and beneficial species. Topics include insect taxonomy, anatomy, morphology, physiology, and the application of Integrated Pest Management (IPM), mechanical, biological, and chemical control measures.

HALT 1322 Landscape Design (2-2-3) A study of the principles and elements of landscape design. Topics include client interview, site analysis, plan view, scale, plant selection, basic drawing and drafting skills, and plan preparation.

HALT 1324 Turfgrass Science and Management (2-4-3) Coverage of various species of warm and cool season grasses including their uses, application, adaptability, environmental tolerances, anatomy, and physiological responses.

HALT 1325 Landscape Plant Material (2-3-3) Study of the identification, characteristics, cultural requirements, and landscape uses of native and adapted plants. Prerequisite: HALT 1301 or HORT 1401

HALT 1327 Horticultural Equipment Management (2-4-3) Application of various types of powered equipment used in the horticulture industry. Presentation of functions, operations, troubleshooting techniques, and repair of equipment.

HALT 1333 Landscape Irrigation (2-4-3) Coverage of irrigation systems including equipment, design, performance, and maintenance. Topics include residential and small business applications, troubleshooting, repair, and technological advances in irrigation systems.

HALT 1345 Golf/Sports Field/Park Management (2-2-3) Instruction in the management of golf courses, sports fields, and municipal parks departments. Topics include record keeping, budgeting, labor management, maintenance programs, financial reports, personnel management, and business functions. Prerequisite: HALT 1346 or HALT 1324

HALT 1346 Specialized Turfgrass Management (2-4-3) An overview of the construction and management of specialized turf features such as putting greens, tee boxes, bunkers, and sand-based ball fields. Topics include the equipment and cultural practices utilized for intensively managed turf areas. Prerequisite: HALT 1324

HALT 1351 Landscape Business Operations (2-2-3) Instruction in the structure of the landscape business including cost estimation; organization; equipment needs; interpretation of financial reports; and material, labor, and equipment management. Emphasis on the types of landscape operations, marketing, legal forms, construction law, and safety.

HALT 2310 Advanced Landscape Irrigation (2-2-3) Advanced applications of landscape irrigation. Topics include commercial applications of irrigation including athletic fields, golf courses, and large commercial projects. Topics also include equipment, design, performance, troubleshooting, maintenance and repair. Prerequisite: HALT 1333

HALT 2315 Landscape Management (2-3-3) A study of the procedures and practices used in the horticulture industry for proper landscape maintenance. Topics include landscape installation, lawn maintenance, shrub and tree care, and management practices. Prerequisite: HORT 1401 or HALT 1301, HALT 1327, HALT 1324 or HALT 1325

HALT 2318 Soil Fertility and Fertilizers (2-3-3) An in-depth study of the chemistry, soil interaction, plant uptake, and utilization of essential plant nutrients. Topics include deficiency and toxicity symptoms, and the selection, application, and characteristics of fertilizer materials. Prerequisite: HALT 1301 or HORT 1401 or HALT 1324, HALT 1305

HALT 2323 Horticultural Pest Control (2-4-3) Examination of federal, state, and local laws and regulations governing the control of horticultural pests. Topics include procedures; methods; safety requirements; integrated pest management (IPM); and chemical, natural, and biological controls. Prerequisite: HALT 1301 or HORT 1401 or HALT 1324 or HALT 1325

HART

HART 1300 HVAC Duct Fabrication (2-4-3) Layout and fabrication of HVAC duct systems using common tools and equipment of the trade.

HART 1301 Basic Electricity for HVAC (2-4-3) Principles of electricity as required by HVAC, including proper use of test equipment, electrical circuits, and component theory and operation.

HART 1303 Air Conditioning Control Principles (2-4-3) A basic study of HVAC 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. Prerequisite: HART 1301 (prereq or coreq)

HART 1307 Refrigeration Principles (2-4-3) An introduction to the refrigeration cycle, heat transfer theory, temperature/pressure relationship, refrigerant handling, refrigeration components, and safety.

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 1341 Residential Air Conditioning (2-4-3) A study of components, applications, and installation of mechanical air conditioning systems including operating conditions, troubleshooting, repair, and charging of air conditioning systems. Prerequisite: HART 1301, HART 1307

HART 1345 Gas and Electric Heating (2-4-3) Study of the procedures and principles used in servicing heating systems including gas fired furnaces and electric heating systems. Prerequisite: HART 1301

HART 1351 Energy Management (2-4-3) Study of basic heat transfer theory; sensible and latent heat loads; building envelope construction; insulation, lighting, and fenestration types; and conduct energy audit procedures. The course also develops energy audit recommendations based on local utility rates, building use, and construction. Laboratory activities include developing energy audit reports, installing energy saving devices, and measuring energy consumption.

HART 1356 EPC Recovery Certification Preparation (2-2-3) Certification training for HVAC refrigerant recovery, recycle, and reclaim. Instruction will provide a review of EPA guidelines for refrigerant recovery and recycling during the installation, service, and repair of all HVAC and refrigeration systems.

HART 2301 Air Conditioning and Refrigeration Codes (2-4-3) HVAC standards and concepts with emphasis on the understanding, and documentation of the codes and regulations required for the state mechanical contractors license and local codes.

HART 2302 Commercial Air Conditioning System Design (2-4-3) Advanced study in essential elements of commercial air conditioning contracting including duct systems design; equipment selection using manufacturers' data; and preparation of shop drawings and submittals. Prerequisite: HART 2336

HART 2331 Advanced Electricity for HVAC (2-4-3) Advanced electrical instruction and skill building in installation and servicing of air conditioning and refrigeration equipment including detailed instruction in motors and power distribution motors, motor controls, and application of solid state devices. Prerequisite: HART 1303

HART 2334 Advanced Air Conditioning Controls (2-4-3) Theory and application of electrical control devices, electromechanical controls, and/or pneumatic controls. Prerequisite: HART 2331

HART 2336 Air Conditioning Troubleshooting (2-4-3) 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. Prerequisite: HART 1303, HART 1341, HART 1345

HART 2338 Air Conditioning Installation and Startup (2-4-3) A study of air conditioning system installation, refrigerant piping, condensate disposal, and air cleaning equipment with emphasis on startup and performance testing.

HART 2341 Commercial Air Conditioning (2-2-3) A study of components, applications, and installation of air conditioning systems with capacities of 25 tons or less. Prerequisite: HART 1341, HART 1345

HART 2342 Commercial Refrigeration (2-4-3) Theory and practical application in the maintenance of commercial refrigeration; medium, and low temperature applications and ice machines. Prerequisite: HART 1307

HART 2343 Industrial Air Conditioning (2-4-3) A study of components, accessories, applications, and installation of air conditioning systems above 25 tons capacity. Prerequisite: HART 1341, HART 1303

HART 2345 Residential Air Conditioning Systems Design (2-4-3) 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. Prerequisite: HART 2336

HART 2349 Heat Pumps (2-4-3) A study of heat pumps, heat pump control circuits, defrost controls, auxiliary heat, air flow, and other topics related to heat pump systems. Prerequisite: HART 1341, HART 1303

HART 2350 HVAC Zone Controls (2-4-3) Theory and application of HVAC residential Zone control devices, electromechanical controls, and/or pneumatic controls.

HART 2357 Specialized Commercial Refrigeration (2-2-3) An advanced course covering the components, accessories, and service of specialized refrigeration units, such as ice machines, soft-serve machines, cryogenics, and cascade systems. Prerequisite: HART 1341, HART 1345

HART 2358 Testing, Adjusting and Balancing HVAC Systems (2-4-3) A study in the process of checking and adjusting all the building environmental systems to produce the design objectives. Emphasis on efficiency and energy savings. Prerequisite: Hart 2336

HART 2380 Cooperative Education 1 0 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: DC Approval

HEMR

HEMR 1304 Natural Gas Compression (2-4-3) An introductory course in the principles of the operation of gas compressors and natural gas engines.

HEMR 1401 Tracks and Undercarriages (2-4-3) Concepts in operation and maintenance of final drive track systems and undercarriages used on track and wheel type equipment.

HITT

HITT 1204 IT for Health Professions (1-4-2) For students without an IT background, provides a basic overview of computer architecture, data organization, representation and structure, structure of programming, networking, and data communication. Includes basic terminology of computing.

HITT 1253 Legal and Ethical Aspects of Health Information (1-2-2) Concepts of privacy, security, confidentiality, ethics, health care legislation, and regulations relating to the maintenance and use of health information.

HITT 1266 Practicum (or Field Experience) - Health Information/Medical Records Technology (0-0-2) Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

HITT 1301 Health Data Content and Structure (2-4-3) Introduction to systems and processes for collecting, maintaining, and disseminating primary and secondary health related information including content of health record, documentation requirements, registries, indices, licensing, regulatory agencies, forms, and screens.

HITT 1305 Medical Terminology I (2-4-3) Study of medical terms through word origin and structure. Introduction to abbreviations and symbols, surgical and diagnostic procedures, and medical specialties.

HITT 1311 Health Information Systems (2-4-3) Introduction to health IT standards, health-related data structures, software applications, and enterprise architecture in health care and public health.

HITT 1341 Coding and Classification Systems (2-4-3) Fundamentals of coding rules, conventions, and guidelines using clinical classification systems.

HITT 1342 Ambulatory Coding (2-4-3) Fundamentals of ambulatory coding rules, conventions, and guidelines.

HITT 1345 Health Care Delivery Systems 3 1 3 Examination of delivery systems including organization, financing, accreditation, licensure, and regulatory agencies.

HITT 2166 Practicum (or Field Experience) - Health Information/Medical Records Technology (0-0-1) Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

HITT 2249 RHIT Competency Review (1-2-2) Review Health Information Technology (HIT) competencies, skills, and knowledge.

HITT 2266 Practicum (or Field Experience) - Health Information/Medical Records Technology (0-0-2) Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

HITT 2331 Medical Terminology - Advanced (2-4-3) Study of advanced terminology in various medical and surgical specialties including disease processes.

HITT 2335 Coding and Reimbursement Methodologies (2-4-3) Advanced coding techniques with emphasis on case studies, health records, and federal regulations regarding prospective payment systems and methods of reimbursement. Prerequisite: HITT 1341

HITT 2339 Health Information Organization and Supervision (3-0-3) Principles of organization and supervision of human, financial, and physical resources.

HITT 2346 Advanced Medical Coding (2-4-3) Advanced concepts of ICD and CPT coding rules, conventions, and guidelines in complex case studies. Investigation of government regulations and changes in health care reporting. Prerequisite: HITT 1341, HITT 1342

HITT 2366 Practicum (or Field Experience) - Health Information/Medical Records Technology (0-0-3)

HITT 2443 Quality Assessment and Performance Improvement (2-6-4) Study of quality standards and methodologies in the health information management environment. Topics include licensing, accreditation, compilation and presentation of data in statistical formats, quality management and performance improvement functions, utilization management, risk management, and medical staff data quality issues. Approaches to assessing patient safety issues and implementation of quality management and reporting through electronic systems and approaches to assessing patient safety issues and implementation of quality management and reporting through electronic systems.

HPRS

HPRS 1206 Essentials of Medical Terminology (2 0 2) A study of medical terminology, word origin, structure, and application.

HRPO

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.

HRPO 2301 Human Resources Management (2-4-3) Behavioral and legal approaches to the management of human resources in organizations.

HYDR

HYDR 1301 Rigging and Conveying Systems (2-4-3) Introduction to directing and moving heavy objects, selecting the appropriate rigging equipment, in conjunction with the suitable hardware and lifting devices with an emphasis on inspection, care, and maintenance of rigging equipment.

HYDR 1305 Basic Hydraulics (2-4-3) Fundamentals of hydraulics including types of hydraulic pumps, cylinders, valves, motors, and related systems. Introduction to hydraulic schematic symbols as related to components.

HYDR 1345 Hydraulics and Pneumatics (2-4-3) Discussion of the fundamentals of hydraulics and pneumatics, components of each system, and the operations, maintenance, and analysis of each system.

IEIR

IEIR 1371 Electrical Principles & Applications (2-4-3) Major topics include safety; the engineering sebset of metric prefixes; engineering notation; electronic abbreviations; schematic symbols; resistor color codes; wire size and composition; Ohm's Law, Watt's Law, and Kirchoff's Laws; analysis of simple direct current and alternating current circuitry; and basic electrical devices including direct current motors, transformers, and passive filters. Laboratory sessions will stress use of test equipment including the digital multimeter and oscilloscope, construction of simple circuits, and troubleshooting techniques to determine faults in simple circuits.

IFWA

IFWA 1205 Food Service Equipment and 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 1217 Food Production and Planning (1-2-2) Skill development in basic mathematical operations and study of their applications in the food service industry. Topics include percentages, weights and measures, ratio and proportion, weights and measures conversions, determination of portion costs for menu items and complete menus, portion control, and the increase and decrease of standard recipes.

IFWA 1318 Nutrition for the Food Service Professional (3-0-3) An introduction to nutrition including nutrients, digestion and metabolism, menu planning, recipe modification, dietary guidelines and restrictions, diet and disease, and healthy cooking techniques.

IFWA 1319 Meat Identifying and Processing (2-4-3) 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.

IFWA 1401 Food Preparation I 2 8 4 A study of the fundamental principles of food preparation and cookery. Emphasis on basic techniques of preparing soups, salads, dressings, sandwiches, beverages, vegetables, and cheese and egg cookery. Prerequisite: CHEF 1205, IFWA 1205, IFWA 1217

IFWA 1427 Food Preparation II 2 8 4 Continuation of the fundamental principles of food preparation. Emphasis on preparation of food items such as meats, poultry and fish. Prerequisite: IFWA 1401

IMED

IMED 1316 Web Design I (2-4-3) Instruction in web 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 digital media applications and/or animations using industry standard authoring software.

IMED 2311 Portfolio Development (2-4-3) Preparation and enhancement of portfolio to meet professional standards, development of presentation skills, and improvement of job-seeking techniques.

IMED 2315 Web Design II (2-4-3) A study of mark-up language and 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. Prerequisite: IMED 1316

IMED 2351 Digital Media Programming (2-4-3) Advanced topics in digital media programming including custom scripts for data tracking. Emphasis on developing digital media programs customized to the client's needs.

IMED 2388 Internship - Digital Communication and Media/Multimedia (0-0-3) 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: INEW 2334, ITSE 2313, IMED 2315

INDS

INDS 1301 Basic Elements of Design (2-4-3) A study of basic design concepts with projects in shape, line, value, texture, pattern, spatial illusion, and form.

INEW

INEW 1340 ASP.NET Programming (2-4-3) Server side web programming concepts to implement solutions for common web programming tasks. Includes Basic

ASP.NET web controls, user management and authentication, state management, and development of database-driven web applications. Prerequisite: ITSE 2334, ITSE 2338

INEW 2330 Comprehensive Software Project: Planning and Design (2-4-3) A comprehensive application of skills learned in previous courses in a simulated workplace. Covers the development, testing, and documenting of a complete software and/or hardware solution. This course may be used as a capstone course for a certificate or degree. Prerequisite: ITSE 2334, ITSE 2338

INEW 2332 Comprehensive Software Project: Coding, Testing, and Implementation (2-2-3) A comprehensive application of skills learned in previous semesters in a simulated workplace. Includes coding, testing, maintenance, and documentation of a complete software and/or hardware solution. This course may be used as a capstone course for a certificate or degree.

INEW 2334 Advanced Web Programming (2-4-3) Web programming using industry-standard languages and data stores. Prerequisite: ITSE 1311

INEW 2338 Advanced Java Programming (2-4-3) A continuation of Java programming techniques such as servlets, and advanced graphical functions. Prerequisite: ITSE 2317

INMT

INMT 1305 Introduction to Industrial Maintenance (2-4-3) Basic mechanical skills and repair techniques common to most fields of industrial maintenance. Topics include precision measuring instruments and general safety rules common in industry, including lock-out/tag-out.

