2014 - 2015
TSTC HARLINGEN
COLLEGE CATALOG

Texas State Technical College Harlingen Technical Careers

Allied Health Care

Culinary Arts
- Food Service Specialist

Dental Assistant
Dental Hygiene
Dental Laboratory Technology
Health Information Technology
Medical Assistant
Medical Information Specialist/Transcriptionist
Nurse Assistant
Registered Nursing
Surgical Technology
Vocational Nursing

Computer Information Systems

Business Management Technology
- Office Management
- Operations Management

Computer Networking and Security Technology
- Computer Networking Specialist

Computer Systems Management Technology
Digital Media Design Technology
Game & Simulation Programming

Engineering

Architectural Design & Engineering Graphics
Biomedical Equipment Technology
Chemical-Environmental Technology
Industrial Systems Technology
Mechatronics Technology
Telecommunications Technology
- Telecommunications Specialist

Wind Energy & Turbine Technology*
- Wind Energy & Turbine Technician

*program offered at Harlingen and Ingleside Campuses

Industrial/Manufacturing

Agricultural Technology
- Agricultural Operations

Air Conditioning & Refrigeration Technology
- Refrigeration Mechanic

Auto Collision Technology
- Auto Body Repair
- Auto Body Collision and Finish Preparer

Automotive Technology
- Ford Maintenance & Light Repair
- Automotive Maintenance Mechanic

Aviation Maintenance Technology
- Airframe
- Powerplant

Building Construction Science
Precision Manufacturing Technology
- Machinist
- Mold, Tool and Die Making

Welding Technology

Education and Humanities

Academic Core
Education and Training

Associate of Science Degrees

Biology
Computer Science
Engineering
Mathematics
Physics

COLLEGE CATALOG

Institutional Purpose and Goals

Statement of Purpose

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

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

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

Expanded Statement of Purpose

TSTC Harlingen is a unique college which offers technical and academic programs and courses in statewide demand for the 21st century while emphasizing, in particular, the needs of Texas. TSTC Harlingen provides opportunities for both immediate employment and seamless transfer of credits to other colleges and universities. Awards include Associate of Science (AS) and Associate of Applied Science (AAS) degrees, technical Certificates of Completion, as well as institutional recognition for completion of the General Education Core and workforce certificates.

TSTC Harlingen promotes economic development by making higher education affordable, readily accessible, and personal through diverse technical programs and rigorous curriculum offerings. TSTC Harlingen offers studies through multiple instructional delivery systems and actively promotes involvement of high school and non-traditional students in its programs. The needs of stakeholders are met through innovative approaches to teaching and student learning as well as appropriate advisement into educational programs that lead to successful career placement.

TSTC Harlingen is committed to preparing students for the 21st century by providing holistic personal and professional development through a combination of technical and academic delivery, relevant student services, talent development organizations, and other career building activities. TSTC Harlingen uses institution-wide coordinated planning to assure program vitality for today's industrial and academic demands and tomorrow's challenges.

Vision and Values

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

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

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Welcome to TSTC Harlingen

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

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

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

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

Dr. Stella Garcia
Interim President

The TSTC System

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

In 1967, JCTI expanded to include a South Texas campus in Harlingen. In 1969, the colleges separated from Texas A&M University and became an independent state system, with the name Texas State Technical Institute (TSTI) and its own Board of Regents. Additional campuses were created in 1970 in Amarillo in the Panhandle of Texas and in Sweetwater in West Texas. As the demand for quality technical education continued to grow, extension centers were established in McAllen (1983), Abilene (1985), Breckenridge (1989), Brownwood (1991), Marshall (1991), Ingleside (2011), and Red Oak (2013). In 1991, TSTI was renamed Texas State Technical College (TSTC). In 1999, the extension center in Marshall became an independent college of the system.

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

TSTC is the only state-supported technical college system in Texas. TSTC's statewide role and mission is to efficiently and effectively help Texas meet the high-tech challenges of today's global economy, in partnership with business and industry, government agencies, and other educational institutions. TSTC has high graduation rates, exceptional postgraduate success rates, and an outstanding record in graduating individuals from diverse cultural and socioeconomic backgrounds. 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.

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Governance and Accreditation

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

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

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

Texas State Technical College Harlingen is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award Associate Degrees and Certificates of Completion. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404-679-4500 for questions about the accreditation of Texas State Technical College Harlingen.

The Southern Association of Colleges and Schools Commission on Colleges should be contacted only if there is evidence that appears to support TSTC Harlingen's significant non-compliance with a requirement or standard related to accreditation. Normal inquiries about TSTC Harlingen, such as admission requirements, financial aid, educational programs, etc., should be addressed directly to Texas State Technical College Harlingen and not to the Commission's office.

Equal opportunity shall be afforded within the Texas State Technical College System to all employees and applicants for admission or employment regardless of race, color, gender, religion, national origin, age 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)
Commission on Dental Accreditation (CODA)
 • 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

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

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

The following programs are recognized by the:

Texas Skills Standards Board (TSSB)
 • Biomedical Equipment Technology
 • Digital Media Design Technology
 • Precision Manufacturing Technology
 • Telecommunications
 • Wind Energy &Turbine Technology

Map | 9

Map
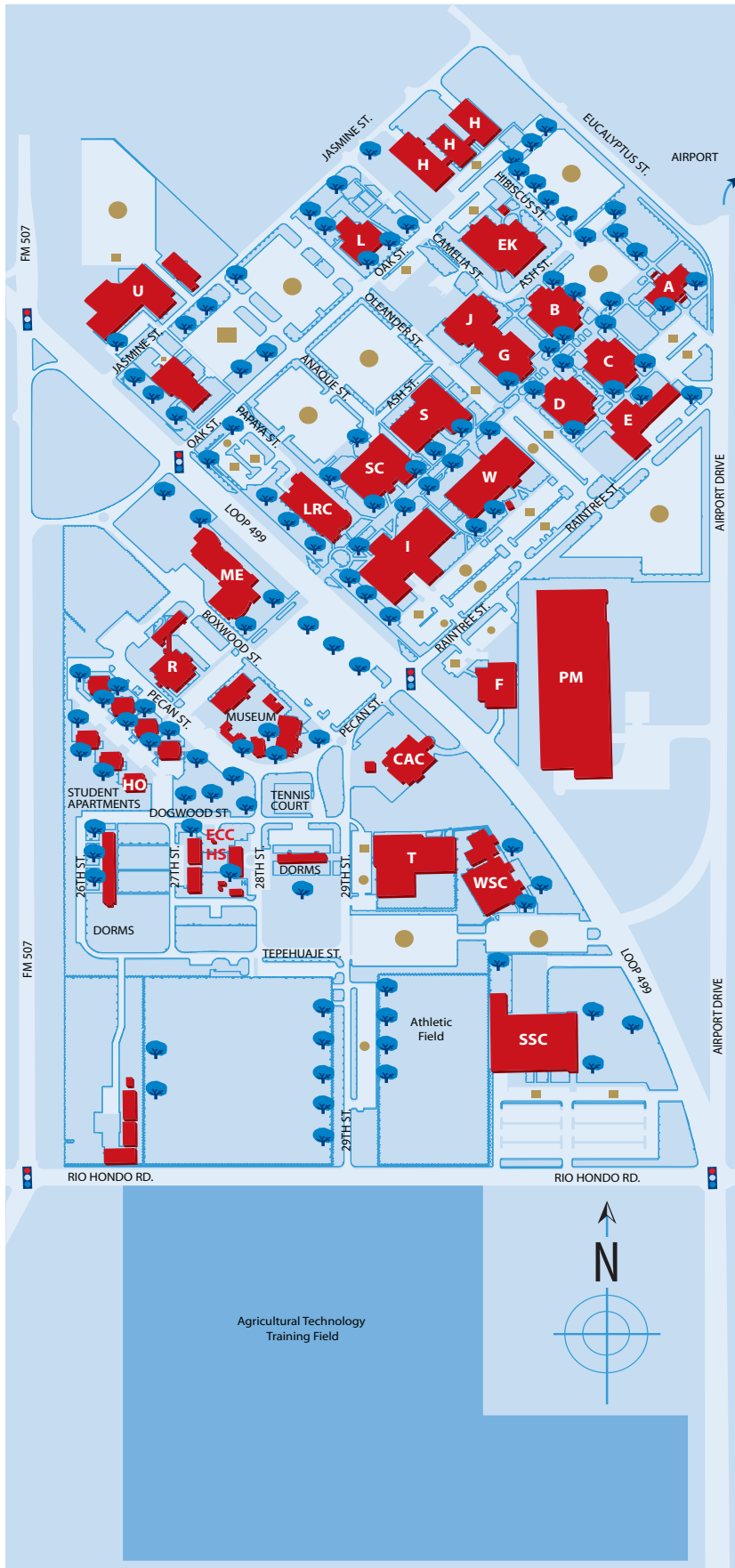
A   **Public Safety Building**
EMT, Fire Academy, Police Academy, TSTC Police

B   **College Readiness & Advancement**
ABE, CAMP, Challenger Learning Center, CSME, Dual Enrollment, HEP, Talent Search, Upward Bound, WIA/VIDA

C   **Office Occupations Building**
BMT, ET, Help Desk

CAC   **Cultural Arts Center**

D   **Biomedical/Dental Lab**
DLT

E   **Transportation Technology**
AUT

ECC/HS   **Early Childhood Center/ Head Start**

EK   **Student Services Center**
Admissions, Cashiers, Counseling & Support Services, Enrollment Management, Financial Aid, Registrar, Student Accounting, Student Development, Testing & Advisement Center

F   **Autobody Collision Technology**
AUB

G   **Computer Science Programs**
CSMT, GAME, COSC

H   **Building Systems Technology**
ACT, BCS

HO   **Housing Office**

I   **Administration/Industrial Technology**
PMT, President's Office, Student Learning Office, WLT

J   **Chemical/Environmental Technology**
CET

L   **Health Information Technology**
HIT, MIS

LRC   **Dr. J. Gilbert Leal Learning Resource Center**
Library, Office of Student Success

ME   **University Center**
Continuing Education

PM   **Engineering Center**
BET, MT, TET, WET

R   **Early College High School**

S   **George F. Young Engineering Technology**
ADEG, DMDT, CNST

SC   **Student Center**
Bookstore, Cafeteria, Career Services, Game Room, Student Government, Student Health Services, Student ID Center, Veterans Center

SSC   **Service Support Center**
Human Resources, Institutional Effectiveness & Research, Marketing, Procurement Office

T   **Aviation Technology**
AER, AGT

U   **Senator Eddie Lucio Health Science Technology Building**
BIOL, CA, DEA, DEH, NA, MEA, RN, ST, VN

W   **Representative Irma Rangel Science and Technology Building**
Academic Core, EA, Online Learning, ENGR, MATH, PHYS

WSC   **Wellness & Sports Center**
Aerobics Room, Athletic Field, Cardio Room, Gym, Racquetball Courts, Walking Trail, Weight Room

▪ **Employee Parking**

● **Student Parking**

TSTC Texas State Technical College

Admissions Information

Campus Tours

Prospective students and their families are strongly encouraged to visit TSTC before registering for classes. During a campus visit, each prospective student is assigned to an admissions outreach representative 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 outreach representative and a campus tour.

Admission Requirements

General Admission Requirements

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

- Graduate from a high school accredited by a state department of education and/or a recognized regional accrediting association.
- Transfer from another college, university, or other higher education institution that is regionally accredited.
- Complete a GED Certificate (General Education Development), as certified by a state education agency.
- Meet international student criteria. Potential students who are not United States citizens must present proper documentation for an appropriate visa category. Additional information relating to academic background and financial support, as well as a personal interview, may be required for admission. See "International Stu-

dents" under the Admission Procedures section for further information.
- Meet individual approval criteria. Potential students who do not meet any of the above requirements and are age 17 or older and no longer attending high school may be admitted through individual approval.
- Meet exceptional admission criteria. Potential students who are under age 17 may be admitted through the exceptional admission program under one of the following categories, provided they present sufficient evidence that they can do college-level work as determined by the institution.
  - Age 16 or older and currently enrolled in high school without a diploma or GED, or age 16 and a graduate of an unaccredited or home high school.
  - Age 16 and no longer attending high school, or age 15 or younger.
- Submit Proof of Bacterial Meningitis Vaccination: (For students under the age of 22). All new students, transfer students and students who have taken a leave of absence from school in either a fall or spring semester must have received the Bacterial Meningitis Vaccination during the five-year period immediately preceding and at least 10 days prior to the first day of the semester enrolled or re-enrolled.

Additional Program Admission Requirements

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

TSTC Texas State Technical College

Admission Procedures

General Admission Procedures

These procedures apply to students enrolling in college credit programs.

1. Complete an online admission application at www.applytexas.org
2. Note that proof of Texas residency may be required to obtain resident tuition rates.
3. Depending on the category under which the applicant qualifies for admission, submit the following additional documents to the Office of Admissions.
   a. High school graduate: an official copy of high school transcript
   b. College or university transfer: official transcripts from all institutions of higher education attended previously
   c. GED: a copy of GED certificate or official score report
   d. Individual approval students: individual approval form
   e. Exceptional admission students:
      - Age 16 or older and currently enrolled in high school without a diploma or GED, exceptional admission form signed by parent or guardian and high school representative; qualifying scores in writing and/or reading and/or mathematics on approved assessment instruments.
      - Age 16 or older and a graduate of a home high school or unaccredited high school: exceptional admission form (signed by parent or guardian if age 16).
      - Age 16 and no longer attending high school, or age 15 or younger: exceptional admission form signed by parent of guardian and high school representative; qualifying scores in writing, reading, and mathematics (Note: An information session with a TSTC official is also required. Contact the Office of Admissions for more information.)
   f. International students: see "International Students" in this section for details
4. Submit Proof of Bacterial Meningitis Vaccination: (For students under the age of 22). All new students, transfer students and students who have taken a leave of absence from school in either a fall or spring semester must have received the Bacterial Meningitis Vaccination during the five-year period immediately preceding and at least 10 days prior to the first day of the semester enrolled or re-enrolled.
5. If applicable submit scores from the Texas Success Initiative Assessment or provide appropriate documentation of a TSI exemption of waiver. If needed, make arrangements to take the Texas Success Initiative Assessment by contacting Testing & Advisement.
6. Attend Mandatory New Student Orientation. Pertains to TSTC Harlingen only. New Student Orientation is mandatory for all new students and is required prior to registration for classes.

All documents submitted by applicants who do not register for the term indicated on the admission application will be retained for one year in the Office of Admissions. 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.

Former TSTC Students

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

International Students

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

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

Non-native English speakers are required to be assessed in reading, writing, and math skills. An alternative test such as TOEFL may be used to determine the level of English proficiency. Depending upon scores, students will be enrolled in non-credit English as a Second Language (ESL) courses, academic ESL courses, developmental courses in reading and math, and/or college-level courses as appropriate until such time as their English proficiency allows testing on an approved TSI instrument. Consult with you international liaison located at the Office of the Registrar.

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

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

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

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

Academic Fresh Start

Texas Education Code 51.931 entitles residents of Texas to seek admission to public institutions of higher education without consideration of courses undertaken ten or more years prior to enrollment. This bill has been called the "right to academic fresh start" and it gives students the option of electing to have coursework taken ten or more years prior to the starting date of the semester in which the applicant seeks to enroll either counted as usual or ignored for admission purposes.

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

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

Early Admission/Concurrent High School/Dual Enrollment

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

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

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

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

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

Placement Testing

If applicable, prior to enrollment in credit courses, students must comply with Texas Success Initiative (TSI) test, by submitting documentation of TSI exemption or waiver. See "Testing and Placement Requirements" in the Scholastic Information section.

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

Registration for Classes

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

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Tuition and Fees

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

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

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

Tuition

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

State Tuition Rates Effective Fall 2013

- Resident of Texas: $82 per semester credit hour for academic courses
- Resident of Texas: $97 per semester credit hour for technical courses
- Resident of Texas: $254 per semester credit hour for technical courses in premium programs
- Non-resident of Texas: $254 per semester credit hour for all courses

Designated Tuition Rate Effective Fall 2013

- $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.

$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 student's 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 as 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 any charges, including all charges made by a collection agency, associated with the collection of delinquent accounts.

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Fees

Students' fees are determined by a variety of factors, as described in the accompanying table. Not all of these fees apply to continuing education and workforce training programs; contact Student Accounting for more information. Fees in force for Fall 2013 are listed below.

TYPE OF FEE	AMOUNT OF FEE	NOTES
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 continuing education/workforce training courses
Out-of-State Resident and Worker Continuing Education Tuition	At least twice the continuing education tuition rate for the associated course-section	For non-residents who are brought from outside the state by their employers to attend the course
Credit Award Evaluation Fee	$25 per evaluation	Applies to evaluation of CEUs and/or experiential learning for the purpose of awarding TSTC semester credit
External Certification of Specialty	Cost of exam	
Student 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	
Mailbox Fee	$5 per semester	For TSTC West Texas, Sweetwater, students living off campus
Alcohol Awareness Course	Cost of course	For Harlingen and West Texas; may be required if student possesses or consumes alcohol on campus
Required vaccines	Cost of vaccine	Optional by college
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	
Returned check charge	$25 per check	
Smoking in a non-designated area fines	First offense--$25 Second offense--$50 Third offense and more --$75	

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 outline under the TSTC Harlingen Satisfactory Academic Progress (SAP policy for Financial Aid).

WAIVERS & EXEMPTIONS FOR RESIDENTS

	OFFICE
Students who graduate early from a Texas high school	Dual Enrollment, College Readiness & Advancement Building, 956-364-4321
Students who are the highest ranking graduate of their high school class (valedictorian)	Dual Enrollment, College Readiness & Advancement Building, 956-364-4321
High school graduates who received TANF benefits while in high school	Dual Enrollment, College Readiness & Advancement Building, 956-364-4321
Texas veterans or dependents of Texas veterans who were killed in action or died while in service (Hazlewood)	Veterans Center, Student Center, 956-364-4387
Children of POWs and MIAs as certified by the U.S. Department of Defense	Financial Aid, Student Services Center, 956-364-4330
Children of disabled Firefighters or Peace Officers as certified by the Texas Higher Education Coordinating Board	Financial Aid, Student Services Center., 956-364-4330
Blind or Deaf Students as certified by the Texas Department of Assistive and Rehabilitative Services – Rehabilitation Services, Blind and Deaf-Blind Services, and Deaf and Hard of Hearing Services.	Counseling & Support Services, Student Services Center, 956-364-4520
Students in foster or other residential care as certified by the Texas Department of Protective and Regulatory Services	Financial Aid, Student Services Center., 956-364-4330

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

WAIVERS & EXEMPTIONS FOR RESIDENTS OR NON-RESIDENTS

	OFFICE
High school students enrolled in class sections for dual high school and college credit may have state and designated tuition waived or reduced	Dual Enrollment, College Readiness & Advancement Building, 956-364-4321
Students enrolled in more than one Texas public institution of higher education at the same time may have a reduction in minimum state tuition charges	Financial Aid, Student Services Center, 956-364-4330
Senior citizens 65 years of age or older may audit courses without payment of state and designated tuition	Student Accounting, Student Services Center, 956-364-4409
TSTC employees, their spouses and/or dependents have a reduction in state tuition and a waiver of designated tuition	Human Resources, Service Support Center, 956-364-4042

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

WAIVERS & EXEMPTIONS FOR NON-RESIDENTS

	OFFICE
Military personnel stationed in Texas and their spouses and children	Veterans Center, Student Center, 956-364-4387
Individuals employed at least half time as teachers or professors at Texas institutions of higher education and their spouses and children	Financial Aid, Student Services Center, 956-364-4330
Students whose families transferred to Texas as a part of the State's plan for economic development. Employer company must be certified as eligible by the Texas Higher Education Coordinating Board	Student Accounting, Student Services Center, 956-364-4409
Students who receive a competitive scholarship of at least $1,000	Student Accounting, Student Services Center, 956-364-4409
Students who reside in a county or parish of Arkansas, Louisiana, New Mexico, or Oklahoma that is adjacent to Texas where a current reciprocity agreement is in effect with a college or university in the out-of-state county or parish.	Student Accounting, Student Services Center, 956-364-4409
Students from Mexico or Canada enrolled through a Texas Higher Education Coordinating Board approved Exchange Program	Student Accounting, Student Services Center, 956-364-4409
Students from Mexico who demonstrate financial need	Student Accounting, Student Services Center, 956-364-4409
Nonimmigrant aliens residing in Texas in accordance with NATO treaties and their spouses and children	Student Accounting, Student Services Center, 956-364-4409

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

TSTC Texas State Technical College

Installment Payment Plan

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

In order to validate the payment plan option, the initial payment and the signed Installment Agreement must be completed online through the TSTC Portal prior to published deadlines.

The payments are due as follows:

Fifteen-Week Term:

$\frac{1}{3}$ prior to published deadlines plus the $25 installment plan fee
$\frac{1}{3}$ prior to the 6th class week
$\frac{1}{3}$ prior to the 11th class week

Twelve-Week Summer Term:

$\frac{1}{3}$ prior to published deadlines plus the $25 installment plan fee
$\frac{1}{3}$ prior to the 5th class week
$\frac{1}{3}$ prior to the 9th class week

Less Than Twelve-Week Term:

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

A student who elects to pay in installments will:
1. pay a $25 installment plan fee;
2. be responsible for making payments on or before the due dates established at the time of registration;
3. be charged a late fee of $25 for each payment made more than seven business days after the payment is due;
4. be unable to obtain official copies of his/her student records until the debt is paid in full;
5. be at 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. Contact the Student Accounting Department for more information.

Meal Plans

70 meals per semester
Breakfast Only
Monday - Friday
$280 per semester (includes tax)

70 meals per semester
Lunch Only
Monday - Friday
$420 per semester (includes tax)

140 meals per semester
Breakfast and Lunch
Monday - Friday
$700 per semester (includes tax)

Housing

The Housing Application with a $150 deposit, the Release of Background Information Form and the non-refundable criminal background check fee of $15, and proof of bacterial meningitis vaccination ten days prior to move-in is required.

Single Students

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

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

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

Families: Married/Single Parents
2 bedrooms
Maximum Occupancy
4 persons
$455 per month

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

Refunds

Refunds for Changes in Enrollment

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

Reduction in course load occurs when a student drops a course(s) having more credit hours than he/she adds, resulting in the student being enrolled in fewer credit hours overall.

Withdrawal occurs when a student completely ends his/her enrollment at the College for the current term.

Credit courses are courses for which a student is eligible to earn semester credit hours toward an institutional award, certificate or associate degree. Credit courses also include support courses required for the student's enrollment, such as developmental education, etc.

Refunds for Drops/Reduction in Course Load

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

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

Notes: _____

_____

_____

_____

_____

_____

_____

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

Refunds for Federal Financial Aid Recipients

Special refund requirements apply to students who receive federal aid that is classified as "Title IV" funds. Title IV funds include awards such as Federal Pell grants, Federal Supplemental Educational Opportunity grants (SEOG), William D. Ford Federal Direct Loans, PLUS loans, and other federal awards. Students must attend classes to remain eligible for federal financial aid. Students who are considering withdrawing from all classes before completing 60 percent of the semester should contact the Financial Aid Office at 956-364-4330 to learn how this would affect their financial aid.

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

A federal formula dictates the amount of Title IV aid that must be returned to the federal government by the College and the student. This formula applies to a student who is receiving Title IV funds if that student withdraws from the College on or before the 60 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
6. The Student

For more detailed information on the entire refund procedures for Financial Aid students or about the calculation of refund amounts, contact the Financial Aid Office at 956-364-4330.

Bookstore Refunds

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

Tools, supplies, and 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 System approved fee schedule:

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

Refund of Other Fees

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

Financial Assistance

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

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

Applying for Financial Assistance

When to Apply

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

Priority Deadlines

Fall Term	March 28, 2014
Spring Term	October 1, 2014
Summer Term	March 3, 2015

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

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

How to Apply

These are the first steps in applying for financial assistance.

1. Complete the Free Application for Federal Student Aid (FAFSA), using the appropriate federal base-year tax forms.
2. Complete the FAFSA through the Internet at www.fafsa.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 2014-2015 school year, you will need financial information from 2013. 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) 2013 Federal Income Tax Return - IRS Form 1040, 1040A, 1040EZ, 1040Telefile, foreign tax return, or tax return for Puerto Rico, Guam, American Samoa, the U.S. Virgin Islands, the Marshall Islands, the Federated States of Micronesia

    (v) Your parent's 2013 Federal Income Tax Return (if you are a dependent student)

    (vi) Your 2013 untaxed income records - Social Security, Temporary Assistance to Needy Families, welfare, or veterans benefits records

    (vii) Your current bank statements

    (viii) Your current business and investment mortgage information, business and farm records, stock, bond, and other investment records

    (ix) Your alien registration card (if you are not a U.S. citizen)

(c.) For the 2014-2015 school year, submit the 2013 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.

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. Pell grant disbursements are made in Fall and Spring. Annual allocations may be awarded in the Summer if the student has remaining eligibility.

- **Federal Supplemental Educational Opportunity Grant (FSEOG):** This federal aid program helps college students who have exceptional need. The amount of the FSEOG varies according to the availability of other grants, scholarships, loans, and student employment. FSEOG funds are limited and are awarded on a first-come first-served basis.

- **Texas Public Education Grant (TPEG):** This state program provides financial assistance in obtaining a postsecondary education. Eligibility is based on a student's financial need.

- **Toward EXcellence, Access & Success (TEXAS):** These state awards pay state and designated tuition for certain students who have graduated from Texas public or accredited private high schools within the preceding 16 months. Students must have completed the recommended or advanced high school curriculum and be able to show financial need. Students who do not meet the criteria for the TEXAS Grant may be eligible for the Texas Grant II.

*NOTE: Effective Fall 2014, only renewal/continued students that meet the programs requirements will continue to be eligible to receive the Toward EXcellence, Access & Success (Texas Grant).

- **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 $2,000. They must be enrolled in a TSTC certificate or degree seeking program (EA and non degree seeking students are not elibible). Students must be within the first 30 credit hours for considereation. Students must apply early.

- **Federal and State Work-Study Program:** Work-study programs are designed to stimulate and promote part-time on-campus employment of students, particularly those who need financial assistance. Funds are available to the College to help create job opportunities for eligible students; however, these funds are limited and students must apply early and submit a resume. Applicants must complete a criminal background check.

- **Federal Loans:** Various types of federal loans are available, including the Federal Direct Subsidized, Federal Direct Unsubsidized, and Federal Direct Parent Loan. To be certified for a loan, students must first apply for the Federal Pell Grant, as described earlier in the Financial Assistance section. Because changes occur frequently in federal regulations, call or visit the Financial Aid Office for details regarding loan amounts, eligibility criteria, repayment responsibilities, etc.

- **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

- **Trade Adjustment Assistance (TAA):** The Trade Adjustment Assistance (TAA) Program is a federal program established under the Trade Act of 1974, as amended. The TAA Program provides aid to workers who lose their jobs or whose hours of work and wages are reduced as a result of increased imports. Interested applicants should contact the Workforce Center in the county of their residence.

- **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.

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 and Financial Aid Programs

TSTC is approved for training service members, veterans and their eligible dependents under the provisions of various laws commonly called the G.I. Bill. Tuition and fees are paid by the student at registration. A spouse or child of a veteran may receive benefits under certain conditions. The DD form 214 and all official college, university and military transcripts may be 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 fol-

lowing 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 http://www.benefits.va.gov/gibill/get_started.asp 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.

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

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

Veterans enrolled in undergraduate degree/certificate programs will be interrupted for unsatisfactory attendance when accumulated absences, exceed five (5) consecutive class days. The school certifying

official will submit VA form 22-1999b within 30 days after learning of the unsatisfactory attendance. Enrollment interruptions will cause an over payment and the Veteran will be responsible for repayment to the VA Education Department.

No Show Status
Veterans reported as a No Show will have their enrollment certification interrupted and may lose their seat for one or all their courses. Over-payment 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.

GI Bill Checklist

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

Eligibility
Students must be eligibility under on of the following programs:

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

Documents Needed
Chapter 30 & Chapter 33 requires:
- Certificate of Eligibility – Apply for benefits at www.gibill.va.gov. Submit VA Form 22-1990 or contact 888-442-4551
- DD Form 214 (member 4)
- Official Military Transcripts and University/College transcripts (to the 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.

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

- Certificate of Eligibility – required for veterans who served after September 10, 2011. Apply for benefits at www.gibill.va.gov. Submit VA Form 22-1990.
- DD Form 214 (member 4)
- Hazlewood application
  o HE-V – Veterans who have never used the benefit
  o HE-D – Dependents of Veterans with service-connected disability and dependents of Veterans transferring unused hours (Legacy).

Note:

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

Hazlewood Hours Account

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

Scholarships

Each year a number of individuals, businesses, and organizations provide scholarships for TSTC students. To compete for scholarships, students must submit a completed TSTC scholarship application to the Financial Aid Office by published deadlines. A partial listing of TSTC scholarships is included in the accompanying table. Contact the Financial Aid Office for additional information and a complete list of available scholarships.

Dr. Rolf Haberecht Allied Health Scholarships

- Need and Merit Based
- $2,100 annual award/$700 per semester

Majors Eligible:

- Allied Health Programs

Eligibility Requirements:

- Must be U.S. Citizen or eligible non-citizen
- Accepted and enrolled in a TSTC Allied Health Program full-time
- Minimum 3.0 GPA
- Complete the Free Application for Federal Student Aid (FAFSA)

Investment in Competitive Texas

- Need Based
- $500 per semester for two semesters

Majors Eligible:

- All Technologies

Eligibility Requirements:

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

Lozano Long Promise Opportunity Scholarship Full-time

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

Majors Eligible:

- All Technologies

Eligibility Requirements:

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

Lozano Long Promise Opportunity Scholarship Part-time

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

Majors Eligible:

- All Technologies

Eligibility Requirements:

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

TSTC Texas State Technical College

President's Scholarship
- Competitive
- Full Time $2,100 / $700 per semester

Majors Eligible:
- TSTC Associate Degree

Eligibility Requirements:
- Must be U.S. Citizen or eligible non-citizen
- 2014 High School Graduate
- Plan to enroll in the Fall 2014 semester
- Minimum 2.5 GPA
- Resident of Cameron, Hidalgo, Willacy or Starr County

Regent Gene Seaman Wind Technology Scholarship- Ingleside
- Need based - demonstrate financial need as determined by the FAFSA

Majors Eligible:
- Wind Energy and Turbine Technology
- $500 Annual award / $250 per semester

Eligibility Requirements:
- Must be U.S. Citizen or eligible non-citizen
- Accepted and enrolled in a TSTC Wind Energy and Turbine Technology Program-Ingleside
- Enrolled at TSTC-Ingleside at least half-time
- Complete the Free Application for Federal Student Aid (FAFSA)
- Maintain minimum GPA requirements

Shell Merit / Incentive Scholarship
- Merit
- $250 for one semester

Majors Eligible:
- Chemical-Environmental Technology

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

STARS Scholarship Fund
- Need Based
- Full-time $2,100 ($700 per semester), Part-time $1,050 ($350 per semester)

Majors Eligible:
- All Technologies
- EA

Eligibility Requirements:
- Must be U.S. Citizen or legal permanent resident with a permanent resident cards or passport stamped I-551
- Have a permanent address with the 22 South Texas county areas
- Have earned / completed at least 12 undergraduate credit hours in a US accredited college or university by the application deadline.
- Minimum 2.5 GPA

Texas Top 10 Percent Scholarship
- Need Based
- $1,500 - Fall semester

Majors Eligible:
- All Technologies
- EA

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

Texas Science, Technology, Engineering, and Math (T-STEM) Challenge Scholarship
The Texas Science, Technology, Engineering, and Math (T-STEM) Challenge Scholarship Grant Program was established by House Bill 2910, passed by the 82nd Legislature, Regular Session in 2011 and codified as Texas Education Code, Chapter 61, Subchapter GG, Sections 61.9791 through 61.9795. The grants will provide Texas public community and technical colleges with a new, merit-based scholarship program for qualifying, high-achieving students.

Eligibility Requirements:
- Graduate from high school with a grade point average of at least 3.0 on a 4.0 scale in mathematics and science courses;
- Enroll in a T-STEM program, as defined in §22.571 of this title (relating to Definitions), at an eligible institution;
- Agree to work no more than 15 hours per week for a business participating in the STEM program
- Have a statement on file with the institution of higher education indicating that the student is registered with the Selective Service System as required by federal law or is exempt from Selective Service registration under federal law

Maintaining Eligibility:
- Have previously received an initial award through this program;
- Remain enrolled in a T-STEM program at an eligible institution;
- Maintain an overall grade point average of at least 3.0 on a four-point scale;
- Complete at least 80 percent of all semester credit hours attempted for each semester in the prior year;
- Complete at least 30 semester credit hours in the prior academic year, as calculated in keeping with institutional policies; and
- Work no more than 15 hours a week for a business participating in the STEM program

TSTC T-STEM Eligible Programs:
- Academic Computer Science
- Architectural Design & Engineering Technology
- Biomedical Equipment Technology
- Building Construction Science
- Computer Networking & Security Technology
- Computer Science & Software Development

- Computer Systems Management
- Dental Assistant
- Dental Hygiene
- Dental Laboratory Technology
- Engineering
- Foundation Certificate for Health
- Health Information Technology
- Health Professions
- Medical Assistant
- Nurse Assistant
- Nursing Preparatory / Biology
- Registered Nursing Program
- Surgical Technology
- Telecommunications Technology
- Vocational Nursing Program
- Wind Energy Technology

NOTE: Scholarship qualifications, availability, and amounts are subject to change. For current listings, requirements, and changes, review the on-line scholarship information.

http://www.tstc.edu/harlingenfinancialaid/scholarships

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 outline under the TSTC Harlingen Satisfactory Academic Progress (SAP policy for Financial Aid).

Maintaining Financial Aid Eligibility

To remain eligible for financial aid, a student must meet the Standards of Academic Progress (SAP) for Financial Aid, which are different from those described in "Scholastic Standing" in the Scholastic Information section of this catalog. A student's scholastic records are reviewed at the end of each term to determine if he/she is making satisfactory progress. This review includes all periods of the student's enrollment, even those for which the student did not receive financial aid. Transfer credits that are applicable to the students' degree plan will be counted in both the attempted and completed credits.

Students receiving financial aid must continually be aware of their grades via the TSTC Portal or class resources. Grade Point Averages (GPAs) can be calculated online at OnlineGPACalculator. A student who is placed on financial aid probation or suspension may be notified in writing by the Financial Aid Office; however, failure to receive such notification does not change the student's financial aid status.

*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 outline under the TSTC Harlingen Satisfactory Academic Progress (SAP policy for Financial Aid).

Financial Aid Standards of Academic Progress

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

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

To continue receiving financial aid, students are expected to successfully complete their classes with passing grades. Students must have at least a 2.0 cumulative GPA (based on all terms of enrollment) and at least a 2.0 term GPA during each period of enrollment. All courses, including college level and developmental will be evaluated.

Quantitative Progress Measure #1:
The Pace of Progression or Completion Rate each Semester
When a student enrolls in classes and receives financial aid to pay for those classes, the student is expected to successfully complete those classes. Effective July 1, 2011, the student must complete at least 67 percent of the credit hours in which he/she is enrolled during each term. The student must also achieve a minimum cumulative completion rate of 67 percent of all courses attempted during their enrollment. Only passing grades count as successful completion. 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.

Quantitative Progress Measure #2:
Maximum Time to Complete a Degree / Program
To ensure that students complete their program in a reasonable amount of time, a time set by law has been placed on the number of hours that students can attempt. That limit is 150 percent of the minimum number of hours required to complete their program. For example, if the degree program requires 72 credit hours for completion, the student must complete his/her degree or certificate program within a maximum of 108 attempted credit hours. Once the student reaches the 150 percent limit or the school determines that the student cannot complete the program within the 150 percent limit, the student 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:

1. All attempted credit hours are counted even if the student was not receiving aid to pay for them. Attempted hours are the hours in which a student enrolled in every semester.
2. Any transfer hours that are accepted from other colleges and applied toward the completion of the student's program are counted in the maximum time frame. If the student has previously attended any college, the student must submit official transcripts from all previous colleges prior to any financial aid being released.
3. If a student repeats a course, both attempts will be counted in the maximum credit hours and progression calculation, even if the student did not receive aid for both attempts. Financial aid will only pay for two attempts in a college level course. Separate rules apply for developmental courses.
4. If a student withdraws from a course(s) after the census data for that course, it is still counted as an attempted course and is included in the SAP calculation.
5. All periods of enrollment and attempted credits will be evaluated, as they apply to the current program of study, whether or not financial aid was awarded during prior enrollment periods.

When a student receives financial aid to help pay for a program of study, the student is expected to complete that program within the specified timeframe for that program. A student should not enroll in classes that are not required for his/her chosen program of study. Classes not required for the student's degree plan are not eligible for financial aid. Additionally, audit courses, continuing education courses, previously passed courses and courses for which a student enrolls 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 by their designated degree plan/catalog year. Change of Program requests will be considered. Change of Program request forms must be submitted to the Financial Aid Office. A program/major change will be documented to ensure that the student's new program is tracked for SAP. Students are responsible for notifying the Financial Aid Office and for completing the financial aid documents required when changing their program/major at the Office of the Registrar.

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

Additional Certificates and Degrees
Additional certificates and degrees will be considered or reviewed on a case by case basis. The student must be meeting SAP requirements. 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
A student may be able to take up to 27 hours of remedial or development 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 towards the maximum 27 credit hour limit. Once a student has attempted 27 credit hours of remedial or developmental classes, the student 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 the Advisement Center.

Financial aid will NOT pay for:
- Courses taken by audit
- Courses taken outside of the student's degree plan requirements
- Courses attempted more than two times (except remedial/developmental courses)
- Credits exceeding the 27 maximum credits for developmental courses
- Courses previously passed unless the course grade failed the minimum grade requirement for the program of study. Starting July 1, 2011, only two attempts will be approved, if a course was previously passed. A third attempt will not be paid by financial aid. The student's degree plan must specify the minimum course grade required.
- Credit hours earned by placement tests
- Continuing education courses
- Courses for which the student registered 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 Status
This status is assigned to students who fail to make SAP progress at the end of a semester. Students in "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 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 SAP measures during a warning period will be placed on financial aid suspension and will lose eligibility for all financial aid until all SAP measures have been met.