INMT 1317 Industrial Automation (2-4-3) Applications of industrial automation systems including identification of system requirements, equipment integration, motors, controllers, and sensors. Coverage of set-up, maintenance, and testing of the automated system.

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.

INMT 1355 Industrial Power Plant Systems (2-4-3) Study the principles of operation and maintenance of industrial power plants. Emphasis placed on component replacement, tune-up, and field adjustments of engine systems. Prerequisite: INMT 1305

INMT 2301 Machinery Installation (2-4-3) Students utilize skills acquired in previous studies. Machinery foundation, locations, installation, and alignment activities are practiced and tested. Emphasis is on the various methods of shaft alignment including laser shaft alignment. Prerequisite: INMT1305

INMT 2303 Pumps, Compressors & Mechanical Drives (2-4-3) A study of the theory and operations of various types of pumps and compressors. Topics include mechanical power transmission systems including gears, v-belts, and chain drives. Prerequisite: INMT1305

INMT 2345 Industrial Troubleshooting (2-4-3) An advanced study of the techniques used in troubleshooting various types of industrial equipment to include mechanical, electrical, hydraulic, and pneumatic systems and their control devices. Emphasis will be placed on the use of schematics and diagrams in conjunction with proper troubleshooting procedures. Prerequisite: ELPT1341

INTC

INTC 1341 Principles of Automatic Control (2-4-3) Basic measurements, automatic control systems and design, closed loop systems, controllers, feedback, control modes, and control configurations.

INTC 1343 Application of Industrial Automatic Controls (2-4-3) Automatic process control including measuring devices, analog and digital instrumentation, signal transmitters, recorders, alarms, controllers, control valves, and process and instrument diagrams. Includes connection and troubleshooting of loops.

INTC 1348 Analytical Instrumentation (2-4-3) Analytical instruments emphasizing utilization in process applications. Includes, but not limited to, chromatography, pH, conductivity, and spectrophotometic instruments. Prerequisite: INTC 1341

INTC 1355 Unit Operations (2-4-3) Automatic control requirements of industrial processes. Includes control systems, control loop tuning, and analysis.

INTC 1356 Instrumentation Calibration (2-4-3) Techniques for configuring and calibrating transmitters, controllers, recorders, valves, and valve positioners. Prerequisite: INTC 1355

INTC 1357 AC/DC Motor Control (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.

INTC 1358 Flow and Measurement Calibration (2-4-3) Practical methods of flow measurements and flow integration. Emphasizes primary flow element selection and calculations in accordance with American Gas Association (AGA) and American Petroleum Institute (API) standards. Prerequisite: INTC 1341

INTC 1370 Power Supply (2-4-3) A study of automatic process control including measuring devices, analog and digital instrumentation, signal transmitters, recorders, alarms, controllers, control valves, and process and instrument drawings. Includes connection and troubleshooting of loops. Prerequisite: CETT 1305

INTC 1371 Nuclear Calibration (2-4-3) This course focuses on a variety of calibration procedures required in the nuclear power generation industry. Prerequisite: INTC 1355

INTC 1380 Cooperative Education - Instrumentation Technology 1 0 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.

INTC 2330 Instrumentation Systems Troubleshooting (2-4-3) Techniques for troubleshooting instrumentation systems in a process environment. Includes troubleshooting upsets in processes. Prerequisite: INTC 1343

INTC 2333 Instrumentation Systems Installation (2-4-3) Synthesis, application, and integration of instrument installation components. Includes a comprehensive final project. Prerequisite: INTC 1355

INTC 2336 Distributed Control and Programmable Logic (2-4-3) An overview of distributed control systems including configuration of programmable logic controllers, smart transmitters, and field communicators. Functions of digital systems in a process control environment. Prerequisite: INTC1341, ELPT2319 (Pre or Co)

INTC 2339 Instrument and Control Review (2-4-3) An overview of instrument and control technology in preparation for industry employment and national testing. Prerequisite: INTC 1343

INTC 2350 Fieldbus Process Control Systems (2-4-3) A comprehensive view of fieldbus systems using theory, applications, and hands-on experiences. Prerequisite: INTC 2333

IRAD

IRAD 1301 Radiation Detection Measurement I (2-3-3) Principles and methods utilized to detect and measure radiation with emphasis on gas-filled-ionization, proportional, and Geiger Muellar (G-M) detectors. Topics include statistics of counting, calculation of efficiencies, and performance of surveys.

IRAD 2271 Radiation Detection Measurements II (1-4-2) Continued study of the principles and methods used to detect and measure radiation with emphasis on scintillators, semiconductors, spectroscopy, external personnel dosimeters, and neutron detectors. Introduction to radiological calibration and standardization.

ITCC

ITCC 1301 Cisco Exploration 1 - Network Fundamentals (2-4-3) A course intro-

ducing the architecture, structure, functions, components, and models of the internet. Describes the use of OSI and TCP layered models to examine the nature and roles of protocols and services at the applications, network, data link, and physical layers. Covers the principles and structure of IP addressing and the fundamentals of Ethernet concepts, media, and operations. Build simple LAN topologies by applying basic principles of cabling; perform basic configurations of network devices, including routers and switches; and implementing IP addressing schemes. Prerequisite: ITNW 1325

ITCC 1304 Cisco Exploration 2 - Routing Protocols and Concepts (2-4-3) This course describes the architecture, components, and operation of routers, and explains the principles of routing and routing protocols. Students analyze, configure, verify, and troubleshoot the primary routing protocols RIPv1, RIPv2, EIGRP, and OSPF. Recognize and correct common routing issues and problems. Model and analyze routing processes. Prerequisite: ITCC 1301 or ITNW 1358

ITCC 1340 Switching Basics (2-4-3) Internet Protocol addressing techniques, command line interface configuration of switches, Ethernet switching, and protocols associated with Virtual Local Area Networks (VLANs).

ITCC 2308 Cisco Exploration 3 - LAN Switching and Wireless (2-4-3) This course helps students develop an in-depth understanding of how switches operate and are implemented in the LAN environment for small and large networks. Detailed explanations of LAN switch operations, VLAN implementation, Rapid Spanning Tree Protocol (RSTP), VLAN Trunking Protocol (VTP), Inter-VLAN routing, and wireless network operations. Analyze, configure, verify, and troubleshoot VLANs, RSTP, VTP, and wireless networks. Campus network design and Layer 3 switching concepts are introduced. Prerequisite: ITCC 1304 or ITNW 2312

ITCC 2310 Cisco Exploration 4 - Accessing the WAN (2-4-3) This course explains the principles of traffic control and access control lists (ACLs) and provides an overview of the services and protocols at the data link layer for wide-area access. Describes user access technologies and devices and discover how to implement and configure Point-to-Point Protocol (PPP), Point-to-Point Protocol over Ethernet (PPPoE), DSL, and Frame Relay. WAN security concepts, tunneling, and VPN basics are introduced. Discuss the special network services required by converged applications and an introduction to quality of service (QoS). Prerequisite: ITCC 2308

ITDF

ITDF 1300 Introduction to Digital Forensics (2-4-3) A study of the application of digital forensic technology to collect, analyze, document, and present information while maintaining a documented chain of custody. Overview of ethics, crime, and other legal guidelines/regulations/laws. Includes overview of tools used for forensic analysis of digital devices in investigations.

ITDF 1305 Digital Data Storage Forensics (2-4-3) Exploration, examination, and assessment of the characteristics and details of digital storage media used in computers systems and small-scale digital devices. Includes experimenting with various tools to reinforce identification of evidentiary data.

ITDF 2320 Digital Forensics Collection (2-4-3) A study of acquiring digital evidence from devices, networks and logs while preserving the evidentiary chain. Includes the legal aspects of the search and seizure of computers and related equipment/information. Prerequisite: ITDF 1300 or ITDF 1305

ITDF 2325 Digital Forensics Tools (2-4-3) Skills-based course in the applications of forensic analysis software. Tools used in this course may include EnCase, ILook, Forensic Tool Kit, write blockers, StegAlyzerSS, "X-Ways", ProDiscover Basic, and others. Prerequisite: ITDF 1300 or ITDF 1305

ITDF 2330 Digital Forensics Analysis (2-4-3) Digital forensic analysis, report preparation, and evidence presentation. Emphasizes balancing legal and technical aspects of cases where digital forensics is employed. Prerequisite: ITDF 1300 or ITDF 1305

ITDF 2335 Comprehensive Digital Forensics Project (2-4-3) Comprehensive application of skills learned in previous digital forensics courses in a simulated crime scene or workplace investigation. Includes collection, analysis, and presentation of digital data and evidence in a problem-based case study format. This course is used as a capstone course for a certificate or degree. Prerequisite: ITDF 1300 or ITDF 1305

ITNW

ITNW 1308 Implementing and Supporting Client Operating Systems (2-4-3) The fundamentals of managing and configuring network clients.

ITNW 1313 Computer Virtualization (2-4-3) Implement and support virtualization of clients of servers in a networked computing environment. This course explores installation, configuration, and management of computer virtualization workstation and servers.

ITNW 1325 Fundamentals of Networking Technologies (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 1345 Implementing Network Directory Services (2-4-3) In-depth coverage of the skills necessary to install, configure, and administer Network Directory service. Prerequisite: ITNW 1325

ITNW 1351 Fundamentals of Wireless LANs (2-4-3) Design, plan, implement, operate, and troubleshoot Wireless Local Area Networks (WLANs). Includes WLAN design, installation, and configuration; and WLAN security issues and vendor interoperability strategies.

ITNW 1354 Implementing and Supporting Servers (2-4-3) Implement, administer, and troubleshoot information systems that incorporate servers in a networked computing environment.

ITNW 1358 Network+ (2-4-3) Assists individuals in preparing for the Computing Technology Industry Association (CompTIA) Network+ certification exam and career as a network professional. Prerequisite: ITNW 1325

ITNW 2312 Routers (2-4-3) Router configuration for local area networks and wide area networks. Includes Internet Protocol (IP) addressing techniques and intermediate routing protocols. Prerequisite: ITNW 1325

ITNW 2313 Networking Hardware (2-4-3) Exploration of hardware devices including cables, servers, and workstations, network connectivity devices and uninterruptible power supplies. Prerequisite: ITNW 1325, ITSC 1325

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. Prerequisite: ITNW 1325

ITNW 2335 Network Troubleshooting and Support (2-4-3) Troubleshoot and support networks with emphasis on solving real world problems in a hands-on environment. Topics include troubleshooting and research techniques, available resources, and network management hard/software. Prerequisite: ITNW 1325

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 2352 Administering SQL Server (2-4-3) Administering SQL Server is a skills development course in the installation, configuration, administration, and troubleshooting of SQL Servers client/server database management system version. Prerequisite: ITNW 2354 (pre or Co) OR ITSW 1307 (pre)

ITNW 2354 Internet/Intranet Server (2-4-3) Advanced concepts in the designing, installing, and administration of an Internet/Intranet server. Prerequisite: ITNW 1345 or ITSC 1316

ITNW 2359 Web Server Support and Maintenance (2-4-3) Instruction in the installation, configuration, and implementation of web servers.

ITNW 2373 High Performance Computing Systems Support (2-4-3) This course is designed to prepare students for ongoing maintenance and support of high performance computing systems. Students will learn how to use system management tools and cluster monitoring software to keep HPC clusters operating. During the course, students will be presented with performance problems that require trouble-

shooting and problem-solving skills. Prerequisite: ITNW 2354

ITNW 2376 Cloud Deployment and Infrastructure Management (2-4-3) Deployment and management of scalable data centers, public and private cloud infrastructures, co-location strategies, energy consumption calculation, and disaster recovery planning using open source and commercial software. Prerequisite: ITNW 2354

ITSC

ITSC 1301 Introduction to Computers (2-4-3) Overview of computer information systems. Introduces computer hardware, software, procedures, and human resources.

ITSC 1309 Integrated Software Applications I (2-4-3) Introduction to business productivity software suites using word processing, spreadsheets, databases, and/or presentation software.

ITSC 1315 Project Management Software (2-4-3) Use of project management software for developing a project plan including timelines, milestones, scheduling, life cycle phases, management frameworks, skills, processes, and tools.

ITSC 1316 Linux Installation and Configuration (2-4-3) Introduction to Linux operating system. Includes Linux installation, basic administration, utilities and commands, upgrading, networking, security, and application installation. Emphasizes hands-on setup, administration, and management of Linux. Prerequisite: ITNW 1325 or ITNW 1308

ITSC 1321 Intermediate PC Operating Systems (2-4-3) Custom operating system installation, configuration and troubleshooting. management of file systems, memory, storage, and peripheral devices. Prerequisite: CPMT 1304

ITSC 1325 Personal Computer Hardware (2-4-3) Current personal computer hardware including assembly, upgrading, setup, configuration, and troubleshooting.

ITSC 1374 Help Desk: Customer Service Skills (2-4-3) Fundamental customer support concepts for the operation of a help desk or call center including effective communication, customer service principles, troubleshooting, and solution-oriented techniques.

ITSC 2321 Integrated Software Applications II (2-4-3) Intermediate study of computer applications from business productivity software suites. Instruction in embedding data and linking and combining documents using word processing, spreadsheets, databases, and/or presentation media software.

ITSC 2325 Advanced Linux (2-4-3) Provides instruction in Advance Open-source Linux operating system. Develops LDAP directory services to all your clients, support users remotely, installing and configuring network services. Prerequisite: ITSC 1316

ITSC 2339 Personal Computer Help Desk Support (2-4-3) Diagnosis and solution of user hardware and software related problems with on-the-job and/or simulated projects. Prerequisite: CPMT 1311 or ITSC 1325

ITSC 2386 Internship - Computer and Information Sciences, General (0-0-3) 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: ITNW 2335 (Pre or Co), ITNW 2354 (Pre or Co)

ITSE

ITSE 1301 Web Design Tools (2-4-3) Designing and publishing Web documents according to World Wide Web Consortium (W3C) standards. Emphasis on optimization of graphics and images and exploration of tools available for creating and editing Web documents.

ITSE 1302 Computer Programming (2-4-4) Introduction to computer programming including design, development, testing, implementation, and documentation.

ITSE 1303 Introduction to MySQL (2-4-3) Introduction to fundamentals of SQL and relational databases. Prerequisite: ITSW 1307

ITSE 1306 PHP Programming (2-4-3) Introduction to PHP including the design of web-based applications, arrays, strings, regular expressions, file input/output, e-mail and database interfaces, stream and network programming, debugging, and security. Prerequisite: ITSE 1359 (Prereq or Coreq)

ITSE 1307 Introduction to C++ Programming (2-4-3) Introduction to computer programming using C++. Emphasis on the fundamentals of object-oriented design with development, testing, implementation, and documentation. Includes language syntax, data and file structures, input/output devices, and files.

ITSE 1311 Beginning Web Programming (2-4-3) Skills development in web programming including mark-up and scripting languages.

ITSE 1329 Programming Logic and Design (2-4-3) Problem-solving applying structured techniques and representation of algorithms using design tools. Includes testing, evaluation, and documentation.