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

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

Warning – Following Suspension status

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

Probation – After Appeal Approval

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

Academic Plan – After Appeal Approval

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.

Notification of Financial Aid Warning, Probation, or Suspension Status

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

Reinstatement

If a student is on financial aid suspension, for reasons other than reaching the maximum timeframe, the student may have his/her aid reinstated in of the following manners:

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

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

Hazelwood Legacy Program

Note: In order to be eligible for the Hazelwood Legacy Program you must maintain financial aid academic progress.

Appeal Process

Note: Appeals submitted without documentation will be denied.

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

Appeals will only be granted for conditions causing extreme hardship to the student, such as the death of a family member, illness or injury of the student, or other mitigating circumstances. The appeal must include supporting documentation regarding the student's mitigating circumstances, such as medical statements, 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. The Financial Aid Office will consider recommendations from counselors or advisors when reviewing appeals. The Financial Aid Office will review the appeal and approve or deny a student's appeal. The highest level appeal is at the Financial Aid Advisory Committee.

- Level 1 Appeal - Financial Aid Officer/Representative
- Level 2 Appeal - Financial Aid Assistant Director
- Level 3 Appeal - Financial Aid Director
- Level 4 Appeal - Financial Aid Advisory Committee

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An appeal must include the following:

- Student's name, TSTC ID number and email address
- A written description of the mitigating circumstances
- Documentation to support any claims
- If appealing because the student has exceeded the maximum hours limit or because of a change in major, a degree plan must be submitted showing the number of hours remaining until graduation.
- A description of the steps the student has taken to remedy the situation (Success Plan)
- A completed Satisfactory Academic Progress Appeal Form

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

Repayment of Federal Funds: Return of Title IV

If 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.

A federal formula dictates the amount of Title IV aid that must be returned to the federal government by the College and the student. This formula applies to a student who is receiving Title IV funds if that student withdraws from the College on or before the 60 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.

Refunds for Financial Aid Recipients

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

Scholastic Information

Grading Standards

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

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

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

I	Incomplete (prior to September 1988)	NC
U	Unsatisfactory (prior to September 1988)	0
WF	Withdrew Failing (prior to September 1988)	0
WP	Withdrew Passing (prior to September 1988)	NC

NC: Not Computed

Grade Point Averages

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

Term Grade Point Average

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

Cumulative Grade Point Average

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

Standards of Progress Grade Point Average

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

Scholastic Standing

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

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

Good Standing

A student who maintains 2.0 or higher SOP Cumulative and Term GPAs at the end of each enrollment period is in good scholastic standing.

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

Scholastic Probation

A student whose SOP Cumulative or Term grade point average is below 2.0 at the end of an enrollment period is placed on scholastic probation. A student is removed from scholastic probation when the SOP Cumulative and Term GPAs are 2.0 or higher.

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

Scholastic Suspension

Scholastic suspension occurs when a student on scholastic probation fails to maintain minimum academic standards. A student on scholastic probation who fails to achieve a SOP Term GPA of 2.0 or higher will be suspended for one semester. A suspended student may appeal for a waiver of a suspension.

Scholastic Honors

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

Grade Reports

Students are expected to monitor their academic progress. Final grade reports are provided to students at the end of each term on the TSTC website via the TSTC Portal at portal.tstc.edu. Students should review the grade reports for accuracy. All requests for review or correction must be submitted to the Office of 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, Department Chair and the Office of the Registrar.
- Upon receipt of the completed and signed grade change form, the Office of 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 college, the Office of 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 require approximately one week for processing. Students who request transcripts prior to the end of a term, with current courses and grades to be included in the transcripts, must clearly note the current work as part of the request.

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

Classification

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

Course Load

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

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

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

Texas Success Initiative (TSI) Requirements

Before enrolling at TSTC, all students are evaluated to determine readiness for college-level courses (unless already exempt). Meeting these TSI assessment standards means a student may enroll in college level courses providing prerequisites and other enrollment requirements have been met. Students are determined to be college-ready based on:

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

Additional placement testing may be required for entry into specific courses or programs. A student must be TSI complete to receive an Associate Degree.

TSI Advisement

Students who do not meet TSI assessment standards must meet with an advisor from the Testing and Advisement Center. 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 test, subject to availability.

TSI Test Standards

The following table provides the minimum passing scores on approved TSI tests taken before August 26, 2013.

Approved TSI Test	Reading	Writing	Math
Accuplacer	78	80 with Essay Score = 5	63
Compass	81	59 with Essay Score = 5	39
Asset	41	40 with Essay Score = 5	38
Writing Essay		6	

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

Reading: 351
Writing: 363 with an essay score of 4 or an essay score of 5 or higher
Math= 350

Note: Test score information is subject to change. Confirm required scores at the Testing and Advisement Center, Student Services Center, Room 101.

TSI Testing Schedule

The TSI Assessment and Pre-Assessment Activity are administered at the TSTC Testing and Advisement Center. Check with the Testing and Advisement Center, Student Services Center, Room 101 or 312 for specific dates and times. The TSI Assessment and Pre-Assessment Activity are computer-based and can only be offered in a paper format for those with documented disabilities. Individuals requiring accommodations to complete the TSI Assessment will be required to make arrangements with the Counseling & Support Services Office, located in the Student Services Center, Room 216 or call 956-364-4520 (Voice) or 956-364-4526 (TDD) to schedule an appointment. 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 following 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 and Advisement Center Room 101 or 312 prior to enrollment in order to qualify for this exemption.
    *   **ACT:** composite score of 23, with a minimum of 19 on the English and/or the mathematics tests; test date no more than five years prior to enrollment
    *   **SAT:** combined verbal and math score of 1070, with a minimum of 500 on the verbal and /or mathematics tests; test date no more than five years prior to enrollment
    *   **STAAR:** score 2000 in English III (level II or higher) on reading and writing, and score 4000 in Algebra II (level II or higher) on math; test dated no more than five years prior to enrollment
    *   **TAKS:** minimum score of 3 on the writing essay test and 2200 on the English Language Arts test, and/or 2200 on the math test ; test date no more than five years prior to enrollment.
    *   **TAAS:** minimum score of 89 on the reading test, 1770 on the writing, and 86 on the mathematics; test date no more than three years prior to enrollment
2. Students enrolled in a certificate program of one-year or less with 42 or fewer semester credit hours.
3. Students who are retired or have been honorably discharged from active duty in the armed forces of the United States, the Texas National Guard or a reserve component of the armed forces of the United States on or after August 1, 1990 are exempt from testing requirements. Appropriate documentation of status is required.
4. Students currently serving on active duty in the armed forces of the United States, the Texas National Guard, or service in a reserve component of the armed forces of the United States with at least three years of service prior to enrollment at TSTC are waived from testing requirements. Students on active duty must present a letter from their commanding officer or current duty papers for each semester of enrollment.
5. A student who has graduated with an associate or baccalaureate degree from an institution of higher education
6. 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.
7. A student who has previously attended any institution and has been determined to have met readiness standards by that institution.

Testing and remediation policies are TSI Assessment standards and subject to change without notice. Contact the Testing and Advisement Center for more information.

College-level Courses

TSTC has designated the following courses to satisfy requirements with TSI Assessment standards. Students who transfer from regionally accredited institutions of higher education with grades of C or higher in these courses (or equivalents) are determined to be "college ready." Students must submit official transcripts indicating successful completion of the course(s). This list was approved September 26, 2013.

Writing

ENGL 1301	Composition I
ENGL 1302	Composition II

Reading

ENGL 2xxx	Any 2nd year Literature Course
GEOG 1303	World Regional Geography
GOVT 2301, 2302	Government
GOVT 2305	Federal Government
GOVT 2306	Texas Government
HIST 1301, 1302	U.S. History
HIST 2301	Texas History
HUMA xxxx	All Humanities
PSYC 2xxx	All Psychology
ANTH 2xxx	Any Anthropology
ARTS xxxx	All ARTS History, ARTS Appreciation
PHIL xxxx	All Philosophy, Ethics, Religion
BIOL xxxx	All biology, A&P, Microbiology, etc.
BUSI xxxx	Business courses
EDUC xxxx	Education courses
SPCH xxxx	Speech
MUSI 1306	Music Appreciation
ECON 2301, 2302	Economics

Mathematics

MATH xxxx	Any Math course
ACCT xxxx	Any Accounting course
ENGR xxxx	Any Engineering course

PHYS xxxx   Any Physics course
CHEM xxxx   Any Chemistry course
TECM xxxx   Any Technical Math course

Advising

TSTC believes advising is essential to student success, therefore, the College supports student progress with designated advisors.

New Student Advising

All new students are encouraged to contact an Admissions Outreach Representative to begin the advising process prior to or upon completing the admissions requirements. The Admissions Outreach Representative acts a 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

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

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

Testing and Advisement Center

The Testing and Advisement Center at TSTC Harlingen was created to assist returning students and current students needing advisement, encouragement, and direction. For returning students, The Testing and Advisement Center can assist students in completing the admissions requirements and aid students in finding a program that matches their interest. In order to aid students, the Testing and Advisement Center has specialized advisors for Allied Health majors, technical students, and those students pursuing and academic degree.

The Testing and Advisement Center works in conjunction with the Faculty Program Advisors to make sure that students are on the right track and are successfully completing the academic requirements for graduation. The Testing and Advisement Center can also refer students to support services on campus that can assist the student in pursuing their degree. The Testing and Advisement Center provide advising assistance for the following:

- TSI advisement and follow up;
- Career assessment and major selection;
- Degree planning;
- Services for nontraditional students; and
- Referrals to counselors, faculty advisors and other support services on campus.

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

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

Other Types of Advising

The Career Services Department provides assistance to students and alumni with applications, resumes, interviewing, job search, career counseling, and developing professionalism in the work place.

The Office of Counseling and Support Services provides support for students in a variety of ways. The staff from Counseling assists students who are struggling with their courses or that are finding personal problems are getting in the way of their success. Support Services provides and maintains an efficient and quality program by providing special population students with a network of services to make the attainment of their educational goals accessible, including accommodations for students with disabilities, child care services, referrals to community agencies, counseling, tutoring, and workshops.

Financial Aid advisors can provide information about the types of financial aid available and how to apply.

Students are welcome to visit with an advisor at any point during the semester for assistance.

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." Testing and Advisement Center assists qualifying students that are enrolled full-time in a declared non-traditional program of study leading to an Associate Degree or Certificate.

Textbook Assistance

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

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

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

Degree and Program Planning

TSTC 1101 (First Year Seminar) Requirement

All current TSTC students and all transfer students with fewer than 24 Semester Credit Hours (SCH) are required to take TSTC 1101. This one-credit-hour, student-success course will present students with the essential knowledge to accomplish their goals at TSTC. TSTC 1101 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 TSTC 1101. Students who intend to attend TSTC for one semester only may request a one-time exemption from TSTC 1101 from the Office of Student Learning. Transfer students who have successfully completed more than 24 credit hours may be exempted from taking this 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 the Associate of Applied Science degree and the Certificate of Completion. All programs are approved by the Texas Higher Education Coordinating Board.

- 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.

- 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.

Institutional Awards

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

Degree and Certificate Plans

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

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

Credits earned at other colleges and universities must be approved for transfer credit by the chairperson in the student's major field of study. Credit for courses in related areas may also require approval from the chairperson of that program area. Before consideration of transfer credit can begin, the student must be eligible to return to the last institution in which he or she was enrolled, official transcripts

from all the institutions the student attended must be in the Office of Admissions, and a grade of C or better must have been earned in the course(s).

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

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

Change of Major

Students who wish to change programs should meet with an advisor. Students must meet the entry requirements if specified. Students receiving financial aid should 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. In addition, students receiving Financial Aid will be asked to complete additional paperwork.
2. Return the completed form and all supporting documentation to the Office of 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.

Graduation and Commencement

Graduation Requirements

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

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

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

1. All TSI-related requirements are met.
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.

Commencement Ceremonies

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

Graduation Honors

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

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

Graduate Guarantee

If an associate degree 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 Vice President of Student Learning.
4. The employment must have commenced within twelve months of graduation or completion.
5. The Graduate Guarantee process must be initiated in writing to the TSTC Office of the President, by either the graduate or the employer.
6. The employer must certify in writing that the employee is lacking entry-level skills identified by TSTC as program exit competencies and must specify the areas of deficiency within 90 days of the graduate's initial employment.
7. The employer, the graduate, career counselor, and appropriate chairperson will develop a written educational plan for retraining.
8. Retraining will be limited to 12 semester credit hours related to the identified skill deficiency and to those classes regularly scheduled during the period covered by the retraining plan.

9. All retraining must be completed within one calendar year from the time the educational plan is agreed upon.
10. The graduate and/or employer will be responsible for the cost of books, insurance, uniforms, fees, and/or other course-related expenses.
11. The guarantee does not imply that the graduate will pass any licensing or qualifying examination for a particular career.

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

Curriculum

Developmental 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.

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

Course	Course Title
Mathematics	
DMTH 0300	Emporium Math
DMTH 200/Math1314 (MAMBO-Math Combo)*	

*See department chair for application and additional information.

Course	Course Title
Reading	
READ 0050	Basic Reading Skills

Course	Course Title
Writing	
WRIT 0050	Basic Writing Skills

Course	Course Title
Integrated Reading and Writing	
INRW 0100	Integrated Reading and Writing
INRW 0200	Integrated Reading and Writing
MIRW 0150	Integrated Reading and Writing Emporium

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

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

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

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

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

- Degree programs with instruction in knowledge and skills designed to impart common knowledge, intellectual concepts, and appropriate attitudes for work and life. These courses assist the student's participation in social, technological, and cultural environments. 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.

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 having any questions regarding transfer credit or special partnership agreements should contact the Curriculum Office or the Office of the Registrar.

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.

General Education Courses

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

General Education Academic Core

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

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

Course	Title

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)

Course	Title

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 credit courses. Students may also be eligible to receive credit awards for other types of training and experience subject to review and approval by the appropriate college official.

General Rules and Regulations

The total number of semester credit hours awarded for Credit Awards may vary depending upon the student's program of study; however, the total credit awarded (including transfer credits) cannot exceed 75 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 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 (or 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 ten (10) years from the test date.

CLEP Subject Test Name	Score	Minimum Credits	TSTC Course(s)
Principles of Accounting	50	6	ACCT 2301, 2302, 2401, 2402
General Biology	50	8	BIOL 1406, 1407
Introductory Business Law	50	3	BUSI 2301
General Chemistry	50	8	CHEM 1411, 1412
Principles of Macroeconomics	50	3	ECON 2301
Principles of Microeconomics	50	3	ECON 2302
English Composition with Essay	50	6	ENGL 1301, 1302
English Literature	50	6	ENGL 2322, 2323
American Literature	50	6	ENGL 2327, 2328
American Government	50	3	GOVT 2305
History of U.S. I	50	3	HIST 1301
History of U.S. II	50	3	HIST 1302
Humanities	50	6	HUMA 1301, 1302
College Algebra	50	3	MATH 1314
Trigonometry	50	3	MATH 1316
Calculus w/ Elementary Functions	50	4	MATH 2413
Pre Calculus	50	3	MATH 2312
Introductory Psychology	50	3	PSYC 2301
Human Growth and Development	50	3	PSYC 2314
Introductory Sociology	50	3	SOCI 1301
Spanish Language	50	3	SPAN 1311
Spanish Language	53	6	SPAN 1311, 1312
Spanish Language	64	12	SPAN 1311, 1312, 2311, 2312

Advanced Placement

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

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

AP Subject Test Name	Score	Minimum Credits	TSTC Course(s)
Art, History of	3	3	ARTS 1303
Art, History of	4	6	ARTS 1303, 1304
Biology	3	4	BIOL 1406
Biology	4	8	BIOL 1406, 1407
Chemistry	3	4	CHEM 1411
Chemistry	4	8	CHEM 1411, 1412
Computer Science A	3	3	COSC 1301, ITSC 1302, 1307
Macroeconomics	4	3	ECON 2301
Microeconomics	4	3	ECON 2302
English Language	3	3	ENGL 1301
English Language	4	6	ENGL 1301, 1302
English Literature	3	3	ENGL 2322,
English Literature	4	6	ENGL 2322, 2323
U. S. Government & Politics	3	3	GOVT 2305
U. S. History	3	3	HIST 1301
History of U. S.	4	6	HIST 1301, 1302
Music Theory	3	3	MUSI 1306

Statistics	3	3	MATH 1342
Calculus AB	3	3	MATH 2312
Calculus AB	4	4	MATH 2413
Calculus BC	3	4	MATH 2414
Physics B	3	8	PHYS 1401, 1402
Physics C	3	8	PHYS 2425, 2426
Psychology	3	3	PSYC 2301
Spanish Language	3	3	SPAN 1311
Spanish Language	4	6	SPAN 1311, 1312
Spanish Language	5	12	SPAN 1311, 1312, 2311, 2312
Spanish Literature	4	3	SPAN 2323
Spanish Literature	5	6	SPAN 2323, 2324

Credit for Military Training

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

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

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

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

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

International Baccalaureate Diploma Program (IBD)

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

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

Credit Award for Continuing Education Units and Experiential Learning

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

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

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

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

Audited Courses

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

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

Early College High School

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

Day/Evening Weekend Courses

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

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.

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. Tutoring resources for online learners and students attending evening classes are available thorugh MyTSTC Video Tutor Library at www.tstc.edu/harlingenoss/videotutorlibrary. Some tutoring is available on Saturdays. For more information, students can view the tutoring schedule at www.tstc.edu/harlingenoss/situtoringprogram.

Enrollment

Registration

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

Schedule Changes

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

Drops and Withdrawals

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

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

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

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.

High School Articulation Agreements

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

Transfer of Credit

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

Resolution of Transfer Disputes for Lower Division Courses

The following procedures specified in Texas Higher Education Coordinating Board Rules (Chapter 4, Subchapter B, Section 4.27) shall be followed by institutions of higher education in the resolution of credit transfer disputes involving lower-division courses:

1   If an institution of higher education does not accept course credit earned by a student at another institution of higher education, the receiving institution shall give written notice to the student and to the sending institution that transfer of the course credit is denied, and shall include in that notice the reasons for denying the credit. Attached to the written notice shall be the procedures for resolution of transfer disputes for lower-division courses as outlined in this section, accompanied by clear instructions outlining the procedure for appealing the decision to the Commissioner.
2   A student who receives notice as specified in paragraph (1) of this subsection may dispute the denial of credit by contacting a designated official at either the sending or the receiving institution.
3   The two institutions and the student shall attempt to resolve the transfer of the course credit in accordance with Board rules and guidelines.
4   If the transfer dispute is not resolved to the satisfaction of the student or the sending institution within 45 days after the date the student received written notice of denial, the sending institution may notify the Commissioner in writing of the request for transfer dispute resolution, and the institution that denies the course credit for transfer shall notify the Commissioner in writing of its denial and the reasons for the denial.

The Commissioner or the Commissioner's designee shall make the final determination about a dispute concerning the transfer of course credit and give written notice of the determination to the involved student and institutions.

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

The Board shall collect data on the types of transfer disputes that are reported and the disposition of each case that is considered by the Commissioner or the Commissioner's designee.

If a receiving institution has cause to believe that a course being presented by a student for transfer from another school is not of an acceptable level of quality, it should first contact the sending institution and attempt to resolve the problem. In the event that the two institutions are unable to come to a satisfactory resolution, the receiving institution may notify the Commissioner, who may investigate the course. If its quality is found to be unacceptable, the Board may discontinue funding for the course.

Scholastic Integrity

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

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

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

Continuing Education and Corporate Workforce Training

TSTC offers a range of continuing education and workforce training courses (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
- Continuing education 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 (1) CEU for every 10 hours of participation in a continuing education course or program. Grades of Satisfactory "S" or Unsatisfactory "U" are typically awarded in 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 a 100 percent refund. Students who drop after the first class day will receive a 0 percent refund and will be responsible for all course fees.

Customized Training for Business and Industry
TSTC Harlingen 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 Corporate Education.

College Readiness and Advancement

College Readiness & Advancement offers students of the Rio Grande Valley 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 post-secondary 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. For additional information, please contact Clarisa De La Fuente at 956-364-4188.

HEP

The High School Equivalency Program (HEP is a federally funded program designed to meet the special needs of migrant and seasonal farm workers in pursuit of the GED diploma. A primary focus of the program purpose is to help students obtain the equivalent of a high school diploma to gain employment in the Texas Workforce and/or be placed in an institution of higher education (college, university, vocational or technical school, or training program). HEP collaborates with TSTC Harlingen faculty, student services, outreach programs, and community based agencies to improve educational/career opportunities for HEP eligible students. For additional information, please contact Toni Luna at 956-364-4540.

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. For additional information, please contact Diana Lucio at 956-364-4174.

Upward Bound

The Upward Bound Program is aimed to provide first-generation and low-income high school students with a rigorous and invigorating academic experience that assures to contribute to the overall development of the student's skills and motivation as they prepare to transition from high school graduation to college enrollment. Upward Bound's focus is to increase the rate at which participants complete secondary education and enroll in and graduate from institutions of post-secondary education. For additional information, please contact Melinda Ortiz at 956-364-4533.

Talent Search

The College Assistance for Student Talent (CAST) Program mission is to increase the number of youth from disadvantaged backgrounds complete high school and enroll and complete their postsecondary education. As an early intervention program, CAST also known as Educational Talent Search identifies and prepares sixth through twelve grade students who are low income and first generation potential college students to better understand educational opportunities available. Student participants are assisted with academic, career and college placement support. For additional information, please contact Laura Casas at 956-364-4597.

Center for Science and Math/The Challenger Learning Center

Center for Science and Math's mission is to increase math and science

proficiency of the Rios Grande Valley's youth by providing STEM related activities through partnership and collaboration with local, state, and federal stakeholders.

The Challenger Learning Center of Texas State Technical College is a unique educational and professional development community initiative. The center features a space flight simulator used to immerse students in a variety of real world experiences related to space travel. The primary purpose of the Challenger Learning Center is to motivate and encourage young students in science, technology, mathematics and teamwork. All activities are fully correlated to the space-related TEKS. The Challenger will provide missions for groups of elementary, middle school and high school students. For additional information, please contact Yvette Mendoza at 956-364-4464.

Student Services

Student Housing

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

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

Housing Reservations

Because facilities are limited, the prospective student should complete a campus housing application as soon as possible, at least one semester in advance of the expected enrollment date. The application must be completed and returned with $150 deposit, the Release of Background Information Form and the non-refundable criminal background check fee of $15. A proof of bacterial meningitis vaccination is also needed 10 days prior to move-in. The deposit can be made by check or money order payable to Texas State Technical College.

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

Housing Assignments

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

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

The student may request a certain apartment and/or roommate, and

all possible consideration will be given to each request. The college reserves the right to assign students to specific apartments.

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

Housing Regulations

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

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

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

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

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

Housing Accommodations for Students with Disabilities

Students with disabilities that require accommodations for TSTC Housing must contact the Counseling & Support Services Office at 956-364-4520/voice, 956-364-4526/TDD, or by visiting the office located in the Counseling & Support Services Office, Room 126, in a timely manner for further guidance on the accommodations process. Students with disabilities are encouraged to self-disclose with the Counseling & Support Services Office when initiating the housing application process

Counseling & Support Services

Counseling assists students in obtaining maximum results from their educational opportunities. Services are provided by an experienced counseling staff, including Licensed Professional Counselors. Students are encouraged to make appointments; however, walk-ins are welcomed and accommodated, based on counselor availability.

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

The TSTC Harlingen Counseling Department also provides a program focusing on Alcohol and Substance Abuse prevention. The services are available and free of charge for all currently enrolled students and may be either voluntary or mandatory. The Alcohol and Substance Abuse Program is a comprehensive substance abuse treatment program based on cognitive-behavioral (CBT) and motivational enhancement (MET) models. It is an 8-12 module program for TSTC students and is tailored to fit into an academic semester. The counseling department also provides regularly offered educational programs for the general student population focusing on awareness and prevention of substance abuse.

Disabilities Program

The Disabilities Program 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 Counseling & Support Services Office in a timely manner. Counseling & Support Services requires that all requests for accommodations be accompanied by professional assessments/reports from individuals qualified to diagnose the disability disclosed. This Disabilities Program 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 Harlingen.

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.

The Support Services Office provides referrals to the following community agencies to aid students in securing reliable child care assistance: Cameron Works Child Care Management Services (serves Cameron County residents), NINO'S Head Start Center at TSTC, TSTC Early Childhood Head Start Center, and Workforce Solutions Child Care Services (serves Starr, Hidalgo &Willacy County residents). Services are contingent to meeting the qualifications for each respective child care servicing agency.

Support Services is the liaison for the NINO's Head Start at TSTC and the Texas Department of Assistive and Rehabilitative Services (DARS) and the Texas Department of Blind Services (DBS).

Student Life & Engagement

Student Activities

Student Activities include a variety of social and special events, leadership development programs, community service and civic engagement involvement opportunities. Contact the Office of Student Life & Engagement for more information.

Intramural and Recreational Sports

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

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

Student Government

The Student Government Association (SGA) is the governing body that represents students, plans and coordinates service programs that will benefit the student body, and advises the College administration on issues of student interest and concern. Each spring semester, six executive board officers and five division senators are elected by the student body to serve on the SGA. Contact the Office of Student Life & Engagement for more information.

Student Clubs and Organizations

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

Student Identification Cards

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

Learning Resource Center

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

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

College Bookstore

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

Food Service

Breakfast   7 - 10:30 a.m.
Lunch   11 a.m. - 2 p.m.

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

Student Health Services

Student Health Services

The Student Health Clinic offers unlimited and convenient medical care to all students. The nursing services include: administering a selection of over-the-counter medication, rendering first aid for minor wound care, health screenings, medical equipment loaning, and health education. If further assessment is required, you will receive a Wellness Referral for additional health services.

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

The Student Health Clinic offers three vaccinations on campus. The tuberculosis skin test is administered Mondays and Tuesdays only, for a fee of $5. The bacterial meningitis vaccine is administered Monday through Friday by appointment, for a fee of $74. The influenza vaccine is available during flu season; call the clinic for current pricing. In order to obtain a vaccine, you must be a registered student or have a student ID number with picture identification. The vaccinations must

be paid in full at the cashier's window and a receipt must be presented at the check-in counter prior to administration. Continuing Education students may receive vaccinations prior to the start of training with proper verification. All other immunizations must be obtained from a private physician.

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. For additional plans and information, call the Student Health Clinic at 956-364-4306.

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 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. A wellness referral is available in the Student Health Clinic for testing services.

Bacterial Meningitis Notification

State law requires that information regarding bacterial meningitis be provided to new college students. Bacterial meningitis is a serious, potentially deadly disease that can progress extremely fast. It is an inflammation of the membranes that surround the brain and spinal cord and can infect the blood. The disease can be treated, but those who survive may develop severe health problems and severe disabilities. Vaccinations that are effective against 70 percent of the most common types of bacterial meningitis are available and should be considered by those living in close quarters and by college students aged 22 or younger. 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 Department. TSTC traffic rules and regulations and a valid parking decal will be provided to all motorists. All TSTC Housing students who operate motor vehicles must also register their vehicles with the Housing Office.

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

Campus Security

The Student Right-to-Know and Campus Security Act 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 October 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 www.tstc.edu/harlingenpolice.

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

Office of Student Success

The Office of Student Success 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 & Completion Rate Forecasting, and related topics.
- An AVID Center (Advancement Via Individual Determination) where students can access laptops with Wi-Fi, get help navigating college, learn about Cornell Note-taking, and make the AVID connection from high school to college.

Career Services

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

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

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

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

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

Community Standards

Behavior Intervention Team (BIT)
The Behavior Intervention Team (BIT) is a team of college employees, chaired by the Director of Community Standards and comprised of members from College Police, Student Life, Housing, Health Services, Faculty and Staff Senates. The BIT provides a systematic response to any student whose behavior is perceived as a threat to themselves or others in order to protect the health, safety and welfare of the entire college community. The BIT meets weekly to review persons of interest.

Any member of the college community who has reason to believe that a student may pose a direct threat to him/herself or others may report the concern by completing the incident report form found at the BIT website at www.tstc.edu/harlingenbit or by contacting Director of Community Standards, College Police, the Vice President of Student Development, or any BIT member.

Title IX – Gender Discrimination and Sexual Harassment
"Title IX of the Education Amendments of 1972 (Title IX) prohibits discrimination on the basis of sex in education programs and activities receiving Federal financial assistance." (Department of Education Office of Civil Rights) Sexual harassment is a form of gender discrimination and therefore prohibited under Title IX, as defined by the Department of Education.

"Sexual harassment is conduct that is
1. Sexual in nature,
2. Unwelcomed, and
Denies or limits a student's ability to participate in or benefit from a school's education program."

The following are examples of types of conduct that may constitute sexual harassment:
• Inappropriate touching, patting, or pinching;
• Physical assault or coerced sexual activity;
• Obscene phone calls, texts, email, or gestures;
• Badgering someone for a date;
• Repeatedly making inappropriate sexual comments or unwanted sexual advances.

If a student feels that he/she has been the victim of sexual harassment, a form of gender discrimination, at TSTC Harlingen, the student should immediately report the incident/complaint to the Title IX Coordinator (located in the Student Services Center Building EK Room 208, Student Development and Enrollment Management Office or at 956-364-4522) and/or the Vice President for Student Development (located in the Student Services Center or at 956-364-4301). After a complaint is filed, an inquiry will be conducted to determine if an investigation is warranted. If deemed necessary, all involved parties will be interviewed and the findings of the investigation will be assessed to determine a preponderance of evidence and a recommendation for a sanction (if deemed necessary). Appropriate sanction will be imposed by the Vice President for Student Development or designee. Complainant and respondent will be notified of the outcome and the Review process. Not participating in the investigative process may result in a determination being made based on the information gathered which could result in a limited resolution. Anonymous/Confidential requests will be considered. A review of the request will be made after assessing the campus safety.

Any witness, bystander, employee, administrator, or instructor who has knowledge or received a report or complaint from a student relating to sexual harassment should immediately notify and refer the student to the Director of Community Standards/Title IX Coordinator and/or the Vice President for Student Development.

For more information regarding Title IX that includes definitions, processes, resources and examples, please visit the following website: www.tstc.edu/harlingentitleix.

Student Conduct and Discipline

Student Conduct
The general morale of the student body is dependent upon many fac-

tors; among these are the success of its graduates, the attitude of faculty and administration, the general behavior of individual students, and the reputation of the College. TSTC believes a primary factor in strong student morale is an overall regard for good citizenship on the part of the student body. TSTC assumes that students eligible to perform on the college level are familiar with the ordinary rules governing proper conduct and that they will observe these rules as a matter of training and habit.

TSTC regulations forbid gambling, the use of controlled substances and alcoholic beverages, and the appearance of anyone under the influence of any of these on the campus or when attending or participating in activities sponsored by the college. Tobacco and electronic smoking devices used inside campus buildings or within the non-smoking designated areas is not permitted.

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

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

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

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

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

Student Discipline Procedures

Any alleged violation or flagrant disregard of TSTC rules and regulations will be brought to the attention of the Vice President of Student Development and the Director of Community Standards who will initiate an investigation of the situation. After a complete and thorough investigation, the the Director of Community Standards will determine the course of action. The Vice President of Student Development or the Director of Community Standard's decision may be appealed through the appropriate college review process when requested by the student.

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

General Information

Buildings and Facilities

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

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

Instructional Philosophy

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

Industry Advisory Committees

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

Institutional Research

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

Educational Foundations

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 Harlingen 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 Harlingen 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 Office of the Registrar);

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 Harlingen 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 course work 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 Office of the Registrar during registration or within the first five (5) 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 Office of 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 Office of the Registrar.

Student Privacy and FERPA updates are available at www.tstc.edu/harlingenadmissions/

Compact with Texans

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

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

TSTC's Values

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

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

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

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

For more information, please call or write to:
Texas State Technical College Harlingen
1902 North Loop 499
Harlingen, Texas 78550
1-800-852-8784
956-364-4000
www.tstc.edu/harlingen

TSTC's Formal Written Complaint Handling Procedure
Most questions or complaints can be addressed through routine college channels. If additional assistance is needed, students are encouraged to file a formal written complaint. TSTC is committed to our student's satisfaction. The Customer Service Representative for our college is the Vice President for Student Development.

1. Submit complaint in writing by filling out the Effective Customer Relations form. This form may be downloaded at www.tstc.edu/harlingen. Alternatively, students may communicate verbally to TSTC's Customer Service Representative at 956-364-4300.
2. The TSTC Customer Service Representative will acknowledge the complaint and let the complainant know the matter is receiving attention. Complainants will be notified in writing within five working days of receiving the complaint as to the length of time it will take to resolve the issue.
3. The TSTC Customer Service Representative will investigate the complaint.
4. A solution that is consistent with TSTC policies, as well as applicable local, state, and federal laws, will be proposed to the complainant in writing in the time frame specified in step 2.
5. Complainants will be contacted by the Customer Service Representative within ten days of the written response to determine his/her satisfaction with the proposed solution and to be sure that the provisions of the solution have been implemented.
6. If complainants are not satisfied with the proposed solution, complainants may request that the complaint be considered by a Dispute Resolution Committee appointed by the college president. This committee will review all available documentation and render a decision as to the resolution of the complaint. All decisions of the committee are final and are not open to further review.

Texas Higher Education Coordinating Board Complaint Procedure

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

**ASSOCIATE OF
APPLIED SCIENCE DEGREE**

ASSOCIATE OF SCIENCE DEGREE

CERTIFICATE OF COMPLETION

Academic Contacts

Allied Health: Jean Lashbrook, Division Director · 956-364-4797

Program Name	AS	AAS	CFR	Acronym	Department Chair	Building	Phone Number
Biology	✓			BIOL	Paul Leonard	U	956-364-4678
Culinary Arts		✓	✓	CA	Carl Eads	U	956-364-4753
Dental Assistant			✓	DEA	Eva Euler	U	956-364-4704
Dental Hygiene		✓		DEH	Raquel Rico	U	956-364-4702
Dental Laboratory Technology			✓	DLT	Randy Bauer	D	956-364-4726
Health Information Technology		✓		HIT	Debbie Woods	L	956-364-4768
Medical Info. Specialist/Transcriptionist			✓	MIS	Debbie Woods	L	956-364-4768
Medical Assistant		✓	✓	MEA	Alicia Lugo	U	956-364-4806
Nurse Assistant			✓	NA	Alicia Lugo	U	956-364-4806
Registered Nursing (ADN)		✓		RN	Antonio Jayoma	U	956-364-4983
Surgical Technology		✓		ST	Robert Sanchez	U	956-364-4805
Vocational Nursing (LVN)			✓	VN	Adriana Hinojosa-Vassberg	U	956-364-4969

Computer Information Systems: Dr. Edna Claus, Division Director · 956-364-4819

Program Name	AS	AAS	CFR	Acronym	Department Chair	Building	Phone Number
Academic Computer Science	✓			COSC	Dr. Edna Claus	G	956-364-4819
Business Management Technology		✓	✓	BMT	Cindy Mata	C	956-364-4658
Computer Networking & Security Tech.		✓	✓	CNST	Norma Colunga-Hernandez	S	956-364-4774
Computer Systems Management Tech.		✓	✓	CSMT	Alex Alcoser	G	956-364-4685
Digital Media Design Technology		✓	✓	DMDT	J.J. Vavra	S	956-364-4721
Game & Simulation Programming		✓	✓	GAME	Tony Lozano	G	956-364-4686

Education & Humanities: Nicki Cone, Division Director · 956-364-4820

Program Name	AS	AAS	CFR	Acronym	Department Chair	Building	Phone Number
Academic General Education			✓	CORE	John Garrett	W	956-364-4760
Education & Training		✓	✓	ET	Dr. Tony Desjardins	C	956-364-4747
Mathematics	✓			MATH	Kyumars Ardalani	W	956-364-4784
Physics	✓			PHYS	Dr. Atiq Syed	W	956-364-4779

Engineering: Hector Yanez, Division Director · 956-364-4695

Program Name	AS	AAS	CFR	Acronym	Department Chair	Building	Phone Number
Architectural Design & Engineering Graphics		✓		ADEG	David Campos	S	956-364-4694
Biomedical Equipment Technology		✓		BET	Ray Longoria	PM	956-364-4776
Chemical-Environmental Technology		✓		CET	Jessica Lopez	J	956-364-4735
Engineering Science	✓			ENGR	Jazmin Ley	W	956-364-4065
Mechatronics Technology		✓	✓	MT	Adam Hernandez	PM	956-364-4982
Telecommunications Technology		✓	✓	TET	Dan Bodnar	PM	956-364-4732
Wind Energy & Turbine Technology		✓	✓	WET	David Gomez	PM	956-364-4729
Wind Energy & Turbine Tech. (Ingleside)		✓	✓	WET	George Lister	Off-Site	361-238-2013

Industrial/Manufacturing: Adan Gutierrez, Division Director · 956-364-4860

Program Name	AS	AAS	CFR	Acronym	Department Chair	Building	Phone Number
Agricultural Technology		✓	✓	AGT	Sam Gavito	T	956-364-4639
Air Conditioning & Refrigeration Technology		✓	✓	ACT	Jorge Cabrera	H	956-364-4672
Auto Collision Technology		✓	✓	AUB	Jose Vargas	F	956-364-4659
Automotive Technology		✓	✓	AUT	Abel Castillo	E	956-364-4576
Aviation Maintenance Technology		✓	✓	AER	Tom Cross	T	956-364-4787
Building Construction Science		✓	✓	BCS	Johannes Schwarz	H	956-364-4770
Precision Manufacturing Technologyy		✓	✓	PMT	Rick Limas	I	956-364-4789
Welding Technology		✓	✓	WLT	Kenny Moore	I	956-364-4814

TSTC Texas State Technical College

Associate of Applied Science Degree Programs

General Information

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

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

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

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

General Requirements

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

1. Complete admission requirements.
2. Complete curriculum requirements.
   a. The student must complete the minimum credit hours as specified for the program of study. Requirements are listed with the program of study descriptions in this catalog.
   b. The student must complete a minimum of 15 semester hours of general education courses. These include:
      - ENGL 1301
      - a SPCH course
      - a math or natural science course
      - a social or behavioral science course
      - a humanities or fine arts course
      - any courses specified by the student's major program (these will be listed with the program of study descriptions in this catalog)
      - any remaining general education hours may be satisfied by taking elective courses in the humanities

and fine arts, social and behavioral sciences or mathematics and natural sciences.
3. Students must meet all scholastic guidelines and specific program requirements. Additional information is included in the Scholastic Regulations section of this catalog. Some programs of study have specific requirements. More information is listed in the respective program of study description.
4. Discharge all financial obligations to TSTC.
5. Complete an Application for Graduation.
6. Complete applicable TSI requirements.

General Education

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

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Agricultural Technology

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

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

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

Admissions Requirements

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

COURSE NAME		CREDIT HOURS
Semester 1		
AGAH 1401	Animal Science †	4
AGMG 1300	Agricultural Policies, Safety & Codes †	3
AGMG 1311	Introduction to Agribusiness	3
BIOL 1306	Biology for Science Majors I † *	3
BIOL 1106	Biology for Science Majors I Lab † *	1
	Total Hours	**14**
Semester 2		
AGMG 1318	Introduction to Agricultural Economics	3
AGAH 2413	Principles of Feeds & Feeding	4
AGCR 1403	Crop Science	4
HALT 1301	Principles of Horticulture	3
	Total Hours	**14**
Semester 3		
AGAH 1347	Animal Reproduction	3
AGCR 2305	Entomology	3
AGCR 1341	Forage and Pasture Management	3
SPCH 1318	Interpersonal Communication †	3
	Humanities/Fine Arts Elective †	3
	Total Hours	**15**
Semester 4		
AGCR 2313	Soil & Water Conservation Management	3
AGMG 1344	Agricultural Records Management ° **	3
WMGT 1305	Introduction to Wildlife Management	3
BIOL 1307	Biology for Science Majors II † *	3
BIOL 1107	Biology for Science Majors II Lab † *	1
MATH 1314	College Algebra	3
	Total Hours	**16**
Semester 5		
AGME 1315	Farm and Ranch Shop Skills	3
	Social/Behavioral Sciences Elective †	3
CHEM 1305	Introductory Chemistry I † *	3
CHEM 1105	Introductory Chemistry Laboratory II † *	1
ENGL 1301	Composition I †	3
	Total Hours	**13**
Grand Totals		**69**

° *This course is designated as the capstone course.*
† *Courses articulated with high school*
* *BIOL 1406 may be taken in place of BIOL 1306 and BIOL 1106*
** *AGMG 2382 or AGMG 2682 (Co-op) may be taken in place of AGMG 1344.*
*** *SPCH 1311 or SPCH 2333 may be taken in place of SPCH 1318.*
‡ *BIOL 1407 may be taken in place of BIOL 1307 and BIOL 1107.*
§ *CHEM 1405 and CHEM 1411 may be taken in place of CHEM 1305 and CHEM 1105.*

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Air Conditioning and Refrigeration Technology

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

Course topics include:
- Applied electricity and electronics
- Basic drafting
- Design and control systems
- Air movement and balancing

Admissions Requirements

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

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

COURSE NAME		CREDIT HOURS
Semester 1		
HART 1310	HVAC Shop Practices and Tools	3
HART 1301	Basic Electricity for HVAC †	3
HART 1307	Refrigeration Principles †	3
HART 1300	HVAC Duct Fabrication	3
	Total Hours	**12**
Semester 2		
HART 1303	Air Conditioning Control Principles	3
HART 1341	Residential Air Conditioning	3
HART 2338	Air Conditioning Installation and Startup	3
HART 1345	Gas and Electric Heating	3
	Humanities/Fine Arts Elective †	3
	Total Hours	**15**
Semester 3		
HART 2342	Commercial Refrigeration	3
HART 2343	Industrial Air Conditioning	3
MAIR 1449	Refrigerators, Freezers, Window Air Conditioners	4
HART 2331	Advanced Electricity for HVAC	3
MATH 1314	College Algebra † *	3
	Total Hours	**16**
Semester 4		
ENGL 1301	Composition I †	3
HART 2341	Commercial Air Conditioning	3
HART 2334	Advanced Air Conditioning Controls	3
HART 2345	Residential Air Conditioning Systems Design	3
	Total Hours	**12**
Semester 5		
HART 2302	Commercial Air Conditioning System Design	3
HART 2336	Air Conditioning Troubleshooting ° **	3
	Social/Behavioral Sciences Elective †	3
	Speech Elective †	3
	Total Hours	**12**
Grand Totals		**67**

° *This course is designated as the capstone course.*
† *Courses articulated with high school*
** *HART 2380 or HART 2680 (Co-op) may be taken in place of HART 2336.*

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TSTC Texas State Technical College

# Architectural Design and Engineering Graphics Technology

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

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

Admissions Requirements
In addition to admissions requirements listed under "Admissions Information," it is recommended students complete two units of high school mathematics, including one unit of Algebra.
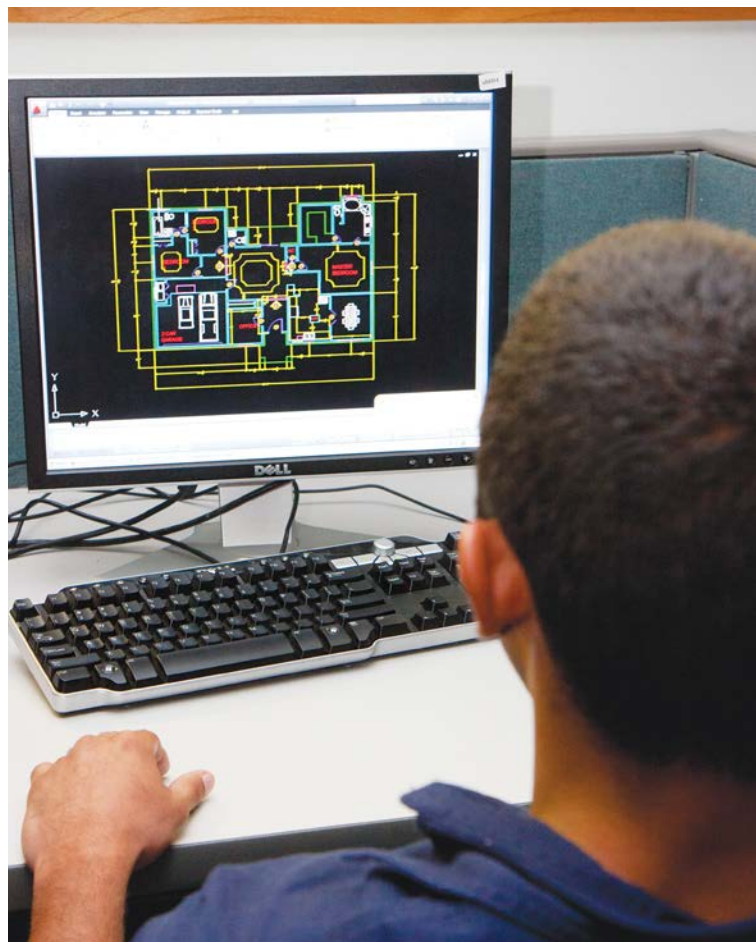
COURSE NAME		CREDIT HOURS
Semester 1		
ENGL 1301	Composition I	3
DFTG 1305	Technical Drafting † *	3
DFTG 1309	Basic Computer-Aided Drafting †	3
INDS 1300	Interior Design Drafting Applications	3
	Total Hours	**12**
Semester 2		
DFTG 1317	Architectural Drafting - Residential †	3
DFTG 1333	Mechanical Drafting	3
DFTG 1310	Specialized Basic Computer Aided Drafting (CAD)	3
DFTG 2319	Intermediate Computer-Aided Drafting	3
MATH 1314	College Algebra †	3
	Total Hours	**15**
Semester 3		
DFTG 2312	Technical Illustration & Presentation	3
DFTG 2332	Advanced Computer-Aided Drafting	3
DFTG 2330	Civil Drafting	3
GISC 1311	Introduction to Geographic Information Systems (GIS)	2 3
MATH 1316	Plane Trigonometry	3
	Total Hours	**15**
Semester 4		
DFTG 1357	Specialized Intermediate Computer-Aided Drafting (CAD)	3
DFTG 2340	Solid Modeling/Design	3
SRVY 2348	Plane Surveying	3
GISC 2320	Intermediate Geographic Information Systems (GIS)	3
	Speech Elective †	3
	Total Hours	**15**
Semester 5		
	Humanities/Fine Arts Elective †	3
ARCE 1352	Structural Drafting	3
DFTG 2338	Final Project - Advanced Drafting °	3
GISC 1301	Cartography and Geography in Geographical Information Systems (GIS) and Global Positioning Systems	3
PSYC 2301	General Psychology †	3
	Total Hours	**15**

Grand Totals 72

° This course is designated as the capstone course.
† Courses articulated with high school
‡ Courses with external experience
** DFTG 2380 or DFTG 2680 (Co-op) may be taken in place of the capstone course
* ENGR 1304 may be taken in place of DFTG 1309.

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Auto Collision Technology

Advances in the auto body repair industry reflect the complexity and sophistication of today's automobile. The auto collision technician is a professional who artistically blends technical skills with advanced practical knowledge to repair automobiles to pre-accident condition. With the high cost of automobiles today, restoration to pre-accident safety and value is very important.

The Auto Collision department is modeled after top repair shops in the industry and meets the standards for National Institute for Automotive Service Excellence certification in non-structural analysis and damage repair, structural analysis and damage repair, plastics and adhesives, and painting and refinishing.

Upon completion of the Auto Collision Program students will:
- Perform auto body collision repairs to NATEF & I-CAR industry standards.
- Apply a variety of paint & refinish materials to NATEF and I-CAR industry standards.
- Repair plastic & fiberglass on auto bodies to NATEF & I-CAR industry standards.
- Prepare an estimate & develop a plan for auto body repair to NATEF & I-CAR industry standards.

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

Admissions Requirements

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

COURSE NAME		CREDIT HOURS
Semester 1		
ABDR 1331	Basic Refinishing †	3
ABDR 1349	Automotive Plastic & Sheet Molded Compound Repair	3
ABDR 1419	Basic Metal Repair †	4
	Total Hours	**10**
Semester 2		
ABDR 1207	Collision Repair Welding	2
ABDR 1458	Intermediate Refinishing	4
ABDR 2449	Advanced Refinishing	4
MATH 1332	Contemporary Mathematics I † (or MATH 1314)	3
	Total Hours	**13**
Semester 3		
ABDR 1311	Vehicle Measurement & Damage Repair Procedures	3
ABDR 1441	Structural Analysis & Damage Repair I	4
ABDR 2353	Color Analysis & Paint Matching	3
ENGL 1301	Composition I †	3
	Social/Behavioral Sciences Elective †	3
	Total Hours	**16**
Semester 4		
ABDR 1442	Structural Analysis & Damage Repair II	4
ABDR 1455	Non-Structural Metal Repair ‡	4
ABDR 2345	Vehicle Safety Systems	3
ABDR 2370	Collision Damage Analysis & Reporting Systems	3
	Speech Elective †	3
	Total Hours	**17**
Semester 5		
ABDR 2257	Collision Repair Shop Management °	2
ABDR 2431	Structural Analysis & Damage Repair III	4
ABDR 2441	Major Collision Repair & Panel Replacement	4
	Humanities/Fine Arts Elective †	3
	Total Hours	**13**
	Grand Totals	**69**

° This course is designated as the capstone course.
† Courses articulated with high school

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TSTC Texas State Technical College

Automotive Technology

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

In this program, students will learn to:
- Diagnose, service and repair all automotive systems including diesel fuels
- Exercise critical thinking problem solving diagnostic skills

Systems include:
- Electrical/Electronics
- Engine Performance
- Transmissions
- Suspension and Steering
- ABS Brakes
- Engines
- Air Conditioning

Additional Subjects:
Shop Management, ASE Certification, and Workplace Soft Skills

Admission Requirements
Students must complete requirements listed under "Admissions Information"

COURSE NAME		CREDIT HOURS
Semester 1		
AUMT 1201	Introduction & Theory of Automotive Technology †	2
AUMT 1407	Automotive Electrical Systems †	4
AUMT 1416	Automotive Suspension & Steering Systems †	4
	Total Hours	**10**
Semester 2		
AUMT 1410	Automotive Brake Systems †	4
AUMT 1445	Automotive Climate Control Systems	4
ENGL 1301	Composition I †	3
MATH 1314	College Algebra † (or MATH 1332)	3
	Total Hours	**14**
Semester 3		
AUMT 2417	Automotive Engine Performance Analysis I †	4
AUMT 2421	Automotive Electrical Diagnosis and Repair	4
AUMT 1419	Automotive Engine Repair	4
	Total Hours	**12**
Semester 4		
AUMT 2270	Automotive Technician Certification Standards	2
AUMT 2413	Automotive Drive Train & Axles	4
AUMT 2425	Automotive Automatic Transmission & Transaxle	4
AUMT 2434	Automotive Engine Performance Analysis II	4
	Total Hours	**14**
Semester 5		
AUMT 2301	Automotive Management ° **	3
DEMR 2434	Advanced Diesel Tune-Up and Troubleshooting	4
	Speech Elective †	3
	Humanities/Fine Arts Elective †	3
	Social/Behavioral Sciences Elective †	3
	Total Hours	**16**
	Grand Totals	**66**

° This course is designated as the capstone course.
† Courses articulated with high school
*** AUMT 1380 or AUMT 2680 (Co-Op) may be taken in place of the capstone course*

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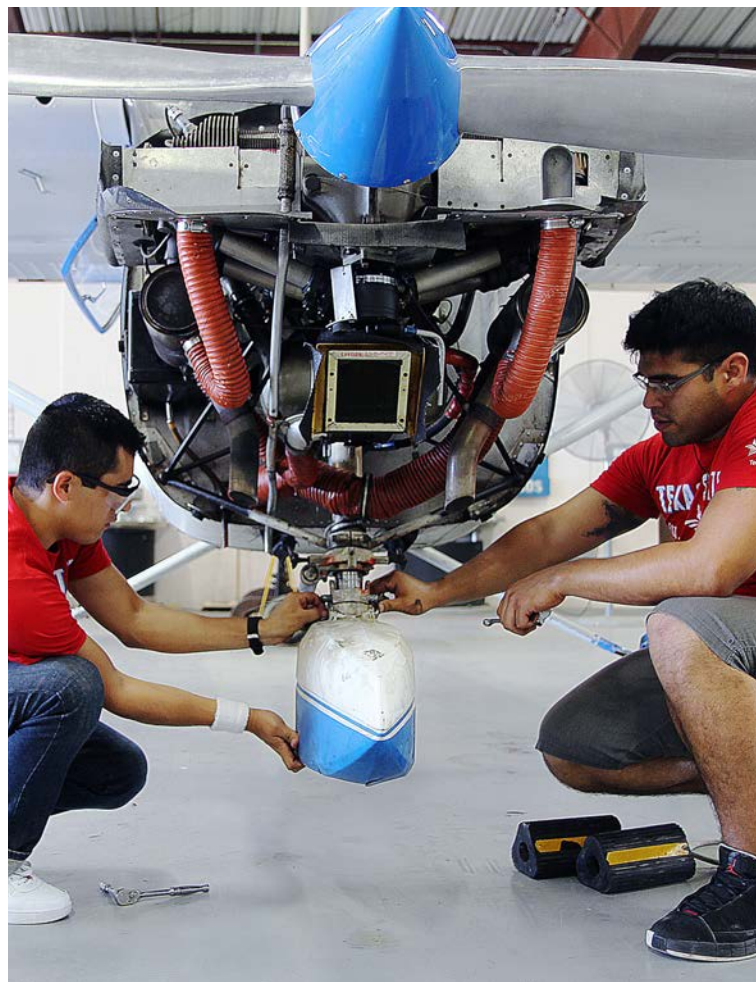# Aviation Maintenance Technology

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

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

Admission Requirements

Students must complete requirements listed under "Admissions Information"

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

COURSE NAME		CREDIT HOURS
Semester 1		
AERM 1203	Shop Practices †	2
AERM 1205	Weight & Balance †	2
AERM 1208	Federal Aviation Regulations	2
AERM 1210	Ground Operations †	2
AERM 1314	Basic Electricity	3
AERM 1315	Aviation Science †	3
	Total Hours	**14**
Semester 2		
AERM 1240	Aircraft Propellers	2
AERM 1357	Fuel Metering & Induction Systems	3
AERM 1456	Aircraft Powerplant Electrical	4
AERM 2341	Powerplant & Auxiliary Power Units	3
	Total Hours	**12**
Semester 3		
AERM 1344	Aircraft Reciprocating Engines	3
AERM 1351	Aircraft Turbine Engine Theory	3
ENGL 1301	Composition I †	3
MATH 1314	College Algebra † (or MATH 1332)	3
	Social/Behavioral Sciences Elective †	3
	Total Hours	**15**
Semester 4		
AERM 1241	Wood, Fabric & Finishes †	2
AERM 1243	Instruments & Navigation/Communication	2
AERM 1247	Airframe Auxiliary Systems	2
AERM 1253	Aircraft Welding	2
AERM 1254	Aircraft Composites	2
	Humanities/Fine Arts Elective †	3
	Total Hours	**13**
Semester 5		
AERM 1345	Airframe Electrical Systems	3
AERM 1349	Hydraulic, Pneumatic & Fuel Systems	3
AERM 1350	Landing Gear Systems	3
AERM 2233	Assembly & Rigging	2
	Speech Elective †	3
	Total Hours	**14**
	Grand Totals	**68**
Enhanced Skills Courses**		
AERM 1352	Aircraft Sheet Metal	3
AERM 2351	Aircraft Turbine Engine Overhaul	3
AERM 2352	Aircraft Powerplant Inspection	3
AERM 2447	Aircraft Reciprocating Engine Overhaul	4
AERM 2231	Airframe Inspection	2
	Total Hours	**15**
	Grand Totals	**83**

† Courses articulated with high school

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

TSTC Texas State Technical College

Biomedical Equipment Technology

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

Admission Requirements
In addition to admissions requirements listed under "Admissions Information," high school courses in Algebra, Trigonometry, Biology, Physics, Chemistry or Physiology are helpful in preparing for this program.

Internship/Co-op Entry Requirements
Before enrolling in internship or cooperative study, a student must have on file with the department the following materials:

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

All BET students have the opportunity to take the comprehensive exam to prepare them for becoming a Certified BioMedical Equipment Technician (CBET). The comprehensive exam will cover the following subject areas: Electronic Fundamentals, Circuit Analysis and Troubleshooting, Safety for Health Care Facilities, Medical Equipment Applications, and Anatomy and Physiology.

COURSE NAME		CREDIT HOURS
Semester 1		
BIOM 1201	Biomedical Equipment Technology †	2
CETT 1303	DC Circuits	3
EECT 1204	Electronic Soldering	2
RBTC 1305	Robotic Fundamentals	3
BIOM 1355	Medical Electronic Applications	3
	Total Hours	**13**
Semester 2		
BIOM 1309	Applied Biomedical Equipment Technology	3
BIOM 1315	Medical Equipment Networks (or INTW 1325)	3
CETT 1325	Digital Fundamentals	3
MATH 1314	College Algebra † * (or MATH 1332)	3
CETT 1305	AC Circuits	3
	Total Hours	**15**
Semester 3		
BIOM 2301	Safety in Health Care Facilities	3
BIOM 1391	Special Topics in Biomedical Engineering-Related Technology/Technician (or BIOM 1350)	3
BIOM 2331	Biomedical Clinical Instrumentation (or ELMT 1305)	3
ENGL 1301	Composition I †	3
	Humanities/Fine Arts Elective †	3
	Total Hours	**15**
Semester 4		
BIOM 2311	General Medical Equipment I	3
BIOM 2315	Physiological Instruments I	3
BIOM 2288	Internship: Biomedical Technology/Technician †	2
PSYC 2301	General Psychology † * (or SOCI 1301)	3
BIOM 1341	Medical Circuits/Troubleshooting	3
	Total Hours	**14**
Semester 5		
BIOM 2339	Physiological Instruments II	3
BIOM 2343	General Medical Equipment II	3
BIOM 2319	Fundamentals of X-Ray and Medical Imaging Systems	3
BIOM 2380	Coop: Biomedical Technology/Technician (or INMT 1317)	3
	Speech Elective †	3
	Total Hours	**15**
	Grand Totals	**72**

† Courses articulated with high school

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Building Construction Science

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

In this program, students will learn to:
- Prepare building sites, construct foundations and structures
- Frame and finish various building systems
- Estimate cost and inspect construction jobs
- Supervise other construction workers

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

COURSE NAME		CREDIT HOURS
Semester 1		
CNBT 1316	Construction Technology I	3
CNBT 1300	Residential and Light Commercial Blueprint Reading	3
OSHT 1305	OSHA Regulations - Construction Industry	3
DFTG 1313	Drafting for Specific Occupations	3
	Total Hours	**12**
Semester 2		
CNBT 1350	Construction Technology II	3
CNBT 2317	Green Building	3
CNBT 1315	Field Engineering I	3
ENGL 1301	Composition I †	3
MATH 1332	Contemporary Mathematics I (or MATH 1314)	3
	Total Hours	**15**
Semester 3		
CNBT 2339	Construction Technology IV	3
CNBT 1311	Construction Methods and Materials I	3
CNBT 1346	Construction Estimating I	3
CNBT 2342	Construction Management I	3
	Total Hours	**12**
Semester 4		
CNBT 2337	Construction Estimating II	3
CNBT 2315	Construction Specifications and Contracts	3
CNBT 2344	Construction Management II	3
	Humanities / Fine Arts Elective †	3
	Total Hours	**12**
Semester 5		
CNBT 1342	Building Codes & Inspections ° ‡	3
	Social / Behavioral Sciences Elective †	3
	Speech Elective	3
	Total Hours	**9**
	Grand Totals	**60**

° This course has been designated as the capstone course
† Courses articulated with high schools
‡ Courses with external learning experience

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TSTC Texas State Technical College

Business Management Technology- Office Management

The Business Management Technology program prepares students for occupations as executive assistants or executive secretaries. Many industries continue to seek for applicants with a college degree related to the business industry. As technology continues to automate office procedures, graduates of this program would assist employers in maintaining a productive office.

Graduates would be skilled in desktop publishing, integrated software applications, database management, records and information management, and administrative office management. 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. Employment positions for graduates from this program of study are Secretaries and Administrative Assistants and Executive Secretaries. "Although secretaries and administrative assistants work in nearly every industry, many are concentrated in schools, hospitals, government agencies, and legal and medical offices." (Occupational Outlook Handbook, accessed Nov. 27, 2012)

While technology has increased the automation of business processes and procedures, it will not replace need for the people skills required by executive assistants and/or executive secretaries.

Admission Requirements

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

COURSE NAME		CREDIT HOURS
Semester 1		
BUSI 1301	Business Principles	3
	Humanities/Fine Arts Elective	3
BCIS 1305	Business Computer Applications	3
POFT 1301	Business English	3
	Total Hours	**12**
Semester 2		
SPCH 1321	Business & Professional Communication	3
MATH 1314	College Algebra † *	3
ENGL 1301	Composition I †	3
ECON 2301	Principles of Macroeconomics	3
	Total Hours	**12**
Semester 3		
BUSI 2301	Business Law	3
ACCT 2301	Principles of Accounting I - Financial	3
BMGT 1327	Principles of Management	3
ECON 2302	Principles of Microeconomics	3
POFI 1349	Spreadsheets	3
	Total Hours	**15**
Semester 4		
HRPO 2301	Human Resource Management	3
ACCT 2302	Principles of Accounting II - Managerial	3
ITSC 2321	Integrated Software Applications II	3
LAWT 1301	Copyright & Ethical Issues	3
	Total Hours	**12**
Semester 5		
POFT 1319	Records & Information Management I	3
MRKG 1301	Customer Relationship Management	3
ITSC 1315	Project Management Software	3
BMGT 1325	Office Management °	3
	Total Hours	**12**
	Grand Totals	**63**

° This course is designated as the capstone course
† Courses articulated with high school
** MATH 1332 or MATH 1325 may be taken in place of MATH 1314*

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Business Management Technology-Operations Management

The Business Management Technology, Business Operations program prepares students for occupations as first line supervisors/managers of production and operating workers. Many industries continue to seek for applicants with a college degree related to the business industry.

As technology continues to automate office procedures, graduates of this program would supervise, monitor and manage processes, materials and/or surroundings to ensure that specific goals and plans are accomplished. Graduates would be skilled in project management, and the management of human resources.

Courses in quality, facilities, and strategic management would provide graduates the knowledge and understanding of the interactive responsibilities such as planning, prioritizing, and the coordination of people and resources to accomplish specific goals.

Employment positions for graduates from this program of study are First-Line Supervisors of Production and Operating Workers. Related occupations are Plant and System Operators, and Supervisors of Production Workers. (Occupational Outlook Handbook, accessed Dec. 5, 2012)

Admission Requirements

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

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COURSE NAME		CREDIT HOURS
Semester 1		
BUSI 1301	Business Principles	3
	Humanities/Fine Arts Elective	3
BCIS 1305	Business Computer Applications	3
POFT 1301	Business English	3
	Total Hours	**12**
Semester 2		
SPCH 1321	Business & Professional Communication	3
MATH 1314	College Algebra † *	3
ENGL 1301	Composition I †	3
ECON 2301	Principles of Macroeconomics	3
	Total Hours	**12**
Semester 3		
BUSI 2301	Business Law	3
ACCT 2301	Principles of Accounting I - Financial	3
BMGT 1327	Principles of Management	3
ECON 2302	Principles of Microeconomics	3
POFI 1349	Spreadsheets	3
	Total Hours	**15**
Semester 4		
HRPO 2301	Human Resource Management	3
ACCT 2302	Principles of Accounting II - Managerial	3
BMGT 2331	Principles of Quality Management	3
BMGT 1306	Facilities Management	3
	Total Hours	**12**
Semester 5		
BMGT 1331	Production and Operations Management	3
BMGT 2341	Strategic Management	3
LMGT 1325	Warehouse and Distribution Center Management	3
BMGT 1309	Information and Project Management	3
	Total Hours	**12**
	Grand Totals	**63**

† Courses articulated with high school
* MATH 1332 or MATH 1325 may be taken in place of MATH 1314
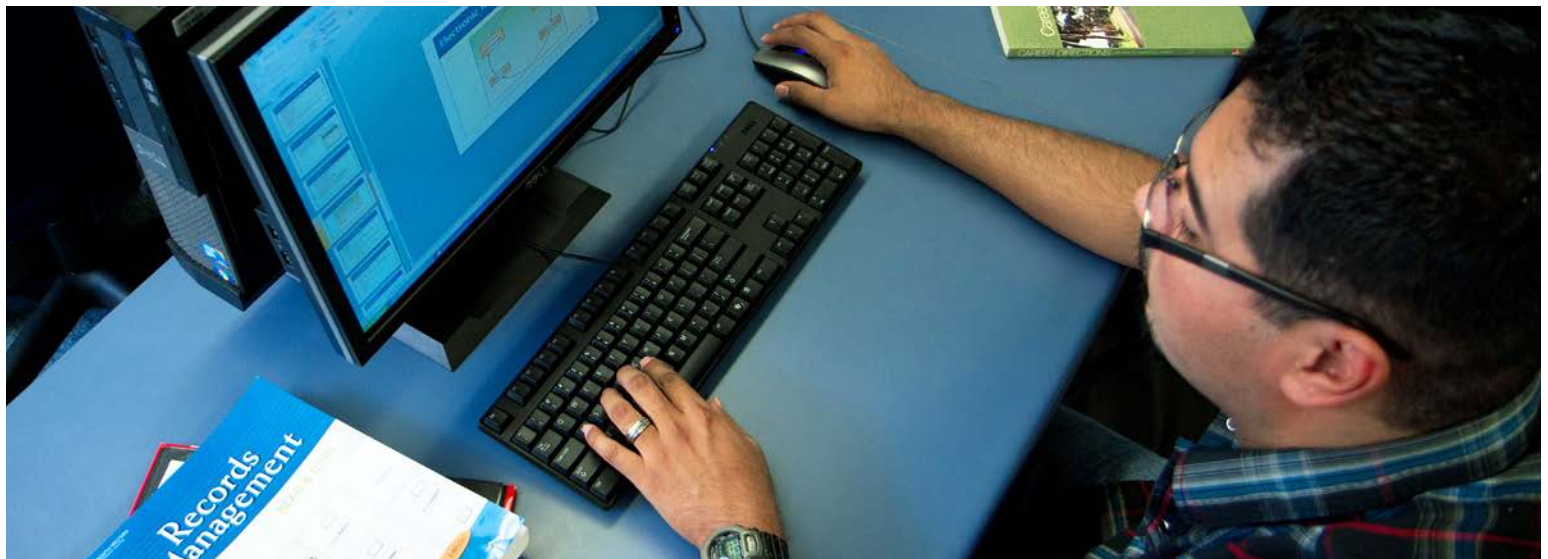
Chemical Environmental Technology

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

In this program, students will learn to:
- Analyze various materials using standard procedures and instrumental procedures
- Calculate and report chemical analyses
- Use computerized testing procedures, such as atomic absorption, gas chromatography, infrared and mass spectroscopy

Admissions Requirements:
In addition to admissions requirements listed under "Admissions Information," completion of one unit of high school Algebra and Chemistry is recommended.

COURSE NAME		CREDIT HOURS
Semester 1		
CTEC 1205	Chemical Calculations I	2
EPCT 1211	Introduction to Environmental Science ‡	2
SCIT 1414	Applied General Chemistry I †	4
	(or CHEM 1311 and 1111)	
	Total Hours	**8**
Semester 2		
CTEC 1206	Chemical Calculations II	2
EPCT 1344	Environmental Sampling & Analysis ‡	3
MATH 1314	College Algebra †	3
SCIT 1415	Applied General Chemistry II	4
	(or CHEM 1312 and 1112)	
	Total Hours	**12**
Semester 3		
ENGL 1301	Composition I †	3
SCIT 1543	Applied Analytical Chemistry I ‡	5
SCIT 2401	Applied Organic Chemistry I	4
	(or CHEM 2323 and 2321)	
	Humanities/Fine Arts Elective †	3
	Total Hours	**15**
Semester 4		
CTEC 1441	Applied Instrumental Analysis I	4
CTEC 2441	Polymers I	4
CTEC 2445	Unit Operations	4
PSYC 2301	General Psychology †	3
	Total Hours	**15**
Semester 5		
CTEC 2250	Unit Operations II	2
CTEC 2443	Polymers II	4
EPCT 2335	Advanced Environmental Instrumental Analysis †	3
	Speech Elective †	3
	Total Hours	**12**
Semester 6		
CTEC 2333	Comprehensive Studies in	3
	Chemical Technology ° ‡ **	
EPCT 1203	24-Hour Emergency Response Training	2
EPCT 1251	Quality Assurance & Quality Control	2
	Total Hours	**7**
	Grand Totals	**69**

o This course has been designated as the capstone course
† Courses articulated with high schools
‡ Courses with external learning experience
**CTEC 1380 or CTEC 1680 (Co-op) may be taken in place of capstone course

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Computer Networking & Security Technology-Computer Network Specialist

The CNST program is for students who desire to
- obtain jobs in which computer network operations knowledge and skills are required
- specialize in the security controls required to safeguard digital/electronic infrastructures and in responding to computer security breaches; and
- continue an education path toward a bachelor's or master's degree with a focus on network information security.

This program will also provide individuals, who are in job fields that have some responsibility with information security, with enhanced knowledge and skills.

Computer and information technology occupations are projected to grow by 22 percent, adding 758,800 new jobs from 2010 to 2020. Demand for workers in these occupations will be driven by the continuing need for businesses, government agencies, and other organizations to adopt and utilize the latest technologies. Workers in these occupations will be needed to develop software, increase cybersecurity, and update existing network infrastructure.

As organizations across the economy increase this reliance on information technology (IT), workers in this occupation will be hired to design new computer systems and respond to the installation and repair requirements of increasingly complex computer equipment and software. As organizations invest in newer, faster mobile technology, growth in wireless and mobile networks will increase, creating a need for new systems that work well with this and emerging technologies.

More network system administrators will be needed to implement and reinforce security controls against the growing frequency and sophistication of network system cyberattacks. Forensic science technicians will be needed to provide timely digital forensics evidence to law enforcement agencies and courts during criminal proceedings related to cyber crime. Analysts with knowledge in malware, viruses, and cyber attack methodologies will be needed to come up with innovative ways to prevent hackers from stealing critical information or creating havoc on computer networks.

A large increase is expected in electronic medical records, e-prescribing, and other forms of healthcare IT, and analysts will be needed to design computer systems to accommodate the increase. In addition, as the healthcare industry expands its use of electronic medical records, ensuring patients' privacy and protecting personal data are becoming more important.

The federal government is expected to greatly increase its hiring of information security analysts to protect the nation's critical information technology (IT) systems. These analysts, who will be hired by organizations in a variety of industries to design computer systems, will move on to another business when they are finished. As more small and medium-size firms demand advanced systems, this practice is expected to grow. Systems analysts are expected to grow 43 percent in the computer systems design and related services industry.

COURSE NAME		CREDIT HOURS
Semester 1		
ITNW 1325	Fundamentals of Networking Technologies †	3
CPMT 1311	Introduction to Computer Maintenance †	3
ITNW 1354	Implementing & Supporting Servers	3
	Humanities/Fine Arts Elective †	3
	Total Hours	**12**
Semester 2		
ITNW 1353	Supporting Network Server Infrastructure	3
ITNW 2321	Networking with TCP/IP	3
ITNW 2305	Network Administration	3
MATH 1314	College Algebra	3
	Total Hours	**12**
Semester 3		
ITSY 1342	Information Technology Security	3
ITNW 2354	Internet/Intranet Server	3
ITNW 2312	Routers	3
ENGL 1301	Composition I †	3
	Total Hours	**12**
Semester 4		
ITSY 2301	Firewalls & Network Security	3
ITSY 2330	Intrusion Detection	3
ITNW 2359	Web Server Support & Maintenance	3
ITNW 2335	Network Troubleshooting & Support	3
SPCH 1318	Interpersonal Communication †	3
	Total Hours	**15**
Semester 5		
ITNW 2350	Enterprise Network °	3
ITNW 1313	Computer Virtualization	3
ITSY 2359	Security Assessment & Auditing	3
	Social/Behavioral Sciences Elective	3
	Total Hours	**12**
	Grand Totals	**63**

o This course has been designated as the capstone course
† Courses articulated with high schools
‡ Course with external learning experience

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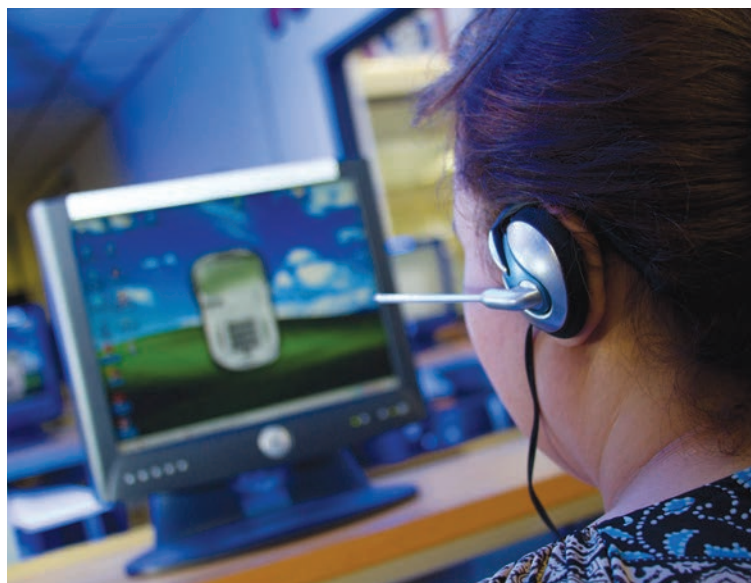
Computer Systems Management Technology

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

Instruction within the program includes the skills and procedures necessary to:
- Analyze hardware and software solutions
- Troubleshoot defective computer or computer related devices
- Recommend computer and/or computer related solutions or purchases to the end user.
- Provide quality assurance of IT related equipment
- Support a business IT environment

Admissions Requirements

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

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COURSE NAME		CREDIT HOURS
Semester 1		
CPMT 1311	Introduction to Computer Maintenance †	3
MATH 1314	College Algebra †	3
CPMT 1304	Microcomputer System Software †	3
ITNW 1354	Implementing & Supporting Servers	3
	Total Hours	**12**
Semester 2		
ITNW 1325	Fundamentals of Networking Technologies	3
ENGL 1301	Composition I †	3
ITSC 1316	Linux Installation and Configuration	3
ITSC 1321	Intermediate PC Operating Systems	3
	Total Hours	**12**
Semester 3		
GAME 1301	Computer Ethics	3
ITSC 2339	PC Help Desk	3
	Social/Behavioral Sciences Elective †	3
CPMT 1307	Electronic & Computer Skills (or CETT 1307)	3
	Total Hours	**12**
Semester 4		
CPMT 1345	Computer Systems Maintenance	3
CPMT 1347	Computer System Peripherals	3
	Speech Elective	3
CPMT 2302	Home Technology Integration	3
	Total Hours	**12**
Semester 5		
CPMT 2345	Computer System Troubleshooting °	3
CPMT 2350	Industry Certification Preparation	3
CPMT 2333	Computer Integration	3
	Humanities/Fine Arts Elective †	3
	Total Hours	**12**
	Grand Totals	**60**

o This course has been designated as the capstone course
† Courses articulated with high schools
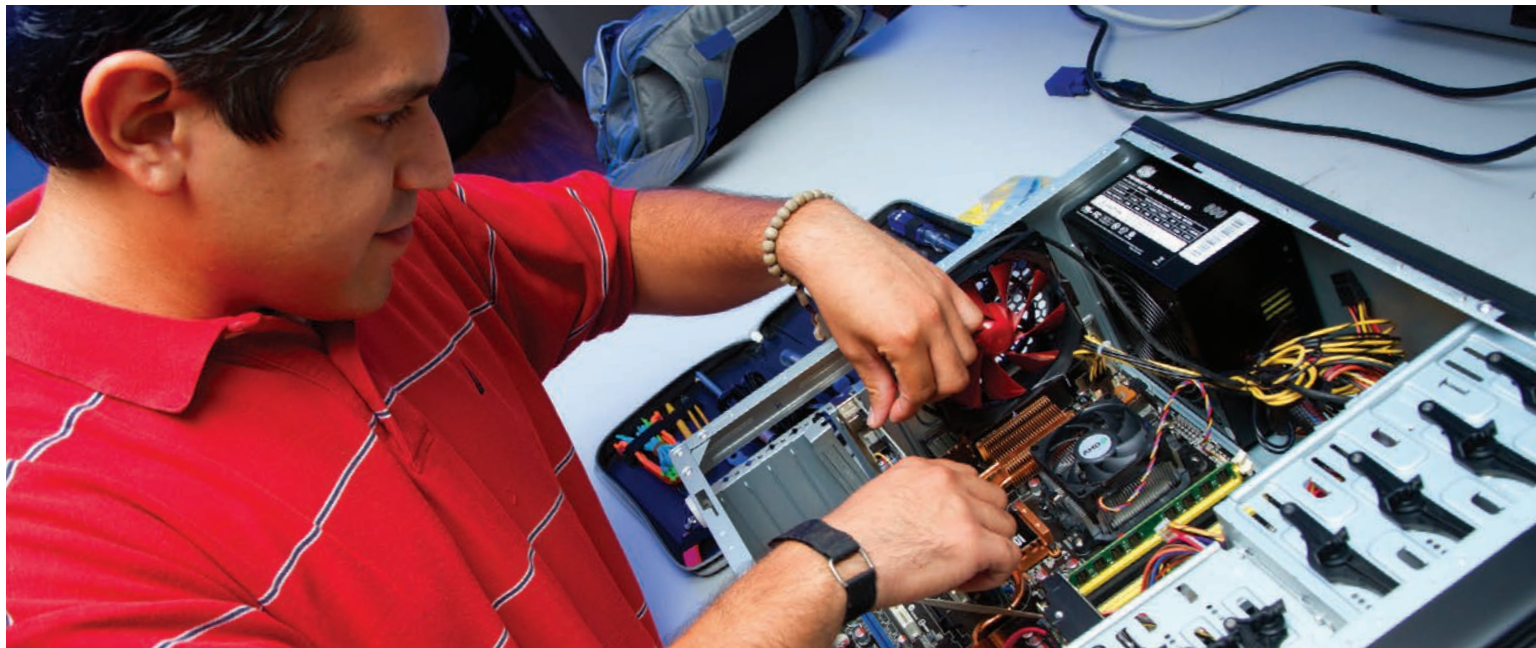
Culinary Arts

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

In this program, students will learn to:

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

Admissions Requirements

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

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COURSE NAME		CREDIT HOURS
Semester 1		
CHEF 1205	Sanitation & Safety †	2
CHEF 1301	Basic Food Preparation †	3
IFWA 1205	Food Service Equipment & Planning	2
RSTO 1204	Dining Room Service	2
TECM 1303	Technical Calculations (or MATH 1314)	3
	Total Hours	**12**
Semester 2		
CHEF 2301	Intermediate Food Preparation	3
FDNS 1305	Nutrition †	3
IFWA 1219	Meat Identifying & Processing	2
RSTO 2301	Principles of Food and Beverage Controls	3
SOCI 1301	Introductory Sociology † ◊	3
	Total Hours	**14**
Semester 3		
CHEF 1314	A la Carte Cooking	3
RSTO 1325	Purchasing for Hospitality Operations	3
PSTR 1401	Fundamentals of Baking	4
ENGL 1301	Composition I	3
	Total Hours	**13**
Semester 4		
IFWA 2437	Special Projects & Field Work	4
RSTO 1313	Hospitality Supervision	3
RSTO 2307	Catering	3
BIOL 1308	Biology for Non-Science Majors I † *	3
BIOL 1108	Biology for Non-Science Majors I Lab † *	1
	Humanities / Fine Arts Elective †	3
	Total Hours	**17**
Semester 5		
IFWA 2341	Specialized Food Preparation ° ‡ **	3
RSTO 1221	Menu Management	2
	Speech Elective †	3
RSTO 1201	Beverage Management	2
BMGT 1327	Principles of Management † (or HRPO 2301)	3
CHEF 2341	Advance Culinary Competition	3
	Total Hours	**16**
	Grand Totals	**72**

° This course has been designated as the capstone course
† Courses articulated with high schools
‡ Courses with external learning experience
* BIOL 1408 may be taken in place of BIOL 1308/1108
** CHEF 2480 or CHEF 2680 (Co-op ‡) may be taken in place of the capstone course
◊ A Social Behavioral Elective may be taken in place of SOCI 1301

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Dental Hygiene

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

This program is accredited by the American Dental Association.