ITSE 1330 Introduction to C# Programming (2-4-3) A study of C# syntax including data types, control structures, functions, syntax, and semantics of the language, classes, class relationships, and exception handling. Prerequisite: ITSE 1329

ITSE 1332 Introduction to Visual Basic.NET Programming (2-4-3) Introduction to Visual Basic.NET (VB.NET) including data types, control structures, functions, syntax, and semantics of the language, classes, class relationships, and exception handling. Prerequisite: ITSE 1329

ITSE 1346 Database Theory and Design (2-4-3) Introduction to the analysis and utilization of data requirements and organization into normalized tables using the four normal forms of database design. Prerequisite: ITSW 1307

ITSE 1347 Programming with Visual Basic.Net (2-4-3) Designing and developing enterprise applications using Microsoft Visual Basic.Net in the Microsoft.Net Framework. Includes reference types, class relationships, polymorphism, operators overloading, and creating and handling exceptions.

ITSE 1350 System Analysis and Design (2-2-3) Introduction to the planning, design, and construction of computer information systems using the systems development life cycle and other appropriate design tools.

ITSE 1359 Introduction to Scripting Languages (2-4-3) Introduction to scripting languages including basic data types, control structures, regular expressions, input/output, and textual analysis.

ITSE 1372 Mobile Application Development (2-4-3) Builds on current programming skills. Students apply software design and logic principles while developing applications for mobile devices such as smart phones and tablets.

ITSE 1392 Dynamic Link Libraries, Reports, and Deployment (Special Topics) (2-4-3) Development of dynamic link libraries for use in multiple applications. Incorporate dynamic reports to enhance user applications. Prerequisite: ITSE 2334, ITSE 2338

ITSE 2305 Windows Programming (2-4-3) Introduction to computer programming for windows. 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 2310 iOS Application Programming (2-4-3) Course explores developing applications for iOS devices. Will include Objective-C programming, use of the iOS SDK environment, and current programming issues in the iOS environment. Prerequisite: ITSE 1307

ITSE 2313 Web Authoring (2-4-3) Instruction in designing and developing web pages that incorporate text, graphics, and other supporting elements using current technologies and authoring tools. Prerequisite: ITSE 1311

ITSE 2317 Java Programming (2-4-3) Introduction to object-oriented Java programming including the fundamental syntax and semantics of Java for applications and web applets. Prerequisite: ITSE 1307

ITSE 2331 Advanced C++ Programming (2-4-3) Further application of C++ programming techniques including file access, abstract data structures, class inheritance, and other advanced techniques. Prerequisite: ITSE 1307

ITSE 2333 Implementing a Database on Microsoft SQL Server (2-4-3) Skills development in the implementation of a database solution using Microsoft SQL Server client/server database management system. Prerequisite: ITSW 1307

ITSE 2334 Advanced Visual Basic.NET Programming (2-4-3) Continuation of Visual Basic.NET programming using advanced features. Prerequisite: ITSE 1302 or ITSE 1332

ITSE 2338 C# Database Development with ADO.NET (2-4-3) C# applications to access data from a database. Emphasizes Object-Oriented Programming (OOP) and database programming with ADO.NET. Prerequisite: ITSE 1302

ITSE 2343 Advanced Windows Programming (2-4-3) Continued applications of Windows programming including file access methods, data structures, modular programming, program testing and documentation. Prerequisite: ITSE 2305

ITSE 2345 Data Structures (2-4-3) Design an analysis of data structures and their operations. Prerequisite: ITSE 2331

ITSE 2346 Oracle: Application I (2-4-3) Skill development in the use of Forms in a Developer environment. Topics include the use of Object Navigator and Virtual Graphics System (VGS), Layout Editor and Menu options. Prerequisite: ITSE 2333, ITSE 1346

ITSE 2347 Advanced Database Programming (2-4-3) Database development using complex database programming techniques emphasizing multiple interrelated files, menu design, security implementation, and multiple access. Prerequisite: ITSE 2356

ITSE 2348 Oracle: Applications II (2-4-3) A continuation of Oracle Forms: Application I. Includes creating multiple form applications, managing multiple transactions across modules, and enhancing applications with custom menus, and charts. Prerequisite: ITSE 2346

ITSE 2353 Advanced C# Programming (2-4-3) Continuation of C# programming using advanced features of the .NET Framework Class Library. Prerequisite: ITSE 1330

ITSE 2354 Advanced Oracle PL/SQL (2-4-3) A continuation of Oracle SQL. Topics include hierarchical queries, set based queries, correlated subqueries, scripting, and scripting generation. Prerequisite: ITSW 1307

ITSE 2356 Oracle Database Administration I (2-4-3) Fundamentals of the tasks and functions required of a database administrator using Oracle. Prerequisite: ITSE 1346 AND ITSE 1303

ITSE 2357 Advanced Object-Oriented Programming (2-4-3) Application of advanced object-oriented programming techniques such as abstract data structures, class inheritance, polymorphism, and exception handling. Prerequisite: ITSE 2310

ITSE 2358 Oracle Database Administration II (2-4-3) A continuation of Oracle Database Administration I. Topics include recovery procedures, logical backups, standby database capabilities, and performance tuning of the Oracle Server. Common performance problems and the use of diagnostic tools to troubleshoot and optimize throughput will be discussed. Prerequisite: ITSE 2409

ITSE 2371 Advanced iOS Programming (2-4-3) This course explores the creation and deployment of an application to an iOS device by building upon concepts in iOS Application Programming and utilization of the Cocoa/Cocoa Touch Framework. Prerequisite: ITSE 2310

ITSE 2386 Internship - Computer Programming (0-0-3) 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.

ITSE 2409 Database Programming (2-4-4) Database development using database programming techniques emphasizing database structures, modeling, and database access.

ITSE 2439 Advanced Windows Programming Using C++ (2-4-4) Further applications of windows programming techniques using C++, including file access methods, data structures, modular programming, program testing, and documentation. Prerequisite: ITSE 2409

ITSE 2447 Advanced Database Programming (2-4-4) Database development using complex database programming techniques emphasizing multiple interrelated files, menu design, security implementation, and multiple access.

ITSW

ITSW 1304 Introduction to Spreadsheets (2-4-3) Instruction in the concepts, procedures, and application of electronic spreadsheets.

ITSW 1307 Introduction to Database (2-4-3) Introduction to database theory and the practical applications of a database.

ITSW 1310 Introduction to Presentation Graphics Software (2-4-3) Instruction in the utilization of presentation software to produce multimedia presentations. Graphics, text, sound, animation and/or video may be used in presentation development.

ITSW 2334 Advanced Spreadsheets (2-4-3) Advanced techniques for developing and modifying spreadsheets. Includes macros and data analysis functions. Prerequisite: ITSW 1304

ITSW 2337 Advanced Database (2-4-3) Advanced concepts of database design and functionality.

ITSW 2386 Internship - Data Processing and Data Processing Technology (0-0-3) 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.

ITSY

ITSY 1300 Fundamentals of Information Security (2-4-3) An introduction to information security including vocabulary and terminology, ethics, the legal environment, and risk management. Identification of exposures and vulnerabilities and appropriate countermeasures are addressed. The importance of appropriate planning, policies and controls is also discussed.

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. Prerequisite: ITSY 1300 or ITNW 1342

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 1325 or ITNW 2312

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. Prerequisite: ITSY 1342

ITSY 2343 Computer System Forensics (2-4-3) In-depth study of system forensics including methodologies used for analysis of computer security breaches. Gather and evaluate evidence to perform postmortem analysis of a security breach. Prerequisite: ITSY 1300

ITSY 2359 Security Assessment and 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 to assure regulatory compliance. Prerequisite: ITSY 1342 , ITSY 2301

LAWT

LAWT 1301 Copyright and Ethical Issues (2-4-3) 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.

LMGT 1319 Introduction to Business Logistics (2-2-3) A systems approach to managing activities associated with traffic, transportation, inventory management, warehousing, packaging, order processing, and materials handling.

LMGT 1321 Introduction to Materials Handling (2-2-3) Introduces the concepts and principles of materials management to include inventory control and forecasting activities.

LMGT 1323 Domestic and International Transportation Management (2-2-3) An overview of the principles and practices of transportation and its role in the distribution process. Emphasis on the physical transportation systems involved in the United States as well as on global distribution systems. Topics include carrier responsibilities and services, freight classifications, rates, tariffs, and public policy and regulations. Also includes logistical geography and the development of skills to solve logistical transportation problems and issues.

LMGT 1325 Warehouse and Distribution Center Management (2-2-3) Emphasis on physical distribution and total supply chain management. Includes warehouse operations management, hardware and software operations, bar codes, organizational effectiveness, just-in-time, and continuous replenishment.

LMGT 1340 Contemporary Logistics Issues (2-2-3) Exploration of relevant and changing topics in the logistics management field. Includes group projects, interaction with local industry, class lectures, and case studies.

LMGT 1341 Freight Loss and Damage Claims (2-2-3) An analysis of bill of lading contracts and liability for lost or damaged freight, including procedures for filing and documenting claims.

LMGT 1346 Radio Frequency Identification (RFID) - Wireless Information Systems (2-2-3) Overview of the wireless communication system and its application with the radio frequency identification (RFID) system. Includes an introduction of the value of both systems as they relate to traffic management, transportation, inventory management, warehousing, packaging, order processing, and materials handling.

LMGT 1349 Materials Requirement Planning (2-2-3) A study of materials requirement planning that includes net change versus regenerative systems, lot sizing, and the time sharing of dependent demand.

LMGT 2330 International Logistics Management (2-2-3) Identification of the principles and practices involved in international distribution systems including the multinational corporation. Attention to global strategic planning, production, supply, manpower/labor, geography, business communications, cultural, political, and legal issues affecting global distribution and firm/host relationships.

LMGT 2334 Principles of Traffic Management (2-2-3) A study of the role and functions of a transportation traffic manager within a commercial or public enterprise. Includes training in rate negotiation, carrier and mode selection, carrier service evaluation, quality control, traffic pattern analysis, documentation for domestic and international shipments, claims, hazardous materials movement, and the state, federal, and international environments of transportation.

LMGT 2388 Internship: Logistics and Materials Management (0-0-3) 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.

LNWK 1231 Transformer Connections (1-4-2) An introduction to basic transformer connections and theory (including basic alternating current (AC) theory) and their direct application to single phase and three phase transformers. Students will study and practice basic transformer connections and fundamentals.

LNWK 1241 Distribution Operations 2 0 2 A study of the theoretical and practical operation of electric utility distribution systems. Topics include customer service voltages, capacitors, and coordination of protection equipment.

LNWK 1301 Orientation and Line Skill Fundamentals (2-4-3) Examination of utility company operations. Topics include company structure, safety and distribution standards handbook, lineman's tools, vocabulary, and work procedures. Discussion of basic electrical systems including the history of power generation and distribution with emphasis on generating plants and substations. Prerequisite: DOT Physical for CDL

LNWK 1311 Climbing Skills (2-4-3) Theory and application of pole climbing. Includes safety, climbing techniques, tool inspection, poles inspection, personal protective equipment, and fall protection. Prerequisite: DOT Physical for CDL

LNWK 2321 Live Line Safety (2-4-3) Study of cover-up procedures and safety requirements for work on energized electrical circuits. Includes use, care, and inspection of cover-up material, recognizing nominal voltages and energized parts, approach distances, and safety. Prerequisite: LNWK 1301

LNWK 2322 Distribution Line Construction (2-4-3) Study of electric distribution line construction. Includes reading staking sheets and framing specifications, tailboard discussions, pole framing and setting, installing conductors, transformers and other line equipment, and OSHA and NESC regulations. Prerequisite: LNWK 1311

LNWK 2324 Troubleshooting Distribution Systems (2-4-3) Study of power outages and voltage complaints on distribution systems. Includes lockout-tagout procedures, safety grounds, backfeed, induced voltage, causes of outages, and analyzing voltage complaints. Prerequisite: LNWK 2322

LOTT 1271 Mathematics for Photonics Technicians (1-4-2) Need a mathematics course specific to the needs of photonics technician.

LOTT 1344 Fundamentals of Laser and Laser Safety (2-4-3) An introduction to the general nomenclature of the laser including laser safety, light and its properties, lasing action, optical cavities, modes of oscillation, and laser characteristics and classifications.

LOTT 1443 Geometrical Optics (3-4-4) Theory of light as a geometric ray. Applications of the laws of reflection and refraction from the mathematical, graphical, and experimental aspects.

LOTT 2432 Laser Maintenance and Repair (2-6-4) A course in planning, disassembling, testing, and troubleshooting various systems. Emphasis on practical utilization of support test equipment. Prerequisite: CETT 1379

LOTT 2435 Electro-Optic Devices (2-6-4) Theory and operation of special purpose devices to measure laser output parameters, manipulate laser beams, modulate and Q-switch lasers, photo detectors, and special techniques in photography and holography. Prerequisite: LOTT 2445

LOTT 2436 Wave Optics (3-4-4) Principles and theory of light and its wave nature including origin of light, spectral characteristics of light, radiometry, photometry, reflection, refraction, propagation of light, interference, diffraction, and polarization. Prerequisite: LOTT 1443

LOTT 2445 Continuous Wave and Pulsed Lasers (2-6-4) A mathematical and conceptual study of continuous wave (CW) and pulsed lasers, inducing ion, solid state, diode pumped solid state (DPSS) and molecular. Emphasis on the operation and maintenance of these systems and the measurement of their output characteristics and data analysis. Prerequisite: LOTT 1344

MAIR

MAIR 1349 Refrigeration, Freezers, Window Air Conditioners (2-4-3) 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.

MCHN

MCHN 1201 Beginning Machine Shop (1-3-2) Fundamental machine shop safety, math, and measurement.

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 (2-4-3) 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.

MCHN 1308 Basic Lathe (2-4-3) An introduction to the common types of lathes. Emphasis on basic parts, nomenclature, lathe operations, safety, machine mathematics, blueprint reading, and theory. Prerequisite: MCHN 1438

MCHN 1313 Basic Milling Operations (2-4-3) An introduction to the common types of milling machines, part nomenclature, basic machine operations and procedures, safety, machine mathematics, blueprint reading, and theory. Prerequisite: MCHN 1438

MCHN 1320 Precision Tools and Measurement (2-4-3) 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 measurements while using standard measuring tools.

MCHN 1326 Introduction to Computer-Aided Manufacturing (CAM) (2-4-3) A study of Computer-Aided Manufacturing (CAM) software which is used to develop applications for manufacturing. Emphasis on tool geometry, tool selection, and the tool library.

MCHN 1343 Machine Shop Mathematics (2-4-3) Designed to prepare the student with technical, applied mathematics that will be necessary in future machine shop-related courses.

MCHN 1416 Machine Tool Repair (2-6-4) Basic repair of machine tools, disassembly, parts fabrication, and assembly of machine types, including related math, blueprint reading, and safety.

MCHN 1438 Basic Machine Shop I (2-6-4) A course that introduces the student to machining fundamentals. The student begins by using basic machine tools including 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 1452 Intermediate Machining I (2-6-4) Operation of drilling machines, milling machines, lathes, and power saws. Select and use appropriate precision measuring tools. Prerequisite: MCHN 1438

MCHN 2303 Fundamentals of Computer Numerical Controlled (CNC) Machine Controls (2-4-3) Programming and operation of Computer Numerical Controlled (CNC) machine shop equipment.

MCHN 2331 Operation of CNC Turning Centers (2-4-3) A study of CNC operations with an emphasis on turning centers. Prerequisite: MCHN 2303, DFTG 1325

MCHN 2335 Advanced CNC Machining (2-4-3) The study of advanced CNC operation with an emphasis on programming and operations of machining and turning centers. Prerequisite: MCHN 2303

MCHN 2337 Advanced Milling Operations (2-4-3) Study of advanced milling machine operations. Identification and/or use of milling cutters and accessories.

MCHN 2338 Advanced Computer-Aided Manufacturing (CAM) (2-4-3) A study of advanced techniques in Computer-Aided Manufacturing (CAM).

MCHN 2341 Advanced Machining I (2-4-3) A study of advanced lathe and milling operations. Emphasis on advanced cutting operations of the lathe and milling machines, including the use of special tooling, bench assembly, and materials identification. Prerequisite: MCHN 1452

MCHN 2372 Mold, Tool & Die Modification & Repair (2-4-3) Rebuilding mold sections using tungsten arc welding and grinding/polishing. Computation of cam blocks, angle pins, and shrinkage. Repairing or manufacturing of die parts which perform trimming, notching, piercing, blanking, piloting or forming. Quality assurance principles and geometric dimensioning will be included.

MCHN 2434 Operation of CNC Machining Centers (2-6-4) A study of CNC operations with an emphasis on vertical machining centers. Prerequisite: MCHN 2303, DFTG 1325

MCHN 2444 Computerized Numerical Control Programming (2-6-4) An introduction to G and M codes (RS274-D) necessary to program Computer Numerical Controlled (CNC) machines. Prerequisite: DFTG 1325

MCHN 2447 Specialized Tools and 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.

MCHN 2471 Specialized Equipment & Processes (2-6-4) An advanced course that incorporates conventional and computer numerical control equipment. Design and fabricate fixtures. Use metrology equipment and reverse engineering. Manufacture a project that shows proficiency in a variety of machining equipment and processes.

MDCA

MDCA 1154 Medical Assisting Credentialing Exam Review (1-0-1) A preparation for one of the National Commission for Certifying Agencies (NCCA) recognized credentialing exams.

MDCA 1302 Human Disease/Pathophysiology (2-4-3) 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.

MDCA 1313 Medical Terminology (2-3-3) A study and practical application of a medical vocabulary system. Includes structure, recognition, analysis, definition, spelling, pronunciation, and combination of medical terms from prefixes, suffixes, roots, and combining forms.

MDCA 1321 Administrative Procedures (2-3-3) Medical office procedures including appointment scheduling, medical records creation and maintenance, interpersonal communications, bookkeeping tasks, coding, billing, collecting, third party reimbursement, credit arrangements, and computer use in the medical office.

MDCA 1343 Medical Insurance (2-4-3) Emphasizes medical office coding for payment and reimbursement by patient or third party payers for ambulatory care settings.

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 Laboratory Procedures (2-4-3) Application of governmental health care guidelines. Includes specimen collection and handling, quality assurance and quality control in performance of Clinical Laboratory Improvement Amendments (CLIA)-waived laboratory testing.

MDCA 1417 Procedures in a Clinical Setting (2-6-4) Emphasis on patient assessment, examination, and treatment as directed by physician. Includes vital signs, collection and documentation of patient information, asepsis, office clinical procedures, and other treatments as appropriate for ambulatory care settings.

MDCA 1460 Clinical - Medical/Clinical Assistant 0 0 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.

MPGT

MFGT 1406 Mechanical Principles in Automated Manufacturing (2-4-4) Overview of mechanical principles used in automated manufacturing. Includes common measurement methods, engineering drawings, and mechanical methods used in automated manufacturing.

MFGT 2459 Industrial Automation II (3-4-4) Advanced topics in automated manufacturing. Includes electrical and electronic principles, electro-pneumatic and electro-hydraulic controls, logic control methods, and basic programming

techniques.

MRKG

MRKG 1301 Customer Relationship Management (2-4-3) General principles of customer relationship management including skills, knowledge, attitudes, and behaviors.

MRKG 2349 Advertising and Sales Promotion (3-0-3) Integrated marketing communications. Includes advertising principles and practices. Emphasizes multi-media of persuasive communication including buyer behavior, budgeting, and regulatory constraints.

MRMT 1307 Medical Transcription I (2-4-3) Fundamentals of medical transcription with hands-on experience in transcribing actual physician dictation including basic reports such as history and physicals, discharge summaries, consultations, operative reports, and other medical reports. Utilizes technology compatible with industry standards. Designed to develop speed and accuracy.

MRMT 2433 Medical Transcription II (2-4-4) "Transcription of medical reports with increasing speed and accuracy including history and physicals, consultations, discharge summaries, operative reports, and other medical reports.

NANO

NANO 1205 Nano Technology (1-4-2) Introduction to nano sciences. Includes terminology, current and future uses, and the impact of nano technology on biology, solid-state manufacturing, material science, and chemistry.

NUCP

NUCP 1241 Personnel and Environmental Monitoring (1-3-2) Instruction on the impact of natural and man-made radiation sources in the environment. Emphasis on naturally occurring radioactive materials and their impact on population doses. Topics include radon sampling.

NUCP 1271 Introduction to Nuclear Systems (1-4-2) A study of the major components of the reactor core, pressure vessel, shield and primary cooling water systems. Topics include differences between pressurized water reactors (PWRs) and boiling water reactors (BWRs) and power waste issues and accidents.

NUCP 1319 Radiation Physics (2-3-3) A study of atomic structure, radioactivity (primarily alpha, beta, gamma), and the interaction of radiation with matter. Topics include radioactive decay law, gamma attenuation equation, and inverse square law.

NUCP 1391 Nuclear Power Technology (Special Topics) (2-2-3) 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.

NUCP 2301 Radiation Protection I (2-3-3) Introduction to the field of radiation protection: the art and science of protecting human beings from injury by radiation. Topics include dose and exposure measurements and units, permissible exposure limits, and internal exposure evaluations.

NUCP 2302 Radiation Protection II (2-4-3) Continued study in the field of protecting humans from unwarranted radiation exposure. Topics include the use of personnel monitoring devices, radiation dose assessment, bioassay techniques, and record keeping.

NUCP 2311 Radioactive Waste Disposal and Management (2-3-3) A study of radioactive waste management from generation through disposal. Topics include regulatory and advisory agencies; appropriate radioactive waste regulations including Department of Transportation (DOT) laws; classification of radioactive wastes; and NORM (naturally occurring) and mixed wastes.

NUCP 2331 Radiation Protection III (2-3-3) Exploration of the use of materials that attenuate the intensity of radiation including the principles of shielding persons and objects from particulate, electromagnetic, and mixed radiation. Emphasis on methods employed by technicians for the determination of the necessary amounts of shielding.

NUCP 2379 Reactor Physics (2-3-3) A study of the principles of nuclear reactor operation including neutron behavior, fission process, neutron balance, criticality, and actual operation procedures. Introduction to neutron detection and measurement and basic nuclear physics calculations. Prerequisite: NUCP 1319

NURA

NURA 1360 Clinical - Nursing Assistant/Aide and Patient Care Assistant/Aide (0-0-3) 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.

NURA 1401 Nurse Aide for Health Care (2-4-4) 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, restorative services, mental health, and social services needs.

OSHT

OSHT 1209 Physical Hazards Control (1-4-2) A study of the physical hazards in industry and the methods of workplace design and redesign to control these hazards. Emphasis on the regulation codes and standards associated with the control of physical hazards.

OSHT 1213 Accident Prevention, Inspection, and Investigation (1-4-2) Provides a basis for understanding the nature of occupational hazard recognition, accident prevention, loss reduction, inspection techniques, and accident investigation analysis.

OSHT 1221 Fire Protection Systems (1-4-2) Study of fire protection systems and their applications with emphasis on the fire prevention codes and standards.

OSHT 1305 OSHA Regulations - Construction Industry (2-4-3) A study of Occupational Safety and Health Administration (OSHA) regulations pertinent to the construction industry.

OSHT 1316 Material Handling (2-3-3) Proper methods for material handling and storage including safety practices, proper equipment usage, engineering controls, and personal protective equipment.

OSHT 1320 Energy Industrial Safety (2-2-3) An overview for industrial workers of state/federal regulations and guidelines which require industrial safety training. Topics include the 29 C.F.R. 1910, 1926 and National Fire Protection Association (NFPA) 70E standards such as confined space entry, emergency action, lock out/tag out, arc flash, and other work related subjects.

OSHT 2209 Safety Program Management (1-4-2) Examine the major safety management issues that affect the workplace including safety awareness, loss control, regulatory issues, and human behavior modification.

OSHT 2320 Safety Training Presentation Techniques (2-4-3) Principles of developing and presenting effective industrial/business training. Emphasis on instructor qualifications and responsibilities, principles of teaching including use of teaching aids and presentation skills.

OSHT 2370 Safety and Health First Aid Certification (2-3-3) This course is designed to offer the student certification in standard First Aid and Cardio-Pulmonary Resuscitation (CPR) along with a full understanding of the principles of emergency care. The student will learn on-scene planning as well as actions necessary to deal with accidents and injuries in an industrial setting. The student will learn physiology of the human body and the principles behind pressure points and actions taken in splint application and body immobilization.

OSHT 2388 Internship - Occupational Safety and Health Technology/Technician (0-0-3) 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.

OSHT 2401 OSHA Regulations - General Industry (2-4-4) A study of Occupa-

tional Safety and Health Administration (OSHA) regulations pertinent to general industry.

PFPB

PFPB 1321 Plumbing Maintenance and Repair (2-4-3) Instruction in the practices and procedures employed by a plumber including public relations.

PFPB 1323 Plumbing Codes I (2-4-3) State and local plumbing codes and the application of potable water, waste water, and gas systems relating to residential and light commercial settings.

PFPB 1347 Backflow Prevention (2-4-3) Principles, practices, and regulations of backflow. Includes backpressure, public health, laws and responsibilities, mechanics and use of backflow devices, and equipment testing used in backflow devices.

PFPB 2308 Piping Standards and Materials (2-4-3) Identification, description, and application of piping standards and specifications. Includes identification and use of various metallic and non-metallic piping materials, identification and installation of valves, and material take-offs.

PFPB 2309 Residential Construction Plumbing I (2-4-3) Skill development in the procedures and techniques employed by a plumber in the rough-in and top-out stages of a new home or the remodeling of an older home.

PFPB 2336 Commercial Construction and Fixture Setting (2-4-3) Practices and procedures employed by a plumber in the common construction in a commercial building including drain, waste, and vent systems, water systems, and fixture installations.

PFPB 2343 Advanced Pipe Practices (2-4-3) Identification, installation, and testing of steam traps and steam trap station components; valve identification, application, and maintenance; identification, storage, and handling of in-line specialties; hydrostatic testing of process piping.

PFPB 2349 Field Measuring, Sketching, and Layout (2-4-3) Field dimensioning, measuring, sketching, and layout of future process piping and the use, care, and setup of transit and level.

PHRA

PHRA 1202 Pharmacy Law 2 0 2 Overview of federal and state laws governing the practice of pharmacy. The role of the pharmacy technician and the pharmacist and their associated responsibilities. Includes Code of Ethics, patient confidentiality, and a comparison of legal and ethical aspects.

PHRA 1205 Drug Classification (1-4-2) A study of pharmaceutical drugs, abbreviations, classifications, dosages, side effects, and routes of administration.

PHRA 1209 Pharmaceutical Mathematics I 0 4 2 Solving pharmaceutical calculation problems encountered in the preparation and distribution of drugs.

PHRA 1243 Pharmacy Technician Certification Review 2 0 2 A review of major topics covered on the national Pharmacy Technician Certification Examination (PTCE).

PHRA 1247 Pharmaceutical Mathematics II 0 4 2 Advanced concepts of Pharmaceutical Mathematics.

PHRA 1301 Introduction to Pharmacy (3-0-3) An overview of the qualifications, operational guidelines, and job duties of a pharmacy technician.

PHRA 1313 Community Pharmacy Practice (2-3-3) Introduction to the skills necessary to process, prepare, label, and maintain records of prescriptions in a community pharmacy to include customer service, count and pour techniques, prescription calculations, drug selection and preparation, over-the-counter drugs, inventory management and legal parameters.

PHRA 1345 Compounding Sterile Preparations (2-4-3) The process of compounding sterile preparations and aseptic technique within legal and regulatory guidelines specified by USP <797> standards.

PHRA 1349 Institutional Pharmacy Practice (2-3-3) Fundamentals of the diverse roles and practice of pharmacy technicians in an institutional pharmacy setting. In-depth coverage of hospital pharmacy organization, work flow and personnel, safety techniques, data entry, packaging and labeling operations, inpatient drug distribution systems including investigational drugs, continuous quality improvement and inventory control.

PHRA 1441 Pharmacy Drug Therapy and Treatment (3-2-4) Study of therapeutic agents, their classifications, properties, actions, and effects on the human body and their role in the management of disease.

PHRA 2461 Clinical - Pharmacy Technician/Assistant 0 0 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.

PHRA 2462 Clinical - Pharmacy Technician/Assistant 0 0 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.

PHTC

PHTC 1311 Fundamentals of Photography (2-4-3) An introduction to camera operation and image production, composition, flash usage, and use of exposure meters and filters. Prerequisite: ARTC 1302

PHTC 1340 Photographic Retouching I (2-4-3) An overview of retouching techniques to enhance photographic media. Includes restoration and coloration. Prerequisite: ARTC 2305

PHTC 1343 Expressive Photography (2-4-3) A study of formal, professional, and individual uses of photography by applying photographic technology to personalized needs. Emphasis on creative visual thinking and problem solving and the exploration of personal vision. Prerequisite: PHTC 1345

PHTC 1345 Illustrative Photography I (2-4-3) Instruction in the technical aspects involved in commercial photography. Topics include lighting equipment, techniques of production photography, reproduction principles, illustrative techniques, and advertising. Prerequisite: PHTC 1311

PHTC 1353 Portraiture I (2-4-3) Skill development in the photographic principles of portrait lighting, posing, and subject rapport. Prerequisite: PHTC 1345, PHTC 1340

PHTC 1371 Commercial Photography (2-4-3) The study and utilization of professional commercial photography techniques, including the use of industry standard software, professional lighting techniques, and the emulation of an industry environment utilizing sample employers and clients. Prerequisite: PHTC 1345

PHTC 2340 Photographic Studio Management (2-4-3) In-depth study of photography business management, pricing, market analysis, promotion, networking, job acquisition, and photographic equipment analysis. Prerequisite: PHTC 1345, PHTC 1340

PLAB

PLAB 1323 Phlebotomy (2-3-3) Skill development in the performance of a variety of blood collection methods using proper techniques and standard 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, patient identification, specimen labeling, quality assurance, specimen handling, processing, accessioning, professionalism, ethics, and medical terminology.

PLTC

PLTC 1343 Mold Design and Maintenance (2-3-3) A study of the basic design parameters of plastic injection molds including mold flow, nominal walls projection, depressions, ejector systems, runners, gates, parting lines, and general mold configurations. Emphasis on maintenance techniques on in house molds.

POFI

POFI 1301 Computer Applications I (2-4-3) Overview of computer office applications including current terminology and technology. Introduction to computer hardware, software applications, and procedures. This course is designed to be repeated multiple times to improve student proficiency.

POFI 1349 Spreadsheets (2-4-3) Skill development in concepts, procedures, and application of spreadsheets. This course is designed to be repeated multiple times to improve student proficiency.

POFI 2301 Word Processing (2-4-3) Word processing software focusing on business applications. This course is designed to be repeated multiple times to improve student proficiency.

POFI 2331 Desktop Publishing (2-4-3) 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. This course is designed to be repeated multiple times to improve student proficiency.

POFI 2340 Advanced Word Processing (2-4-3) Advanced word processing techniques using merging, macros, graphics, and desktop publishing. Includes extensive formatting for technical documents. This course is designed to be repeated multiple times to improve student proficiency. Prerequisite: POFT 2301

POFT

POFT 1300 Career Exploration/Planning (2-2-3) An introduction to career exploration, educational planning, and job searching.

POFT 1301 Business English (2-2-3) Introduction to a practical application of basic language usage skills with emphasis on fundamentals of writing and editing for business.