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

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

Clinical Entry Requirements
Before enrolling in clinical courses, a student must have on file with the department the following materials:
- Results of prescribed physical examination.
- Proof of required immunizations.
- Proof of liability insurance of at least $1 million, health and accident insurance and needlestick insurance (available through TSTC)
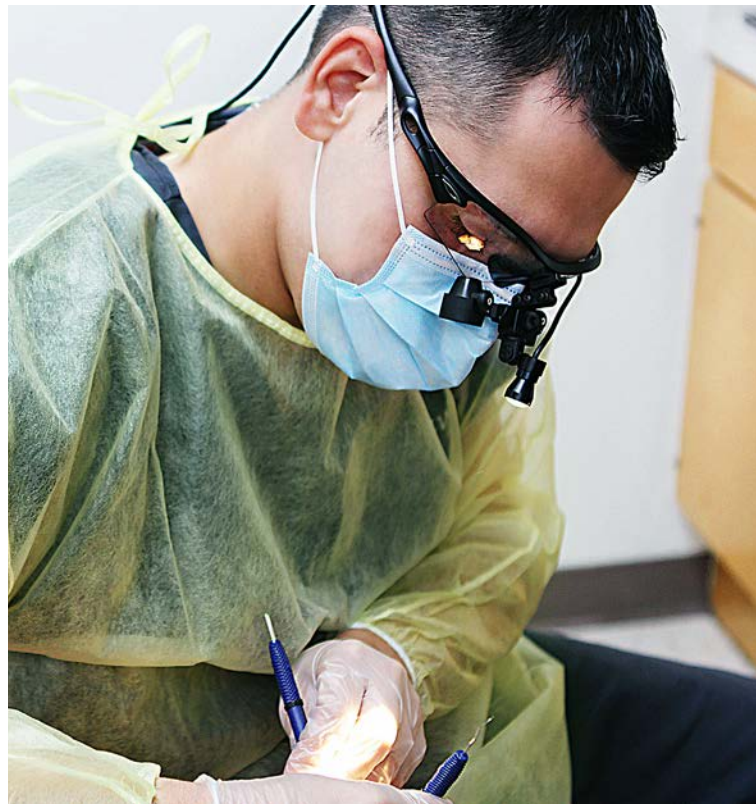
COURSE NAME		CREDIT HOURS
Semester 1		
BIOL 2301	Anatomy & Physiology I † **	3
BIOL 2101	Anatomy & Physiology Laboratory I † **	1
CHEM 1305	General Chemistry I	3
CHEM 1105	General Chemistry Lab I	1
	Total Hours	**8**
Semester 2		
BIOL 2302	Anatomy & Physiology II † *	3
BIOL 2102	Anatomy & Physiology II Lab † *	1
DHYG 1227	Preventive Dental Hygiene Care	2
DHYG 1301	Orofacial Anatomy, Histology & Embryology	3
DHYG 1331	Preclinical Dental Hygiene	3
	Total Hours	**12**
Semester 3		
BIOL 2320	Microbiology for Science Majors †	3
BIOL 2120	Microbiology for Science Majors Laboratory †	1
DHYG 1235	Pharmacology for the Dental Hygienist	2
DHYG 1260	Clinical - Dental Hygiene/Hygienist I	2
DHYG 1304	Dental Radiology	3
	Humanities/Fine Arts Elective	3
	Total Hours	**14**
Semester 4		
DHYG 1211	Periodontology	2
DHYG 1261	Clinical - Dental Hygiene/Hygienist II	2
DHYG 1319	Dental Materials	3
SOCI 1301	Introductory Sociology †	3
	Total Hours	**10**
Semester 5		
DHYG 1215	Community Dentistry †	2
DHYG 1239	General & Oral Pathology	2
DHYG 2301	Contemporary Dental Hygiene Care I	3
DHYG 2360	Clinical: Dental Hygiene/Hygienist	3
PSYC 2301	General Psychology †	3
	Total Hours	**13**
Semester 6		
DHYG 2153	Dental Hygiene Practice	1
DHYG 1207	General & Dental Nutrition	2
DHYG 2361	Clinical: Dental Hygiene/Hygienist °	3
ENGL 1301	Composition I †	3
	Speech Elective †	3
	Total Hours	**12**
	Grand Totals	**69**

o This course has been designated as the capstone course
† Courses articulated with high schools
‡ Course with external learning experience
*** BIOL 2401 may be taken in place of BIOL 2301 and BIOL 2101*
** BIOL 2402 may be taken in place of BIOL 2302 and BIOL 2101*

Digital Media Design Technology

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

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

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

COURSE NAME		CREDIT HOURS
Semester 1		
ARTC 1302	Digital Imaging I †	3
ARTC 1305	Basic Graphic Design †	3
ENGL 1301	Composition I †	3
PHTC 1311	Fundamentals of Photography	3
MATH 1314	College Algebra † (or MATH 1332)	3
	Total Hours	**15**
Semester 2		
ARTC 1313	Digital Publishing I †	3
ENGL 2314	Technical & Business Writing (or ENGL 2307)	3
GRPH 1359	Vector Graphics for Production	3
ARTC 2347	Design Communication II	3
	Humanities/Fine Arts Elective †	3
	Total Hours	**15**
Semester 3		
ARTC 2305	Digital Imaging II	3
ARTC 2313	Digital Publishing II	3
ARTV 1343	Digital Sound	3
ARTV 1351	Digital Video	3
SPCH 1311	Intro to Speech Communication †*	3
	Total Hours	**15**
Semester 4		
ARTV 1341	3-D Animation I	3
ARTV 2341	Advanced Digital Video	3
IMED 1316	Web Design I	3
IMED 1345	Interactive Digital Media I	3
	Total Hours	**12**
Semester 5		
ARTC 2335	Portfolio Development for Graphic Design ° **	3
ARTV 2351	3-D Animation II	3
IMED 2345	Interactive Digital Media II	3
IMED 2315	Web Page Design II	3
	Social/Behavioral Sciences Elective †	3
	Total Hours	**15**
	Grand Totals	**72**

o *This course has been designated as the capstone course*

† *Courses articulated with high schools*

‡ *Course with external learning experience*

* *Suggested Speech Elective*

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

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Education & Training

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

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

Admissions Requirements

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

COURSE NAME — **CREDIT HOURS**

Semester 1

Course	Name	Hours
EDTC 1301	Educational Systems	3
EDTC 1341	Instructional Technology and Computer Applications	3
CDEC 1318	Wellness of the Young Child	3
ENGL 1301	Composition I †	3
HIST 1301	United States History I †	3
	Total Hours	**15**

Semester 2

Course	Name	Hours
CDEC 1359	Children with Special Needs	3
EDTC 2311	Instructional Practices and Effective Learning Environments	3
HIST 1302	United States History II †	3
	General Education Elective † **	3
	Speech Elective † *	3
	Total Hours	**15**

Semester 3

Course	Name	Hours
EDTC 1307	Introduction to Teaching Reading	3
TECA 1354	Child Growth & Development	3
GOVT 2305	Federal Government (Federal constitution & topics) †	3
MATH 1314	College Algebra † §	3
	Area of Emphasis # 1 (from list below)	3
	Total Hours	**15**

Semester 4

Course	Name	Hours
EDTC 1394	Special Topics: Teacher Assistant/Aide	3
EDTC 2317	Guiding Student Behavior	3
GOVT 2306	Texas Government (Texas constitution & topics) †	3
	General Education Elective † **	3
	Area of Emphasis # 2 (from list below)	3
	Total Hours	**15**

Semester 5

Course	Name	Hours
EDTC 1364	Practicum: Teacher Assistant/Aide ° ‡ ◊	3
	Humanities/Fine Arts Elective †	3
	Social/Behavioral Sciences Elective †	3
	Total Hours	**9**
	Grand Totals	**69**

AREA OF EMPHASIS COURSES

Emphasis in Bilingual Education

EDTC 1321	Bilingual Education	3
EDTC 1325	Multicultural Education	3

Emphasis in Early Childhood Education

CDEC 1321	The Infant & Toddler	3
CDEC 1356	Emergent Literacy for Early Childhood	3

Emphasis in General Education

EDTC 2305	Reading Problems	3
EDTC 1393	Special Topics: Computer Teacher Education	3

Emphasis in Students with Special Needs

CDEC 2340	Instructional Techniques for Children with Special Needs	3
EDTC 1395	Special Topics: Bilingual/Bicultural Education	3

o This course has been designated as the capstone course
† Courses articulated with high schools
‡ Course with external learning experience
* SPCH 1315 is the suggested Speech Elective
** See your program chair for help in choosing a General Education Elective
§ BIIOL 1308/1106 or BIOL 1309/1109 may be taken in place of MATH 1314
◊ EDTC 1164 and EDTC 1264 may be taken in place of EDTC 1364

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Game and Simulation Programming Specialty

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

In this program, students will learn to:
Develop computer games and simulations using appropriate tools and techniques. Examine best practices for entering the industry.

Admissions Requirements
Students must complete the admissions requirements listed under "Admissions Information."
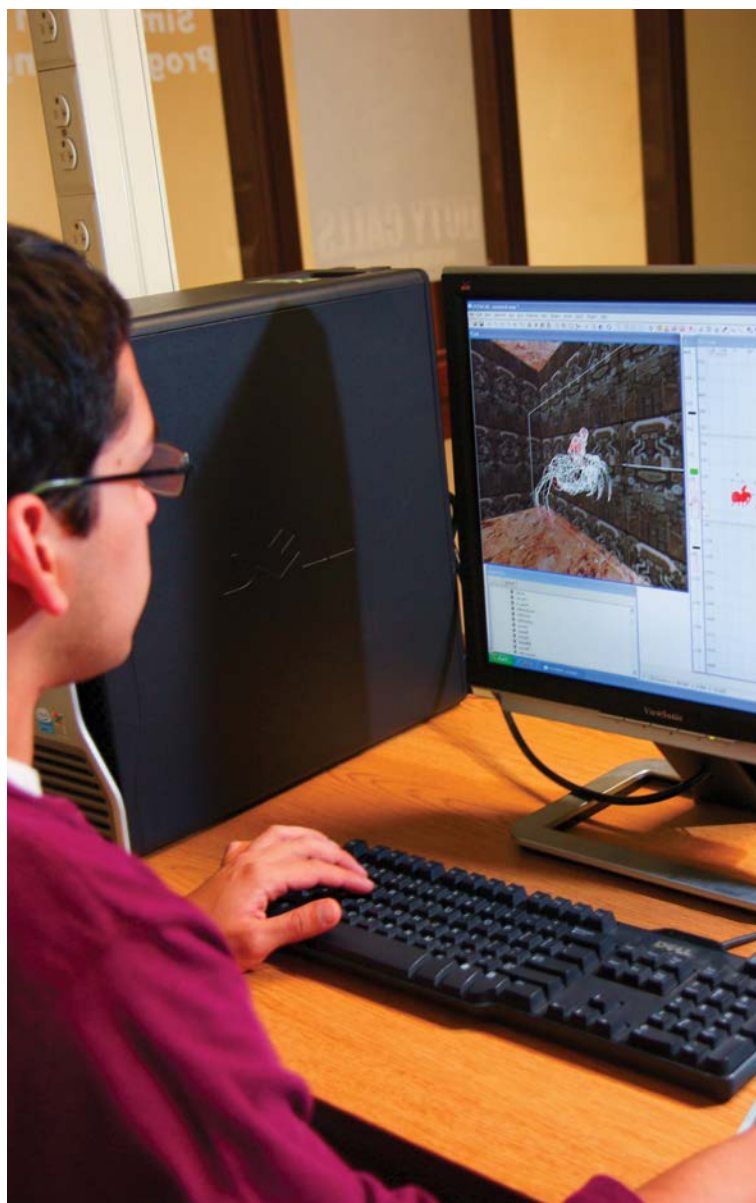
COURSE NAME		CREDIT HOURS
Semester 1		
GAME 1303	Introduction to Game Design & Development †	3
MATH 1314	College Algebra †	3
GAME 1306	Design and Creation of Games	3
ARTC 1302	Digital Imaging I	3
	Total Hours	**12**
Semester 2		
GAME 1301	Computer Ethics	3
MATH 1316	Plane Trigonometry	3
ITSE 1307	Introduction to C++ Programming	3
GAME 1309	Introduction to Animation Programming	3
	Total Hours	**12**
Semester 3		
MATH 2318	Linear Algebra*	3
ITSE 2331	Advanced C++ Programming	3
GAME 1304	Level Design	3
GAME 1349	OpenGL Programming I	3
	Total Hours	**12**
Semester 4		
GAME 1353	Multi-User Game Programming I	3
ITSE 2345	Data Structures	3
GAME 1343	Graphics & Simulation Programming I	3
GAME 2353	OpenGL Programming II	3
	Total Hours	**12**
Semester 5		
GAME 2303	Artificial Intelligence Programming I	3
ENGL 1301	Composition I †	3
GAME 1359	Game and Simulation Programming II	3
	Speech Elective †	3
	Total Hours	**12**
Semester 6		
GAME 2359	Game & Simulation Group Project	3
	Social/Behavioral Sciences Elective †	3
	Humanities/Fine Arts Elective †	3
GAME 2333	Game and Simulation Programming III	3
	Total Hours	**12**
	Grand Totals	**72**

† Courses articulated with high schools
* PHYS 1301/1101 may be taken in place of MATH 2318

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Health Information Technology

The health information management profession focuses on health care data and the management of health care information resources. The profession addresses the nature, structure and translation of data into usable forms of information for the advancement of health and health care of individuals and populations.

Health Information Technicians collect, integrate, and analyze primary and secondary health care data, disseminate information and manage information resources related to research, planning, provision and evaluation of health care services.

At Texas State Technical College Harlingen, HIT students learn skills in both classroom and laboratory settings. Skills are practiced in health care facilities during two directed practice courses. Students are trained as generalists with entry level skills and opportunities for specialization in the following areas: coders, utilization management technicians, medical statistic specialists, release of information technicians, health record analysts, quality assurance abstractors, and health record consultants.

During the final directed practice course, students will be eligible to take the National Certification Examination to become a Registered Health Information Technician (RHIT). Upon graduation of the six-semester program, graduates are awarded an Associate of Applied Science Degree.

The job outlook for Health Information Technicians is good. The Bureau of Labor and Statistics is predicting a shortfall of these technicians. The starting salary for entry level positions depends on the area of specialization, with coders earning at the higher end of the scale.

The Health Information Technology Program is accredited by the Commission on Accreditation for Health Informatics and Information Management Education in cooperation with the Council on Education of the American Health Information Management Association (AHIMA).

Admissions Requirements

Additional Program Requirements: In addition to the admission requirement listed under "Admissions Information", the student must have maintained a 2.0 grade point average on a 4.0 scale in high school or previous post-secondary studies, or received a passing score on the GED. An interview with a member of the department is also required, as well as completion of the TSI Assessment (if applicable) and completion of a program orientation prior to registration of classes.

Practicum Entry Requirements: Before enrolling in practicum courses, a student must have on file with the department the following materials:
- The ability to satisfy the industry standards for the program.
- Proof of required immunizations.
- Proof of liability insurance of at least $1 million (available through TSTC).
- Proof of health and accident insurance (available through TSTC).
- Proof of auto liability.
- Proof of current driver's license.

- Passage of a criminal background check (available through TSTC).
- Passage of a drug and alcohol screening (required by various medical facilities).

COURSE NAME		CREDIT HOURS
Semester 1		
BIOL 2301	Anatomy & Physiology I † §	3
BIOL 2101	Anatomy & Physiology I Lab §	1
HITT 1204	IT for Health Professions	2
HITT 1305	Medical Terminology I †	3
	Total Hours	**9**
Semester 2		
BIOL 2302	Anatomy & Physiology II † ◊	3
BIOL 2102	Anatomy & Physiology II Lab † ◊	1
HITT 1301	Health Data Content & Structure	3
HITT 1253	Legal & Ethical Aspects of Health Information	2
HITT 1345	Health Care Delivery Systems	3
HITT 1255	Health Care Statistics	2
	Total Hours	**14**
Semester 3		
HITT 1311	Health Information Systems	3
MDCA 1402	Human Disease / Pathophysiology	4
HPRS 2300	Pharmacology for Health Professions	3
HITT 1341	Coding & Classification Systems	3
	Total Hours	**13**
Semester 4		
HITT 2166	Practicum: Health Information / Medical Records Technology / Technician ‡	1
HITT 2239	Health Information Organization & Supervision	2
HITT 2343	Quality Assessment & Performance Improvement †	3
MDCA 1321	Administrative Procedures	3
HITT 1342	Ambulatory Coding	3
	Total Hours	**12**
Semester 5		
HITT 2149	RHIT Competency Review	1
HITT 2335	Coding & Reimbursement Methodologies	3
HITT 2266	Practicum: Health Information / Medical Records Technology / Technician °	2
	Speech Elective †	3
	Humanities / Fine Arts Elective †	3
	Total Hours	**12**
Semester 6		
PSYC 2301	General Psychology †	3
ENGL 1301	Composition I †	3
	Math / Natural Sciences Elective	3
	Total Hours	**9**
	Grand Totals	**69**

° This course has been designated as the capstone course
† Courses articulated with high schools
‡ Course with external learning experience
§ BIOL 2401 may be taken in place of BIOL 2301 and BIOL 2101
◊ BIOL 2402 may be taken in place of BIOL 2302 and BIOL 2102

Mechatronics Technology

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

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

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

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

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

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

Admissions Requirements

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

COURSE NAME		CREDIT HOURS
Semester 1		
CETT 1303	DC Circuits † (or IEIR 1302)	3
MATH 1314	College Algebra † (or MATH 2312)	3
RBTC 1305	Robotic Fundamentals	3
	Total Hours	**9**
Semester 2		
CETT 1305	AC Circuits † (or IEIR 1304)	3
CETT 1325	Digital Fundamentals	3
INMT 1317	Industrial Automation	3
CHEM 1311	General Chemistry I † *	3
CHEM 1111	General Chemistry Lab I † *	1
	Total Hours	**13**
Semester 3		
ELMT 1301	Programmable Logic Controllers	3
ELMT 1305	Basic Fluid Power	3
ELMT 2333	Industrial Electronics	3
ENGL 1301	Composition I †	3
	Total Hours	**12**
Semester 4		
ELMT 2339	Advanced Programmable Logic Controllers	3
INTC 1341	Principles of Automatic Control	3
MCHN 1338	Basic Machine Shop I	3
	Social/Behavioral Sciences Elective †	3
	Total Hours	**12**
Semester 5		
EECT 1307	Convergence Technologies	3
FCEL 1305	Introduction to Fuel Cell & Alternative/ Renewable Energy	3
	Speech Elective †	3
	Humanities/Fine Arts Elective †	3
	Total Hours	**12**
Semester 6		
ELMT 2341	Electromechanical System°	3
ELPT 2231	AC/DC Drives	2
INMT 1319	Manufacturing Processes	3
QCTC 1303	Quality Control	3
	Total Hours	**11**
	Grand Totals	**69**

° This course has been designated as the capstone course

† Courses articulated with high schools

‡ Course with external learning experience

* PHYS 1401 may be taken in place of CHEM 1311 and CHEM 1111

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Medical Assistant

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

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

All Medical Assistant students must complete a minimum of 160 clinical hours without remuneration for course completion.

Admissions Requirements

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

Clinical/Practicum Entry Requirements

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

COURSE NAME		CREDIT HOURS
Semester 1		
BIOL 2301	Anatomy & Physiology I † *	3
BIOL 2101	Anatomy & Physiology I Lab † *	1
HITT 1305	Medical Terminology I †	3
MDCA 1417	Procedures in a Clinical Setting	4
PSYC 2314	Lifespan Growth & Development	3
	Total Hours	**14**
Semester 2		
BIOL 2302	Anatomy & Physiology II † §	3
BIOL 2102	Anatomy & Physiology II Lab † §	1
HITT 1301	Health Data Content & Structure	3
MDCA 1348	Pharmacology & Administration of Medications	3
MDCA 1352	Medical Assistant Laboratory Procedures	3
	Total Hours	**13**
Semester 3		
MDCA 1343	Medical Insurance	3
MDCA 1402	Human Disease/Pathophysiology	4
HITT 1311	Health Information Systems	3
PLAB 1323	Phlebotomy	3
	Total Hours	**13**
Semester 4		
ENGL 1301	Composition I †	3
MDCA 1321	Administrative Procedures	3
MDCA 1205	Medical Law & Ethics	2
MDCA 1460	Clinical: Medical/Clinical Assistant ‡ ≠	4
PSYC 2301	General Psychology †	3
	Total Hours	**15**
Semester 5		
CHEM 1311	General Chemistry I ◊	3
CHEM 1111	General Chemistry Lab I ◊	1
MATH 1314	College Algebra †	3
MDCA 2266	Practicum: Medical/Clinical Assistant ° ‡ ≠	2
	Speech Elective †	3
	Humanities/Fine Arts Elective †	3
	Total Hours	**15**
	Grand Totals	**70**

° This course has been designated as the capstone course
† Courses articulated with high schools
‡ Course with external learning experience
* BIOL 2401 may be taken in place of BIOL 2301 and BIOL 2101
§ BIOL 2402 may be taken in place of BIOL 2302 and BIOL 2102
◊ CHEM 1411 may be taken in place of CHEM 1311 and CHEM 1111
≠ Clinical required

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Precision Manufacturing Technology - Mold, Tool & Die Making

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

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

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

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

Admissions Requirements

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

COURSE NAME		CREDIT HOURS
Semester 1		
MCHN 1302	Print Reading For Machining Trades	3
MCHN 1338	Basic Machine Shop I †	3
MCHN 1343	Machine Shop Mathematics	3
	Total Hours	**9**
Semester 2		
MCHN 1308	Basic Lathe	3
MCHN 1313	Basic Milling Operations	3
MCHN 1320	Precision Tools & Measurement	3
MCHN 2303	Fundamentals of Computer Numerical Controlled (CNC) Machine Controls	3
	Total Hours	**12**
Semester 3		
MCHN 1305	Metals & Heat Treatment	3
MCHN 1358	Intermediate Lathe Operations	3
MCHN 2302	Intermediate Milling Operations	3
MCHN 2335	Advanced CNC Machining	3
	Total Hours	**12**
Semester 4		
MATH 1314	College Algebra †	3
MCHN 1335	Grinders, Outside, Internal, Surface	3
MCHN 2337	Advanced Milling Operations	3
MCHN 2370	Mold Making/Repair	3
	Total Hours	**12**
Semester 5		
ENGL 1301	Composition I †	3
MCHN 2372	Tool & Die Making & Repair	3
MCHN 2447	Specialized Tools & Fixtures ° **	4
WLDG 1206	Fundamentals of Gas Tungsten	2
	Total Hours	**12**
Semester 6		
	Social/Behavioral Sciences Elective †	3
	Humanities/Fine Arts Elective †	3
MATH 1316	Plane Trigonometry	3
	Speech Elective †	3
	Total Hours	**12**
	Grand Totals	**69**

° This course has been designated as the capstone course
† Courses articulated with high schools
‡ Course with external learning experience
** MCHN 2480 (Co-op ‡) may be taken in place of the capstone course

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TSTC Texas State Technical College

Registered Nursing

Registered Nurses (RNs) provide and coordinate patient care, educate patients and the public about various health conditions, and provide advice and emotional supprot to patients and their familiy 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.

Registeed Nurses typically do the following:
- Record patient's medical histories and symptoms
- Give patients medicines and treatments
- Set up plans for patients' care or contribute to existing plans
- Observe patients and record the observations
- Consult with doctors and other healthcare professionals
- Operate and monitor medical equipment
- Help perform diagnostic tests and analyze results
- Teach patients and their families how to manage their illnesses or injuries
- Explain what to do at home after treatment
- Oversee licensed practical nurses (LVNs), nursing aides and home care aides
- Work to promote general health by education the public on warning signs and symptoms of disease
- Some may run general health screenings or immunization clinics, blood drives or other outreach programs

Most RNs work as part of a team with physicians and other healthcare specialists. Some do not work directly with patients but must still have an active RN license if they work as nurse educators, healthcare consultants, public policy advisors, researchers, hospital administrators, pharmaceutical and medical supply sales, medical writers or editors or expert witness.

According to the US Bureau of Labor Statistics, in 2010, the median pay range for RNs was $64,690 (hourly rate of $31.10). Employment of RNs is expected to grow 26 percent from 2010 to 2020, faster than average for all occupations.

Admissions Requirements
In addition to admissions requirements listed under the "Admissions Information," the following requirements must be met:

- Be 18 years of age and eligible for TSTC admission; non probationary for grades;
- Have all transcripts of courses taken from other colleges sent to the Admissions Office for review and evaluation;
- Completed a Vocational Nursing (VN) Program and passed the NCLEX-PN prior fall entrance date;
- Submit a copy of SSN, picture ID (preferably US Passport, I-551 card, or current driver's license), and a passport-size photo with application (photocopies not accepted);
- Must have completed and passed all prerequisite subjects with minimum grades of "C" regardless of when they were taken;
- Must be able to pass L1 TX Board of Nursing Criminal Background Check (CBC) & 10 panel drug screen;
- All immunizations must be current including Hepatitis A and Hepatitis B series, TB, Flu shot, bacterial meningitis, TDAP, Varicella, MMR series;
- Must have a current physical assessment from a physician or practitioner using TSTC form only;
- Must take the entrance test at TSTC and passed the program requirement score;
- Must submit a completed RN program application packet in sealed 10x13 envelope on or prior to deadline.

COURSE NAME		CREDIT HOURS
Semester 1		
	Humanities/Fine Arts Elective	3
BIOL 2301	Anatomy & Physiology I	3
BIOL 2101	Anatomy & Physiology I Lab	1
PSYC 2301	General Psychology †	3
MATH 1314	College Algebra †*	3
	Total Hours	**13**
Semester 2		
BIOL 2302	Anatomy & Physiology II	3
BIOL 2102	Anatomy & Physiology II Lab	1
BIOL 2320	Microbiology for Science Majors	3
BIOL 2120	Microbiology for Science Majors Laboratory	1
CHEM 1311	General Chemistry I	3
CHEM 1111	General Chemistry Lab I	1
	Total Hours	**12**
Semester 3		
	Speech Elective	3
ENGL 1301	Composition I †	3
FDNS 1341	Nutrition in the Life Cycle	3
PSYC 2314	Lifespan Growth & Development †	3
	Total Hours	**12**
Semester 4		
RNSG 1413	Foundations for Nursing Practice	4
RNSG 1341	Common Concepts of Adult Health	3
RNSG 1360	Clinical - Registered Nursing/Registered Nurse	3
RNSG 1201	Pharmacology	2
	Total Hours	**12**
Semester 5		
RNSG 1412	Nursing Care of the Childbearing and Childrearing Family	4
RNSG 1343	Complex Concepts of Adult Health	3
RNSG 1361	Clinical - Registered Nursing/Registered Nurse	3
RNSG 1210	Introduction to Community-Based Nursing	2
	Total Hours	**12**
Semester 6		
RNSG 2313	Mental Health Nursing	3
RNSG 2331	Advanced Concepts of Adult Health	3
RNSG 2362	Clinical - Registered Nursing/Registered Nurse	3
RNSG 2221	Professional Nursing: Leadership and Management	2
	Total Hours	**11**
	Grand Totals	**72**

° This course has been designated as the capstone course
† Courses articulated with high schools
‡ Course with external learning experience
* Prerequisite for CHEM 1311 and CHEM 1111

TSTC Texas State Technical College

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.

Certified surgical technologist with additional specialized education or training also may act in the role of the surgical first assistant or circulator

Most surgical technologists work a regular 40-hour week, although they may be on call or work nights, weekends, and holidays on a rotating basis.
- This program is offered only during the day
- Graduates are eligible to take the national certification examination to become a Certified Surgical Technologist, one month prior to graduation.
- Texas State Technical College Harlingen's Surgical Technology Program is a CAAHEP-accredited program.
- The student must maintain a numerical average of 78 or better in each required major course to receive the Associate of Applied Science degree.

In this program, student will learn:
- In-depth coverage of perioperative concepts such as aseptic/sterile principles and practices, infectious processes, wound healing, and creation and maintenance of the sterile field.
- Orientation to surgical technology theory, surgical pharmacology, technology sciences, and patient care concepts.
- 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.
- Introduction to surgical procedures, related pathologies incorporating instruments, equipment, and supplies for perioperative patient care.

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

Clinical Entry Requirements
Before enrolling in clinical study, a student must have on file with the department the following materials
- Results of prescribed physical examination.
- Completion of Hepatitis B and A prior to being accepted into program.
- Proof of liability insurance of at least $1 million, health and accident insurance and needle stick insurance (available through TSTC).
- Must have a criminal background check done through Campus Police.
- Drug screen test done prior to acceptance to the program
- Completion of TEAS Test prior to acceptance to the program

COURSE NAME		CREDIT HOURS
Semester 1		
BIOL 2301	Anatomy & Physiology I	3
BIOL 2101	Anatomy & Physiology I Lab	1
HITT 1305	Medical Terminology I †	3
MATH 1314	College Algebra † *	3
CHEM 1311	General Chemistry I **	3
CHEM 1111	General Chemistry Lab I **	1
	Total Hours	**14**
Semester 2		
BIOL 2302	Anatomy & Physiology II	3
BIOL 2102	Anatomy & Physiology II Lab	1
ENGL 1301	Composition I †	3
HPRS 2300	Pharmacology for Health Professions	3
PSYC 2301	General Psychology †	3
	Total Hours	**13**
Semester 3		
BIOL 2320	Microbiology for Science Majors **	3
BIOL 2120	Microbiology for Science Majors Laboratory **	1
PSYC 2314	Lifespan Growth & Development	3
	Speech Elective †	3
	Humanities/Fine Arts Elective †	3
	Total Hours	**13**
Semester 4		
SRGT 1405	Introduction to Surgical Technology	4
SRGT 1409	Fundamentals of Perioperative Concepts and Techniques	4
SRGT 1460	Clinical: Surgical Technology/Technologist ‡	4
	Total Hours	**12**
Semester 5		
SRGT 1244	Technological Sciences for the Surgical Technologist	2
SRGT 1441	Surgical Procedures I	4
SRGT 1461	Clinical: Surgical Technology/Technologist ‡	4
	Total Hours	**10**
Semester 6		
SRGT 1442	Surgical Procedures II	4
SRGT 2462	Clinical: Surgical Technology/Technologist °	4
	Total Hours	**8**
	Grand Totals	**70**

° This course has been designated as the capstone course

† Courses articulated with high schools

‡ Course with external learning experience

* Prerequisite for CHEM 1311/1111 or equivalent academic preparation

TSTC Texas State Technical College

Telecommunications Technology

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

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

Admissions Requirements

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

In this program, students will learn how to:

- Design and install telecommunications equipment network to meet customer needs.
- Troubleshoot to solve real and potential telecommunications network problems.
- Repair telecommunications network cabling and equipment.
- Maintain Telco, CATV, and customer premise telecommunications network infrastructure.

COURSE NAME		CREDIT HOURS
Semester 1		
CETT 1303	DC Circuits † (or IEIR 1302)	3
EECT 1303	Introduction to Telecommunications †	3
ENGL 1301	Composition I †	3
MATH 1314	College Algebra † (or MATH 1332)	3
	Total Hours	**12**
Semester 2		
CETT 1305	AC Circuits † (or IEIR 1304)	3
CETT 1325	Digital Fundamentals	3
CSIR 1303	Telecommunications Systems Installer	3
EECT 1300	Technical Customer Service	3
	Humanities / Fine Arts Elective	3
	Total Hours	**15**
Semester 3		
CSIR 1359	Digital Data Communication	3
CSIR 1391	Special Topics: Communications System Installer & Repairer	3
CSIR 2351	Fiber Optic Communication System Installation & Repair	3
EECT 1307	Convergence Technologies	3
EECT 1342	Telecommunications Outside Plant	3
	Total Hours	**15**
Semester 4		
CSIR 1355	Industry Certifications	3
EECT 2337	Wireless Telephony Systems	3
	Speech Elective	3
	Social / Behavioral Sciences Elective	3
	Total Hours	**12**
Semester 5		
CSIR 2350	Telecommunications Maintenance	3
EECT 1344	Telecommunications Broadband Systems	3
EECT 2330	Telecommunications Switching	3
EECT 2435	Telecommunications ° **	4
	Total Hours	**13**
	Grand Totals	**67**

° This course has been designated as the capstone course
† Courses articulated with high schools
‡ Course with external learning experience
**EECT 2680 (Co-op) may be taken in place of the capstone course

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Welding Technology

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

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

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

Graduates of the Welding Technology Department can look forward to exceptional career opportunities in Ship Building, Oil Refinement and Processing, Manufacturing, Nuclear and Wind Energy, Aerospace, and Motorsports Industries.

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

We welcome prospective students and companies interested in our training program to stop by for a close-up look at our faculty and have our instructors answer any questions they may have.

Upon completion of the program, student will:
- Practice various sophisticated welding processes to include oxy-acetylene welding, gas tungsten arc, and gas metal arc.
- Perform fillet and groove welds in several positions.
- Design and fabricate welded projects.

Admissions Requirements

In addition to admissions requirements listed under "Admissions Information," students must complete the Welding Program Application two months prior to the enrollment date.