POFT 1319 Records and Information Management I (2-4-3) Introduction to basic records information management systems including manual and electronic filing.

POFT 1321 Business Math (2-4-3) Fundamentals of business mathematics including analytical and critical thinking skills.

POFT 1325 Business Math Using Technology (2-2-3) Skill development in business math problem-solving using electronic technology.

POFT 1329 Beginning Keyboarding (2-4-3) Skill development in keyboarding techniques. Emphasis on development of acceptable speed and accuracy levels and formatting basic documents.

POFT 2331 Administrative Systems (2-4-3) Advanced concepts of project management and office procedures integrating software applications. Prerequisite: POFT 1349, POFI 2301, ITSW 1307, ITSW 1310

PSTR

PSTR 1301 Fundamentals of Baking (2-4-3) Fundamentals of baking including dough, quick breads, pies, cakes, cookies, and tarts. 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. Prerequisite: CHEF 1205

PSTR 1342 Quantity Bakeshop Production (2-4-3) Advanced baking techniques to include volume production of a variety of breads and desserts.

PSTR 2431 Advanced Pastry Shop (2-6-4) A study of classical desserts, French and international pastries, hot and cold desserts, ice creams and ices, chocolate work, and decorations. Emphasis on advanced techniques. Prerequisite: PSTR 1301

PSYT

PSYT 1313 Psychology of Personal Adjustment (2-2-3) Overview of personal, social, and work adjustment skills.

PTAC

PTAC 1302 Introduction To Process Technology (2-2-3) An introduction overview of the processing industries.

PTAC 1308 Safety, Health, and Environment I (2-4-3) An overview of safety, health, and environmental issues in the performance of all job tasks.

PTAC 1310 Process Technology I - Equipment (2-4-3) Introduction to the use of common processing equipment. Prerequisite: PTAC 1302

PTAC 1332 Process Instrumentation I (2-4-3) Study of the instruments and control systems used in the process industry including terminology, process variables, symbology, control loops, and basic troubleshooting.

PTAC 2314 Principles of Quality (2-2-3) Study of the background and application of quality concepts. Topics include team skills, quality tools, statistics, economics and continuous improvement.

PTAC 2336 Process Instrumentation II (2-2-3) Continued study of the instruments and control systems used in the process industries including terminology, process variables, symbology, control loops, and troubleshooting. Prerequisite: PTAC 1332

PTAC 2346 Process Troubleshooting (2-4-3) Instruction in the different types of troubleshooting techniques, procedures, and methods used to solve process problems. Prerequisite: PTAC 2420

PTAC 2420 Process Technology II - Systems (2-4-4) A study of various process systems including related scientific principles. Prerequisite: PTAC 1310

PTAC 2438 Process Technology III - Operations (2-6-4) This course emphasizes activities associated with the hands-on operations of process equipment.

PTRT

PTRT 1301 Introduction to Petroleum Industry (2-4-3) An introduction to the various aspects of petroleum industry including equipment, systems, instrumentation, operations, and the various scientific principles. Addresses a variety of petroleum technologies: exploration, drilling, production, transportation, marketing, and chemical processing industries.

PTRT 1307 Recovery and Production Methods (2-4-3) Petroleum recovery and production methods.

PTRT 1413 Industrial Safety (2-6-4) An overview for petroleum and manufacturing workers of state/federal regulations and guidelines which require industrial safety training. Topics include the 29 C.F.R 1910, 1926 standards.

PTRT 1471 Downhole Tool Redressing (2-6-4) Topics address recently identified skills and knowledge pertinent to working in the oil and gas shop environments. This course has been designed to prepare a student for redressing the downhole tools used in the oil well servicing industry.

RBPT

RBPT 1370 Building Envelope Inspection (2-4-3) Outlines procedures for improving the comfort, durability and energy efficiency of residential homes shell or envelope. Emphasis on air leakage and sealing measures, insulation types, proper installation of doors and windows, moisture fundamentals, indoor pollutants, and health and safety issues encountered when making energy improvements. The material covered will prepare the student to be able to take the Building Envelope Professional Certification exam offered through BPI.

RBPT 2325 Energy Rating Systems for Homes (2-4-3) Use of computer software and rating criteria to evaluate and score homes using residential energy rating systems. Emphasizes gathering data from building plans, manufacturers' specifications, and onsite testing.

RBPT 2329 Residential Verification and Rating (2-4-3) A summary of the skills needed to be an energy rater and a green rater for homes. Emphasizes onsite building testing, use of rating software and criteria, producing reports, and presenting

recommendations to improve building performance scores.

RBPT 2335 Residential Environmental Quality (2-4-3) Methods for improving the indoor and outdoor environmental quality associated with homes. Emphasizes identifying materials, building practices, and human behavior both inside and outside the home that impact environmental quality. Includes best-practice strategies.

RBPT 2350 Residential Retrofit Strategies (2-4-3) Evaluation of existing homes and retrofit strategies to improve energy efficiency and environmental quality. Includes retrofitting a home for onsite power generation. Covers using a whole-house approach to evaluate the effects of comfort, safety, indoor environmental quality, financial incentives, cost effectiveness, environmental impact, energy efficiency, and the movement of heat, moisture, and air through the building enclosure.

RBPT 2359 Residential Building Performance Consulting (2-4-3) A summary of the skills needed to be a residential building performance specialist. Emphasizes onsite building testing, use of evaluation software and rating criteria, production of reports, and presentation of recommendations to improve residential building performance.

RBTC 1309 Pneumatics (2-4-3) A study of principles of pneumatics, including formulas, functions, and circuits with hands-on experience in these industrial automated systems. Prerequisite: HYDR1305

RBTC 1341 Vision Systems (2-4-3) An overview of machine vision systems, including terminology and components. Topics include optics, sensors, lighting, image analysis, and user interfaces. Prerequisite: RBTC2339

RBTC 1343 Robotics (2-4-3) Principles and applications of robots. Includes installation, interfacing, programming, maintenance, and safety of robots and robotic cells. Prerequisite: CETT1303 (Pre or Co)

RBTC 1345 Robot Interfacing (2-4-3) A study of the basic principles of robot controllers, controller input/output, memory, and interfacing with computer integrated manufacturing. Prerequisite: RBTC2339, RBTC2347

RBTC 2339 Robot Programming and Diagnostics (2-4-3) Emphasis on the programming of industrial robots, the development of programming techniques, and the diagnosis of faults in systems. Prerequisite: RBTC 1343

RBTC 2345 Robot Application, Set-up, and Testing (2-4-3) A capstone course that provides the student with laboratory experience in the installation, set-up, and testing of robotic cells. Topics include maintenance. RBTC2339, RBTC2347

RBTC 2347 Computer Integrated Manufacturing (2-4-3) The principles of computer integrated manufacturing, including case studies and implementation of process control techniques, CAD/CAM, operations, software, and networking for CIM systems. RBTC1343 or CETT1325

RNSG

RNSG 1207 Nursing Jurisprudence (1-2-2) A course in nursing jurisprudence and ethics with an emphasis on personal and professional responsibility. Study of the laws and regulations related to the provision of safe and effective professional nursing care. This course lends itself to either a blocked or integrated approach.

RNSG 1210 Introduction to Community-Based Nursing 2 0 2 Overview of the delivery of nursing care in a variety of community-based settings to promote health; application of systematic problem-solving processes and critical thinking skills, focusing on the examination of concepts and theories relevant to community-based nursing; and development of judgment, skill, and professional values within a legal/ethical framework.

RNSG 1227 Transition to Professional Nursing (1-3-2) Content includes health promotion, expanded assessment, analysis of data, critical thinking skills and systematic problem solving process, pharmacology, interdisciplinary teamwork, communication, and applicable competencies in knowledge, judgment, skills, and professional values within a legal/ethical framework throughout the lifespan. This course lends itself to either a blocked or integrated approach.

RNSG 1261 Clinical - Registered Nursing (0-0-2) 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.

RNSG 1300 Health Assessment Across the Lifespan (2-2-3) Development of skills and techniques required for a comprehensive nursing health assessment of patients across the lifespan. Includes assessment of patients' health promotion and maintenance, illness and injury prevention and restoration, and application of the nursing process within a legal/ethical framework. This course lends itself to either a blocked or integrated approach.

RNSG 1301 Pharmacology (2-2-3) Introduction to the science of pharmacology with emphasis on the actions, interactions, adverse effects, and nursing implications of drug classifications. Content includes 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.

RNSG 1343 Complex Concepts of Adult Health (2-2-3) Integration of previous knowledge and skills related to common adult health needs into the continued development of the professional nurse as a provider of patient-centered care, patient safety advocate, member of health care team, and member of the profession in the care of adult patients and families with complex medical-surgical health care needs associated with body systems. Emphasis on complex knowledge, judgments, skills, and professional values within a legal/ethical framework. This course lends itself to a blocked approach.

RNSG 1362 Clinical - Registered Nursing (0-0-3) 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.

RNSG 1412 Nursing Care of the Childbearing and Childrearing Family (3-2-4) Study of the concepts related to the provision of nursing care for childbearing and childrearing families. Application of systematic problem-solving processes and critical thinking skills, including a focus on the childbearing family during the perinatal periods and the childrearing family from birth to adolescence; and competency in knowledge, judgment, skill, and professional values within a legal/ethical framework. This course lends itself to a blocked approach.

RNSG 1463 Clinical - Registered Nursing 0 0 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.

RNSG 2213 Mental Health Nursing (1-3-2) Principles and concepts of mental health, psychopathology, and treatment modalities related to the nursing care of patients and their families. This course lends itself to a blocked approach.

RNSG 2221 Professional Nursing: Leadership and Management 2 0 2 Exploration of leadership and management principles applicable to the roles of the professional nurse. Includes application of knowledge, judgment, skills, and professional values within a legal/ethical framework. This course lends itself to a blocked approach.

RNSG 2230 Professional Nursing Review and Licensure Preparation (1-2-2) Review of concepts required for licensure examination and entry into the practice of professional nursing. Includes review of application process of National Council Licensure Examination for Registered Nurses (NCLEX-RN) test plan, assessment of knowledge deficits, and remediation. This course lends itself to either a blocked or integrated approach.

RNSG 2432 Enhanced Concepts of Adult Health (3-2-4) Enhanced concepts and skills for developing professional competencies in complicated nursing care situations involving adult patients/families with multiple body system problems. Emphasizes critical thinking, clinical reasoning, and determining legal/ethical values for optimization of patient care in intermediate and acute care settings. This course lends itself to a blocked approach.

RSTO

RSTO 1304 Dining Room Service 1 7 3 Introduces the principles, concepts, and systems of professional table service. Topics include dining room organization, scheduling, and management of food service personnel. CHEF 1205, IFWA 1205, IFWA 1217

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, applicable personnel laws and regulations. Emphasis on leadership development.

RSTO 2301 Principles of Food and Beverage Controls (2-2-3) A study of financial principles and controls of food service 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. CHEF 1205

RSTO 2407 Catering (2-4-4) Principles, techniques, and applications for both on-premises, off-premises, and group marketing of catering operations including food preparation, holding, and transporting techniques. CHEF 1205

RSTO 2505 Management of Food Production and Service 2 9 5 A study of quantity cookery and management problems pertaining to commercial and institutional food service, merchandising and variety in menu planning, and customer food preferences. Includes laboratory experiences in quantity food preparation and service. Prerequisite: CHEF 1445, PSTR 2431, RSTO 1313 (Pre or Coreq)

SCIT

SCIT 1318 Applied Physics (2-4-3) Introduction to physics for industrial applications including vectors, motion, mechanics, simple machines, matter, heat, and thermodynamics.

SCIT 1407 Applied Human Anatomy and Physiology I (2-6-4) An applied systematic study of the structure and function of the human body. Includes anatomical terminology, cells, tissues, and the following systems: integumentary, skeletal, muscular, nervous, and endocrine. Emphasis on homeostasis.

SCIT 1414 Applied General Chemistry I (3-3-4) Applications of general chemistry emphasizing industry-related laboratory skills and competencies including laboratory safety and report writing. Addresses supporting chemical theories including atomic and molecular structure, nomenclature, chemical reactivity, gas laws, acids and bases, solutions, and an overview of organic chemistry.

SCIT 1415 Applied General Chemistry II (3-3-4) Applications of general chemistry emphasizing industry-related laboratory skills and competencies including laboratory safety and report writing. Addresses supporting chemical theories including covalent bonding, thermodynamics, equilibrium, reaction rates, electrochemistry, nuclear chemistry, and organic compounds. Prerequisite: SCIT 1414

SCIT 1543 Applied Analytical Chemistry I (3-6-5) Principles of quantitative analysis as related to industrial applications. Includes gravimetric and titrimetric analysis of practical samples by classical and standard methods. Prerequisite: SCIT 1415

SCIT 2401 Applied Organic Chemistry I (3-3-4) Applications of the chemistry carbon emphasizing industry-related laboratory skills and competencies. Prerequisite: SCIT 1415

SCIT 2402 Applied Organic Chemistry II (3-3-4) Continuation of the applications of the chemistry of carbon compounds emphasizing industry-related laboratory skills and competencies. Includes reaction mechanisms, spectroscopy, and synthetic methods. Prerequisite: SCIT 2401

SMER

SMER 1434 Small Engine Two Stroke Overhaul (2-4-4) Overhaul procedures for two stroke small engines as used in lawn and garden applications. Emphasis on proper shop procedures for overhaul of two stroke small engines.

SMER 1437 Small Engine Four Stroke Engine (2-4-4) Overhaul procedures for four stroke small engines. Emphasis on shop procedures for overhauls.

SMFT

SMFT 1471 Vacuum Technology (3-4-4) Introduction to and skill development of Vacuum Technology, Vacuum Principles, Pumping Systems, Gauging, Leak Detection, and Safety Practices.

SMFT 2450 Vacuum Thin Films (2-6-4) Physical vapor deposition (PVD), chemical vapor deposition (CVD), and related systems. Includes planning, repairing, maintaining, and testing various systems such as evaporators, electron guns, ion plating, direct current (DC) and radio frequency (RF) sputtering systems. The course is intended to enhance and apply knowledge gained in previous vacuum-related classes. Other topics include the planning, repairing, maintaining, and coating of various chemical depositions used as coatings in manufactured optics and semiconductors. Prerequisite: SMFT 1471

SOLR

SOLR 1272 Foundations of Solar Photovoltaic Power Generation (1-4-2) Solar electrical power generation using photovoltaic (PV) equipment. Includes calculation of power generation and demand requirements, installation process for solar system components, and strategies for optimizing system performance and reliability.

SOLR 1371 Instruction to Solar and Alternative Energy Technologies (2-4-3) Introduction to Renewable Energy is an overview to the most common types of renewable energy with an emphasis on solar system types and applications. This course introduces solar system types, components, safety issues, and history.

SOLR 1373 Foundations of Solar Thermal Systems (2-4-3) Discusses industry terminology, safety issues, solar thermal systems design and installation procedures.

SOLR 2175 Solar System Design, Installation, Troubleshooting and Repair 0 4 1 Design considerations including site assessment and desired system operation, installation, commissioning, maintenance, operation, troubleshooting and repair, and decommissioning. Review of safety issues, personal protection equipment, and tools of the trade associated with installation, operation, maintenance, and troubleshooting and repair of solar systems.

SOLR 2374 Solar System Equipment and Components (2-4-3) Design and operation of solar system equipment, components, subsystems, and balance of plant. Design considerations include environmental, architectural, structural, and legal requirements.

SRGT

SRGT 1244 Technological Sciences for the Surgical Technologist 2 0 2 Specialized surgical modalities covered include endoscopy, microsurgery, therapeutic surgical energies, and other integrated science technologies.