COURSE NAME		CREDIT HOURS
Semester 1		
WLDG 1430	Introduction to Gas Metal Arc Welding (GMAW)	4
WLDG 1313	Introduction to Blueprint Reading for Welders	3
WLDG 1323	Welding Safety, Tools, & Equipment	3
WLDG 1421	Introduction to Welding Fundamentals †	4
	Total Hours	**14**
Semester 2		
	Speech Elective †	3
WLDG 1434	Introduction to Gas Tungsten Arc Welding (GTAW) †	4
WLDG 1317	Introduction to Layout & Fabrication	3
WLDG 1457	Intermediate Shielded Metal Arc Welding (SMAW)	4
	Total Hours	**14**
Semester 3		
WLDG 2443	Advanced Shielded Metal Arc Welding (SMAW)	4
WLDG 1412	Introduction to Flux Cored Arc Welding (FCAW)	4
WLDG 1435	Introduction to Pipe Welding	4
	Total Hours	**12**
Semester 4		
ENGL 1301	Composition I †	3
WLDG 1337	Introduction to Welding Metallurgy	3
WLDG 2453	Advanced Pipe Welding	4
MATH 1332	Contemporary Mathematics I † (or MATH 1314)	3
	Total Hours	**13**
Semester 5		
NDTE 2311	Preparation for Welding Inspection	3
WLDG 2413	Intermediate Welding Using Multiple Processes	4
WLDG 2435	Advanced Layout and Fabrication	4
	Humanities/Fine Arts Elective †	3
	Social/Behavioral Sciences Elective †	3
	Total Hours	**17**
	Grand Totals	**70**

° This course has been designated as the capstone course
† Courses articulated with high schools

TSTC Texas State Technical College

Wind Energy & Turbine Technology

In the Wind Energy Technology Program, students will learn to operate and maintain the systems that make a wind turbine function whether it's an electrical, pneumatic, communications, computer, control or hydraulic system. Safety is a critical part of the wind energy industry and upon completion of the program students will be able to practice those principles in industry.

Studetns will also learn all about Supervisory Control and Data Acquisition (SCADA). It's the utility industry standard computerized system that controls the wind tower network. Students will also find that knowledge of all the systems they will learn in the Wind Energy Technology Program is important not only to wind energy but also to many other types of companies in the utility industry.

In this program, students will learn how to:

- Demonstrate proficient skills in maintaining and repairing electrical systems of wind turbines.
- Exhibit competency in maintaining and repairing mechanical systems of wind turbines.
- Implement a safe working environment in response to hazards associated with wind turbines.
- Work with supervisory control and data acquisition (SCADA) systems and data communications related to wind turbines.

Admissions Requirements

Students must complete the admissions requirements listed under "Admissions Information." See Department Chair for additional requirements that may apply.

COURSE NAME		CREDIT HOURS
Semester 1		
WIND 1300	Introduction to Wind Energy	3
WIND 1302	Wind Safety	3
CETT 1303	DC Circuits †	3
MATH 1314	College Algebra †	3
	Total Hours	**12**
Semester 2		
ELMT 1305	Basic Fluid Power	3
CETT 1305	AC Circuits	3
CETT 1325	Digital Fundamentals	3
INMT 1317	Industrial Automation	3
	Speech Elective †	3
	Total Hours	**12**
Semester 3		
WIND 2455	Wind Turbine Troubleshooting and Repair	4
WIND 2459	Wind Power Delivery System	4
ELMT 2335	Certified Electronics Technician Training	3
WIND 2310	Wind Turbine Materials and Electro-Mechanical Equipment	3
ELMT 1301	Programmable Logic Controllers	3
	Total Hours	**17**
Semester 4		
WIND 1470	Wind Turbine SCADA and Networking	4
	Humanities/Fine Arts Elective †	3
ENGL 1301	Composition I †	3
	Social/Behavioral Sciences Elective †	3
ELMT 1391	Special Topics in Electromechanical Technology/Technician *	3
	Total Hours	**16**
	Grand Totals	**60**

† Courses articulated with high schools

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Associate of Science Degree Programs

General Information

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

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

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

General Requirements

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

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

General Education

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

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Computer Science

The Associate of Science Degree in Computer Science supports the mission of the college by providing a relevant and quality education. The curriculum provides students with several opportunities to practice and develop their writing, presentation, teamwork, and problem solving skills. Computer Science courses encourage students to develop their creative and technical skills with course projects. Finally, the program is committed in supporting students to continue their education in the field of computer science by providing a solid foundation in computer science and academic fundamentals.

Admissions Requirements

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

COURSE NAME		CREDIT HOURS
Semester 1		
COSC 1301	Microcomputer Applications	3
ENGL 1301	Composition I	3
MATH 2413	Calculus I	4
ACGM X3XX	Fine Arts Elective [1]	3
	Semester Totals	**13**
Semester 2		
COSC 1336	Programming Fundamentals I (or COSC 1436)	3
ENGL 1302	Composition II	3
MATH 2414	Calculus II	4
GOVT 2305	Federal Government	3
	Total Hours	**13**
Semester 3		
COSC 1337	Programming Fundamentals II°	3
ACGM X4XX	Science Elective *	4
ACGM X3XX	Humanities Elective [2]	3
GOVT 2306	Texas Government	3
	Total Hours	**13**
Semester 4		
COSC 2325	Computer Organization° (COSC 1336 or COSC 1436)	3
ACGM X4XX	Science Elective *	4
ACGM X3XX	Humanities Elective [3]	3
HIST 1301	United States History I	3
	Total Hours	**13**
Semester 5		
COSC 2336	Programming Fundamentals III ◊	3
ACGM X3XX	Social/Behavioral Science Elective	3
SPCH X3XX	Speech Elective	3
HIST 1302	United States History II	3
	Total Hours	**12**
	Grand Totals	**64**

Prerequisites:
° COSC 1336 or COSC 1436
◊ COSC 1337

Science Elective (8 credits)

PHYS 2325	University Physics I	3
	PHYS 2125 (Co-req), MATH 2413 (Pre-req)	
PHYS 2125	University Physics Lab I	1
	PHYS 2325 (Co-req), MATH 2413 (Pre-req)	
and		
PHYS 2326	University Physics II	3
	PHYS 2126 (Co-req), PHYS 2325 (Pre-req), MATH 2413 (Pre-req)	
PHYS 2126	University Physics Lab II	1
	PHYS 2326 (Co-req), PHYS 2325 (Pre-req), MATH 2413 (Pre-req)	
or		
BIOL 2301	Anatomy & Physiology I Lecture	3
BIOL 2101	Anatomy & Physiology I Lab	1
and		
BIOL 2302	Anatomy & Physiology II Lecture	3
BIOL 2102	Anatomy & Physiology II Lab	1
or		
BIOL 1306	Biology for Science Majors I Lecture	3
BIOL 1106	Biology for Science Majors I Lab	1
and		
BIOL 1307	Biology for Science Majors II Lecture	3
BIOL 1107	Biology for Science Majors II Lab	1
or		
CHEM 1311	General Chemistry I Lecture	3
	MATH 1314 (Pre-req)	
CHEM 1111	General Chemistry I Lab	1
	MATH 1314 (Pre-req)	
and		
CHEM 1312	General Chemistry II Lecture	3
	CHEM 1312 and CHEM 1311 (Pre-req)	
CHEM 1112	General Chemistry II Lab	1

[1] *Fine Arts Elective*
ARTS 1301, ARTS 1303, ARTS 1304 or MUSI 1306

[2] *Humanities*
ENGL 2321, ENGL 2326, ENGL 2331, SPAN 2323 or SPAN 2324

[3] *Humanities*
ANTH 2346, ENGL 2321, ENGL 2326, ENGL 2331, PHIL 1301, PHIL 1304, PHIL 2306, SOCI 2319, SPAN 2323 or SPAN 2324

[4] *Social/Behavioral*
ECON 2301, PSYC 2301, PSYC 2314, SOCI 1301, SOCI 1306 or SOCI 2319

Addendum to TSTC Harlingen Catalog 2014-2015, p. 85

TSTC Texas State Technical College
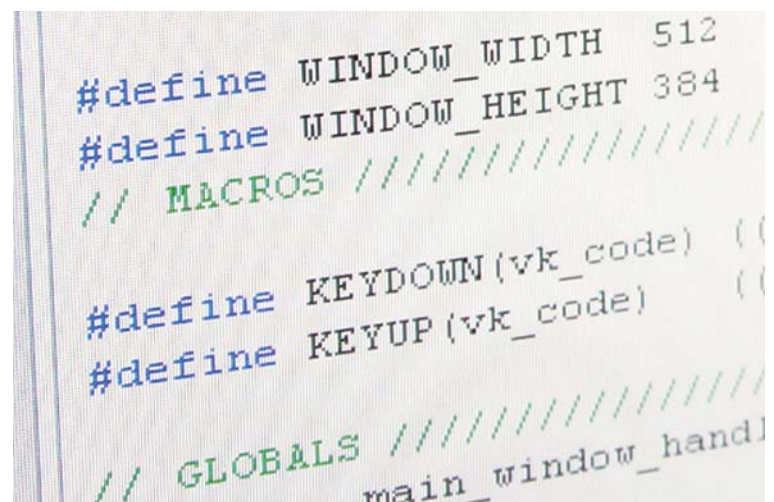
Biology

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.

Admissions Requirements

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

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COURSE NAME		CREDIT HOURS
Semester 1		
ENGL 1301	Composition I †	3
BIOL 1306	Biology for Science Majors I * ◊	3
BIOL 1106	Biology for Science Majors Laboratory I (lab) * ◊	1
HIST 1301	United States History I	3
	Speech Elective	3
	Total Hours	**13**
Semester 2		
ENGL 1302	Composition II	3
BIOL 1307	Biology for Science Majors II ** ◊	3
BIOL 1107	Biology for Science Majors Laboratory II ** ◊	1
HIST 1302	United States History II	3
	Social/Behavioral Sciences Elective	3
	Total Hours	**13**
Semester 3		
MATH 2413	Calculus I * (or MATH 1314 or MATH 2312)	4
CHEM 1311	General Chemistry I § ◊	3
CHEM 1111	General Chemistry Lab I § ◊	1
	Humanities Elective [2]	3
	Fine Arts Elective [1]	3
	Total Hours	**14**
Semester 4		
	Approved Elective ¤	4
GOVT 2305	Federal Government (Federal constitution & topics)	3
	Humanities Elective [3]	3
SPAN 1311	Beginning Spanish I	3
	Total Hours	**13**
Semester 5		
CHEM 1312	General Chemistry II	3
CHEM 1112	General Chemistry II Lab	1
GOVT 2306	Texas Government (Texas constitution & topics)	3
SPAN 1312	Beginning Spanish II	3
	Total Hours	**10**
	Grand Totals	**63**

† Courses articulated with high schools

* BIOL 2301/2101 may be taken in place of BIOL 1306/1106
** BIOL 2302/2102 may be taken in place of BIOL 1307/1107
§ CHEM 1411, CHEM 1312/1112 or CHEM 1412 may be taken in place of CHEM 1311/1111
◊ BIOL1306/1106, BIOL1307/1107 and CHEM1311/1111 are prerequisites for BIOL 2321/2121

[1] Fine Arts: ARTS 1301, ARTS 1303, ARTS 1304 or MUSI 1306
[2] 1st Humanities: ENGL 2321, ENGL 2326, ENGL 2331, SPAN 2323 or SPAN 2324
[3] 2nd Humanities: ANTH 2346, ENGL 2321, ENGL 2326, ENGL 2331, PHIL 1301, PHIL 1304, PHIL 2306, SOCI 2319, SPAN 2323 or SPAN 2324

¤ Approved Elective: BIOL 1411, BIOL 1413, BIOL 2306, BIOL 2416, BIOL 2401, BIOL 2301/ 2101, BIOL 2302/2102, BIOL 2421, BIOL 2321/2121, BIOL 2428, CHEM 2423, PHYS 1401, PHYS 2425, MATH 2312 or BIOL 1322S

TSTC Texas State Technical College

Engineering Science

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 the acquisition of superior science and mathematics-based problem-solving skills, and facilitates progress toward successful completion of further educational goals and / or lifelong learning experiences

Admissions Requirements

Students must complete the admissions requirements listed under "Admissions Information."
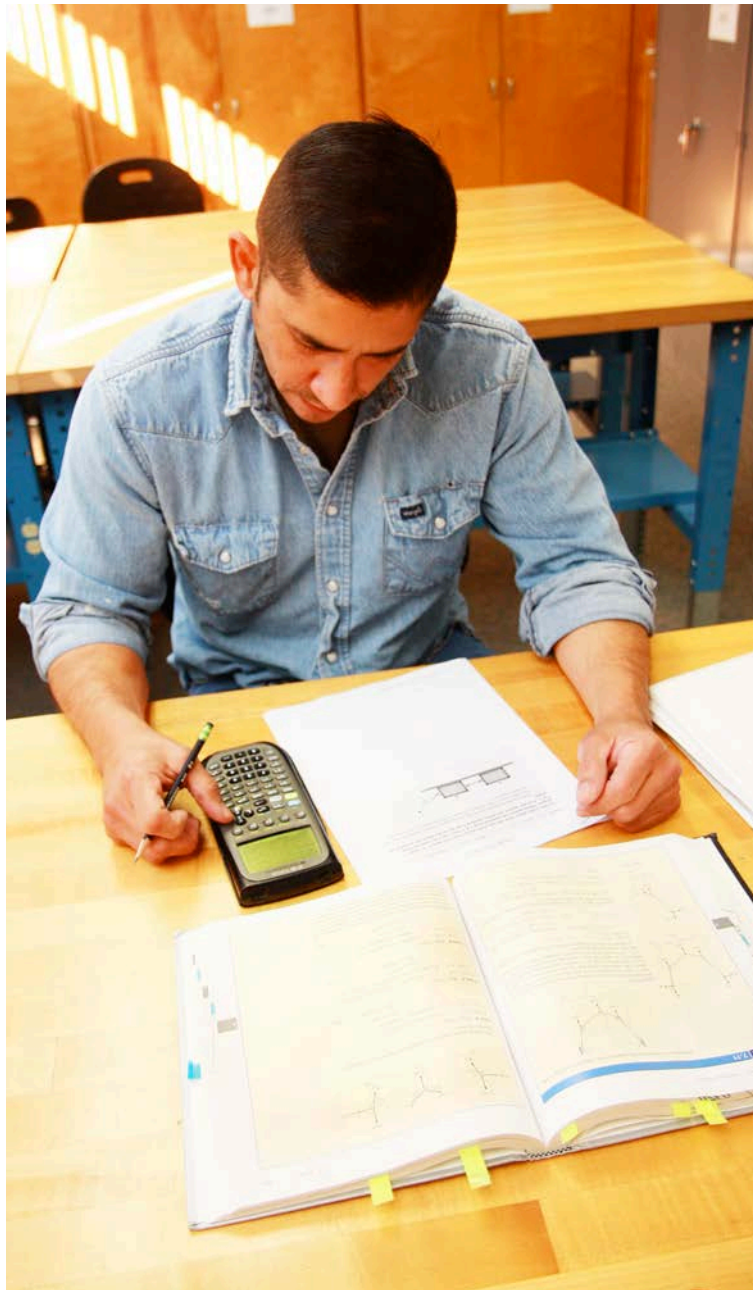
COURSE NAME		CREDIT HOURS
Semester 1		
ENGL 1301	Composition I †	3
MATH 2413	Calculus I	4
CHEM 1311	General Chemistry I * ¤	3
CHEM 1111	General Chemistry Lab I * ¤	1
ENGR 1201	Introduction to Engineering	2
	Total Hours	**13**
Semester 2		
ENGR 1204	Engineering Graphics I	2
ENGL 1302	Composition II	3
MATH 2414	Calculus II	4
PHYS 2325	University Physics I ** ¤	3
PHYS 2125	University Physics I Lab ** ¤	1
	Total Hours	**13**
Semester 3		
ENGR 2304	Programming for Engineers	3
HIST 1301	United States History I	3
GOVT 2306	Texas Government †	3
	Fine Arts Elective [1]	3
	Total Hours	**12**
Semester 4		
	Economics Elective ◊	3
ENGR 2301	Engineering Mechanics I - Statics	3
MATH 2415	Calculus III	4
PHYS 2326	University Physics II § ¤	3
PHYS 2126	University Physics II Lab § ¤	1
	Total Hours	**14**
Semester 5		
ENGR 2305	Circuits I Electrical Engineering	3
ENGR 2105	Circuit I Electrical Engineering Laboratory	1
MATH 2320	Differential Equations	3
	Engineering Elective [2]	3
	Humanities Elective [3]	3
	Total Hours	**13**
	Grand Totals	**65**

† Courses articulated with high schools
* CHEM 1411 may be taken in place of CHEM 1311/1111
** PHYS 2425 may be taken in place of PHYS 2325/2125
§ PHYS 2426 may be taken in place of PHYS 2326/2126
¤ Prerequisites: MATH 1314 with MATH 1316 or MATH 2312

[1] Fine Arts: ARTS 1301, ARTS 1303, ARTS 1304 or MUSI 1306
[2] Engineering: ENGR 2302, COSC 1420, COSC 1337, COSC 2325 or equivalent, ENGR 2308
[3] Humanities: ENGL 2321, ENGL 2326, ENGL 2331
◊ Economics: ECON 2301 or ECON 2302

Mathematics

The Mathematics and Science Department support and enhance the college's technical education mission; to provide Texas industry with employees who perform well at the entry level by virtue of their competence in mathematical manipulations and problem solving techniques using principles of physics and mathematics; to prepare graduates for advancement in the workplace through the acquisition of superior science and mathematics-based problem-solving skills; and to facilitate progress toward successful completion of further educational goals and/or lifelong learning experiences.

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

Prerequisites to admission into the program
- Grade of C or better in Trigonometry (MATH 1316) or Pre-Calculus (MATH 2312) or equivalent.

COURSE NAME		CREDIT HOURS
Semester 1		
MATH 2413	Calculus I	4
MATH 2318	Linear Algebra	3
ENGL 1301	Composition I †	3
HIST 1301	United States History I	3
	Total Hours	**13**
Semester 2		
MATH 2414	Calculus II	4
PHYS 2325	University Physics I * ¤	3
PHYS 2125	University Physics I Lab * ¤	1
ENGL 1302	Composition II	3
HIST 1302	United States History II	3
	Total Hours	**14**
Semester 3		
GOVT 2305	Federal Government	3
	Fine Arts Elective [1]	3
	Humanities Elective [2]	3
	Social/Behavioral Sciences Elective ◊	3
	Total Hours	**12**
Semester 4		
MATH 2415	Calculus III	4
PHYS 2326	University Physics II ** ¤	3
PHYS 2126	University Physics II Lab ** ¤	1
GOVT 2306	Texas Government	3
SPAN 1311	Beginning Spanish I	3
	Total Hours	**14**
Semester 5		
MATH 2320	Differential Equations	3
	Speech Elective [3]	3
SPAN 1312	Beginning Spanish II	3
	Humanities Elective [2]	3
	Total Hours	**12**
	Grand Totals	**65**

† Courses articulated with high schools
* PHYS 2425 may be taken in place of PHYS 2325/2125
** PHYS 2426 may be taken in place of PHYS 2326/2126
¤ Prerequisites: MATH 1314 with MATH 1316 or MATH 2312

[1] Fine Arts: ARTS 1301, ARTS 1303, ARTS 1304 or MUSI 1306
[2] Humanities: ANTH 2346, PHIL 1301, PHIL 1304, PHIL 2306, SOCI 2319, SPAN 2323, SPAN 2324, ENGL 2321, ENGL 2326 or ENGL 2331
[3] Speech: SPCH 1311, SPCH 1315, SPCH 1318, SPCH 1321 or SPCH 2333
◊ Social/Behavioral: ECON 2301, PSYC 2301, PSYC 2314, SOCI 1301, SOCI 1306 or SOCI 2319

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.

Admission Requirements

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

Prerequisites to admission into the program

- Grade of C or better in Trigonometry (MATH 1316) or Pre-Calculus (MATH 2312) or equivalent.

COURSE NAME		CREDIT HOURS
Semester 1		
MATH 2413	Calculus I	4
	Humanities Elective [2]	3
ENGL 1301	Composition I †	3
HIST 1301	United States History I	3
	Total Hours	**13**
Semester 2		
MATH 2414	Calculus II	4
PHYS 2325	University Physics I * ¤	3
PHYS 2125	University Physics I Lab * ¤	1
ENGL 1302	Composition II	3
HIST 1302	United States History II	3
	Total Hours	**14**
Semester 3		
GOVT 2305	Federal Government	3
	Fine Arts Elective [1]	3
	Humanities Elective [2]	3
	Social/Behavioral Sciences Elective ◊	3
	Total Hours	**12**
Semester 4		
PHYS 2326	University Physics II ** ¤	3
PHYS 2126	University Physics II Lab ** ¤	1
CHEM 1311	General Chemistry I §	3
CHEM 1111	General Chemistry Lab I §	1
GOVT 2306	Texas Government	3
SPAN 1311	Beginning Spanish I	3
	Total Hours	**14**
Semester 5		
CHEM 1312	General Chemistry II ≠ ¤	3
CHEM 1112	General Chemistry II Lab ≠ ¤	1
	Speech Elective [3]	3
SPAN 1312	Beginning Spanish II	3
	Total Hours	**10**
	Grand Totals	**63**

† Courses articulated with high schools
* PHYS 2425 may be taken in place of PHYS 2325/2125
** PHYS 2426 may be taken in place of PHYS 2326/2126
§ CHEM 1411 may be taken in place of CHEM 1311/1111
≠ CHEM 1411 may be taken in place of CHEM 1311/1111
¤ Prerequisites: MATH 1314 with MATH 1316 or MATH 2312

[1] Fine Arts: ARTS 1301, ARTS 1303, ARTS 1304 or MUSI 1306
[2] Humanities: ANTH 2346, PHIL 1301, PHIL 1304, PHIL 2306, SOCI 2319, SPAN 2323, SPAN 2324, ENGL 2321, ENGL 2326 or ENGL 2331
[3] Speech: SPCH 1311, SPCH 1315, SPCH 1318, SPCH 1321 or SPCH 2333
◊ Social/Behavioral: ECON 2301, PSYC 2301, PSYC 2314, SOCI 1301, SOCI 1306 or SOCI 2319

Certificate of Completion Programs

General Information

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

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

General Requirements

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

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

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Agricultural Technology

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

In this program, students will learn to:
- Operate farm equipment
- Process and handle livestock using up-to-date equipment and livestock holding facilities
- Plant, cultivate and harvest crops, such as cotton, grain, corn and vegetables

Admissions Requirements

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

COURSE NAME		CREDIT HOURS
Semester 1		
AGAH 1401	Animal Science †	4
AGMG 1300	Agricultural Policies, Safety & Codes †	3
AGCR 1341	Forage and Pasture Management	3
	Total Hours	**10**
Semester 2		
AGAH 1347	Animal Reproduction	3
AGAH 2413	Principles of Feeds & Feeding	4
AGCR 1403	Crop Science	4
POFT 1301	Business English † (or ENGL 1301)	3
	Total Hours	**14**
Semester 3		
AGCR 2305	Entomology	3
AGCR 2313	Soil & Water Conservation Management	3
AGMG 1318	Introduction to Agricultural Economics**	3
BIOL 1306	Biology for Science Majors I † *	3
BIOL 1106	Biology for Science Majors Laboratory I (lab) † *	1
	Total Hours	**13**
	Grand Totals	**37**

† Courses articulated with high school
* BIOL 1406 may be taken in place of BIOL 1306 and BIOL 1106
** AGMG 2382 or AGMG 2682 can be taken in place of AGMG 1318

TSTC Texas State Technical College

Air Conditioning & Refrigeration - Refrigeration Mechanic

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

Admissions Requirements

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

COURSE NAME		CREDIT HOURS
Semester 1		
HART 1310	HVAC Shop Practices and Tools	3
HART 1301	Basic Electricity for HVAC †	3
HART 1307	Refrigeration Principles †	3
HART 1300	HVAC Duct Fabrication	3
	Total Hours	**12**
Semester 2		
HART 1303	Air Conditioning Control Principles	3
HART 1345	Gas and Electric Heating	3
MAIR 1449	Refrigerators, Freezers, Window Air Conditioners	4
POFT 1301	Business English	3
	Total Hours	**13**
Semester 3		
HART 2342	Commercial Refrigeration	3
HART 2338	Air Conditioning Installation and Startup	3
HART 1341	Residential Air Conditioning	3
TECM 1303	Technical Calculations	3
	Total Hours	**12**
	Grand Totals	**37**

† Courses articulated with high school

Auto Collision Technology - Auto Body Repair

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

Upon completion of the Auto Collision Program students will:

- Perform auto body collision repairs to NATEF & I-CAR industry standards.
- Apply a variety of paint & refinish materials to NATEF and I-CAR industry standards.
- Repair plastic & fiberglass on auto bodies to NATEF & I-CAR industry standards.
- Prepare an estimate & develop a plan for auto body repair to NATEF & I-CAR industry standards.

Admissions Requirements

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

COURSE NAME		CREDIT HOURS
CERTIFICATE I		
Semester 1		
ABDR 1331	Basic Refinishing †	3
ABDR 1349	Automotive Plastic & Sheet Molded Compound Repair	3
ABDR 1419	Basic Metal Repair †	4
	Total Hours	**10**
Semester 2		
ABDR 1207	Collision Repair Welding	2
ABDR 1458	Intermediate Refinishing	4
ABDR 2449	Advanced Refinishing	4
TECM 1301	Industrial Mathematics † *	3
	Total Hours	**13**
Semester 3		
ABDR 1311	Vehicle Measurement & Damage Repair Procedures °	3
ABDR 1441	Structural Analysis & Damage Repair I	4
ABDR 2353	Color Analysis & Paint Matching	3
ABDR 2451	Specialized Refinishing Techniques	4
	Total Hours	**14**
	Grand Totals	**37**
	AUTO BODY REPAIR CERTIFICATE	

COURSE NAME		CREDIT HOURS
CERTIFICATE II		
Semester 1		
ABDR 1331	Basic Refinishing †	3
ABDR 1349	Automotive Plastic & Sheet Molded Compound Repair	3
ABDR 1419	Basic Metal Repair †	4
	Total Hours	**10**
Semester 2		
ABDR 1207	Collision Repair Welding	2
ABDR 1458	Intermediate Refinishing	4
ABDR 2449	Advanced Refinishing	4
TECM 1301	Industrial Mathematics † *	3
	Total Hours	**13**
Semester 3		
ABDR 1311	Vehicle Measurement & Damage Repair Procedures	3
ABDR 1441	Structural Analysis & Damage Repair I	4
ABDR 2353	Color Analysis & Paint Matching	3
ABDR 2451	Specialized Refinishing Techniques	4
POFT 1301	Business English † (or ENGL 1301)	3
	Total Hours	**17**
Semester 4		
ABDR 1442	Structural Analysis & Damage Repair II	4
ABDR 1455	Non-Structural Metal Repair ‡	4
ABDR 2345	Vehicle Safety Systems	3
ABDR 2370	Collision Damage Analysis & Reporting Systems ° **	3
	Total Hours	**14**
	Grand Totals	**54**
	AUTO COLLISION TECHNICIAN CERTIFICATE	

° This course has been designated as the capstone course
† Courses articulated with high school
‡ Course with external learning experience
*** ABDR 2380 or ABDR 2680 (Co-op ‡) may be taken in place of the capstone course*
** MATH 1332 or MATH 1314 may be taken in place of TECM 1301*

Automotive Technology

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

In this program, students will learn to:

- Diagnose and repair problems in all systems of the automobile
- Apply skills in the laboratory using up-to-date automotive equipment

The Automotive Technician Program is NATEF certified.

Admissions Requirements

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

COURSE NAME		CREDIT HOURS
Semester 1		
AUMT 1201	Introduction & Theory of Automotive Technology †	2
AUMT 1407	Automotive Electrical Systems †	4
AUMT 1416	Automotive Suspension & Steering Systems †	4
	Total Hours	**10**
Semester 2		
AUMT 1410	Automotive Brake Systems †	4
AUMT 1445	Automotive Climate Control Systems	4
POFT 1301	Business English † (or ENGL 1301)	3
TECM 1301	Industrial Mathematics † *	3
	Total Hours	**14**
Semester 3		
AUMT 2417	Automotive Engine Performance Analysis I †	4
AUMT 2421	Automotive Electrical Diagnosis and Repair	4
AUMT 1419	Automotive Engine Repair †	4
	Total Hours	**12**
	Grand Totals	**36**
	EXIT POINT: AUTOMOTIVE MECHANIC	
Semester 4		
AUMT 2270	Automotive Technician Certification Standards °	2
AUMT 2413	Automotive Drive Train & Axles	4
AUMT 2425	Automotive Automatic Transmission & Transaxle	4
AUMT 2434	Automotive Engine Performance Analysis II	4
	Approved Technical Elective † **	2
	Total Hours	**16**
	Grand Totals	**52**
	EXIT POINT: AUTOMOTIVE TECHNICIAN	

° This course has been designated as the capstone course
† Courses articulated with high school
* MATH 1332 or MATH 1314 may be taken in place of TECM 1301
** Approved Electives: AUMT 1380, AUMT 2301, or AUMT 2680

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Automotive Technology - Ford Maintenance & Light Repair Certificate

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

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

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

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

Admissions Requirements

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

COURSE NAME		CREDIT HOURS
Semester 1		
AUMT 1201	Introduction & Theory of Automotive Technology †	2
AUMT 1407	Automotive Electrical Systems †	4
AUMT 1416	Automotive Suspension & Steering Systems †	4
	Total Hours	**10**
Semester 2		
AUMT 1410	Automotive Brake Systems †	4
AUMT 1445	Automotive Climate Control Systems	4
POFT 1301	Business English † (or ENGL 1301)	3
TECM 1301	Industrial Mathematics † *	3
	Total Hours	**14**
Semester 3		
AUMT 2680	Coop: Automobile / Automotive Mechanics Technology / Technician ° **	6
	Total Hours	**6**
	Grand Totals	**30**

° This course has been designated as the capstone course
† Courses articulated with high schools
‡ Course with external learning experience
* MATH 1332 or MATH 1314 may be taken in place of TECM 1301

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TSTC Texas State Technical College

Aviation Maintenance Technology - Airframe

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

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

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

Admissions Requirements

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

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

° This course has been designated as the capstone course
† Courses articulated with high schools

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Aviation Maintenance Technology - Powerplant

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

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

Admissions Requirements

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

COURSE NAME		CREDIT HOURS
Semester 1		
AERM 1203	Shop Practices †	2
AERM 1205	Weight & Balance †	2
AERM 1208	Federal Aviation Regulations 2	
AERM 1210	Ground Operations †	2
AERM 1314	Basic Electricity	3
AERM 1315	Aviation Science †	3
	Total Hours	**14**
Semester 2		
AERM 1240	Aircraft Propellers †	2
AERM 1357	Fuel Metering & Induction Systems	3
AERM 1456	Aircraft Powerplant Electrical	4
AERM 2341	Powerplant & Auxiliary Power Units	3
	Total Hours	**12**
Semester 3		
AERM 1344	Aircraft Reciprocating Engines	3
AERM 1351	Aircraft Turbine Engine Theory	3
	Total Hours	**6**
Semester 4		
AERM 2351	Aircraft Turbine Engine Overhaul	3
AERM 2352	Aircraft Powerplant Inspection °	3
AERM 2447	Aircraft Reciprocating Engine Overhaul	4
	Total Hours	**10**
	Grand Totals	**42**

° This course has been designated as the capstone course
† Courses articulated with high schools

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TSTC Texas State Technical College

Building Construction Science

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

In this program, students will learn to:
- Prepare building sites, construct foundations and finish structures, frame and finish various buildings systems
- Apply learned skills through construction of residential buildings

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

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| COURSE NAME		CREDIT HOURS
Semester 1		
CNBT 1316	Construction Technology I	3
CNBT 1300	Residential and Light Commercial Blueprint Reading	3
OSHT 1305	OSHA Regulations - Construction Industry	3
DFTG 1313	Drafting for Specific Occupations	3
	Total Hours	**12**
Semester 2		
CNBT 1350	Construction Technology II	3
CNBT 2317	Green Building	3
CNBT 1315	Field Engineering I	3
POFT 1301	Business English	3
TECM 1301	Industrial Mathematics	3
	Total Hours	**15**
Semester 3		
CNBT 2339	Construction Technology IV **	3
CNBT 1311	Construction Methods and Materials I	3
CNBT 1346	Construction Estimating I	3
CNBT 2342	Construction Management I	3
	Total Hours	**12**
	Grand Totals	**39**

º This course has been designated as the capstone course
† Courses articulated with high schools 1
‡ Courses with external learning experience
** CNBT 2380 or CNBT 2680 (Co-op ‡) may be taken in place of the capstone course

Business Management Technology - Office Management

The Business Management Technology program prepares students for occupations as executive assistants or executive secretaries. Many industries continue to seek for applicants with a college degree related to the business industry. As technology continues to automate office procedures, graduates of this program would assist employers in maintaining a productive office.

Graduates would be skilled in desktop publishing, integrated software applications, database management, records and information management, and administrative office management. 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.

Employment positions for graduates from this program of study are Secretaries and Administrative Assistants and Executive Secretaries. "Although secretaries and administrative assistants work in nearly every industry, many are concentrated in schools, hospitals, government agencies, and legal and medical offices." (Occupational Outlook Handbook, accessed Nov. 27, 2012) While technology has increased the automation of business processes and procedures, it will not replace need for the people skills required by executive assistants and/or executive secretaries.

Admissions Requirements

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

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COURSE NAME		CREDIT HOURS
Semester 1		
BUSI 1301	Business Principles	3
BCIS 1305	Business Computer Applications	3
POFT 1301	Business English	3
BUSI 2301	Business Law	3
	Total Hours	**12**
Semester 2		
HRPO 2301	Human Resource Management	3
BMGT 1327	Principles of Management	3
POFI 1349	Spreadsheets	3
SPCH 1321	Business & Professional Communication	3
	Total Hours	**12**
Semester 3		
LAWT 1301	Copyright & Ethical Issues	3
POFT 1319	Records & Information Management I	3
ITSC 2321	Integrated Software Applications II	3
MRKG 1301	Customer Relationship Management	3
ITSC 1315	Project Management Software	3
	Total Hours	**15**
	Grand Totals	**39**

TSTC Texas State Technical College

Business Management Technology - Operations Management

The Business Management Technology, Business Operations program prepares students for occupations as first line supervisors/managers of production and operating workers. Many industries continue to seek for applicants with a college degree related to the business industry. As technology continues to automate office procedures, graduates of this program would supervise, monitor and manage processes, materials and/or surroundings to ensure that specific goals and plans are accomplished.

Graduates would be skilled in project management, and the management of human resources. Courses in quality, facilities, and strategic management would provide graduates the knowledge and understanding of the interactive responsibilities such as planning, prioritizing, and the coordination of people and resources to accomplish specific goals.

Employment positions for graduates from this program of study are First-Line Supervisors of Production and Operating Workers. Related occupations are Plant and System Operators, and Supervisors of Production Workers. (Occupational Outlook Handbook, accessed Dec. 5, 2012)

Admissions Requirements

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

COURSE NAME		CREDIT HOURS
Semester 1		
BUSI 1301	Business Principles	3
BCIS 1305	Business Computer Applications	3
POFT 1301	Business English	3
BUSI 2301	Business Law	3
	Total Hours	**12**
Semester 2		
HRPO 2301	Human Resource Management	3
BMGT 1327	Principles of Management	3
POFI 1349	Spreadsheets	3
SPCH 1321	Business & Professional Communication	3
	Total Hours	**12**
Semester 3		
BMGT 1331	Production and Operations Management	3
BMGT 2341	Strategic Management	3
BMGT 1306	Facilities Management	3
BMGT 2331	Principles of Quality Management	3
LMGT 1325	Warehouse and Distribution Center Management	3
	Total Hours	**15**
	Grand Totals	**39**

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Computer Networking & Security Technology - Network Technician

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

Network and Computer Systems Administrators or Network Specialists who:
- Design, install, and support an organization's local area network (LAN), wide area network (WAN), network segment, or Internet system.

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

Admissions Requirements

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

COURSE NAME		CREDIT HOURS
Semester 1		
CPMT 1311	Introduction to Computer Maintenance †	3
ITNW 1325	Fundamentals of Networking Technologies †	3
ITNW 1354	Implementing & Supporting Servers	3
	Total Hours	**9**
Semester 2		
CPMT 1304	Microcomputer System Software †	3
ITNW 2305	Network Administration	3
ITNW 2321	Networking with TCP/IP	3
TECM 1303	Technical Calculations (or MATH 1314)	3
ITNW 1353	Supporting Network Server Infrastructure	3
	Total Hours	**15**
Semester 3		
ITNW 2312	Routers	3
ITNW 2359	Web Server Support & Maintenance	3
ITSY 1342	Information Technology Security	3
POFT 1301	Business English (or ENGL 1301) †	3
	Total Hours	**12**
	Grand Totals	**36**

° This course has been designated as the capstone course
† Courses articulated with high schools

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TSTC Texas State Technical College

Computer Systems Management Technology
PC Repair Technician

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

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

- Analyze hardware and software solutions
- Troubleshoot defective computer or computer related devices
- Recommend computer and/or computer related solutions or purchases to the end user
- Provide support for small business and home users.

Admissions Requirements

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

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COURSE NAME		CREDIT HOURS
Semester 1		
CPMT 1311	Introduction to Computer Maintenance †	3
TECM 1303	Technical Calculations (or MATH 1314)	3
CPMT 1304	Microcomputer System Software †	3
ITNW 1325	Fundamentals of Networking Technologies †	3
GAME 1301	Computer Ethics	3
	Total Hours	**15**
Semester 2		
CPMT 1345	Computer Systems Maintenance	3
CPMT 1307	Electronic & Computer Skills (or CETT 1307)	3
ITSC 2339	PC Help Desk	3
ITSC 1321	Intermediate PC Operating Systems	3
CPMT 1347	Computer System Peripherals	3
	Total Hours	**15**
	Grand Totals	**30**

† Courses articulated with high schools

Culinary Arts -
Food Service Specialist

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

In this program, students will learn to:
- Follow recipes using standard weight and measures
- Prepare a wide variety of foods
- Maintain quality in all cookery
- Utilize industry-standard kitchen tools and equipment

Admissions Requirements

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

COURSE NAME		CREDIT HOURS
Semester 1		
CHEF 1205	Sanitation & Safety †	2
CHEF 1301	Basic Food Preparation †	3
IFWA 1205	Food Service Equipment & Planning	2
RSTO 1204	Dining Room Service	2
POFT 1321	Business Math †	3
	Total Hours	**12**
Semester 2		
CHEF 2301	Intermediate Food Preparation	3
FDNS 1305	Nutrition †	3
IFWA 1219	Meat Identifying & Processing	2
RSTO 2301	Principles of Food and Beverage Controls	3
	Total Hours	**11**
Semester 3		
CHEF 1314	A la Carte Cooking ° ‡	3
RSTO 1325	Purchasing for Hospitality Operations	3
PSTR 1401	Fundamentals of Baking	4
POFT 1301	Business English †	3
	Total Hours	**13**
	Grand Totals	**36**

° This course has been designated as the capstone course
† Courses articulated with high schools
‡ Course with external learning experience

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Dental Assistant

As the Rio Grande Valley continues to grow, the demand for health care services is growing just as rapidly. Dental health care is one area of health care that has grown the most, requiring increased utilization of dental assistants to keep up with the demand. A dental assistant performs a variety of chairside assisting duties and related office and laboratory procedures under the supervision of the dentist. The U.S. Department of Labor predicts a shortage of dental assistants through the year 2020.

This program is accredited by the American Dental Association which allows graduates to take the Dental Assisting National Board Examination to become certified dental assistants.

Admissions Requirements

In addition to admissions requirements listed under "Admissions Information," applicants may be required to take the Health Occupations Basic Entrance Test if the number of candidates greatly exceeds the number of openings in the new class, in addition to an interview with the Department Chair of Dental Assistant. Students must complete the Dental Assistant Program Application two months prior to the enrollment date.

The Dental Assistant program follows the TSTC health professions program grading scale. The student must maintain a numerical average of 78 or better in each required major course to receive the Certificate of Completion.

Clinical Entry Requirements

Before enrolling in clinical study, a student must have on file with the department the following materials:
- Results of prescribed physical examination.
- Proof of required immunizations.
- Proof of liability insurance of at least $1 million, health and accident insurance and needlestick insurance (available through TSTC)"

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COURSE NAME		CREDIT HOURS
Semester 1		
DNTA 1305	Dental Radiology	3
DNTA 1415	Chairside Assisting	4
DNTA 1213	Emergency Management	2
DNTA 1351	Dental Office Management	3
	Total Hours	**12**
Semester 2		
DNTA 1245	Preventive Dentistry	2
DNTA 1453	Dental Assisting Applications	4
DNTA 1660	Clinical - Dental Assisting / Assistant ° ‡	6
	Total Hours	**12**
	Grand Totals	**24**

° This course has been designated as the capstone course
‡ Course with external learning experience

Dental Laboratory Technology

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

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

Admissions Requirements

In addition to admissions requirements listed under "Admissions Information."

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COURSE NAME		CREDIT HOURS
Semester 1		
DLBT 1301	Dental Anatomy and Tooth Morphology	3
DLBT 1209	Removable Partial Denture Techniques I	2
DLBT 1213	Complete Denture Techniques I	2
DLBT 1217	Fixed Restorative Techniques I	2
	Total Hours	**9**
Semester 2		
DLBT 1205	Dental Materials	2
DLBT 2204	Removable Partial Denture Techniques II	2
DLBT 2207	Complete Denture Techniques II	2
DLBT 2211	Fixed Restorative Techniques II	2
	Total Hours	**8**
Semester 3		
DLBT 2215	Removable Partial Denture Techniques III	2
DLBT 2217	Complete Denture Techniques III	2
DLBT 2241	Dental Ceramics I	2
DLBT 2244	Introduction to Orthodontic Procedures	2
DLBT 2321	Fixed Restorative Techniques III	3
TECM 1303	Technical Calculations	3
	Total Hours	**14**
Semester 4		
DLBT 1291	Special Topics in Dental Laboratory Technician	2
DLBT 2333	Complete Denture Techniques IV	3
DLBT 2235	Fixed Restorative Techniques IV	2
DLBT 2242	Dental Ceramics II	2
	Total Hours	**9**
Semester 5		
DLBT 2430	Special Project in Dental Laboratory Procedures	4
DLBT 2446	Practical Laboratory Procedures °	4
POFT 1301	Business English	3
	Total Hours	**11**
	Grand Totals	**51**

° This course has been designated as the capstone course

TSTC Texas State Technical College

Digital Media Design Technology

This program will provide entry level training in illustration, desktop publishing, graphic design, imaging editing, sound and video, and web page design. Graduates in this program will find employment as graphic artists, desktop publishers, video and web production with an emphasis on illustration and pre-press.

Admissions Requirements

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

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COURSE NAME		CREDIT HOURS
Semester 1		
ARTC 1302	Digital Imaging I †	3
ARTC 1305	Basic Graphic Design †	3
PHTC 1311	Fundamentals of Photography	3
	Total Hours	9
Semester 2		
ARTC 1313	Digital Publishing I †	3
ARTV 1343	Digital Sound	3
ARTV 1351	Digital Video	3
GRPH 1359	Vector Graphics for Production	3
TECM 1303	Technical Calculations †	3
	Total Hours	15
Semester 3		
ARTC 2313	Digital Publishing II	3
POFT 1301	Business English † (or ENGL 1301)	3
IMED 1316	Web Design I °	3
	Approved Elective *	3
	Total Hours	12
	Grand Totals	36

° This course has been designated as the capstone course
† Courses articulated with high schools
* Approved Electives: ARTC 2305, ARTV 1341, ARTV 2341, COMM 2311 ENGL 2314
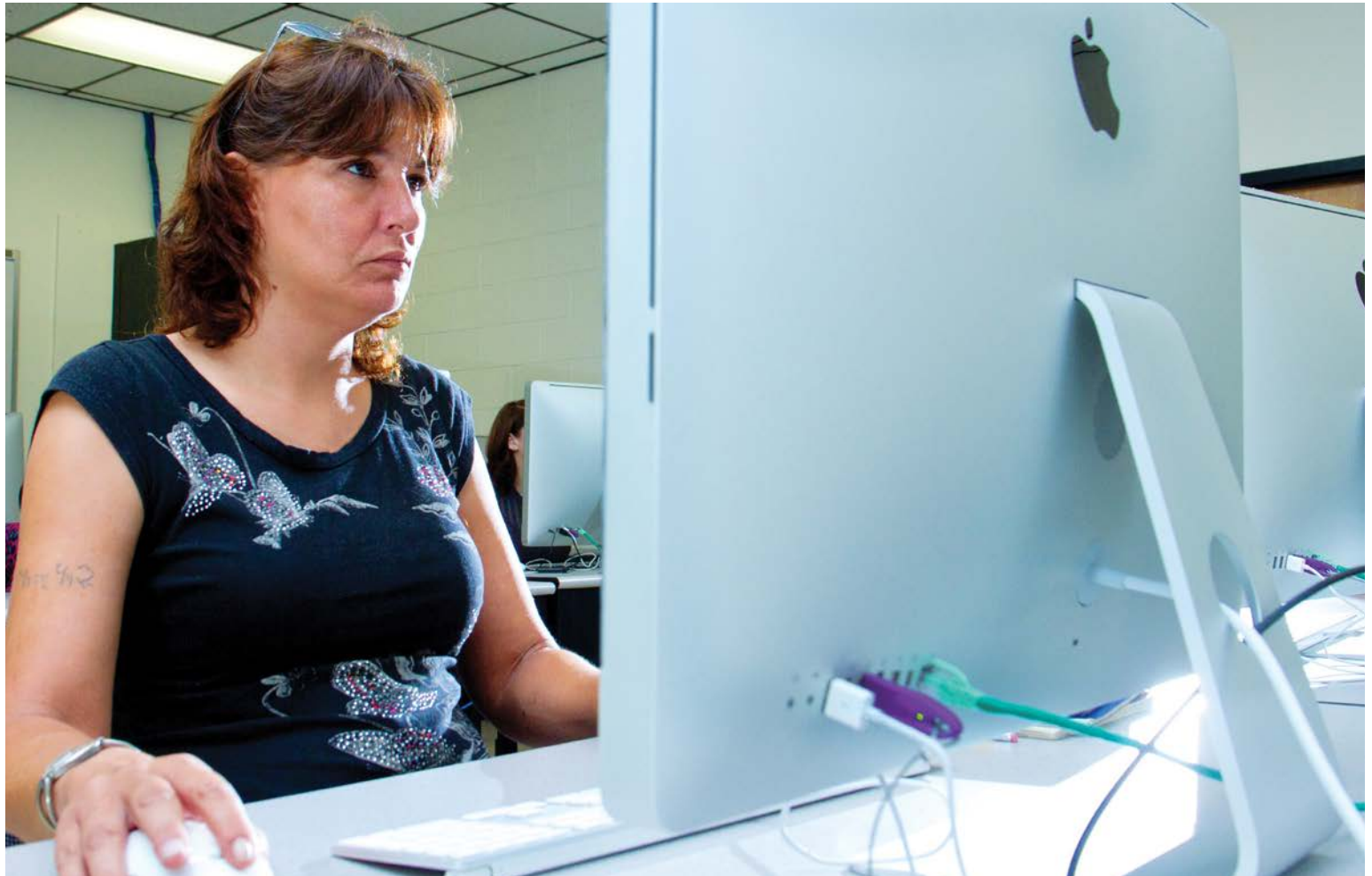
Education & Training

This 49-semester hour program leads to a Certificate of Completion and most courses in this certificate program can be applied toward the Associate of Applied Science degree.

Students completing the certificate program will have enough semester hours of credit under current rulings by the State Board for Educator Certification (SBEC) in order to obtain employment with a school district to obtain a position within a school district or early childhood center.

Admissions Requirements

Students must complete the admissions requirements listed under "Admissions Information." A background check and TB test will be required within the first semester.

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COURSE NAME		CREDIT HOURS
Semester 1		
EDTC 1301	Educational Systems	3
EDTC 1341	Instructional Technology and Computer Applications	3
HIST 1301	United States History I †	3
CDEC 1318	Wellness of the Young Child	3
	Speech Elective † *	3
	Total Hours	**15**
Semester 2		
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
	Social/Behavioral Sciences Elective †	3
	Total Hours	**15**
Semester 3		
GOVT 2305	Federal Government (Federal constitution & topics) †	3
EDTC 2317	Guiding Student Behavior	3
TECA 1354	Child Growth & Development	3
MATH 1314	College Algebra †	3
	Humanities/Fine Arts Elective †	3
	Total Hours	**15**
Semester 4		
EDTC 1164	Practicum: Teacher Assistant/Aide ° ‡	1
GOVT 2306	Texas Government (Texas constitution & topics) †	3
	Total Hours	**4**
	Grand Totals	**49**

° This course has been designated as the capstone course
† Courses articulated with high schools
‡ Course with external learning experience
* SPCH 1315 suggested

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Game & Simulation Programming-
Game Technology

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

In this program, students will learn to:

- Develop computer games and simulations using appropriate tools and techniques, and

- Examine best practices for entering the industry.

Admissions Requirements

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

COURSE NAME		CREDIT HOURS
Semester 1		
GAME 1303	Introduction to Game Design & Development †	3
GAME 1306	Design and Creation of Games	3
TECM 1303	Technical Calculations	3
ARTC 1302	Digital Imaging I	3
	Total Hours	**12**
Semester 2		
GAME 1301	Computer Ethics	3
ITSE 1307	Introduction to C++ Programming	3
GAME 1309	Introduction to Animation Programming	3
POFT 1301	Business English	3
	Total Hours	**12**
Semester 3		
GAME 1304	Level Design	3
GAME 1349	OpenGL Programming I	3
ITSE 2331	Advanced C++ Programming	3
	Total Hours	**9**
	Grand Total	**33**

† Courses articulated with high schools

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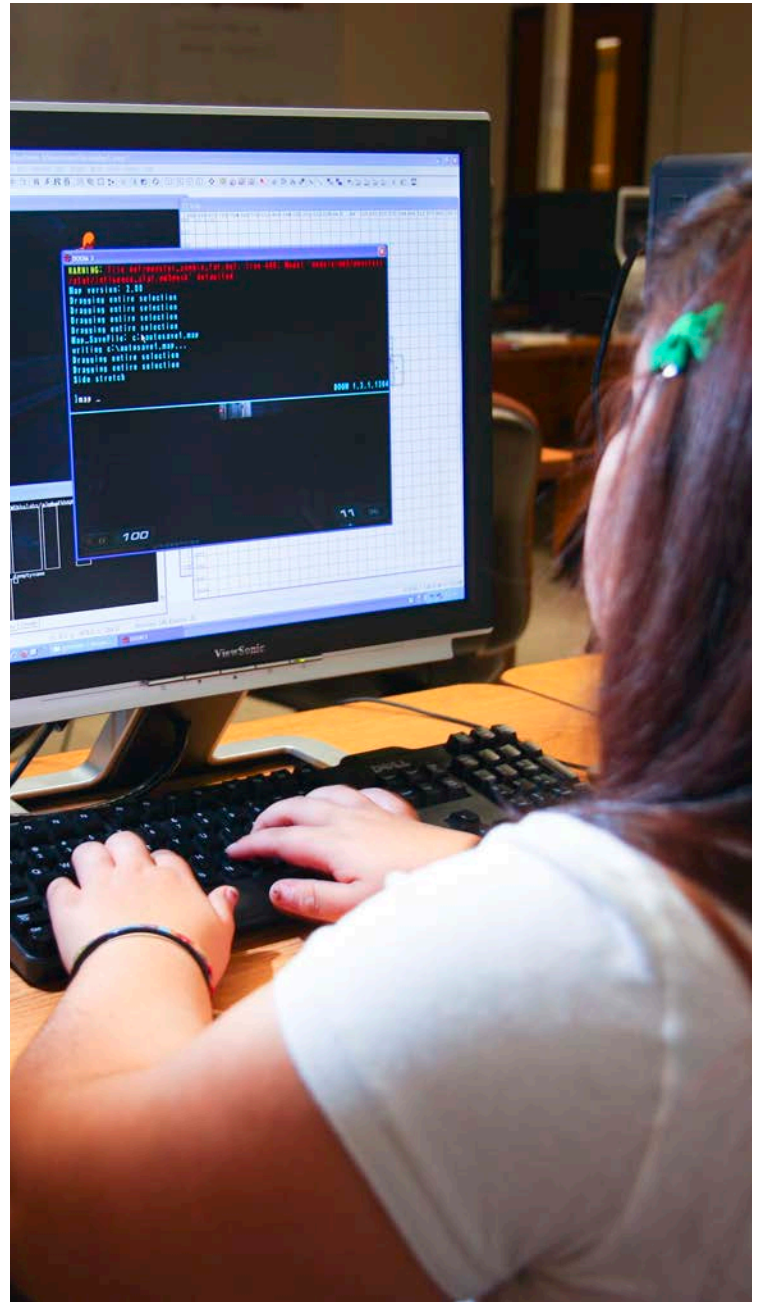
Mechatronics Technology-Industrial Systems Technology

Due to industry demand, the Industrial Systems Technology is a Level 1 Certificate that was developed with the help of the Texas manufacturing industry. It is a competency-based learning program which matches learning activities with industry-validated competencies. Students with applicable experience can progress more rapidly through the program saving both time and money. Students receive training in electrical systems, fluid power systems and automated systems that involve electronics and computer controls. The program is a blend of instructor-led training, supplemented by on-site computer modules and simulations, and it incorporates project application of attained skills.

This certificate creates a pathway for students wanting to further their education into an Associate of Applied Science (AAS) degree in Mechatronics Technology. Traditionally, this is a two-semester program but through competency-based learning, can be completed in less time.

Industrial Systems is an interdisciplinary field that is applicable to the manufacturing, energy, and other industrial sectors, and technicians who graduate with this certificate will possess the skills to successfully enter these fields.

Admissions Requirements

Students must complete the admissions requirements listed under "Admissions Information." Completion of one unit of high school Alegbra and English is recommended. See program advisor for additional prerequisites.

COURSE NAME		CREDIT HOURS
Semester 1		
CETT 1303	DC Circuits	3
ELMT 1305	Basic Fluid Power	3
CETT 1325	Digital Fundamentals	3
INMT 1319	Manufacturing Processes	3
	Total Hours	**12**
Semester 2		
CETT 1305	AC Circuits	3
INTC 1341	Principles of Automatic Control	3
ELMT 1301	Programmable Logic Controllers	3
INMT 1317	Industrial Automation	3
EECT 1307	Convergence Technologies	3
	Total Hours	**15**
	Grand Total	**27**

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TSTC Texas State Technical College

Medical Assistant

Medical Assisting is a multi-skilled allied health profession. Medical assistants function as members of the health care delivery team, performing both administrative and clinical procedures.

Administrative duties may include scheduling and receiving patients, preparing and maintaining medical records, performing basic secretarial skills, insurance processing and billing, medical transcribing, handling telephone calls and writing correspondence, serving as a liaison between the physician and other individuals and managing practice finances. Clinical duties may include asepsis and infection control, taking patient histories and vital signs, performing first aid and CPR, preparing patients for procedures, assisting the physician with examination and treatments, collecting and processing specimens, performing selected diagnostic tests, and preparing and administering medications as directed by the physician.

Students must maintain a numerical average of 78 or better in each Medical Assisting curriculum course.

All Medical Assistant students must complete a minimum of 160 clinical hours without remuneration for course completion.

Admissions Requirements

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

Clinical Entry Requirements

Before enrolling in clinical study, a student must have on file with the department the following materials:
- Results of prescribed physical examination
- Proof of required immunizations
- Proof of liability insurance of at least $1 million, health and accident insurance and needlestick insurance (available through TSTC)

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COURSE NAME		CREDIT HOURS
Semester 1		
BIOL 2301	Anatomy & Physiology I † *	3
BIOL 2101	Anatomy & Physiology I Lab † *	1
HITT 1305	Medical Terminology I †	3
MDCA 1417	Procedures in a Clinical Setting	4
PSYC 2314	Lifespan Growth & Development	3
	Total Hours	**14**
Semester 2		
BIOL 2302	Anatomy & Physiology II † ◊	3
BIOL 2102	Anatomy & Physiology II Lab † ◊	1
HITT 1301	Health Data Content & Structure	3
MDCA 1348	Pharmacology & Administration of Medications	3
MDCA 1352	Medical Assistant Laboratory Procedures	3
	Total Hours	**13**
Semester 3		
MDCA 1343	Medical Insurance	3
MDCA 1402	Human Disease / Pathophysiology	4
HITT 1311	Health Information Systems	3
PLAB 1323	Phlebotomy	3
	Total Hours	**13**
Semester 4		
MDCA 1321	Administrative Procedures	3
MDCA 1205	Medical Law & Ethics	2
MDCA 1460	Clinical: Medical / Clinical Assistant ° ‡	4
PSYC 2301	General Psychology	3
POFT 1301	Business English (or ENGL 1301)	3
	Total Hours	**15**
	Grand Totals	**55**

° This course has been designated as the capstone course
† Courses articulated with high schools
‡ Course with external learning experience
* BIOL 2401 may be taken in place of BIOL 2301 and BIOL 2101
◊ BIOL 2402 may be taken in place of BIOL 2302 and BIOL 2102
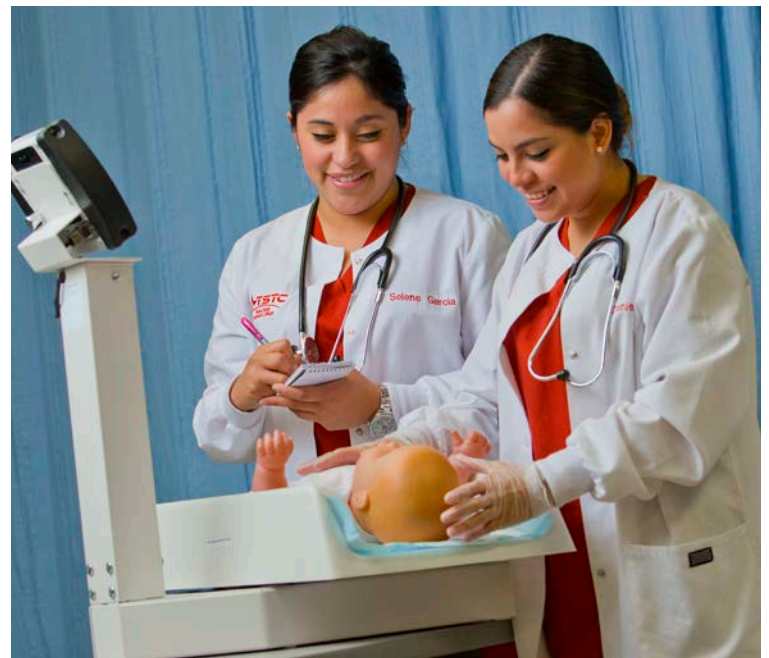
Medical Information Specialist/Transcriptionist

The Medical Information Specialist/Transcriptionist program is a three-semester certificate of completion program that provides concentrated training in specialized skills needed for entry-level clerical positions in the health information field, as well as in the medical transcription field.

Medical information specialists are vital members of the health care team who work very closely with physicians, nurses, and other health care providers. They are the patient data experts on which patient care practitioners rely. This is the ideal profession for individuals who are interested in working in the medical field, yet do not want to work directly in patient care.

Medical transcriptionists are medical language specialists who interpret and transcribe reports dictated by physicians and other health care professionals. They provide reports that are the communication tools for documenting health care and facilitating health care delivery.

Medical Information Specialist/Transcriptionist students are trained for various positions including, but not limited to, the following: assembly clerk, analysis clerk, file clerk, release of information clerk, processing specialist, unit secretary, medical receptionist, billing specialist, appointments scheduler, medical transcriptionist assistant, and medical transcriptionist.

Graduates of this program are prepared to work in a variety of facilities, such as hospitals, clinics, physician's offices, managed care organizations, long term care facilities, behavioral health facilities, ambulatory care facilities, and rehabilitation centers.

The job outlook for Medical Information Specialists and/or Transcriptionists is good. The Bureau of Labor and Statistics is predicting a shortfall of these technicians. The starting salary for entry level positions depends on the area of specialization, with medical insurance billing and medical transcriptionists earning at the higher end of the scale.

Admissions Requirements

In addition to the admission requirement listed under "Admissions Information", the student must have maintained a 2.0 grade point average on a 4.0 scale in high school or previous post-secondary studies, or received a passing score on the GED. An interview with a member of the department is also required, as well as completion of a program orientation prior to registration of classes.

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Practicum Entry Requirements: Before enrolling in practicum courses, a student must have on file with the department the following materials:
- The ability to satisfy the industry standards for the program.
- Proof of required immunizations.
- Proof of liability insurance of at least $1 million (available through TSTC).
- Proof of health and accident insurance (available through TSTC).
- Proof of auto liability.
- Proof of current driver's license.
- Passage of a criminal background check (available through TSTC).
- Passage of a drug and alcohol screening (required by various medical facilities).

COURSE NAME		CREDIT HOURS
Semester 1		
HITT 1305	Medical Terminology I †	3
HITT 1301	Health Data Content & Structure	3
HITT 1311	Health Information Systems	3
	Total Hours	**9**
Semester 2		
BIOL 2301	Anatomy & Physiology I *	3
BIOL 2101	Anatomy & Physiology I Lab *	1
HITT 1342	Ambulatory Coding	3
MDCA 1321	Administrative Procedures	3
MRMT 1307	Medical Transcription I	3
	Total Hours	**13**
Semester 3		
MDCA 1343	Medical Insurance	3
MDCA 1402	Human Disease/Pathophysiology	4
MRMT 2333	Medical Transcription II	3
	Speech Elective	3
HITT 1166	Practicum (or Field Experience) - Health Information/Medical Records Technology/Technician ° ‡	1
	Total Hours	**14**
	Grand Totals	**36**

° This course has been designated as the capstone course
† Courses articulated with high schools
‡ Course with external learning experience
* BIOL 2401 may be taken in place of BIOL 2301 and BIOL 2101

TSTC Texas State Technical College

Nurse Assistant

According to the US Department of Labor, employment of nurse assistants is expected to grow at an extremely rapid rate in response to the long-term care needs of a growing and aging population. Modern medical technology has also increased the need to provide care to those who never fully recover. Nurse assistants provide a variety of support services for other health-care professionals. Their primary responsibility is to provide basic bedside care, such as bathing, making beds, taking vital signs, assisting in feeding, serving trays, answering call lights and ambulating patients.

Students successfully completing this program are eligible to take the Texas Department of Aging and Disability Services Certified Nurse Assistant skills and written exam to be listed on the Texas Registry as a Texas certified Nurse Assistant.

In this program, students will learn to:
- Provide basic bedside nursing care
- Work with nurses, doctors and other coworkers
- Apply skills in clinical practice at a hospital or nursing home

Students must maintain a numerical average of 78 or better in each Nurse Assistant curriculum course to graduate from the program and receive the Certificate of Completion.

Admissions Requirements
In addition to admissions requirements listed under "Admissions Information," the applicant must complete an application to the program and interview with the Department Chair.

Clinical Entry Requirements
Before enrolling in clinical or cooperative study, a student must have on file with the department the following materials:
- Results of prescribed physical examination.
- Proof of required immunizations.
- Proof of liability insurance of at least $1 million, health and accident insurance and needlestick insurance (available through TSTC).

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COURSE NAME		CREDIT HOURS
Semester 1		
HITT 1305	Medical Terminology I †	3
POFT 1301	Business English (or ENGL 1301)	3
SPCH 1318	Interpersonal Communication (or SPCH 1315)	3
TECM 1301	Industrial Mathematics (or MATH 1314)	3
	Total Hours	**12**
Semester 2		
NURA 1360	Clinical - Nurse/Nursing Assistant/ Aide & Patient Care Assistant ° ‡ †	3
NURA 1301	Nurse Aide for Health Care †	3
	Total Hours	**6**
	Grand Totals	**18**

° This course has been designated as the capstone course
† Courses articulated with high schools
‡ Course with external learning experience

Precision Manufacturing Technology - Machinist

Machinists use machine tools, such as lathes, milling machines, and machining centers, to produce precision metal parts. Although they may produce large quantities of one part, precision machinists often produce small batches or one-of-a-kind items. They use their knowledge of the working properties of metals and their skill with machine tools to plan and carry out the operations needed to make machined products that meet precise specifications. Persons interested in becoming machinists should be mechanically inclined, have good problem-solving abilities, be able to work independently, and be able to do highly accurate work that requires concentration and physical effort.

The number of workers obtaining the skills and knowledge necessary to fill machinist jobs is expected to be less than the number of job openings arising each year from the need to replace experienced machinists who transfer to other occupations or retire, and from job growth.

Due to modern production techniques, employers prefer machinists who have a wide range of skills and are capable of performing almost any task in a machine shop. Machinists can advance in several ways. Experienced machinists may become CNC programmers, tool and die makers, or mold makers. A few open their own shops.

Median hourly earnings of machinists were $16.33 in May 2004. The middle 50 percent earned between $12.84 and $20.33. The lowest 10 percent earned less than $10.08, while the top 10 percent earned more than $24.34. Machining Technology students are currently being placed in the median range stated above.

Admissions Requirements

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

COURSE NAME		CREDIT HOURS
Semester 1		
MCHN 1302	Print Reading For Machining Trades 3	
MCHN 1338	Basic Machine Shop I †	3
MCHN 1343	Machine Shop Mathematics	3
	Total Hours	**9**
Semester 2		
MCHN 1308	Basic Lathe	3
MCHN 1313	Basic Milling Operations	3
MCHN 1320	Precision Tools & Measurement	3
MCHN 2303	Fundamentals of Computer Numerical Controlled (CNC) Machine Controls	3
	Total Hours	**12**
Semester 3		
MCHN 1305	Metals & Heat Treatment	3
MCHN 1358	Intermediate Lathe Operations	3
MCHN 2302	Intermediate Milling Operations	3
MCHN 2335	Advanced CNC Machining °	3
	Total Hours	**12**
	Grand Totals	**33**

° This course has been designated as the capstone course
† Courses articulated with high schools
‡ Course with external learning experience

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TSTC Texas State Technical College

Precision Manufacturing Technology - Toolmaker

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

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

Toolmakers play a key role in building and maintaining advanced automated manufacturing equipment. The number of workers receiving training in this occupation is expected to continue to be fewer than the number of openings created each year by toolmakers who retire or transfer to other occupations. Students that earn the Toolmaker Certificate are excellent candidates for Tool and Die apprenticeships.

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

Admissions Requirements

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

COURSE NAME		CREDIT HOURS
Semester 1		
MCHN 1302	Print Reading For Machining Trades	3
MCHN 1338	Basic Machine Shop I †	3
MCHN 1343	Machine Shop Mathematics	3
	Total Hours	**9**
Semester 2		
MCHN 1308	Basic Lathe	3
MCHN 1313	Basic Milling Operations	3
MCHN 1320	Precision Tools & Measurement	3
MCHN 2303	Fundamentals of Computer Numerical Controlled (CNC) Machine Controls	3
	Total Hours	**12**
Semester 3		
MCHN 1305	Metals & Heat Treatment	3
MCHN 1358	Intermediate Lathe Operations	3
MCHN 2302	Intermediate Milling Operations	3
MCHN 2335	Advanced CNC Machining	3
	Total Hours	**12**
Semester 4		
MCHN 1335	Grinders, Outside, Internal, Surface	3
MCHN 2337	Advanced Milling Operations	3
MCHN 2370	Mold Making/Repair	3
	Speech Elective †	3
	Total Hours	**12**
Semester 5		
MCHN 2372	Tool & Die Making & Repair	3
MCHN 2447	Specialized Tools & Fixtures ° *	4
WLDG 1206	Fundamentals of Gas Tungsten	2
	Total Hours	**9**
	Grand Totals	**54**

° This course has been designated as the capstone course
† Courses articulated with high schools
‡ Course with external learning experience
*** MCHN 2480 (Co-op ‡) may be taken in place of the capstone course*

Telecommunications Technology - Telecommunications Specialist

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

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

Admissions Requirements

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

COURSE NAME		CREDIT HOURS
Semester 1		
CETT 1303	DC Circuits (or IEIR 1302)	3
EECT 1303	Introduction to Telecommunications †	3
TECM 1303	Technical Calculations (or MATH 1314)	3
	Total Hours	**9**
Semester 2		
CETT 1305	AC Circuits † (or IEIR 1304)	3
CETT 1325	Digital Fundamentals	3
CSIR 1303	Telecommunications Systems Installer	3
EECT 1300	Technical Customer Service	3
POFT 1301	Business English (or ENGL 1301)	3
	Total Hours	**15**
Semester 3		
CSIR 1359	Digital Data Communication	3
CSIR 1391	Special Topics: Communications System Installer & Repairer	3
CSIR 2351	Fiber Optic Communication System Installation & Repair	3
EECT 1307	Convergence Technologies	3
EECT 1342	Telecommunications Outside Plant ° **	3
	Total Hours	**15**
	Grand Totals	**39**

° This course has been designated as the capstone course
† Courses articulated with high schools
‡ Course with external learning experience
**EECT 1380 or EECT 1680 (Co-op) may be taken in place of the capstone course

TSTC Texas State Technical College

Vocational Nursing

The licensed vocational nurse (LVN), an important member of the medical team, may gather information, access and provide direct care for the sick, injured, convalescent, and disabled under the direction of physicians and registered nurses. LVNs generally work in acute and long-term care facilities or they may work in clinics, be employed as utilization reviewers who evaluate medical records in hospitals and doctors' offices, plus many other health-related areas.

LVNs care for patients in many ways. Often, they provide basic bedside care. Experienced LVNs may supervise nursing assistants and aides. As part of their work, LVNs collect samples for testing, perform routine laboratory tests, and record food and fluid intake and output. They clean and monitor medical equipment. Sometimes, they help physicians and registered nurses perform tests and procedures. Some LVNs help to deliver, care for, and feed infants.

LVNs also monitor their patients and report adverse reactions to medications or treatments. LVNs gather information from patients, including their health history and how they are currently feeling. They may use this information to complete insurance forms, pre-authorizations, and referrals, and they share information with registered nurses and doctors to help determine the best course of care for a patient. LVNs often teach family members how to care for a relative or teach patients about good health habits. Most LVNs are generalists and work in all areas of health care. However, some work in a specialized setting, such as a nursing home, a doctor's office, or in home health care. LVNs in nursing care facilities help to evaluate residents' needs, assist in developing care plans, and supervise the care provided by nursing aides. In Texas, LVNs are permitted to administer prescribed medicines, start intravenous fluids, and provide care to ventilator-dependent patients. According to the Bureau of Labor Statistics, employment of LVNs is expected to grow 14 percent between 2006 and 2016, faster than the average for all occupations, in response to the long-term care needs of an increasing elderly population and the general increase in demand for health care services.

Nursing has always been emotionally rewarding; now with signing bonuses of up to $5,000 and average annual salaries of $42,620, it is also financially rewarding.

Admissions Requirements
In addition to admissions requirements listed under the "Admissions Information," the following requirements must be met:
- Be 18 years of age and eligible for TSTC admission; non probationary for grades
- Be "TSI" complete with all remedial courses taken & passed successfully
- Have all transcripts of courses taken from other colleges sent to TSTC and reviewed by Admissions
- Submit a copy of picture ID (preferably current driver's license) and SSN
- Must be able to pass L1 Board of Nursing Criminal Background Check & 5 panel drug screen
- All Immunizations must be current including Hepatitis A and B series, TB, Flu shot, Meningococcal vaccine, TDap, Varicella, MMR series

- Must have a current Physical from a physician
- Must pass all academic courses prior to start of nursing courses; no "D's" for program of study courses
- Prerequisite courses Anatomy and Physiology I & II must be within 5 years
- Must take TEAS Exam here at TSTC through the Testing Center
- Must submit a complete Application Packet in sealed 10x13 envelope prior to deadline

COURSE NAME		CREDIT HOURS
Semester 1		
HPRS 1204	Basic Health Profession Skills	2
PSYC 2314	Lifespan Growth & Development	3
BIOL 2301	Anatomy & Physiology I	3
BIOL 2101	Anatomy & Physiology I Lab	1
BIOL 2302	Anatomy & Physiology II	3
BIOL 2102	Anatomy & Physiology II Lab	1
FDNS 1341	Nutrition in the Life Cycle (or ENGL 1301)	3
HITT 1305	Medical Terminology I †	3
	Total Hours	**19**
Semester 2		
VNSG 1331	Pharmacology	3
VNSG 1402	Applied Nursing Skills I	4
VNSG 1304	Foundations of Nursing	3
VNSG 1261	Clinical - Licensed Vocational Nurse (LVN) Training	2
	Total Hours	**12**
Semester 3		
VNSG 1230	Maternal-Neonatal Nursing	2
VNSG 1329	Medical-Surgical Nursing I	3
VNSG 2413	Applied Nursing Skills II	4
VNSG 1462	Clinical - Licensed Vocational Nurse (LVN) Training	4
	Total Hours	**13**
Semester 4		
VNSG 1219	Leadership and Professional Development	2
VNSG 1334	Pediatrics	3
VNSG 1432	Medical-Surgical Nursing II	4
VNSG 2463	Clinical - Licensed Vocational Nurse (LVN) Training °	4
	Total Hours	**13**
	Grand Totals	**57**

° This course has been designated as the capstone course
† Courses articulated with high schools
‡ Course with external learning experience

Welding Technology - Combination Welding

The variety of jobs available to welding technicians is increasing due to the number of new inventions and technical advances using a wide variety of metal alloys and non-metallic materials that can be joined through the welding process. Students in this program will develop knowledge of metal properties and the different welding techniques used to join metals.

Upon completion of the program, student will:
- Practice various sophisticated welding processes to include oxy-acetylene welding, gas tungsten arc, and gas metal arc.
- Perform fillet and groove welds in several positions.
- Design and fabricate welded projects.

Admissions Requirements

In addition to admissions requirements listed under "Admissions Information," students must complete the Welding Program Application two months prior to the enrollment date.

COURSE NAME		CREDIT HOURS
Semester 1		
WLDG 1313	Introduction to Blueprint Reading for Welders	3
WLDG 1430	Introduction to Gas Metal Arc Welding (GMAW)	4
WLDG 1323	Welding Safety, Tools, & Equipment	3
WLDG 1421	Introduction to Welding Fundamentals †	4
	Total Hours	**14**
Semester 2		
WLDG 1317	Introduction to Layout & Fabrication	3
	Speech Elective †	3
WLDG 1434	Introduction to Gas Tungsten Arc Welding (GTAW)	4
WLDG 1457	Intermediate Shielded Metal Arc Welding (SMAW)	4
	Total Hours	**14**
Semester 3		
WLDG 1412	Introduction to Flux Cored Arc Welding (FCAW)	4
WLD 1435	Introduction to Pipe Welding	4
WLDG 2443	Advanced Shielded Metal Arc Welding (SMAW)	4
	Total Hours	**12**
	Grand Totals	**40**

º This course has been designated as the capstone course
† Courses articulated with high schools

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TSTC Texas State Technical College

Wind Energy and Turbine Technician

In the Wind Energy Technology Program, you'll learn to operate and maintain the systems that make a wind turbine function whether it's an electrical, pneumatic, communications, computer, control or hydraulic system. Safety is a critical part of the wind energy industry and upon completion of the program you'll be able to practice those principles in industry.

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

In this program, students will learn how to:
- Demonstrate proficient skills in maintaining and repairing electrical systems of wind turbines.
- Exhibit competency in maintaining and repairing mechanical systems of wind turbines.
- Implement a safe working environment in response to hazards associated with wind turbines.
- Work with supervisory control and data acquisition (SCADA) systems and data communications related to wind turbines.

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

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COURSE NAME		CREDIT HOURS
Semester 1		
WIND 1300	Introduction to Wind Energy	3
WIND 1302	Wind Safety	3
CETT 1303	DC Circuits	3
TECM 1303	Technical Calculations	3
	Total Hours	**12**
Semester 2		
CETT 1325	Digital Fundamentals	3
CETT 1305	AC Circuits	3
ELMT 1305	Basic Fluid Power	3
INMT 1317	Industrial Automation	3
	Total Hours	**12**
Semester 3		
WIND 2455	Wind Turbine Troubleshooting and Repair	4
WIND 2459	Wind Power Delivery System	4
ELMT 2335	Certified Electronics Technician Training	3
ELMT 1301	Programmable Logic Controllers	3
WIND 2310	Wind Turbine Materials and Electro-Mechanical Equipment	3
	Total Hours	**17**
	Grand Totals	**41**

º This course has been designated as the capstone course

COURSE DESCRIPTONS

Course Descriptions

Please note: In the parenthesis following the course number and title of each course description are the lecture hours per week - lab hours per week - credit hours per course (ex: 2-4-3 is 2 lecture-4 lab-3 credit).