SRGT 1461 Clinical-Surgical Technology (0-0-4) 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.

SRGT 1244 Technological Sciences for the Surgical Technologist (2-0-2) Specialized surgical modalities covered include endoscopy, microsurgery, therapeutic surgical energies, and other integrated science technologies.

SRGT 1244 Technological Sciences for the Surgical Technologist (2-0-2) Specialized surgical modalities covered include endoscopy, microsurgery, therapeutic surgical energies, and other integrated science technologies.

SRGT 1405 Introduction to Surgical Technology (3-2-4) Orientation to surgical technology theory, surgical pharmacology and anesthesia, technological sciences, and patient care concepts.

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.

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, otorhinolaryngology, and orthopedic surgical specialties incorporating instruments, equipment, and supplies required for safe patient care.

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 cardiothoracic, peripheral vascular, plastic/reconstructive , ophthalmology, oral/maxillofacial, and neurological surgical specialties incorporating instruments, equipment, and supplies required for safe patient care.

SRGT 1460 Clinical-Surgical Technology (0-0-4) 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.

SRGT 2462 Clinical-Surgical Technology (0-0-4) 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

SRVY

SRVY 1235 Land Surveying Applications (1-4-2) Structured experience with the equipment, techniques and hardware necessary to measure horizontal and vertical angles and distances used in surveying.

SRVY 1301 Introduction to Surveying (3-0-3) An overview of the surveying profession. The history of surveying and its impact on the world. Review of the mathematics used in surveying. Introduction to basic surveying equipment with emphasis on measurements. Instruction on surveying procedures and the limitation of errors. Calculation to determine precision and error of closure.

SRVY 1309 Surveying Measurement (2-4-3) Covers the equipment and hardware necessary to measure horizontal and vertical distances in accordance with prevailing professional standards.

SRVY 1315 Surveying Calculations (2-2-3) Review and application of mathematics used in surveying and mapping.

SRVY 1341 Land Surveying (3-0-3) A study of the measurement and determination of boundaries, areas, shapes, location through traversing techniques. Instruction in a variety of adjustment methods using calculators and computers. Addresses methods of traversing and adjustment of errors according to prevailing professional standards.

SRVY 1342 Global Positioning System Techniques for Surveying and Mapping (2-4-3) Introduction to the Global Positioning System (GPS) in surveying and mapping activities. Major topics include structuring a GPS system, designing a GPS data collection project, using GPS data collection equipment, collecting and processing GPS data, and correcting data errors.

SRVY 2309 Computer Aided Mapping (2-4-3) Production of survey maps using appropriate computer aided drafting software. Includes plats, civil engineering design drawings and topographic maps.

SRVY 2331 Geodetic Surveying and Mapping (3-0-3) A study of field astronomy, Polaris and solar observations, State Plane Coordinate Systems, and Global Positioning System.

SRVY 2335 Geodetic Surveying and Mapping Application (2-4-3) Emphasis on the field techniques of making astronomic observations, recovering control monuments, setting control monuments, and the planning and use of Global Positioning System receivers in data collection.

SRVY 2339 Engineering Design Surveying (3-0-3) A study of the theory and field methods of surveying alignments, to include highway routes, pipelines, utility and waterway construction, transmission lines and site stakeout, including the study of horizontal curves, vertical curves, areas, and earthwork volumes.

SRVY 2341 Engineering Design Surveying Lab (2-4-3) The companion lab for Engineering Design Surveying. Emphasis on field methods of surveying alignments.

SRVY 2343 Surveying - Legal Principles I (3-0-3) The study of location, conveyance, ownership and transfer of real property under the laws of the State of Texas. Emphasis on the history of disposition of public land, interpreting written descriptions, dignity of calls and evidence, and record search of public and private land records.

SRVY 2348 Plane Surveying (2-4-3) Surveying instruments, basic measuring procedures, vertical and horizontal control, and traverse closure.

SRVY 2455 Advanced Boundary Project (2-6-4) Designed for students for perform boundary surveying of large tracts of land using an environmental approach to determine real-time boundary lines. Students will interact with private citizens and public agencies in assessing boundary lines and limiatations. Course includes the use of the latest, state-of-the-art Geographic Positioning Systems (GPS), total stations, historical data, and deed references.

TECM

TECM 1301 Industrial Mathematics (2-2-3) Math skills applicable to industrial occupations. Includes fraction and decimal manipulation, measurement, percentage, and problem solving techniques for equations and ratio/proportion applications.

TECM 1303 Technical Calculations (3-0-3) Specific mathematical calculations required by business, industry, and health occupations.

VNSG

VNSG 1116 Nutrition (0-2-1) Introduction to nutrients and the role of diet therapy in growth and development and in the maintenance of health.

VNSG 1119 Leadership and 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 0 2 A study of the biological, psychological, and sociological concepts applicable to basic needs of the family including childbearing and neonatal care. Utilization of the nursing process in the assessment and management of the childbearing family. Topics include physiological changes related to pregnancy, fetal development, and nursing care of the family during labor and delivery and the puerperium.

VNSG 1261 Clinical - Licensed Practical/Vocational Nurse Training (0-0-2) 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 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 1327 Essentials of Medication Administration (3-0-3) General principles of medication administration including determination of dosage, preparation, safe administration, and documentation of multiple forms of drugs. Instruction includes various systems of measurement.

VNSG 1329 Medical-Surgical Nursing I (3-0-3) 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 1331 Pharmacology (3-0-3) Fundamentals of medications and their diagnostic, therapeutic, and curative effects. Includes nursing interventions utilizing the nursing process.

VNSG 1334 Pediatrics (3-0-3) Study of the care of the pediatric patient and family during health and disease. Emphasis on growth and developmental needs utilizing the nursing process.

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 (3-2-4) 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 Clinical - Licensed Practical/Vocational Nurse Training 0 0 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 complex patient needs utilizing the nursing process and related scientific principles.

VNSG 2463 Clinical - Licensed Practical/Vocational Nurse Training 0 0 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.

WDWK

WDWK 1300 Beginning Woodworking (2-4-3) The first course in a logical sequence of courses in which students learn to build wood projects using dados, rabbets, and tongue & groove joints.

WIND

WIND 1300 Introduction to Wind Energy (3-0-3) Introduction of wind technology, wind farm design, and wind power delivery.

WIND 1302 Wind Safety (2-2-3) Introduction to safety procedures and practices relating to turbine towers. Includes first aid training and CPR certifications.

WIND 1491 Special Topics in Wind Energy (2-4-4) 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.

WIND 2310 Wind Turbine Materials and Electro-Mechanical Equipment (2-2-3) Identification and analysis of the components and systems of wind turbine. Prerequisite: WIND 1300

WIND 2455 Wind Turbine Troubleshooting and Repair (2-4-4) Operation, maintenance, troubleshooting, and repair of wind turbine electro-mechanical systems. Prerequisite: CETT 1305, INMT 1317

WIND 2459 Wind Power Delivery System (2-4-4) Components, equipment, and infrastructure used in the production and transmission of electricity as related to wind turbine power. Prerequisite: CETT 1305

WLDG

WLDG 1313 Introduction to Blueprint Reading for Welders (3-0-3) 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 1327 Welding Codes and Standards (2-4-3) An in-depth study of welding codes and their development in accordance with structural standards, welding processes, destructive and nondestructive test methods. Prerequisite: 3rd semester standing

WLDG 1337 Introduction to Welding Metallurgy (2-4-3) 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 1407 Introduction to Welding Using Multiple Processes (2-6-4) Basic welding techniques using some of the following processes: Oxy-fuel welding (OFW) and cutting, shielded metal arc welding (SMAW), gas metal arc welding (GMAW), and gas tungsten arc welding (GTAW).

WLDG 1412 Introduction to Flux Cored Arc Welding (FCAW) (2-6-4) An overview of terminology, safety procedures, and equipment set-up. Practice in performing T-joints, lap joints, and butt joints using Flux Cored Arc Welding(FCAW) equipment.

WLDG 1417 Introduction to Layout and Fabrication (2-6-4) A fundamental course in layout and fabrication related to the welding industry. Major emphasis on structural shapes and use in construction. Prerequisite: WLDG 1313

WLDG 1428 Introduction to Shielded Metal Arc Welding (SMAW) (2-6-4) An introduction to the shielded metal arc welding process. Emphasis placed on power sources, electrode selection, oxy-fuel cutting, and various joint designs. Instruction provided in SMAW fillet welds in various positions.

WLDG 1434 Introduction to Gas Tungsten Arc (GTAW) Welding (2-6-4) Principles of gas tungsten arc welding (GTAW), including setup, GTAW equipment. Instruction in various positions and joint designs.

WLDG 1435 Introduction 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 1453 Intermediate Layout and Fabrication (2-6-4) An intermediate course in layout and fabrication. Includes design and production of shop layout and fabrication. Emphasis placed on symbols, blueprints, and written specifications.

WLDG 1457 Intermediate Shielded Metal Arc Welding (SMAW) (2-6-4) A study of the production of various fillets and groove welds. Preparation of specimens for testing in various positions. Prerequisite: WLDG 1428

WLDG 2331 Advanced Blueprint Interpretation and Cost Analysis (2-4-3) A continuation of the Blueprint for Welders course. Emphasis placed on inspection, cost analysis, and estimating.

WLDG 2355 Advanced Metallurgy (2-4-3) Advanced study of metallurgy as it applies to welding. Includes structure, identification, and testing of metals. Also covers temperature changes and their effect on welded metals, properties of metals, and factors affecting weldability of ferrous and nonferrous metals.

WLDG 2406 Intermediate Pipe Welding (2-6-4) A comprehensive course on the welding of pipe using the shielded metal arc welding (SMAW) process. Welds will be done using various positions. Topics covered include electrode selection, equipment setup, and safe shop practices. Prerequisite: WLDG 1435 or WLDG 1457

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. Prerequisite: WLDG 1407

WLDG 2432 Welding Automation (2-6-4) Overview of automated welding and cutting applications. Special emphasis on safe use and operation of equipment.

WLDG 2435 Advanced Layout and 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. Prerequisite: WLDG 1417

WLDG 2443 Advanced Shielded Metal Arc Welding (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. Prerequisite: WLDG 1457

WLDG 2451 Advanced Gas Tungsten Arc Welding (GTAW) (2-6-4) Advanced topics in GTAW welding, including welding in various positions and directions.

WLDG 2452 Advanced Flux Cored Arc Welding (2-6-4) Advanced concepts of flux cored arc welding of structural and fabricated steel products. Skill development in multi-pass fillet and v-groove welding.

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. Prerequisite: WLDG 1435

WMGT

WMGT 1305 Introduction to Wildlife Management (3-0-3) History of wildlife management based on its economic and ecological impact. Includes basic wildlife and habitat management techniques and discussion of threatened and endangered species.

FACULTY

TSTC
Texas State Technical College

tstc.edu

Faculty

Acuna, Sesario J — Associate Degree
Texas State Technical College

Adames, Jamie Joe — Certificate
Texas State Technical College

Adams, Madeline Lynn — Associate Degree
Texas State Technical College

Adeniregun, Babafemi I — Master's Degree
University of Houston

Agharbi, Mohamed — Master's Degree
Texas A & M University Kingsville

Aguila, Myriam — Master's Degree
University of Texas at Brownsville

Aguilar, Johnathon Angelo — Associate Degree
Texas State Technical College

Alcoser, Alejandro Bauer — Master's Degree
University of Texas at Brownsville

Alderman, Christi Rhymes — Bachelor's Degree
Louisiana Tech University

Alfred, Julian Paul — Associate Degree
Central Texas College

Alvarado, Terra Lynn — Master's Degree
Texas Tech University

Alvarez, Jose A — Master's Degree
University of Detroit Mercy

Alves, Penny Diane — Associate Degree
Texas State Technical College

Anderson, Robbie Woodley — Bachelor's Degree
East Texas Baptist University

Ardalani, Kyumars — Master's Degree
Texas A & M University Kingsville

Arjona, Gladys C — Master's Degree
Texas A & M University Kingsville

Arnold, Claudia Lina — Bachelor's Degree
University of Texas at Brownsville

Arocha, Steve G — Associate Degree
Texas State Technical College

Avila, Manuel Duron — Bachelor's Degree
Stephen F. Austin State University

Baesler-Ridge, Chris — Master's Degree
Southrn Connecticut State University

Bagby, Sharon Lou — Bachelor's Degree
Ashford University

Baish, Robert A — Associate Degree
Texas State Technical College

Balcos, Felicidad Baduel — Master's Degree
Foreign University

Bandy, Sherman Ranson — Associate Degree
Texas State Technical College

Barnes, Michael Conly — Associate Degree
Texas State Technical College

Bateman, Daniel Lee — Associate Degree
Texas State Technical College

Bauer, Randolph L — Associate Degree
Dup Record Harlingen

Bazan, Pedro — Master's Degree
The University of Texas Pan American

Beall, James Madison — Associate Degree
Texas State Technical College

Beauchamp, David Brian — Bachelor's Degree
East Texas Baptist University

Benavides, Effren Cristobal

Bendiks, Beverly L. — Master's Degree
The University of Texas Pan American

Benitez, Edelmiro — Bachelor's Degree
University of Texas at Brownsville

Betros, Steven Wayne — Bachelor's Degree
Paul Quinn College

Bibb, Jimmy W — Certificate
Texas State Technical College

Blanco, Oscar Luis — Master's Degree
University of Texas at Brownsville

Block, Darren A — Associate Degree
Texas State Technical College

Bodnar, Daniel — Bachelor's Degree
Texas A & M University - Corpus Christi

Bolfing, Sidney Gerald — Bachelor's Degree
University of Texas at Tyler

Bowen, Stephen L — Master's Degree
Texas A & M University - Commerce

Bowen, Trace E — Master's Degree
Tarleton State University

Bowers, Lester David — Associate Degree
Tarrant County College District

Bowers, Michael Scott — Associate Degree
Texas State Technical College

Bowles, Roger Allen — Doctorate
University of North Texas

Bowling, Bryan William — Associate Degree
Texas State Technical College

Brannen, David Randall — Associate Degree
Texas State Technical College

Brantley, Timothy L

Brewster, Todd Derek — Associate Degree
Texas State Technical College

Brooks, Sarah Dawn — Bachelor's Degree
University of Cincinnati

Brown, Robert L — Associate Degree
Kilgore College

Browning, Yvonne — Master's Degree
Trinity University

Brunson, Jill B. — Certificate
Southwestern Oklahoma State University

Bryant, Elizabeth Michelle — Master's Degree
Southern University And A&M College at Baton Rouge