Academic Computer Science

COSC 1336 Programming Fundamentals I (3-1-3)
Introduces the fundamental concepts of structured programming. Topics include software development methodology, data types, control structures, functions, arrays, and the mechanics of running, testing, and debugging. This course assumes computer literacy.

COSC 1337 Programming Fundamentals II (3-1-3)
Review of control structures and data types with emphasis on structured data types. Applies the object-oriented programming paradigm, focusing on the definition and use of classes along with the fundamentals of object-oriented design. Includes basic analysis of algorithms, searching and sorting techniques, and an introduction to software engineering. Prerequisite: COSC 1336/1436.

COSC 2325 Computer Organization & Machine Language (3-1-3)
Basic computer organization; machine cycle, digital representation of data and instructions; assembly language programming, assembler, loader, macros, subroutines, and program linkages. Prerequisite: COSC 1336/1436.

COSC 2336 Programming Fundamentals III (3-1-3)
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. Prerequisite: COSC 1337/1437.

ENGL 1301, ENGL 1302 (see English/Communications)

GOVT 2305, GOVT 2306 (see Business and Social/Behavioral Sciences)

HIST 1301, HIST 1302 (see Business and Social/Behavioral Sciences)

MATH 2413, MATH 2414 (see Math/Natural Sciences)

PHYS (see Math/Natural Sciences)

Agricultural Technology

ACCT 2401 (see Transferable Academic)

AGAH 1347 Animal Reproduction (2-4-3)
Study of organs, functions, endocrinology, and common management practices related to reproduction.

AGAH 1401 Animal Science (3-4-4)
An introductory survey of the scientific principals and applied practices related to livestock production. Topics include genetics, animal breeding and selection, anatomy and physiology, nutrition, reproduction, health, and marketing of livestock and livestock products.

AGAH 2413 Principles of Feeds & Feeding (3-4-4)
Study of the role and application of feed nutrients and additives. Topics include comparative aspects of digestion, absorption, and metabolism of nutrients. Emphasis on identification of nutrient requirements and formulation of dietary feeding regimens.

AGCR 1341 Forage & Pasture Management (2-2-3)
Study of the production and management of forage crops and pastures including establishment, fertilization, weed control, grazing systems, hay, seed production, and harvesting.

AGCR 1403 Crop Science (3-4-4)
Fundamentals of the development, production, and management of field crops. Topics include the classification and distribution of field crops, botany, soils, plant breeding, pest management, and harvesting.

AGCR 2305 Entomology (2-4-3)
Study of the morphology, physiology, and classification of the common insect orders and related arthropods with emphasis on species of economic or biological importance. Emphasis on integrated pest management concepts and proper use of pesticides.

AGCR 2313 Soil and Water Conservation Management (2-4-3)
Study of physical and chemical soil deterioration and loss, water conservation, and principles for protection and maintenance of these resources. Topics include plant/water relationships, water conservation methods, basic terrace engineering principles, sediment loss, and land use plans.

AGMG 1300 Agricultural Policies, Safety & Codes (2-4-3)
Study of safety standards, government regulations, and codes as they apply to agriculture. Emphasis on the application of current safety and health standards, and compliance with state and federal regulations.

AGMG 1311 Intro to Agribusiness (2-3-3)
Introduction to agribusiness management, marketing and sales in the free enterprise system. Topics include economic principles, finance, risk management, record keeping, budgeting, employee/employer responsibilities, communications human relation skills, and agricultural career opportunities.

AGMG 1318 Intro to Agricultural Economics (2-4-3)
Study of the fundamental economic principles and their application to the problems of the industry of agricultural.

AGMG 1344 Agricultural Records Management (2-4-3)
Examination of the principles of agricultural records and bookkeeping with emphasis on utilization and interpretation of farm and ranch accounts. Prerequisite: 5th semester standing.

AGMG 2312 Marketing of Agricultural Products (2-4-3)
Study of operations in the movement of agricultural commodities from producer to consumer including the essential marketing functions of buying, selling, transporting, storing, financing, standardizing, pricing, and risk bearing.

AGMG 2382 COOP: Farm and Ranch Management (1-19-3)
AGMG 2682 COOP: Farm and Ranch Management (1-39-6)
A study of the business and management aspects of agricultural operations including management, public relations, external organizations, and record keeping. Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and employer, the student combines classroom learning with work experience. Includes a lecture component.

BIOL 1106, BIOL 1107, BIOL 1306, BIOL 1307 (see Math/Natural Sciences)

CHEM 1105, CHEM 1305 (see Math/Natural Sciences)

ENGL 1301 (see English/Communications)

EPCT 1211 (see Chemical-Environmental Technology)

MATH 1314 (see Math/Natural Sciences)

POFT 1301 (see English/Communications)

SPCH 1318 (see Speech Electives)

TECM 1303 (see Math/Natural Sciences)

Air Conditioning and Refrigeration Technology

ENGL 1301 (see English/Communications)

HART 1300 Hvac Duct Fabrication (2-4-3)
Layout and fabrication of HVAC duct systems using common tools and equipment of the trade.

HART 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.

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.

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.

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 catalog data; and preparation of shop drawings and submittals.

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.

HART 2334   Advanced Air Conditioning Controls (2-4-3)
Theory and application of electrical control devices, electromechanical controls, and / or pneumatic controls.

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.

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 (2-4-3)
A study of components, applications, and installation of air conditioning systems with capacities of 25 tons or less.

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.

HART 2343 Industrial Air Conditioning (2-4-3)
A study of components, accessories, applications, and installation of air conditioning systems above 25 tons capacity.

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.

HART 2380 COOP: Heating, A/C, & Refrigeration Tech (1-19-3)
HART 2680 Coop: Heating, A/C & Refrigeration Tech (1-39-6)
Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component.

MAIR 1449 Refrigerators, Freezers, Window A/C (2-6-4)
Theory, sequence of operation, components and repair, electrical schematics, and troubleshooting electronic components in air conditioning and refrigeration. Emphasis on safety for the electrical, mechanical, and sealed systems.

MATH 1314 (see Math/Natural Sciences)

POFT 1301 (see English/Communications)

TECM 1303 (see Math/Natural Sciences)

Allied Health Related Skills

HPRS 1101 Intro to Health Professions (1-0-1)
An overview of the roles of the various members of the health care system, educational requirements, and issues affecting the delivery of health care.

HPRS 1204 Basic Health Profession Skills (1-3-2)
A study of the concepts that serve as the foundation for health profession courses. Topics include client handling and safety issues, basic client monitoring, and health documentation methods.

HPRS 1205 Medical Law/Ethics Health Professionals (2-0-2)
Introduction to the relationship between legal aspects and ethics in health care, with emphasis on the ethical and legal responsibilities of health care professionals.

HPRS 2300 Pharmacology/Health Professions (3-0-3)
A study of drug classifications, actions, therapeutic uses, adverse effects, routes of administration, and calculation of dosages.

Architectural Design & Engineering Graphics

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.

DFTG 1305 Technical Drafting (2-4-3)
Introduction to the principles of drafting to include terminology and fundamentals, including size and shape descriptions, projection methods, geometric construction, sections, auxiliary views, and reproduction processes.

DFTG 1309 Basic Computer-Aided Drafting (2-4-3)
An introduction to basic computer-aided drafting. Emphasis is placed on drawing setup; creating and modifying geometry; storing and retrieving predefined shapes; placing, rotating, and scaling objects, adding text and dimensions, using layers, coordinating systems; and plot/print to scale.

DFTG 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 1317 Architectural Drafting-Residential (2-4-3)
Architectural drafting procedures, practices, and symbols. Preparation of detailed working drawings for residential structures. Emphasis on light frame construction methods. Prerequisites: DFTG 1309.

DFTG 1333 Mechanical Drafting (2-4-3)
Detail drawings with proper dimensioning and tolerances, use of sectioning techniques, common fasteners, pictorial drawings, including bill of materials. Prerequisites: DFTG 1305, DFTG 1309.

DFTG 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 2312 Technical Illustration & Presentation (2-4-3)
Study of pictorial drawings including isometrics, obliques, perspectives, charts, and graphs. Emphasis on rendering and using different media. Prerequisite: DFTG 2340.

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 2330 Civil Drafting (2-4-3)
An in-depth study of drafting methods and principles used in public works civil engineering. Prerequisites: DFTG 1309.

DFTG 2332 Advanced Computer-Aided Drafting (2-4-3)
Application of advanced CAD techniques.

DFTG 2338 Final Project - Advanced Drafting (2-4-3)
A drafting course in which students participate in a comprehensive project from conception to conclusion.

DFTG 2340 Solid Modeling/Design (2-4-3)
A computer-aided modeling course. Development of three-dimensional drawings and models from engineering sketches and orthographic drawings and utilization of three-dimensional models in design work.

DFTG 2380 COOP: Drafting & Design Technology, General (1-19-3)
DFTG 2680 COOP: Drafting & Design Technology (1-39-6)
Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component. Prerequisite: DFTG 2328, DFTG 2340.

ENGL 1301 (see English/Communications)

GISC 1301 Cartography and Geography in GIS & GPS (2-4-3)
Introduction to the principles of cartography and geography. Emphasis on global reference systems and the use of satellites for measurements and navigation.

GISC 1311 Introduction to Gis (2-4-3)
Introduction to basic concepts of vector GIS using several industry specific software programs including nomenclature of cartography and geography.

GISC 2320 Intermediate Geographic Info Sys (2-4-3)
This course focuses on the study of spatial data structures and the display, manipulation, and analysis of geographic information. Students will study the technical aspects involved in spatial data handling, analysis and modeling. Instruction will include theories and procedures associated with the implementation and management of GIS projects. A variety of GIS software packages will be used in the laboratory.

INDS 1300 Interior Design Drafting Applications (2-2-3)
Computer-aided drafting (CAD) as a tool for interior design, illustration, drafting, and design development.

MATH (see Math/Natural Sciences)

PSYC 2301 (see Business and Social/Behavioral Sciences)

SRVY 2348 Plane Surveying (2-4-3)
Surveying instruments, basic measuring procedures, vertical and horizontal control, and traverse closure.

Auto Collision Technology

ABDR 1207 Collision Repair Welding (1-4-2)
A study of collision repair welding and cutting procedures.

ABDR 1311 Vehicle Measurement and Damage Repair Procedures (2-4-3)
Introduction to damaged vehicle measurement and alignment systems.

ABDR 1331 Basic Refinishing (2-4-3)
An introduction to current refinishing products, shop safety, and equipment used in the automotive refinishing industry. Emphasis on surface preparation, masking techniques, and refinishing of trim and replacement parts.

ABDR 1349 Automotive Plastic and Sheet Molded Compound Repair (2-4-3)
A comprehensive course in repair of interior and exterior plastics, including the use of various types of adhesives.

ABDR 1419 Basic Metal Repair (2-6-4)
Covers metal principles and working techniques including proper tool usage and product application.

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 1442 Structural Analysis and Damage Repair II (2-6-4)
Continuation of general repair and replacement procedures for damaged structural parts and collision damage.

ABDR 1455 Non-Structural Metal Repair (2-6-4)
Demonstrate sheet metal repair skills using mechanical and hydraulic equipment. Emphasis on attachment devices used to straighten and align exterior body panels.

ABDR 1458 Intermediate Refinishing (2-6-4)
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.

ABDR 2257 Collision Repair Shop Management (1-2-2)
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 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 2353 Color Analysis & Paint Matching (2-4-3)
Advanced course in color theory, analysis, tinting, and advanced blending techniques for acceptable paint matching.

ABDR 2370 Collision Damage Analysis & Reporting Systems (2-4-3)
This course is a detailed study of manual and computerized systematic approaches for inspecting, checking, identifying, measuring and determining damage. A detailed study of preparing and interpreting computerized damage reports is part of this course.

ABDR 2380   COOP: Autobody Collision & Repair Technology/Technician (1-19-3)
ABDR 2680   COOP: Autobody Collision & Repair Technology/Technician (1-39-6)
Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component.

ABDR 2431 Structural Analysis & Damage Repair III (2-6-4)
Advanced concepts in the application of theories of auto body repair and replacement of major body units.

ABDR 2441 Major Collision Repair and Panel Replacement (2-6-4)
Instruction in preparation of vehicles for major repair processes. This course covers interpreting information from damage reports, planning repair sequences, selecting appropriate tools, and organizing removed parts for reinstallation.

ABDR 2449 Advanced Refinishing (2-6-4)
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.

ABDR 2451 Specialized Refinishing Techniques (2-6-4)
Advanced topics in specialty automotive refinishing. Emphasis on refinishing plastics, fiberglass, aluminum, and galvanized panels as well as custom graphics and current industry innovations.

ENGL 1301 (see English/Communications)

MATH 1314, MATH 1332 (see Math/Natural Sciences)

POFT 1301 (see English/Communications)

TECM 1301 (see Math/Natural Sciences)

Automotive Technology

AUMT 1201 Intro & Theory of Automotive Tech (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 1380 COOP: Automobile/Automotive Mechanics Technology/Technician (1-9-3)
AUMT 2680 COOP: Automobile/Automotive Mechanics Technology/Technician (1-39-6)
Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component.

AUMT 1407 Automotive Electrical Systems (2-6-4)
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 1410 Automotive Brake Systems (2-6-4)
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 1416 Auto Suspension and Steering (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 including lubrication systems and cooling systems. Emphasis on identification, inspection, measurements, and disassembly, repair, and reassembly of the engine. May be taught manufacturer specific.

AUMT 1445 Automotive Climate Control Systems (2-6-4)
Diagnosis and repair of manual/electronic climate control systems; includes the refrigeration cycle and EPA guidelines for refrigerant handling. May be taught manufacturer specific..

AUMT 2270 Automotive Technician Certification Standards (2-0-2)
A study of certification procedures and testing as offered by major automotive manufacturers and National Institute for Automotive Service Excellence. This testing is required by the automotive industry in order to become a certified automotive technician.

AUMT 2301 Automotive Management (3-0-3)
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 2413 Automotive Drive Train & 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.

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.

AUMT 2421 Automotive Electrical Lighting and Accessories (2-6-4)
Repair of automotive electrical subsystems, lighting, instrumentation, and accessories. Emphasis on accurate diagnosis and proper repair methods using various troubleshooting skills and techniques. May be taught manufacturer specific. Prerequisite: AUMT 1407.

AUMT 2425 Automatic Transmission/Transaxle (2-6-4)
A study of the operation, hydraulic 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.

AUMT 2434 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.

DEMR 2434 AdvDieselTune-up/Troubleshoot (2-6-4)
Advanced concepts and skills required for tune-up and troubleshooting procedures of diesel engines. Emphasis on the science of diagnostics with a common sense approach.

ENGL 1301 (see English/Communications)

MATH 1314 (see Math/Natural Sciences)

POFT 1301 (see English/Communications)

SPCH (see Speech Electives)

TECM 1301 (see Math/Natural Sciences)

Aviation Maintenance Technology

AERM 1203 Shop Practices (1-4-2)
An introduction to shop safety, the correct use of hand tools, equipment and precision measurement, identification of aircraft hardware, and the fabrication of fluid lines and tubing. Emphasis on procedures for testing, heat treating, and inspection of aircraft structures.

AERM 1205 Weight & Balance (1-2-2)
An introduction to Federal Aviation Administration (FAA) required subjects relating to the weighing of aircraft, the performance of weight and balance calculations, and appropriate maintenance record entries.

AERM 1208 Federal Aviation Regulations (1-4-2)
A course in the use and understanding of the Federal Aviation Administration (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 and safety procedures, aircraft movement, securing and operations of aircraft, external power equipment, aircraft cleaning, and corrosion control.

AERM 1240 Aircraft Propellers (1-3-2)
Fundamentals of propeller design, function, and construction. Skill development in inspection, servicing, and repair of fixed-pitch, constant-speed, and feathering propellers and governing systems.

Instruction in removal, balancing, and installation of propellers and fundamentals of safety are also addressed.

AERM 1241 Wood, Fabric & Finishes (1-3-2)
A course in the use and care of various covering materials, finishes, and wood structures including approved methods and procedures. Safety also addressed.

AERM 1243 Instruments & Navigation/Communication (1-2-2)
A study of aircraft instruments and electronic flight instrument systems including testing and installing instruments; inspecting, checking, and troubleshooting navigation and communication systems; and inspecting and repairing antennas and electronic equipment installations.

AERM 1247 Airframe Auxiliary Systems (1-4-2)
A comprehensive study of airframe auxiliary systems including cabin atmospheric control systems, ice and rain control systems for aircraft and engines, and fire detection and protection systems. Fundamentals of safety procedures also addressed.

AERM 1253 Aircraft Welding (1-3-2)
Skill development in repair procedures for steel, magnesium, brass, and aluminum materials. Includes the selection and application of appropriate methods of welding, brazing, and soldering. Fundamentals of safety procedures also addressed.

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 electrial diagrams to include solid state devices and logic functions. Fundamentals of electrical safety also addressed.

AERM 1315 Aviation Science (2-4-3)
Fundamentals of mathematics, physics, and drawing as they apply to aircraft principles and operations as required by the Federal Aviation Administration (FAA) for airframe and powerplant mechanics.

AERM 1344 Aircraft Reciprocating Engines (2-4-3)
Reciprocating engines, their development, operating principles, and theory. Includes engine instruments, lubrication, and exhaust systems. Also addresses fundamentals of safety.

AERM 1345 Airframe Electrical Systems (1-6-3)
A study of airframe electrical systems including installation, removal, disassembly, and repair of electrical components and related wiring. Fundamentals of electrical safety also addressed. Prerequisite: AERM 1314.

AERM 1349 Hydraulic, Pneumatic, and Fuel Systems (2-4-3)
Skill development in inspecting, servicing, and maintaining aircraft fluid systems including hydraulics, pneumatics, and fuel. Application of basic concepts through detailed maintenance procedures. Fundamentals of safety procedures also addressed.

AERM 1350 Landing Gear Systems (2-3-3)
General principles of inspection, servicing, overhaul, and repair of fixed and retractable landing gear systems. Includes coverage of systems, components, operation, and fundamentals of safety procedures.

AERM 1351 Aircraft Turbine Engine Theory (2-3-3)
General principles 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.

AERM 1352 Aircraft Sheet Metal (1-8-3)
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.

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, carbureters, induction systems, heat exchangers, and cooling systems. Fundamentals of safety procedures will also be addressed.

AERM 1456 Aircraft Powerplant Electrical (2-6-4)
General principles of theory, operation, and maintenance of powerplant electrical systems including ignition, starting, and fire protection systems. Fundamentals of safety procedures will also be addressed. Prerequisite: AERM 1314.

AERM 2231 Airframe Inspection (1-3-2)
In depth coverage of methods and procedures to perform airframe conformity and air worthiness inspections (including one hundred hour inspections) in accordance with Federal Aviation Regulations and manufacturer's service information. Safety procedures will also be addressed.

AERM 2233 Assembly and Rigging (1-4-2)
A comprehensive study of the assembly and rigging of fixed and rotary-wing aircraft including structural alignment, balancing and rigging of control systems and assembly of aircraft components. Fundamentals of safety procedures are also addressed.

AERM 2341 Powerplant & Auxiliary Power Units (2-3-3)
Advanced concepts of auxiliary power unit (APU) and powerplant systems and components. Safety procedures will also be addressed.

AERM 2351 Aircraft Turbine Engine Overhaul (2-4-3)
A comprehensive study in inspection, disassembly, reassembly, and replacement of gas turbine engines, sections, and components including operational troubleshooting, analysis, and safety.

AERM 2352 Aircraft Powerplant Inspection (2-4-3)
In-depth coverage of methods and procedures to perform powerplant conformity and airworthiness inspections (including one hundred hour inspections) in accordance with Federal Aviation Regulations and manufacturer's information. Safety procedures will also be addressed.

AERM 2447 Aircraft Reciprocating Engine Overhaul (2-6-4)
A comprehensive study of reciprocating engine overhaul including measurement and inspection procedures. Instruction in removal and installation, inspections, checks, servicing, and repair of engines. Safety procedures will be addressed.

ENGL 1301 (see English/Communications)

MATH 1314, MATH 1332 (see Math/Natural Sciences)

Biology

ENGL 1301, ENGL 1302 (see English/Communications)

BIOL (see Math/Natural Sciences)

CHEM (see Math/Natural Sciences)

GOVT 2305, GOVT 2306 (see Business and Social/Behavioral Sciences)

HIST 1301, HIST 1302 (see Business and Social/Behavioral Sciences)

MATH 1314, MATH 1332 (see Math/Natural Sciences)

SPAN 1311 (see Spanish)

Biomedical Equipment Technology

BIOM 1201 Biomedical Equipment Technology (1-2-2)
Introduction to current biomedical job responsibilities, salaries, and classifications in the health care industry.

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. Prerequisites: CETT 1305 or IEIR 1304.

BIOM 1350 Diagnostic Ultrasound Imaging System
Diagnostic ultrasound imaging systems. Covers basic systems troubleshooting and problem solving.

BIOM 1355 Medical Electronic Application (2-4-3)
Presentation of sensors, transducers, and supporting circuits used in medical instrumentation devices. Prerequisites: CETT 1305 or IEIR 1304.

BIOM 1391 Special Topics in Biomedical Engineering-Related Technology/Technician (2-4-3)
Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. This course was designed to be repeated multiple times to improve student proficiency.

BIOM 2288 Internship-Biomedical Technology (0-10-2)
A work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts. A learning plan is developed by the college and the employer.

BIOM 2301 Safety in Health Care Facilities (2-4-3)
Study of codes, standards and management principles related to biomedical instrumentation. Emphasizes application of safety test equipment, preventive maintenance procedures, and documentation of work performed. Prerequisites: CETT 1305 or IEIR 1304.

BIOM 2311 General Medical Equipment I (2-4-3)
A study of theory, application, and principles of operation of instruments commonly used in a medical laboratory.

BIOM 2315 Physiological Instrument I (2-4-3)
Theory of operation, circuit analysis, and troubleshooting physiological instruments.

BIOM 2319 Fundamentals of X-Ray and Medical Imaging Systems (2-3-3)
Radiation theory and safety hazards, fundamental circuits, and application of X-ray systems including circuit analysis and troubleshooting.

BIOM 2331 Biomedical Clinical Instrumentation (2-4-3)
A study of theory, application, and principles of operation of instruments commonly used in a medical laboratory.

BIOM 2339 Physiological Instruments II (2-4-3)
Graphic display recording devices. Includes defibrillators and multi-purpose diagnostic equipment. Prerequisites: BIOM 2335

BIOM 2343 General Medical Equipment II (2-4-3)
Theory and principles of operation of a variety of basic electro-mechanical equipment with emphasis on repair and service of actual medical equipment. Prerequisites: BIOM 2341.

BIOM 2380 COOP - Biomedical Technology (1-19-3)
Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component. Prerequisite: BIOM 2201.

CETT 1303 (see Mechatronics Technology)

CETT 1305 (see Mechatronics Technology)

CETT 1325 (see Mechatronics Technology)

EECT 1204 Electronic Soldering (1-4-2)
Theory and use of tools and equipment for electronic soldering techniques.

ELMT 1305 (see Mechatronics Technology)

ENGL 1301 (see English/Communications)

INMT 1317 (see Mechatronics Technology)

ITNW 1325 (see Computer Networking & Security Technology)

MATH (see Math/Natural Sciences)

PSYC 2301 (see Business and Social/Behavioral Sciences)

RBTC 1305 (see Mechatronics Technology)

Building Construction Science

CNBT 1300 Residential and Light Commercial Blueprint Reading (2-4-3)
Introductory blueprint reading for residential and light commercial construction.

CNBT 1311 Construction Methods and Materials I (2-4-3)
Introduction to construction materials and methods and their applications.

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)
Fundamentals of estimating materials and labor costs in construction. Prerequisite: CNBT 1305.

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 2315 Construction Specifications and Contracts (2-4-3)
Overview of the legal aspects of written construction documents.

CNBT 2317 Green Building (2-2-3)
Methods and materials used for buildings that conserve energy, water, and human resources.

CNBT 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.

CNBT 2380 COOP: Construction Engineering Technology/Technician (1-19-3)
CNBT 2680 COOP: Construction Engineering Technology/Technician (1-39-6)
Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component. Prerequisites: CNBT 1549, CRPT 1315, CRPT 1323.

DFTG 1313 Drafting for Specific Occupations (3-0-3)
Discussion of theory and practice with drafting methods and the terminology required to prepare working drawings in specific or various occupational fields.

ENGL 1301 (see English/Communications)

MATH 1314, MATH 1332 (see Math/Natural Sciences)

OSHT 1305 OSHA Regulations-Construction Industry (2-2-3)
A study of Occupational Safety and Health Administration (OSHA) regulations pertinent to the construction industry.

POFT 1301 (see English/Communications)

SPCH (see Speech Electives)

TECM 1301 (see Math/Natural Sciences)

Business and Social/Behavioral Sciences

ACNT 1325 Principles of Accounting I (2-4-3)
A study of accounting concepts and their application in transaction analysis and financial statement preparation and asset and equity accounting in proprietorships and corporations. Emphasis on accounting cycle for service and merchandising enterprises.

BMGT 1327 Principles of Management (2-2-3)
Concepts, terminology, principles, theories, and issues in the field of management.

ECON 2301 Principles of Macroeconomics (3-0-3)
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 (3-0-3)
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.

GEOG 1303 World Regional Geography
Study of major world regions with emphasis on prevailing conditions and developments, including emerging conditions and trends, and the awareness of diversity of ideas and practices found in those regions. Course content may include one or more regions.

GOVT 2305 Federal Government (Federal constitution & topics) (3-0-3)
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 (Texas constitution & topics) (3-0-3)
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 1301 United States History I (3-0-3)
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 (3-0-3)
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
A survey of the political, social, cultural, intellectual, diplomatic, technological, and economic development of civilizations in Africa, Asia, Europe, and the New World to 1500. Particular attention is given to intersections between cultures along with a comparative analysis of their unique historical trajectories.

PSYC 2301 General Psychology (3-0-3)
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 (3-0-3)
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 1301 Introductory Sociology (3-0-3)
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 (3-0-3)
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 (3-0-3)
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.

LAWT 1301 Copyright & 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

Business Management Technology
Office Management, Operations Management

ACCT 2301, ACCT 2302 (see Transferable Academic Courses)

BCIS 1305 Business Computer Applications (3-0-3)
Computer terminology, hardware, software, operating systems, and information systems relating to the business environment. The main focus of this course is on business applications of software, including word processing, spreadsheets, databases, presentation graphics, and business-oriented utilization of the Internet.

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, 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 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 (see Business and Social/Behavioral Sciences)

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 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.

BUSI 1301, BUSI 2301 (see Transferable Academic Courses)

ECON 2301, ECON 2302 (see Business and Social/Behavioral Sciences)

ENGL 1301 (see English/Communications)

HRPO 2301 Human Resource Management (2-4-3)
Behavioral and legal approaches to the management of human resources in organizations.

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 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 software.

LAWT 1301 (see Business and Social/Behavioral Sciences)

**LMGT 1325 Warehouse and Distribution
Center Management (2-4-3**
Emphasis on physical distribution and total supply chain management. Includes warehouse operations management, hardware and software operations, bar codes, organizational effectiveness, just-in-time manufacturing, continuous replenishment, and third party.

MATH 1314, MATH 1332 (see Math/Natural Sciences)

MRKG 1301 Customer Relationship Management (2-2-3)
General principles of customer service including skills, knowledge, attitudes, and behaviors.

POFI 1349 Spreadsheets (2-4-3)
Spreadsheet software for business applications.

POFT 1301 (see English/Communications)

POFT 1319 Records & Info Management I (2-4-3)
Introduction to basic records information management filing systems including manual and electronic filing.

SPCH 1321 (see Speech Electives)

Chemical-Environmental Technology

CHEM (see Math/Natural Sciences)

CTEC 1205 Chemical Calculations I (1-2-2)
Calculations related to general chemistry emphasizing industry related laboratory skills and competencies.

CTEC 1206 Chemical Calculations II (1-2-2)
Calculations related to general chemistry emphasizing industry related laboratory skills and competencies.

CTEC 1380 COOP: Chemical Technology Technician (1-19-3)
CTEC 1680 COOP: Chemical Technology Technician (1-39-6)
Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component.

CTEC 1441 Applied Instrumental Analysis I (2-6-4)
Principles of instrumental chemical analysis that includes chromatography, spectroscopy, and electroanalytical chemistry.

CTEC 2250 Unit Operations II (1-4-2)
A continuation of Unit Operations I. This course emphasizes dynamic computer simulations.

CTEC 2333 Comprehensive Studies in Chemical Technology (1-6-3)
Course requiring a special laboratory research project.

CTEC 2441 Polymers I (2-6-4)
Study of the concepts of polymer science. Topics include classification, structure, properties, synthesis, characterization, and industrial applications.

CTEC 2443 Polymers II (2-6-4)
Continuation of Polymers I with emphasis on polymeric materials.

CTEC 2445 Unit Operations (2-6-4)
Instruction in the principles of chemical engineering and process equipment. Emphasis on scale-up from laboratory bench to pilot plant.

ENGL 1301 (see English/Communications)

EPCT 1203 24 Hr Emergency Response Training (1-3-2)
Minimum certification requirements of a hazardous material Minimum certification requirements of a hazardous material emergency response technician, hazardous materials specialist, or on-site incident commander as found in the Code of Federal Regulations: 29CFR-1910.120.

EPCT 1211 Intro to Environmental Science (1-3-2)
An overview of environmental science and current global concerns, and a brief history of environmental ethics, resource use, and conservation. Discussion of fundamental principles of resource economics and environmental health.

EPCT 1251 Quality Assurance & Quality Control (1-4-2)
Quality assurance/quality control procedures used to confirm viability and confidence of sample results or procedures. Emphasis on documentation, blank and check sample (spike) preparation, and control tables. Prerequisite: EPCT 2335.

EPCT 1344 Environmental Sampling/Analysis (2-4-3)
Sampling protocol, procedures, quality control, preservation technology, and field analysis. Emphasis on analysis commonly performed by the field technician. Prerequisite: EPCT 1211.

EPCT 2335 Advanced Environmental Instrument Analysis (1-6-3)
Regulations and standards in the analysis of samples using specific analytical instruments and their procedures. Emphasis on instrument calibrator sample preparation, evaluation, and reporting of analytical results. Prerequisite: CTEC 1441.

MATH 1314 (see Math/Natural Sciences)

POFT 1301 (see English/Communications)

PSYC 2301 (see Business and Social/Behavioral Sciences)

SCIT 1414 Applied General Chemistry (2-6-4)
1094052276 Study of the general concepts of chemistry with an emphasis on industrial applications. Prerequisite: DMTH 0100 or Math placement test equivalent.

SCIT 1415 Applied General Chemistry II (2-6-4)
A continuation of Applied General Chemistry I with emphasis on solids, liquids, gases, solutions, energy changes, reaction rates, and chemical equilibrium. Prerequisite: SCIT 1414.

SCIT 1543 AppliedAnalytical Chemistry I (3-6-5)
Instruction in gravimetric and titrimetric analysis of practical samples by classical and standard methods. Prerequisite: SCIT 1415.

SCIT 2401 Applied Organic Chemistry I (3-4-4)
An overview of the classification, characteristics, and structure of carbon compounds and an introduction to basic organic laboratory techniques. Prerequisite: SCIT 1415.

SPCH (see Speech Electives)

TECM 1301 (see Math/Natural Sciences)

Computer Networking and Security Technology

CPMT 1304 (See Computer Systems Management Technology).

ENGL 1301 (see English/Communications)

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 Technology (2-4-3)
Instruction in networking technologies and their implementation. Topics include the OSI reference model, network protocols, transmission media, and networking hardware and software.

ITNW 1354 Implementing & Supporting Servers (2-4-3)
Development of skills necessary to implement, administer, and troubleshoot information systems that incorporate servers in a networked computing environment.

ITNW 1358 Network+
Assists individuals in preparing for the Computing Technology Industry Association (CompTIA) Network+ certification exam and career as a network professional.

ITNW 2305 Network Administration (2-4-3)
Topics include network components, user accounts and groups, network file systems, file system security, and network printing.

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.

ITNW 2321 Networking with TCP/IP (2-4-3)
Set up, configure, use, and support Transmission Control Protocol/Internet Protocol (TCP/IP) on networking operating systems.

ITNW 2335 Network Troubleshooting & 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.

ITNW 2350 Enterprise Network (2-4-3)
A case study in Convergence Technologies requiring a network engineer to study a problem and design a network solution for an enterprise network.

ITNW 2354 Internet/Intranet Server (2-4-3)
Designing, installing, configuring, maintaining, and managing an Internet server.

ITNW 2359 Web Server Support & Maintenance (2-4-3)
Instruction in the installation, configuration, and implementation of web servers.

ITSY 1342 Information Technology Security (2-4-3)
Instruction in security for network hardware, software, and data, including physical security; backup procedures; relevant tools; encryption; and protection from viruses.

ITSY 2301 Firewalls and Network Security (2-4-3)
Identify elements of firewall design, types of security threats and responses to security attacks. Use best practices to design, implement, and monitor a network security plan. Examine security incident postmortem reporting and ongoing network security activities. Prerequisite: ITNW 2321, ITSY 1342

ITSY 2330 Intrusion Detection (2-4-3)
Computer information systems security monitoring, intrusion detection, and crisis management. Includes alarm management, signature configuration, sensor configuration, and troubleshooting components. Emphasizes identifying, resolving, and documenting network crises and activating the response team.

ITSY 2359 Security Assessment & Auditing (2-4-3)
Capstone experience for the security curriculum. Synthesizes technical material covered in prior courses to monitor, audit, analyze, and revise computer and network security systems to ensure appropriate levels of protection are in place. Prerequisite: ITSY 2342

MATH 1314 (see Math/Natural Sciences)

SPCH (see Speech Electives)

TECM 1303 (see Math/Natural Sciences)

Computer Systems Management Technology

CETT 1307 Fundamentals of Electronics
Applies concepts of electricity, electronics, and digital fundamentals; supports programs requiring a general knowledge of electronics.

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 & 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. Prerequisite: TECM 1303 or MATH 1314.

CPMT 1311 Introduction to Computer Maintenance (2-4-3)
Introduction to the installation, configuration, and maintenance of a microcomputer system.

CPMT 1345 Computer Systems Maintenance (2-4-3)
A study of the components within a computer system. Development of testing and troubleshooting skills. Prerequisite: CPMT 1311.

CPMT 1347 Computer System Peripherals (2-4-3)
Theory and practices involved in computer peripherals, operation and maintenance techniques, and specialized test equipment.

CPMT 2302 Home Technology Integration (2-4-3)
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.

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.

CPMT 2350 Industry Certification Preparation (2-4-3)
Overview of the objectives for industry specific certification exam(s).

ENGL 1301 (see English/Communications)

GAME 1301 (see See Game & Simulation Programming)

ITNW 1325 (see Computer Networking & Security Technology)

ITNW 1354 (see Computer Networking & Security Technology)

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.

ITSC 1321 Intermediate PC Operating Systems (2-4-3)
Continued study in advanced installation and configuration troubleshooting, advanced file management, memory and storage management. Update peripheral device drivers, and use of utilities to increase system performance. Prerequisite: ITSC 1305.

ITSC 2339 PC Help Desk (2-4-3)
Diagnosis and solution of user hardware and software related problems with on-the-job and / or simulated projects in either a Help Desk lab or in short-term assignments for local business. Prerequisites: CPMT 1303.

MATH 1314 (see Math/Natural Sciences)

SPCH (see Speech Electives)

TECM 1303 (see Math/Natural Sciences)

Culinary Arts

BIOL 1108, BIOL 1308 (see Math/Natural Sciences)

BMGT 1327 (see Business and Social/Behavioral Sciences)

CHEF 1205 Sanitation and Safety (1-2-2)
A study of personal cleanliness; sanitary practices in food preparation; causes, investigation, control of illness caused by food contamination (Hazard Analysis Critical Control Points); and work place safety standards.

CHEF 1301 Basic Food Preparation (1-8-3)
A study of the fundamental principles of food preparation and cookery to include Brigade System, cooking techniques, material handling, heat transfer, sanitation, safety, nutrition, and professionalism.

CHEF 1314 A la Carte Cooking (2-4-3)
A course in a la carte or "cooking to order" concepts. Topics include menu and recipe interpretation and conversion, organization of work station, employment of appropriate cooking methods, plating, and saucing principles. Prerequisites: CHEF 2301.

CHEF 2301 Intermediate Food Preparation (1-8-3)
Continuation of previous food preparation course. Topics include the concept of pre-cooked food items, as well as scratch preparation. Covers full range of food preparation techniques.

TSTC Texas State Technical College

CHEF 2341 Advance Culinary Competition (2-4-3)
Skill development for culinary competition by offering advanced experience in salon presentations as well as hot food competition.

CHEF 2480 COOP- Culinary Arts/Chef Training (1-29-4)
CHEF 2680 COOP-Culinary Arts/Chef Training (1-39-6)
Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component.

ENGL 1301 (see English/Communications)

FDNS 1305 Nutrition (3-0-3)
A study of nutrients including functions, food sources, digestion, absorption and metabolism with application to normal and preventive nutrition needs. Includes nutrient intake analysis, energy expenditure evaluation, and diet planning.

IFWA 1205 Food Service Equipment & Planning (1-3-2)
A study of various types of food service equipment and the planning of equipment layout for product flow and efficient operation.

IFWA 1219   Meat Identifying and Processing (1-4-2)
A study of the identification and characteristics of wholesale and retail cuts of meat; hotel, restaurant, and institutional cuts of meat; U.S.D.A. quality grades; quality control; and the Federal Meat Inspection Regulation.

IFWA 2341 Specialized Food Preparation (1-6-3)
A study of ethnic/regional cooking with actual preparation of local favorite dishes and common international favorites. Prerequisites: CHEF 2301.

IFWA 2437 Special Projects & Field Work (2-6-4)
Assignment to real or simulated projects in campus facilities or off campus locations which require the application of all knowledge and skills learned throughout the program. Prerequisites CHEF 2301.

MATH 1314 (see Math/Natural Sciences)

POFT 1301 (see English/Communications)

POFT 1321 (see Math/Natural Sciences)

PSTR 1401 Fundamentals of Baking (2-6-4)
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.