Bundick, Patricia — Bachelor's Degree
Hardin-Simmons University

Burks, Jay M — Associate Degree
Vernon College

Butcher, Brian Christopher — Bachelor's Degree
Baylor University

Buterbaugh, Stacie M — Associate Degree
Texas State Technical College

Cabrera, Jorge Luis — Associate Degree
Texas State Technical College

Campbell, Clint M — Associate Degree
Texas State Technical College
Campos, David N — Associate Degree
Texas State Technical College
Campuzano, Ruby Chantell — Master's Degree
The University of Texas Pan American
Cano, Omar — Master's Degree
The University of Texas Pan American
Cantu, Joseph — Associate Degree
Texas State Technical College
Cantu, Mario H — Master's Degree
Clemson University
Cantu, Rudy G. — Associate Degree
Texas State Technical College
Capps, Robert Jeffrey — Associate Degree
Hallmark College of Aeronautics
Carithers, Eric D — Associate Degree
Texas State Technical College
Carnagey, Amelia L — Bachelor's Degree
Abilene Christian University
Castillo, Abel — Associate Degree
Texas State Technical College
Castillo, Charles D — Master's Degree
The University of Texas Pan American
Cervantez, Rudy — Associate Degree
Texas State Technical College
Chacon, Nicole Ashley
Chaffin, Anthony B — Master's Degree
Texas A & M University
Chaney, Edward Allen — Associate Degree
Texas State Technical College
Chavez, Cynthia — Master's Degree
The University of Texas Pan American
Chavez, Leonardo J — Associate Degree
Texas State Technical College
Childs, Howard E. — Doctorate Nova
Southeastern University
Christian, Deborah L — Associate Degree
Texas State Technical College
Clark, Douglas
Claus, Edna — Doctorate Texas
A & M University
Cleveland, Nathan Darvis — Associate Degree
Texas State Technical College
Clinton, Sean Davis — Associate Degree
Texas State Technical College
Cockrum, Kristin Ashley — Certificate
Austin Community College
Coffman, Steven Shelby — Associate Degree
Texas State Technical College
Collins, Curtis Lyn — Associate Degree
Texas State Technical College
Colunga-Hernandez, Norma — Master's Degree
Western International University
Comer, Theo D — Associate Degree
University of Kentucky
Cone, Nicki Berry — Master's Degree
Texas A & M International University
Connally, Alfred Wayne — Associate Degree
Texas State Technical College
Connor, John Richard — Associate Degree
Aims Community College
Contois, Scott Leo — Master's Degree
Western Illinois University
Coody, Steven L — Bachelor's Degree
San Jose State University
Cooper, Meagan M — Associate Degree
Texas State Technical College
Cozby, Robert F — Bachelor's Degree
University of Texas at Arlington
Cram, Nicholas B — Master's Degree
Texas A & M University
Creps, Emma Dalia — Associate Degree
South Texas College
Cross, Thomas Eugene — Associate Degree
Texas State Technical College
Cuellar, San Juana — Master's Degree
University of Texas at Brownsville
Culp, Albert Ray — Certificate
Federal Aviation Administration Academy
Curry, Charles Mack — Associate Degree
Texas State Technical College
Curtis, William Charles — Associate Degree
Tyler Junior College
Darr, Steve J — Associate Degree
Texas State Technical College
Daunis, Gari D — Master's Degree
Baylor University
Davidson, John R. — Master's Degree
University of Texas at Brownsville
Davis, John Sandy — Master's Degree
Abilene Christian University
Dawe, Jon Thomas — Associate Degree
Texas State Technical College
De La Rosa, Hector — Associate Degree
Texas State Technical College
Deleon, Gilbert — Bachelor's Degree
The University of Texas Pan American
Delgado, Marilupe Angelica — Master's Degree
University of Texas at Brownsville
Desjardins, Tony Manuel — Doctorate
University of Houston
Dillon, Donald Wayne — Associate Degree
Kilgore College
Doughty, Edward Lee — Bachelor's Degree
Louisiana Tech University
Easterling, Rachel Leanne — Associate Degree
Texas State Technical College
Eccleston, Laurie Patricia — Bachelor's Degree
The Kings College
Edgmon, Kathryn A — Master's Degree
Ut Tyler
Edwards-Borens, Sylvia H — Doctorate
Capella University
Elizondo, Samuel

Elkins, Arlis Milford — Associate Degree
Spokane Community College
Ellenberger, Martin D — Associate Degree
Sinclair Community College
Elliott, Loree A — Master's Degree
University of Texas at Arlington
Ellis, Ian W — Associate Degree
Texas State Technical College
Emerson, Van
Esquivel, Laura Margarita — Bachelor's Degree
University of Texas at Brownsville
Estes, Donna Lynn — Associate Degree
Texas State Technical College
Euler, Eva Mckinzey — Master's Degree
Texas A & M University Kingsville
Fariyike, Akin O. — Master's Degree
Oral Roberts University
Ferguson, Shannon — Bachelor's Degree
University of Texas at Brownsville
Fickens, Charlotte Nicole — Bachelor's Degree
Texas A & M University - Commerce
Fields, George Ruben — Master's Degree
Texas A & M University - Commerce
Filgo, Kelly Mayne-Hampton — Associate Degree
Texas State Technical College
Flener, Samara — Associate Degree
Austin Community College
Flores, Kristina
Flores, Olivia M — Associate Degree
Texas State Technical College
Follis, Daniel Earl — Associate Degree
Mclennan Community College
Folz, David Wayne — Associate Degree
Texas State Technical College
Formacio-Serna, Emmanuel — Doctorate
Foreign University
Fowler, Maxie Gene — Associate Degree
Texas State Technical College
Fowler, Victor J — Associate Degree
Texas State Technical College Waco
French, William G — Doctorate — Baylor University
Fuller, Mark Robert — Master's Degree
University of Texas at Tyler
Fyffe, Terry G — Associate Degree
Community College of The Air Force
Gainer, John A — Bachelor's Degree
Embry-Riddle Aeronautical University
Gaither, Garnet Dale — Bachelor's Degree
Texas A & M University Kingsville
Garcia, Mirna Renee — Master's Degree
University of Texas at Brownsville
Garcia, Odelia — Master's Degree
Capella University
Garrett, Alisia M — Associate Degree
Texas State Technical College
Garrett, John Thomas — Master's Degree
University of Texas at Brownsville
Garza, Ageda Cantu — Associate Degree
University of Texas at Brownsville
Garza, Gabriel — Bachelor's Degree
University of Texas at Brownsville
Garza, Rene — Master's Degree
The University of Texas Pan American
Gates, Michael C — Bachelor's Degree
Texas A & M University - Corpus Christi
Gauntt, Jennifer Kay — Bachelor's Degree
Tarleton State University
Gavito, Sammy D — Master's Degree
Texas A & M University
Gay, Michael — Master's Degree
The University of Texas Pan American
Gaytan, Raul — Bachelor's Degree
The University of Texas Pan American
Getman, Marta — Master's Degree
Baylor University
Gill, Matthew E — Associate Degree
Texas State Technical College
Girard, Shannon Dean — Associate Degree
Texas State Technical College
Glomb, David Frank — Associate Degree
Texas State Technical College
Gnuschke, Allen P — Associate Degree
The University of Akron Main Campus
Goebel, Jeremy Adam — Associate Degree
Texas State Technical College
Goebel, John A — Associate Degree
Texas State Technical College
Golden, Mitchell Anthony
Gomez, David Correa — Associate Degree
Texas State Technical College
Gonzales, Ana Maria — Bachelor's Degree
Texas State University - San Marcos
Gonzales, Emilia Rodriguez — Certificate — Texas State Technical College
Gonzalez, Alfonso Diaz — Associate Degree
Texas State Technical College
Gonzalez, Daniel Esteban — Doctorate
University of Houston - Downtown
Gonzalez, Elsa Raquel — Master's Degree
Texas State University - San Marcos
Gonzalez, Isaac — Associate Degree
Texas State Technical College
Gray, Ruth Renelle — Bachelor's Degree
Capella University
Greer, Kimberly Dawn
Guerrero, Veronica
Gustavus, Toby B. — Associate Degree
Texas State Technical College
Gutierrez, Adan — Bachelor's Degree
Texas A & M University - Corpus Christi
Gutierrez, Arnold — Bachelor's Degree
University of Texas at Brownsville
Gutierrez, Jesus Alberto — Master's Degree
University of Oklahoma Norman Campus

Gwyn, Ronald W — Associate Degree
Texas State Technical College
Haan, Thomas P — Bachelor's Degree
Western Washington University
Haich, Niles A — Master's Degree
North Dakota State University Main Campus
Hall, Heather J — Master's Degree
The University of Texas Pan American
Hall, Melvin Dwight — Associate Degree
City Colleges of Chicago
Hansen, Paul Carl — Master's Degree
University of Texas at Brownsville
Harley, David A — Bachelor's Degree
Southern Utah University
Hassig, Randall L — Master's Degree
University of Dallas
Hathi, Aniruddh J — Master's Degree
University of Iowa
Haverlah, Allison
Hayes, Dennis — Associate Degree
Texas State Technical College
Hensley, John Carl — Master's Degree
The University of Texas Pan American
Henson, Phillip Don — Associate Degree
Texas State Technical College
Hernandez, Adam J — Bachelor's Degree
Texas A & M University Kingsville
Hernandez, Felipe Angel — Associate Degree
Texas State Technical College
Hernandez, Juan Francisco
Hernandez, Luis — Doctorate New
York University
Hernandez, Robert D — Bachelor's Degree
University of Texas at Austin
Hernandez, Yanina — Master's Degree
University of New Mexico Main Campus
Herrington, Sherry Frances — Bachelor's Degree
University of Texas at Arlington
Hertel, Amy Lynn — Bachelor's Degree
University of Texas at Tyler
Hewgley, Richard William — Bachelor's Degree
Texas State University - San Marcos
Hightower, Jolynn — Bachelor's Degree
Hardin-Simmons University
Hill, Donna Worley — Master's Degree
University of North Texas
Hill, Travis R — Associate Degree
Texas State Technical College
Hinojosa-Vassberg, Adriana Dalia — Associate Degree
University of Texas at Brownsville
Hise, Justin Matthew — Bachelor's Degree
Tarleton State University
Hogue, James Edward — Master's Degree
Air Force Institute of Technology
Hollingshead, Phyllis E — Bachelor's Degree
East Texas Baptist University
Hollingsworth, Jerry Michael — Certificate Texas
State Technical College

Hollis, Christina Michelle — Associate Degree
Texas State Technical College
Hollmann, Mary — Master's Degree
University of Texas at Brownsville
Hooten, Samuel Edward — Associate Degree
Texas State Technical College
Hosseinpour, Mehrdad — Master's Degree
Texas A & M University Kingsville
Hubbard, Michael Stewart — Associate Degree
Texas State Technical College
Hubbard, Rewa A — Associate Degree
Richland College
Huffhines, Lisa Renee — Associate Degree
Texas State Technical College
Human, Lucretia A — Bachelor's Degree
Northern Arizona University
Huneke, Michael Wayne — Associate Degree
Texas State Technical College
Hunter, Kirk P — Master's Degree
Texas A & M University - Commerce
Hutchings, Joe Donald — Certificate
Professional Certification
Ibarra, Cesar — Master's Degree
Devry University Naperville Center
Ince, Timothy H — Bachelor's Degree
Texas Tech University
Ingram, Charles D — Master's Degree
Baylor University
Jaster, Linda S — Bachelor's Degree
University of Nebraska at Omaha
Jayoma, Antonio B — Master's Degree
University of Texas at Brownsville
Jean, Gena Lois — Bachelor's Degree
University of Texas at Brownsville
Jenkins, Jack Ronald — Associate Degree
Texas State Technical College
Johnson, Ronald Lynn — Associate Degree
Texas State Technical College
Jones, Brandon Kyle — Associate Degree
Texas State Technical College
Jones, Casey Wayne — Bachelor's Degree
Bellevue University
Jones, Elizabeth A — Bachelor's Degree
Tarleton State University
Jones, Wilson A — Bachelor's Degree
Louisiana Tech University
Junek, David Allen — Associate Degree
Texas State Technical College
Junek, Lee Hilliard — Master's Degree
Baylor University
Kahl, Carlyn Elizabeth — Master's Degree
Georgia College & State University
Kahler, Kent E — Associate Degree
Texas State Technical College
Kalka, Michael — Master's Degree
Devry University- North Brunswick Campus
Keahey, Heather Leigh — Associate Degree
Texas State Technical College

Kelley, Gary Lee — Associate Degree
Brookhaven College
Kent, Paula — Master's Degree
Tarleton State University
Kikos, Timothy A — Master's Degree
The University of Texas Pan American
Kimberley, Patricia — Associate Degree
Texas State Technical College
Kimbrell, Cynthia Ellen — Bachelor's Degree
University of Texas at Tyler
King, Ethel Olivia — Master's Degree
Hardin-Simmons University
Kinsey, Kathryn Ann — Certificate West Texas
Kirk, Richard — Doctorate The University of Texas Pan American
Kirkland, Carol L — Bachelor's Degree
Sam Houston State University
Kleibrink, Kevon L — Associate Degree
Texas State Technical College
Kleypas, Jason E — Associate Degree
Texas State Technical College
Klix, Keith C. — Associate Degree
Texas State Technical College
Klontz, Darwin L — Bachelor's Degree
Park University
Knudsen, Martin — Master's Degree
University of North Texas
Kooyman, Keith Charles — Bachelor's Degree
Western Governors University
Koslan, Mark Lynn — Associate Degree
Texas State Technical College
Kotzur, Velma Joann — Master's Degree
University of Texas at Brownsville
Krause, Mary Lynn — Bachelor's Degree
Southern Illinois University Carbondale
Kuehne, David W — Associate Degree
Texas State Technical College
Kunkler, Dane T — Bachelor's Degree
Midwestern State University
Lamb, Sheila Jo — Associate Degree
Texas State Technical College
Lamere, Rufus A — Associate Degree
Texas State Technical College
Lansford, Matthew Karl — Associate Degree
Texas State Technical College
Larrazolo, Francisco R — Master's Degree
Baylor University
Lashbrook, Jean Ann — Associate Degree
New York University
Leija, Eldwin Roland — Bachelor's Degree
The University of Texas Pan American
Lemon, Chris Lee — Bachelor's Degree
Baylor University
Leonard, Earl R — Bachelor's Degree
University of Texas at Arlington
Leonard, Paul Horton — Master's Degree
The University of Texas Pan American
Lewis, Frank K — Master's Degree
American University
Lewis, Michael Anthony — Bachelor's Degree
Paul Quinn College
Lewis, Stephen John — Associate Degree
Hill College
Lewis-Qualls, Chandra Camille — Master's Degree
Abilene Christian University
Lewsader, Abigail — Master's Degree
The University of Texas Pan American
Ley, Jazmin — Master's Degree
The University of Texas Pan American
Limas, Ricardo — Associate Degree
Texas State Technical College
Lipscombe, Mark A
Lister, George P — Master's Degree
National University
Lloyd, Tony Ray — Associate Degree
Texas State Technical College
Longoria, Ray — Associate Degree
Texas State Technical College
Longoria, Rogelio S — Associate Degree
Texas State Technical College Harlingen
Looper, Jeffrey L. — Associate Degree
Oklahoma State University
Lopez, Higinio Campos — Bachelor's Degree
University of Texas Health Science Center at Houston
Lopez, Jessica I — Master's Degree
The University of Texas Pan American
Lovelace, Robert R — Associate Degree
Texas State Technical College
Loya, Miguel Angel — Associate Degree
Texas State Technical College
Lozano, Jose Antonio — Associate Degree
Texas State Technical College
Lucas, Christopher Lance — Associate Degree
Texas State Technical College
Lugo, Maria Alicia — Bachelor's Degree
University of Texas at Brownsville
Macik, David Joseph — Associate Degree
Texas State Technical College
Macik, Henry Jerome — Associate Degree
Texas State Technical College
Mack, Marven Kennith — Bachelor's Degree
Tarleton State University
Mahlke, Ray Ernest — Master's Degree
Tarleton State University
Mallet, Gabrielle Shante — Master's Degree
Abilene Christian University
Marshall, Tracy Lester — Associate Degree
Coastal Bend College
Martin, Garrett B — Associate Degree
Texas State Technical College
Martin, Linda B — Bachelor's Degree
Abilene Christian University
Martin, Michael Ray — Associate Degree
Texas State Technical College

Martinez, Elizabeth — Bachelor's Degree
Texas A & M University - Corpus Christi
Marx, Paul Ernest — Bachelor's Degree
Baylor University
Mata, Cynthia B. — Bachelor's Degree
The University of Texas Pan American
Mata, Maria Raquel — Bachelor's Degree
Mcmurry University
Matheny, Marvin D — Associate Degree
Texas State Technical College
Mathis, Curtis L — Doctorate
Texas A & M University Hsc - Baylor College of Dentistry
Matus, Ben R — Associate Degree
Texas State Technical College
Matus, James Michael — Associate Degree
Texas State Technical College
Mcbrayer, Andrew Scott — Bachelor's Degree
Oklahoma State University
Mccauley, Christopher Dwayne — Associate Degree
Texas State Technical College
Mcclenny, Rix Danny — Associate Degree
Texas State Technical College
Mcdaniel, Gregory Brown — Master's Degree
Stephen F. Austin State University
Mcelroy, Dana Sue — Bachelor's Degree
Southeast Missouri State University
Mcfarland, Richard Lee — Master's Degree
University of Texas at Tyler
Mcgee, Tommy G — Bachelor's Degree
University of North Texas
Mcginnis, John M — Master's Degree
Letourneau University
Mcleod, Steven C — Associate Degree
Texas State Technical College
Medrano, Adrian — Associate Degree
Texas State Technical College
Melendez, Jose V — Associate Degree
Texas State Technical College
Melendez, Lynda K — Associate Degree
Rancho Santiago Community College District
Mendias, Jerome M — Bachelor's Degree
Sul Ross University
Mendoza, Norberto — Master's Degree
Angelo State University
Mercado, Monica Marie — Master's Degree
The University of Texas Pan American
Michael, Monte Eric — Associate Degree
Texas State Technical College
Miller, Ronald E — Doctorate Texas
Tech University
Mills, Matthew Lee — Associate Degree
Texas State Technical College
Mitchell, Robert Kenneth — Associate Degree
Texas State Technical College
Molini, Frank Trevino — Certificate Texas
State Technical College
Montalvo, Julian — Associate Degree
Texas State Technical College
Montemayor, Yldefonso — Master's Degree
Trinity University
Moon, Kayleen Marie — Associate Degree
Le Cordon Bleu College of Culinary Arts
Moore, Kenneth Ray — Associate Degree
Texas State Technical College
Morgan, Evan Thomas — Bachelor's Degree
Le Cordon Bleu College of Culinary Arts
Morris, Chelsey K — Associate Degree
Shasta College
Moss, Steven Lewis — Master's Degree
Texas Tech University
Mullins, Wesley James — Bachelor's Degree
Averett University
Murphy, David E — Bachelor's Degree
University of Texas at Austin
Murphy, Kathleen L — Bachelor's Degree
Stephen F. Austin State University
Murphy, Michael John — Bachelor's Degree
University of Houston - Clear Lake
Myers, James Corby — Associate Degree
Texas State Technical College
Nauman, Sam — Master's Degree
Southern New Hampshire University
Necessary, Bryan Thomas — Associate Degree
Texas State Technical College
Nesmith, Jan — Bachelor's Degree
University of Texas at Brownsville
Newberry, Miranda G — Master's Degree
University of Texas at Arlington
Newhart, Angel Diane — Master's Degree
Liberty University
Nixon, Daniel Crayton — Associate Degree
Texas State Technical College
Nixon, Jean — Master's Degree
American University
Novosad, Letha K — Certificate Texas
State Technical College
Obare, Charles — Master's Degree
The University of Texas Pan American
Odom, Patricia Ann — Master's Degree
Lamar University
Olney, Jeff L — Associate Degree
Texas State Technical College
O'neal, Patricia A — Bachelor's Degree
University of Saint Mary
O'neill, Carolyn D — Associate Degree
Texas State Technical College
Ortega, Eva E. — Bachelor's Degree
University of Texas at Brownsville
Ortega, Henry — Associate Degree
Texas State Technical College
Ortigo, Rodney Glen — Master's Degree
Tarleton State University
Osborne, Michael C
O'steen, Alesha Mccomic — Bachelor's Degree
Letourneau University
Otts, Trisha Lynn — Associate Degree
Texas State Technical College

Overcash, Michael D — Associate Degree
Texas State Technical College
Owen, John Clark — Master's Degree
University of Texas at Brownsville
Owens, Jonathan David — Associate Degree
Texas State Technical College
Page, Gary L. — Bachelor's Degree
Tarleton State University
Pape, Stephen W
Parker, Joshua J — Bachelor's Degree
Kansas State University
Parker, Ronnie W — Associate Degree
Texas State Technical College Waco
Parks, Shelley Kay — Bachelor's Degree
Baylor University
Parsee, Jerome — Master's Degree
Prairie View A & M University
Pate, John Clinton — Associate Degree
Texas State Technical College
Pearce, Verlon Carson — Bachelor's Degree
University of Alaska Anchorage
Pedrotti, John Owen — Associate Degree
Texas State Technical College
Pelton, Conrad Wallace — Bachelor's Degree
University of Texas at Tyler
Pemberton, Pamela Diane — Bachelor's Degree
Texas A & M University - Commerce
Perez, Arturo Jesus — Associate Degree
Texas State Technical College
Petit, Kristopher Raymond — Bachelor's Degree
University of Texas at Brownsville
Pevia, Ariel Jacob — Associate Degree
Texas State Technical College
Phillips, Daniel George — Associate Degree
Texas State Technical College
Phillips, John R — Associate Degree
Texas State Technical College
Phipps, Lisa — Associate Degree
Texas Southmost College
Pierce, Joe M. — Bachelor's Degree
Sam Houston State University
Piper, Jennifer Lynn — Associate Degree
Texas State Technical College
Piper, Sean Michael — Associate Degree
Texas State Technical College
Pitts, James Ronald — Associate Degree
Texas State Technical College
Pizano, Samuel — Associate Degree
Texas State Technical College
Place, David Andrew — Bachelor's Degree
American Intercontinental University
Pleasant, William E — Master's Degree
Texas A & M University - Commerce
Plough, Mark Arthur — Associate Degree
Texas State Technical College
Porter, Richard G — Bachelor's Degree
University of Texas at Tyler
Poston, Gregory Z — Associate Degree
Texas State Technical College
Poulter, Philip Matthew — Master's Degree
University of Dallas
Powell, Kathy Mary — Bachelor's Degree
University of Texas at Tyler
Procopio, Jennifer Lynn — Master's Degree
University of Texas at Tyler
Ramirez, Beyda Magdalena — Bachelor's Degree
University of Texas at Brownsville
Ramirez, Roberto Juan — Associate Degree
South Texas College
Ramirez, Victor — Master's Degree
University of Texas at Arlington
Reams, Julie Elizabeth — Master's Degree
Angelo State University
Reddin, Michael R — Associate Degree
Vernon College
Reed, Brin N — Associate Degree
Texas State Technical College
Reyes, John Alexander — Bachelor's Degree
The University of Texas Pan American
Reyna, Victoriano Fidel
Reynolds, Donald W — Associate Degree
Texas State Technical College
Rhoades, Julie Dianna — Bachelor's Degree
Tarleton State University
Rico, Raquel — Master's Degree
University of Texas at Brownsville
Rivera, Rodney — Bachelor's Degree
Angelo State University
Robb, Leonardo Arturo — Associate Degree
Texas State Technical College
Roberts, Arthur Woodrow — Master's Degree
Our Lady of The Lake University
Roberts, Ruth A. — Bachelor's Degree
Marion College
Rocha, Aida Yvonne — Bachelor's Degree
University of Texas at Brownsville
Rodriguez, Jennifer Michele — Master's Degree
The University of Texas Pan American
Rodriguez, Jose L — Bachelor's Degree
Chicago State University
Rodriguez, Ramiro — Master's Degree
University of Texas at Brownsville
Rost, Roy L. — Bachelor's Degree
Tarleton State University
Rouse, Adam J. — Associate Degree
Spartan College of Aeronautics And Technology
Ruble, Sherri Adele — Associate Degree
Texas State Technical College
Ruiz, Theresa — Bachelor's Degree
University of Texas at Brownsville
Russell, Nancy Gail — Master's Degree
Texas A & M University - Corpus Christi
Salas, Jose G — Associate Degree
Texas State Technical College

Saldivar, Eduardo — Master's Degree
The University of Texas Pan American
Salvato, Carol Ann — Associate Degree
Texas State Technical College
San Pedro, Anna Lilia — Master's Degree
The University of Texas Pan American
Sanchez, Robert S — Bachelor's Degree
The University of Texas Pan American
Sandrock, Nancy — Master's Degree
Case Western Reserve University
Santos, Anthony J — Associate Degree
Texas State Technical College Harlingen
Sauceda, Heather M — Associate Degree
South Texas College
Scheler, Carol Marie — Associate Degree
Texas State Technical College
Scheler, Kenneth Wayne — Associate Degree
Texas State Technical College
Schier, Joshua Nathaniel — Associate Degree
Texas State Technical College
Schneider, Mark Robert — Bachelor's Degree
Tarleton State University
Schrader, John W — Associate Degree
Texas State Technical College
Schwarz, Johannes Philip — Associate Degree
Texas State Technical College
Scott, Byron Anthony — Bachelor's Degree
Texas State University - San Marcos
Scott, William L — Master's Degree
Air Force Institute of Technology
Scruggs, Cathy Kandell — Associate Degree
Texas State Technical College
Seale, Donnie R — Certificate Texas
A&M University Central Texas
Seeley, Garrett Lawrence — Master's Degree
Tarleton State University
Segraves, Martin A — Bachelor's Degree
Excelsior College
Senn, Harry C — Master's Degree
Southwestern Bapist Theological Seminary
Senn, Jonathan C — Associate Degree
Texas State Technical College
Sexton, Sharon Marie — Master's Degree
University of North Texas
Shafer, Constance Irene — Bachelor's Degree
American Intercontinental University
Sharp, Don D — Associate Degree
Texas State Technical College
Sherman, Jonathan B
Shorter, Linda Jane — Associate Degree
Texas State Technical College
Shriver, Penny G. — Bachelor's Degree
University of Texas at Arlington
Sigler, Garry Lee — Doctorate Baylor University
Signer, Timothy Robert — Bachelor's Degree
Southern Illinois University Carbondale
Silva, Elvia — Master's Degree
University of Texas at Brownsville
Simmons, T.j. J. — Certificate Texas State Technical College
Slagle, Steven Roy — Master's Degree
University of Houston
Smith, Derek Paul — Associate Degree
Mclennan Community College
Smith, Stacie F
Soto, Michael Paul — Associate Degree
Texas State Technical College
Stevens, Karen Joanne — Associate Degree
Texas State Technical College
Stinson, Jeff Samuel — Bachelor's Degree
Tarleton State University
Stotts, Katrina Denise — Associate Degree
Texas State Technical College
Stranacher, Richard Allen — Associate Degree
Texas State Technical College
Sulak, Elaine A. — Bachelor's Degree
Baylor University
Swinnea, Brenda Lamarr — Associate Degree
The University of Texas Pan American
Syed, atiq Ahmad — Doctorate Saint Louis University
Szymoniak, Steven Michael — Doctorate
Fielding Graduate University
Taliancich, William Ross — Master's Degree
University of Texas at Brownsville
Tamez, Amanda S — Bachelor's Degree
University of Texas at Brownsville
Tate, Patti Sue — Associate Degree
Texas State Technical College
Taylor, Kathy Marchelle — Bachelor's Degree
University of Texas at Arlington
Thacker, Traci Louise — Bachelor's Degree
Howard Payne University
Thomas, David Bernard — Master's Degree
Valdosta State University
Thomas-Mcnew, Lisa K — Bachelor's Degree
Tarleton State University
Thompson, Jane — Associate Degree
Texas State Technical College
Tierce, David Earl — Associate Degree
Texas State Technical College
Todaro, William Joseph — Associate Degree
Texas State Technical College
Tongate, Charlotte Fern — Master's Degree
Tarleton State University
Towery, Anthony Gilliam — Associate Degree
Texas State Technical College
Tragus-Lopez, Sabrina M — Master's Degree
University of Texas at San Antonio
Tschirhart, Stephen M — Bachelor's Degree
Embry-Riddle Aeronautical University-Worldwide
Turner, Heather A — Master's Degree
Baylor University
Unger, Randall William — Master's Degree
State University of New York at Binghamton

Uptmor, Bobby R — Associate Degree
Texas State Technical College
Valdez, Cinthya Lizbeth — Associate Degree
Texas State Technical College
Van Sant, Charlene Gayle
Vargas, Jose S. — Associate Degree
Texas State Technical College
Vasquez, Jose Ricardo — Certificate Texas
State Technical College
Vavra, Jerry Jack — Bachelor's Degree
University of Advancing Technology
Velez, Walter
Viera, Edgard Arcadio — Associate Degree
Central Texas College
Villarreal, Diego Del Angel — Associate Degree
Texas State Technical College
Villarreal, Ida — Bachelor's Degree
The University of Texas Pan American
Villarreal, Ramiro — Associate Degree
Texas State Technical College
Villarreal, Santiago — Associate Degree
Texas State Technical College
Voelkel, Gary Michael — Associate Degree
Texas State Technical College
Vorderkunz, Alex Elwood — Associate Degree
Texas State Technical College
Wade, Curt Ray — Associate Degree
Texas State Technical College
Walker, Tommy Leon — Master's Degree
Abilene Christian University
Wallace, Joni Janelle — Associate Degree
Texas State Technical College
Walters, Colby — Master's Degree
Capella University
Ware, Steven Doyle — Bachelor's Degree
Texas A & M University
Washington, John Allen — Bachelor's Degree
Devry Inst Tech Tx
Watkins, Susie Elizabeth — Master's Degree
Bellevue University
Watson, Mark Graham — Associate Degree
Texas State Technical College
Weaver, Andy — Associate Degree
Howard College
Weeaks, Justin Donald — Doctorate Texas
Tech University
Weir, Shannon Dale — Associate Degree
Texas State Technical College
Wellborn, Walker B — Bachelor's Degree
University of Houston
Wheet, Richard L — Bachelor's Degree
Texas A & M University
White, Anneliese E — Master's Degree
Texas State University - San Marcos
White, Jonathan Senter — Master's Degree
Texas State University - San Marcos
White, Leroy — Master's Degree
University of Phoenix
White, Robert L — Associate Degree
Texas State Technical College
White, Stephen T
White, Trayne — Bachelor's Degree
Utah Valley State College
Whitzel, Dale James — Master's Degree
The University of Texas Pan American
Wilhite, George A — Master's Degree
University of Texas at San Antonio
Wilke, Otto C — Doctorate Texas
A & M University
Wilkins, David Lee — Associate Degree
Texas State Technical College
Williams, Brooke Nichole — Associate Degree
Austin Community College
Williams, George Joseph — Associate Degree
Texas State Technical College
Williams, Mary J — Master's Degree
Regis University
Williams, Y'vonne D — Master's Degree
Washington University In St. Louis
Wilson, Jimmie Joe — Associate Degree
Texas State Technical College
Wimberley, Christa Marie — Master's Degree
University of Texas at Brownsville
Wishon, Donna J — Bachelor's Degree
Tarleton State University
Withers, Paul Dwayne — Associate Degree
Texas State Technical College
Woehl, Katherine — Master's Degree
Hardin-Simmons University
Woods, Deborah Bernice — Bachelor's Degree
Baker College System
Woolls, Temple Harris — Associate Degree
Texas State Technical College
Wyche, Sessia — Master's Degree
Texas A & M University Kingsville
Yanez, Hector Hugo — Master's Degree
University of Texas at Brownsville
Yezak, Ashley Andrew — Associate Degree
Texas State Technical College
Zetzman-Sparks, Sharon Elaine — Associate Degree
Texas State Technical College