RSTO 1201 Beverage Management (1-4-2)
A study of the beverage service of the hospitality industry including spirits, wines, beers, and non-alcoholic beverages. Topics include purchasing, resource control, legistation, marketing, physical plant requirement, staffing, service, and the selection of wines to enhance foods.

RSTO 1204 Dining Room Service (1-4-2)
Introduces the principles, concepts, and systems of professional table service. Topics include dining room organization, scheduling, and management of food service personnel.

RSTO 1221 Menu Management (1-4-2)
Introduces the principles, concepts, and systems of professional table service. Topics include dining room organization, scheduling, and management of food service personnel. Prerequisites: CHEF 2301.

RSTO 1313 Hospitality Supervision (2-2-3)
Fundamentals of recruiting, selection, and training of food service and hospitality personnel. Topics include job descriptions, schedules, work improvement, motivation, and applicable personnel laws and regulations. Emphasis on leadership development. Prerequisites: RSTO 2301.

RSTO 1325 Purchasing for Hospitality Operations (2-2-3)
Study of purchasing and inventory management of foods and other supplies to include development of purchase specifications, determination of order quantities, formal and informal price comparisons, proper receiving procedures, storage management, and issue procedures. Emphasis on product cost analysis, yields, pricing formulas, controls, and record keeping at each stage of the purchasing cycle.

RSTO 2301 Principles of Food & Beverage Controls (2-2-3)
A study of financial principles and controls of food service operation including review of operation including review of operation policies and procedures. Topics include financial budgeting and cost analysis emphasizing food and beverage labor costs, operational analysis, and international and regulatory reporting procedures.

RSTO 2307 Catering (1-4-3)
Principles, techniques, and applications for both on-premises, off-premises, and group marketing of catering operations including food preparation, holding, and transporting techniques. Prerequisite: CHEF 2301, RSTO 1221, RSTO 2301.

SOCI 1301 (see Business and Social/Behavioral Sciences)

Dental Assistant

DNTA 1213 Emergency Management (1-2-2)
Application of CPR procedures and related dental medical emergencies. Maintenance of medical emergency kit, and recording of vital signs.

DNTA 1245 Preventive Dentistry (1-3-2)
The study and prevention of dental diseases and community dental health.

DNTA 1305 Dental Radiology I (2-3-3)
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 (2-2-3)
The study of business office procedures, including telephone management, appointment control, receipt of payment for dental services, completion of third-party reimbursement forms, supply inventory maintenance, data entry for charges and payments, recare management (manage recall systems),federal and state guidelines regarding health care providers, and operating basic business equipment. Prerequisite: DNTA 1353

DNTA 1415 Chairside Assisting (2-4-4)
An introduction to pre-clinical chairside assisting procedures, instrumentation, infection and hazard control protocol, equipment safety and maintenance.

DNTA 1453 Dental Assisting Applications (2-4-4)
Comprehensive procedures and applications for the general and specialty areas of dentistry. Prerequisite: DNTA 1315.

DNTA 1660 Clinical Dental Assistant (0-21-6)
A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional.

Dental Hygiene

BIOL (see Math/Natural Sciences)

CHEM 1411 (see Math/Natural Sciences)

DHYG 1207 General & Dental Nutrition (2-0-2)
General nutrition and nutritional biochemistry emphasizing the effect nutrition has on oral health. Prerequisite: DHYG 2360.

DHYG 1211 Periodontology (1-2-2)
Normal and diseased periodontium including the structural, functional, and environmental factors. Emphasis on etiology, pathology, treatment modalities, and therapeutic and preventive periodontics in a contemporary practice setting. Prerequisite: DHYG 1331.

DHYG 1215 Community Dentistry (1-4-2)
The principles and concepts of community public health and dental health education emphasizing community assessment, educational planning, implementation, and evaluation including methods and materials used in teaching dental health education in various community settings.

DHYG 1227 Preventive Dental Hygiene Care (1-3-2)
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. Prerequisite: CHEM 1411.

DHYG 1235 Pharmacology for Dental Hygienist (1-2-2)
Classification of drugs and their uses, actions, interactions, side effects, contraindications, with emphasis on dental applications.

DHYG 1239 General & Oral Pathology (1-2-2)
Disturbances in human body development, diseases of the body, and disease prevention measures with emphasis on the oral cavity and associated structures.

DHYG 1260 Clinical-Dental Hygiene/Hygienist I (0-10-2)
DHYG 1261 Clinical-Dental Hygiene/Hygienist II (0-11-3)
A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional.

DHYG 1301 Orofacial Anatomy, Histology & Embryology (2-4-3)
The histology and embryology of oral tissues, gross anatomy of the head and neck, tooth morphology, and individual tooth identification. Prerequisite: CHEM 1411.

DHYG 1304 Dental Radiology (2-3-3)
Fundamentals of oral radiography, including techniques, interpretation, quality assurance,and ethics.

DHYG 1319 Dental Materials (2-3-3)
Physical and chemical properties of dental materials including the application and manipulation of the various materials used in dentistry.

DHYG 1331 Preclinical Dental Hygiene (1-6-3)
Foundational knowledge for performing clinical skills on patients with emphasis on procedures and rationale for performing dental hygiene care. Introduction to ethical principles as they apply to dental hygiene care. Prerequisite: CHEM 1411.

DHYG 2153 Dental Hygiene Practice (1-0-1)
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. Prerequisite: DHYG 2360.

DHYG 2301 Contemporary Dental Hygiene Care I (2-2-3)
Dental hygiene care for the medically or dentally compromised patient including supplemental instrumentation techniques.

DHYG 2360 Clinical- Dental Hygiene/Hygienist III (0-14-3)
DHYG 2361 Clinical- Dental Hygiene/Hygienist IV (0-14-3)
A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. Prerequisite: DHYG 2360

ENGL 1301 (see English/Communications)

SOCI 1301 (see Business and Social/Behavioral Sciences)

PSYC 2301 (see Business and Social/Behavioral Sciences)

SPCH (see Speech Electives)

Dental Laboratory Technology

CHEM (see Math/Natural Sciences)

DLBT 1205 Dental Materials (1-4-2)
Study of dental materials and their uses in the fabrication of all types of dental protheses.

DLBT 1209 Removable Partial Denture Tech I (1-4-2)
Introduction to removal partial dentures. Topics include temporary partials and treatment partials with wrought clasps.

DLBT 1213 Complete Denture Techniques I (1-4-2)
Introduction to the fabrication of complete dentures. Topics include edentulous arch anatomical lanmarks, edentulous cast preparation, impressions, trays, baseplates, occlusal rims, and artificial tooth arrangement.

DLBT 1217 Fixed Restorative Techniques I (1-4-2)
Introduction to fixed restorative techniques. Topics include types of casts with removable dies and fabrication of wax patterns.

DLBT 1291 Special Topics in Dental Laboratory Technician (1-4-2)
Topics address recently identified current events, skills, knowledges, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. This course was designed to be repeated multiple times to improve student proficiency.

DLBT 1301 Dental Anatomy and Tooth Morphology (2-3-3)
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 2204 Removable Partial Denture Technique II (1-4-2)
Study of the components of removable partial dentures and the methods of surveying and designing and fabricating removable partial dentures. Prerequisite: DLBT 1209.

DLBT 2207 Complete Denture Techniques II (1-4-2)
Comprehensive study and practice of the procedures required to construct complete maxillary and mandibular dentures from the final impression to the finished appliance. Prerequisite: DLBT 1213.

DLBT 2211 Fixed Restorative Techniques II (1-4-2)
Continuation of construction of wax patterns for single unit crowns by spruing, investing, casting, and polishing the metal crown. Prerequisite: DLBT 1217.

DLBT 2215 Removable Partial Dentures Techniques III (1-3-2)
Comprehensive study of and practice in the phases of removable partial denture construction with emphasis on complex dental prostheses. Prerequisite: DLBT 2204.

DLBT 2217 Complete Denture Techniques III (1-3-2)
Introduction to the semi-adjustable articulator and techniques required to repair, reline, and rebase complete dentures. Emphasis on the completion of balanced set-ups. Prerequisite: DLBT 2207.

DLBT 2235 Fixed Restorative Techniques IV (1-4-2)
Construction of multiple-unit bridges with emphasis on rigid and non-rigid connectors. Prerequisite: DLBT 2321.

DLBT 2241 Dental Ceramics I (1-3-2)
Introduction to dental ceramic procedures with emphasis on metal substructures and procelain application. Topics include individual and bridge copings, waxing, casting, and preparation for porcelain adaptation.

DLBT 2242 Dental Ceramics II (1-4-2)
Construction of single and multiple-unit ceramic teeth including characterization and shading of teeth. Emphasis on anterior teeth. Prerequisite: DLBT 224.

DLBT 2244 Intro to Orthodontics Procedures (1-3-2)
Introduction to orthodontic dental laboratory procedures. Emphasis on wire bending, soldering, and fabrication of removable acrylic resin appliances.

DLBT 2321 Fixed Restorative Techniques III (2-3-3)
Continued refinements in crown and bridge fabrication for multiple-unit fixed-partial dentures with metal pontics. Experience in the fabrication and repair of single and multiple-unit fixed-partial dentures. Prerequisite: DLBT 2211.

DLBT 2333 Complete Denture Techniques IV (2-3-3)
Continued instruction in the fabrication of complete dentures. Emphasis on the semi-adjustable articulator using various occlusal theories and different forms of posterior teeth. Set-up modifications for Class II and Class III relationships will be discussed

DLBT 2430 Special Project in Dental Lab Procedures (2-8-4)
Culmination of instruction in practical laboratory procedures with the emphasis on specialized areas of choice.

ENGL 1301 (see English/Communications)

MATH 1314 (see Math/Natural Sciences)

POFT 1301 (see English/Communications)

PSYC 2301 (see Business and Social/Behavioral Sciences)

SPCH (see Speech Electives)

TECM 1303 (see Math/Natural Sciences)

Developmental Education Courses

DMTH 0050 Basic Mathematics (3-1-3)
A study of fundamental mathematics involving operations on whole numbers, fractions, decimals and percents, data analysis, real numbers, algebraic expressions, and elementary equations.

DMTH 0100 Introductory Algebra (3-1-3)
A study of geometry and elementary algebra involving real numbers, algebraic expressions, equations, inequalities, graphs, slopes, and operations with polynomials. Prerequisite: Grade of C or better in DMTH 0050 or Math placement test equivalent.

DMTH 0200 Intermediate Algebra (3-1-3)
A study of intermediate algebra that includes polynomial factoring, rA study of intermediate algebra that includes polynomial factoring, rational expressions and equations, systems of equations, radical expressions and equations, and quadratic equations. Prerequisite: Grade of C or better in DMTH 0100 or Math placement test equivalent.

INRW 0100 Integrated Reading Skills I and Writing Skills I
This is an integrated reading and writing course to prepare students for the INRW 200. The focus of this course will be the 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 Skills II and Writing Skills II
This is a combined lecture/lab, performance-based course designed to develop students' critical reading and academic writing skills. The focus of the course will be 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 integrates preparation in basic academic reading skills with basic skills in writing a variety of academic essays. This is a course with a required lab. The course fulfills TSI requirements for reading and writing.

MIRW 0150 Modular Integrated Reading and Writing
This is an integrated reading and writing multi-level emporium model performance-based course designed to develop students' critical reading and academic writing skills. The focus of the course will be 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 integrates preparation in basic academic reading skills with basic skills in writing a variety of academic essays. The course fulfills TSI requirements for reading and writing at differing levels.

NCBM 0050 Mathematics Lab (0-2-1)
This course is designed for students to participate in remedial math studies on an individual basis. Course content is customized to each student's specific deficiencies in math. Semester credit hours vary depending on student's specific needs. Course may be repeated for credit. The last digit of the course number indicates the semester credit hours. When appropriate, and with developmental departmental approval, this course may substitute for a course on the student's TSI plan. Prerequisite: Instructor approval.

NCBR 0050 Reading Lab (0-2-1)
This course is designed for students to participate in remedial reading studies on an individual basis. Course content is customized to each student's specific deficiencies in reading. Semester credit hours vary depending on students' specific needs. Course may be repeated for credit. The last digit of the course number indicates the semester credit hours. When appropriate, and with developmental department approval, this course may substitute for a course of the student's TSI plan. Prerequisite: Instructor approval.

NCBW 0050 Writing Lab (0-2-1)
This course is designed for students to participate in remedial writing studies on an individual basis. Course content is customized to each student's specific deficiencies in writing. Semester credit hours vary depending on students' specific needs. Course may be repeated for credit. The last digit of the course number indicates the semester credit hours. When appropriate, and with developmental department approval, this course may substitute for a course on the student's TSI plan. Prerequisite: Instructor's approval

READ 0050 Basic Reading Skills (3-1-3)
This course 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.

WRIT 0050 Basic Writing Skills (3-1-3)
Development of fundamental writing skills such as idea generation, organization, style, utilization of standard English, and revision. This course provides instruction in writing standard English. The emphasis is on vocabulary, application of grammar, spelling, standard English usage, and organization of ideas. Individual and group tutoring, counseling, and computer-assisted learning are available.

Digital Media Design Technology

ARTC 1302 Digital Imaging I (2-4-3)
Digital imaging using raster image editing and/or image creation software: scanning, resolution, file formats, output devices, color systems, and image-acquisitions.

ARTC 1305 Basic Graphic Design (2-4-3)
Graphic design with emphasis on the visual communication design process. Topics include basic terminology and graphic design principles.

ARTC 1313 Digital Publishing I (2-4-3)
The fundamentals of using digital layout as a primary publishing tool and the basic concepts and terminology associated with typography and page layout. Prerequisites: ARTC 1302.

ARTC 2305 Digital Imaging II (2-4-3)
General principles of digital image processing and electronic painting. Emphasis on bitmapped or raster-based image marking and the creative aspects of electronic illustration for commercial and fine art applications.

ARTC 2313 Digital Publishing II (2-4-3)
Layout procedures from thumbnails and roughs to final comprehensive and printing; emphasis on design principles for the creation of advertising and publishing materials, and techniques for efficient planning and documenting projects. Prerequisites: ARTC 1313.

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.

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.

ARTV 1341 3-D Animation I (2-4-3)
Three-dimensional (3-D) modeling and rendering techniques including lighting, staging, camera, and special effects. Emphasizes 3-D modeling building blocks using primitives to create simple and complex objects.

ARTV 1343 Digital Sound (2-4-3)
Digitizing sound and incorporating it into multimedia or web titles for various delivery systems. Emphasizes compression issues, sampling, synchronizing, and resource management.

ARTV 1351 Digital Video (2-4-3)
Producing and editing video and sound for multimedia or web productions. Emphasizes capture, editing, and outputting of video using a desktop digital video workstation.

ARTV 2341 Advanced Digital Video (2-4-3)
Advanced digital video techniques for post-production. Emphasizes generation and integration of special effects, 2-D animation and 3-D animation for film, video, CD-ROM, and the Internet. Exploration of new and emerging compression and video streaming technologies.

ARTV 2351 3-D Animation II (2-4-3)
Skill development in three-dimensional modeling and rendering techniques using lighting, staging, and special effects for digital output. Emphasis on the production of three-dimensional (3-D) animation as final digital outputting using modeling, rendering and animation software.

ENGL 1301, ENGL 2307, ENGL 2314 (see English/Communications)

GRPH 1359 Object Oriented Computer Graphics (2-4-3)
Mastery of the tools and transformation options of an industry standard draw program to create complex illustrations and follow them through to the color output stage. Mastery in the use of basic elements of good layout and design principles and use of the capabilities specific to vector (object oriented) drawing software to manipulate both text and graphics with emphasis on the use of bezier curves. Acquisition of images via scanning and the creative use of clipart is included. Prerequisites: ARTC 1302.

GRPH 1380 COOP-Prepress/Desktop Publishing and Digital Imaging Design (1-19-3)
GRPH 2380 COOP: Prepress/Desktop Publishing & Digital Imaging Design (1-19-3)
GRPH 2680 COOP: Prepress/Desktop Publishing & Digital Imaging Design (1-39-6)
Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component. Prerequisites: ARTC 2313, ARTV 1343, ARTV 1351, IMED 1316, IMED 1345.

IMED 1316 Web Page Design I (2-4-3)
Instruction in web page design and related graphic design issues including mark-up languages, web sites,and browsers.

IMED 1345 Interactive Digital Media I (2-4-3)
Exploration of the use of graphics and sound to create interactive multimedia animations using industry standard authoring software.

IMED 2315 Web Page Design II (2-4-3)
A study of mark-up language advanced layout techniques for creating web pages. Emphasis on identifying the target audience and producing web sites according to accessibility standards, cultural appearance, and legal issues. Prerequisites: IMED 1316, IMED 1345.

IMED 2345 Interactive Digital Media II (2-4-3)
Instruction in the use of scripting languages to create interactive digital media applications.

MATH 1314, MATH 1332 (see Math/Natural Sciences)

PHTC 1311 Fundamentals of Photography (2-4-3)
An introduction to camera operation and image production, composition, supplemental lighting, and use of exposure meters and filters.

POFT 1301 (see English/Communications)

TECM 1303 (see Math/Natural Sciences)

SPCH 1311 (see Speech Electives)

MATH (see Math/Natural Sciences)

PHYS (see Math/Natural Sciences)

Engineering Science

CHEM (see Math/Natural Sciences)

ENGL 1301, ENGL 1302 (see English/Communications)

ENGR 1201 Introduction to Engineering (1-3-2)
An introduction to the engineering profession with emphasis on technical communication and team-based engineering design. One hour of lecture and three hours of laboratory each week.

ENGR 1204 Engineering Graphics I (2-0-2)
Introduction to computer-aided drafting using CAD software and sketching to generate two- and three-dimensional drawings based on the conventions of engineering graphical communication; topics include spatial relationships, multi-view projections and sectioning, dimensioning, graphical presentation of data, and fundamentals of computer graphics.

ENGR 2105 Circuit I Electrical Engineering Laboratory (0-3-1)
Laboratory experiments supporting theoretical principles presented in ENGR 2305 involving DC and AC circuit theory, network theorems, time, and frequency domain circuit analysis. Introduction to principles and operation of basic laboratory equipment; laboratory report preparation.

ENGR 2301 Engineering Mechanics I - Statics (3-1-3)
Calculus-based study of composition and resolution of forces, equilibrium of force systems, friction, centroids, and moments of inertia. Prerequisite: PHYS 2425. Co-requisite: a second course in calculus.

ENGR 2304 Programming for Engineers (3-0-3)
Introduction to computer programming. Emphasis on the fundamentals of structured design, development, testing, implementation, and documentation. Includes coverage of language syntax, data and file structures, input/output devices, and disks/files.

ENGR 2305 Circuits I Electrical Engineering (3-0-3)
Principles of electrical circuits and systems. Basic circuit elements (resistance, inductance, mutual inductance, capacitance, independent and dependent controlled voltage, and current sources). Topology of electrical networks; Kirchhoff 's laws; node and mesh analysis; DC circuit analysis; operational amplifiers; transient and sinusoidal steady-state analysis; AC circuit analysis; first- and second-order circuits; Bode plots; and use of computer simulation software to solve circuit problems.

GOVT 2305, GOVT 2306 (see Business and Social/Behavioral Sciences)

HIST 1301 (see Business and Social/Behavioral Sciences)

English/Communications

ENGL 1301 Composition I (3-0-3)
Principles and techniques of written, expository, and persuasive composition; analysis of literary, expository, and persuasive texts; and critical thinking. Prerequisite: Grade of C or better in READ 0200 and WRIT 0200 or English placement test equivalent.

ENGL 1302 Composition II (3-0-3)
Further development in the principles and techniques of written, expository, and persuasive composition; analysis of literary, expository, and persuasive texts; and critical thinking. Prerequisite: Grade of C or better in ENGL 1301.

ENGL 2307 Creative Writing (3-0-3)
Practical experience in the techniques of imaginative writing. May include fiction, nonfiction, poetry, or drama. Prerequisites: ENGL 1301, READ 200 or equivalent or as determined by English placement test.

ENGL 2314 Technical & Business Writing I (3-0-3)
Principles, techniques, and skills needed for college-level scientific, technical, or business writing. Standard technical documents and the internal report are emphasized. Prerequisite: Grade of C or better in ENGL 1301.

ENGL 2321 British Literature (3-0-3)
Critical reading, discussion, and written analysis of selected significant works of British literature. May include study of movements, schools, or periods. Prerequisite: Grade of "C" or better in ENGL 1301.

ENGL 2326 American Literature (3-0-3)
Critical reading, discussion, and written analysis of selected significant works of American literature. May include study of movements, schools, or periods. Prerequisite: Grade of "C" or better in ENGL 1301.

ENGL 2331 World Literature (3-0-3)
Critical reading, discussion, and written analysis of selected significant works of world literature in translation. May include study of movements, schools, or periods. Prerequisite: Grade of "C" or better in ENGL 1301.

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.

Education and Training

BIOL (see Math/Natural Sciences)

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 & Toddler (3-0-3)
A study of appropriate infant and toddler programs (birth to age 3), including an overview of development, quality, learning environments, materials and activities, and teaching/guidance techniques.

CDEC 1356 Emergent Lit for Early Childhood (2-4-3)
An exploration of principles, methods, and materials for teaching young children language and literacy through a play-based integrated curriculum.

CDEC 1359 Children with Special Needs (2-4-3)
A survey of information regarding children with special needs including possible causes and characteristics of exceptionalities, intervention strategies, available resources, referral processes, the advocacy role, and legislative issues.

CDEC 2340   Instructional Techniques for Children with Special Needs (2-4-3)
Exploration of development and implementation of curriculum for children with special needs.

EDTC 1164 Practicum Teacher Assistant/Aide (0-10-1)
Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

EDTC 1301 Educational Systems (2-4-3)
A study of the role and responsibilities of educational personnel with emphasis on development of professionalism and effective communication strategies with adults. Topics include the various codes of ethics governing the educational field, the issue of confidentiality, learners' rights and responsibilities, and challenges facing schools.

EDTC 1307 Intro to Teaching Reading (2-4-3)
General principles of reading instruction. Topics include emergent literacy, reading readiness, reading instruction, literacy-based environments, and a review of varied materials and techniques for teaching reading.

EDTC 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 Tech and Computer Apps (2-2-3)
Examination of specialized educational technology. Topics include the integration of educational computer terminology, system operations, software, and multimedia in the contemporary classroom environment.

EDTC 1264 Practicum-Teacher Assistant/Aide
EDTC 1364 Practicum-Teacher Assistant/Aide (0-21-3)
Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

EDTC 1393 Special Topics: In Computer Teacher Education (3-0-3)
Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. This course was designed to be repeated multiple times to improve student proficiency.

EDTC 1394 Special Topics: Teacher Assisstant/Aide (2-4-3)
Topics address recently identified current events, skills, knowledges, and /or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. This course was designed to be repeated multiple times to improve student proficiency.

EDTC 1395 Special Topics: Bilingual/Bicultural Education (3-0-3)
Topics address recently identified current events, skills, knowledges, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. This course was designed to be repeated multiple times to improve student proficiency.

EDTC 2305 Reading Problems (2-4-3)
In-depth coverage of reading difficulties. Emphasis on the theories, strategies, recognition, and remediation of reading problems. Topics include assessment, direct instruction, and motivational/interactive literacy activities.

EDTC 2311 Instructional Practices and Effective Learning Environments (2-4-3)
General principles for selecting developmentally appropriate strategies in core curriculum areas, planning the classroom environment, and instructional accommodations and modifications. Topics address methods for supporting instructional planning and implementation of educational goals and objectives. Also examines cooperative learning strategies.

EDTC 2317 Guiding Student Behavior (2-4-3)
Developmentally appropriate direct and indirect guidance techniques for use in various school environments. Topics include identifying causes of inappropriate behavior, establishing and managing routines, the environment's role in promoting positive behavior, promoting self-esteem negotiation/conflict resolution strategies, and enhancing

positive self-direction. Emphasis in implementation of a behavior management plan.

ENGL 1301 (see English/Communications)

GOVT 2305, GOVT 2306 (see Business and Social/Behavioral Sciences)

HIST 1301, HIST 1302 (see Business and Social/Behavioral Sciences)

MATH 1314 (see Math/Natural Sciences)

SPCH (see Speech Electives)

TECA 1354 Child Growth & Development (3-0-3)
A study of the physical, emotional, social, and cognitive factors impacting growth and development of children through adolescence.

Game & Simulation Programming

ARTC 1302 (See Digital Media Design Technology)

ENGL 1301 (see English/Communications)

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 Intro to Game Design/Development (2-4-3)
Introduction to electronic game development and game development careers. Includes examination of history and philosophy of games, the game production process, employee factors for success in the field, and current, issues and practices in the game development industry.

GAME 1304 Level Design (2-4-3)
Introduction to the tools and concepts used to create levels for games and simulations. Incorporates level design, architecture theory, concepts of critical path and flow, balancing, play testing, and storytelling. Includes utilization of toolsets from industry titles.

GAME 1306 Design and Creation of Games (2-4-3)
Introduction to game and simulation development. Includes analysis of existing applications and creation of a game using an existing game engine. In-depth coverage of the essential elements of game design. Also covers an overview of cultural history of electronic games, survey of the major innovators, and examination of the trends and taboos that motivate game design.

GAME 1309 Intro to Animation Programming (2-4-3)
Mathematical elements and algorithms involved in basic animation. Includes generating graphics, viewing 3D environments such as visible line detection and 3D surfaces, image processing techniques, and special effects.

GAME 1343 Graphics & Simulation Programming I (2-4-3)
Game and simulation programming. Includes advanced pointer manipulation techniques and pointer applications, points and vectors, sound, and graphics.

GAME 1349 OpenGL Programming I (2-4-3)
Computer graphics with focus on the basic principles and techniques 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 1353 Multi-User Game Programming I (2-4-3)
Network topologies, architecture and protocols, and communication in game and simulation programming. Introduces sockets programming utilizing TCP and UDP protocols in high-level language. Focuses on blocking and asynchronous modes.

GAME 1359 Graphics & 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.

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: ITSE 1307.

GAME 2333 Graphics & Simulation Programming III (2-4-3)
Advanced applications of game and simulation programming techniques. Includes advanced rendering techniques and BSP trees. Incorporates shadowing, lighting, collision detection, and 3D animation and motion. Prerequisite: GAME 1359.

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/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.

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 2331 Advanced C++ Programming (2-4-3)
Further application of C++ programming techniques including subjects such as file access, abstract data structures, class inheritance, and other advanced techniques. Prerequisite: ITSE 1307.

ITSE 2345 Data Structures (2-4-3)
Further applications of programming techniques. Includes an in-depth look at various data structures and the operations performed on them.

MATH (see Math/Natural Sciences)

SPCH (see Speech Electives)

Health Information Technology

BIOL (see Math/Natural Sciences)

ENGL 1301 (see English/Communications)

HITT 1204 IT for Health Professions (1-3-2)
For students without an IT background, provides a basic overview of computer architecture, dta organization, representation and structure, structure of programming, networking, and data communication. Includes basic terminology of computing.

HITT 1253 Legal & Ethical Aspects of Health Info (1-2-2)
Concepts of confidentiality, ethics, health care legislation, and regulations relating to the maintenance and use of health information.

HITT 1255 Health Care Statistics (1-3-2)
General principles of health care statistics with emphasis in hospital statistics. Skill development in computation and calculation of health data.

HITT 1301 Health Data Content & Structure (3-0-3)
Introduction to systems and processes for collecting, maintaining, and disseminating primary and secondary health related information. Instruction in delivery and organization structure to include content of health record, documentation requirements, registries, indices, licensing, regulatory agencies, forms, and screens.

HITT 1305 (see Medical Information Specialist/Transcriptionist)

HITT 1311 (see Medical Information Specialist/Transcriptionist)

HITT 1341 Coding & Classification of Systems (2-4-3)
Application of basic coding rules, principles, guidelines, and conventions.

HITT 1342 Ambulatory Coding (2-4-3)
Application of basic coding rules, principles, guidelines, and conventions with emphasis on ambulatory coding.

HITT 1345 Health Care Delivery Systems(2-4-3)
Introduction to organization, financing, and delivery of health care services, accreditation, licensure, and regulatory agencies.

HITT 2149 RHIT Competency Review (0-3-1)
Review Health Information Technology (HIT) competencies, skills, and knowledge.

HITT 2166 Practicum - Health Information/Medical Records (0-8-1)
Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

HITT 2239 Health Information Organization & Supervision (1-2-2)
Principles of organization and supervision of human, fiscal, and capital resources.

HITT 2266 Practicum - Health Information/Medical Records (0-16-2)
The college with the employer develops and documents an individualized plan for the student. The plan relates the workplace training and experiences to the student's general and technical course of study. The guided external experiences may be paid or unpaid. This course may be repeated if topics and learning outcomes vary. Prerequisites: 5th semester standing.

HITT 2335 Coding/Reimbursement Methodology (2-4-3)
Development of advanced coding techniques with emphasis on case studies, health records, and federal regulations regarding perspective payment systems and methods of reimbursement.

HITT 2343 Quality Assessment & Performance Improvement (2-4-3)
Study of the many facets of quality standards and methodologies in the health information management environment. Topics include licensing, accreditation, compilation and presentation of data in statistical formats, quality improvement functions, quality tools, utilization management, risk management, and medical staff data quality issues.

HPRS 2300 (see Allied Health Related Skills)

MDCA 1321 (see Medical Assistant)

MDCA 1402 (see Medical Information Specialist/Transcriptionist)

PSYC 2301 (see Business and Social/Behavioral Sciences)

SPCH (see Speech Electives)

Humanities/Fine Arts Electives

ANTH 2346 General Anthropology (3-0-3)
Study of human beings, their antecedents and related primates, and their cultural behavior and institutions. Introduces the major subfields: physical and cultural anthropology, archaeology, linguistics, and ethnology.

ARTS 1301 Art Appreciation (3-0-3)
Exploration of purposes and processes in the visual arts including evaluation of selected works.

ARTS 1303 Art History I (3-0-3)
Examination of painting, sculpture, architecture, and other arts from prehistoric times to the 14th century.

ARTS 1304 Art History II (3-0-3)
Examination of painting, sculpture, architecture, and other arts from the Middle Ages to the present day.

MUSI 1306 Music Appreciation (3-0-3)
Understanding music through the study of cultural periods, major composers, and musical elements illustrated with audio recordings and live performance.

PHIL 1301 Introduction to Philosophy (3-0-3)
A study of major issues in philosophy and/or the work of major philosophical figures in philosophy. Topics in philosophy may include theories of reality, theories of knowledge, theories of value, and their practical applications.

PHIL 1304 Introduction to World Religions (3-0-3)
A comparative study of world religions, including but not limited to Hinduism, Buddhism, Judaism, Christianity, and Islam.

PHIL 2306 Introduction to Ethics (3-0-3)
The systematic evaluation of classical and/or contemporary ethical theories concerning the good life, human conduct in society, morals, and standards of value.

Math/Natural Sciences

BIOL 1106 Biology for Science Majors I Lab (0-3-1)
BIOL 1306 Biology for Science Majors I Lecture (3-0-3)
BIOL 1406 Biology for Science Majors I Lecture + Lab (3-3-4)
Fundamental principles of living organisms including physical and chemical properties of life, organization, function, evolutionary adaptation, and classification. Concepts of cytology, reproduction, genetics, and scientific reasoning are included. Recommended prerequisite: MATH 1314

BIOL 1107 Biology for Science Majors II Lab (0-3-1)
BIOL 1307 Biology for Science Majors II Lecture (3-0-3)
BIOL 1407 Biology for Science Majors II Lecture + Lab (3-3-4)
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. Recommended prerequisite: MATH 1314

BIOL 1108 Biology for Non-Science Majors I Lab (0-3-1)
BIOL 1308 Biology for Non-Science Majors I (3-0-3)
BIOL 1408 Biology for Non-Science Majors I Lecture + Lab (3-3-4)
Provides a survey of biological principles with an emphasis on humans, including chemistry of life, cells, structure, function, and reproduction. Course is designed for both science and non-science majors.

BIOL 1109 Biology for Non-Science Majors II Lab (0-3-1)
BIOL 1309 Biology for Non-Science Majors II Lecture (3-0-3)
BIOL 1409 Biology for Non-Science Majors II Lecture + Lab (3-3-4)
This course will provide a survey of biological principles with an emphasis on humans, including evolution, ecology, plant and animal diversity, and physiologyCourse is designed for both science and non-science majors.

BIOL 1111 General Botany Lab (3-0-3)
BIOL 1311 General Botany Lecture (0-3-1)
BIOL 1411 General Botany Lecture + Lab (3-3-4)
Fundamental biological concepts relevant to plant physiology, life cycle, growth and development, structure and function, and cellular and molecular metabolism. The role of plants in the environment, evolution, and phylogeny of major plant groups, algae, and fungi. Recommended prerequisite: MATH 1314

BIOL 1113 General Zoology Lab (3-0-3
BIOL 1313 General Zoology Lecture (0-3-1)
BIOL 1413 General Zoology (3-3-4)
Fundamental biological concepts relevant to animals, including systematics, evolution, structure and function, cellular and molecular metabolism, reproduction, development, diversity, phylogeny, and ecology. Recommended prerequisite: MATH 1314

BIOL 1322 Nutrition & Diet Therapy I
BIOL 1323 Nutrition & Diet Therapy II
Study of the chemical, physical, and sensory properties of food; nutritional quality; and food use and diet applications.

BIOL 2101 Anatomy & Physiology I Lab (0-3-1)
BIOL 2301 Anatomy & Physiology I Lecture (3-0-3)
BIOL 2401 Anatomy & Physiology I Lecture + Lab (3-3-4)
Study of the structure and function of human anatomy, including the neuroendocrine, integumentary, musculoskeletal, digestive, urinary, reproductive, respiratory, and circulatory systems. Content may be either integrated or specialized.

BIOL 2102 Anatomy & Physiology II Lab (0-3-1)
BIOL 2302 Anatomy & Physiology II Lecture (3-0-3)
BIOL 2402 Anatomy & Physiology II Lecture + Lab (3-3-4)
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 2320 Microbiology for Non-Science Majors (lecture)
BIOL 2120 Microbiology for Non-Science Majors Laboratory (lab)
BIOL 2420 Microbiology for Non-Science Majors (lecture + lab)
Study of the morphology, physiology, and taxonomy of representative groups of pathogenic and nonpathogenic microorganisms. Pure cultures of microorganisms grown on selected media are used in learning laboratory techniques. Includes a brief preview of food microbes, public health, and immunology.

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BIOL 2321 Microbiology for Science Majors (lecture)
BIOL 2121 Microbiology for Science Majors (lab)
BIOL 2421 Microbiology for Science Majors (lecture + lab)
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. Recommended co-requisite: BIOL 2121 Microbiology for Science Majors Laboratory Prerequisites: CHEM 1311 and 1111, or 1411 General Chemistry I (lecture and lab)

CHEM 1105 Introductory Chemistry I Lab (0-3-1)
CHEM 1305 Introductory Chemistry I Lecture (3-0-3)
CHEM 1405 Introductory Chemistry I Lecture + Lab (3-3-4)
Survey course introducing chemistry. Topics may include inorganic, organic, biochemistry, food / physiological chemistry, and environmental / consumer chemistry. Designed for non-science and allied health students.

CHEM 1111 General Chemistry I Lab (0-3-1)
CHEM 1311 General Chemistry I Lecture (3-0-3)
CHEM 1411 General Chemistry I Lecture + Lab (3-3-4)
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. Prerequisite: MATH 1314

CHEM 1112 General Chemistry II Lab (0-3-1)
CHEM 1312 General Chemistry II Lecture (3-0-3)
CHEM 1412 General Chemistry II Lecture + Lab (3-3-4)
Chemical equilibrium; phase diagrams and spectrometry; acid-base concepts; thermodynamics; kinetics; electrochemistry; nuclear chemistry; an introduction to organic chemistry and descriptive inorganic chemistry. Prerequisite: CHEM 1311 and 1111 or 1411.

CHEM 2123 Organic Chemistry I Lab (0-3-1)
CHEM 2323 Organic Chemistry I Lecture (3-0-3)
CHEM 2423 Organic Chemistry I Lecture + Lab (3-3-4)
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. Prerequisite: CHEM 1312 and CHEM 1112, or CHEM 1412

CHEM 2125 Organic Chemistry II Lab (0-3-1)
CHEM 2325 Organic Chemistry II Lecture (3-0-3)
CHEM 2425 Organic Chemistry II Lecture + Lab (3-3-4)
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. Prerequisite: CHEM 2323 and CHEM 2123, or CHEM 2423

MATH 1314 College Algebra (3-0-3)
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 (3-0-3)
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 1324 Mathematics for Business & Social Sciences I (3-0-3)
Topics from college algebra (linear equations, quadratic equations, functions and graphs, inequalities), mathematics of finance (simple and compound interest, annuities), linear programming, matrices, systems of linear equations, applications to management, economics, and business.

MATH 1325 Mathematics for Business & Social Sciences II (3-0-3)
Limits and continuity, derivatives, graphing and optimization, exponential and logarithmic functions, antiderivatives, integration, applications to management, economics, and business. Prerequisite: MATH 1324 or equivalent.

MATH 1332 Contemporary Mathematics I (3-0-3)
Topics may include introductory treatments of sets, logic, number systems, number theory, relations, functions, probability and statistics. Appropriate applications are included.

MATH 1348 Analytic Geometry (3-0-3)
Lines, circles, and other conic sections; transformation of coordinates; polar coordinates; and parametric equations. Prerequisite: Math 1316

MATH 1350 Fundamentals of Mathematics I (3-0-3)
Concepts of sets, functions, numeration systems, number theory, and properties of the natural numbers, integers, rational, and real number systems with an emphasis on problem solving and critical thinking.

MATH 1351 Fundamentals of Mathematics II (3-0-3)
Concepts of geometry, probability, and statistics, as well as applications of the algebraic properties of real numbers to concepts of measurement with an emphasis on problem solving and critical thinking. This course is designed specifically for students who seek middle grade (4 though 8) teacher certification. Prerequisite: MATH 1350.

MATH 2305 Discrete Mathematics (3-0-3)
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. Prerequisite: MATH 2413

MATH 2312 Precalculus Math (3-0-3)
In-depth combined study of algebra, trigonometry, and other topics for calculus readiness. Prerequisite: MATH 1314.

MATH 2318 Linear Algebra (3-0-3)
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. Pre-requisite: MATH 2414

MATH 2320 Differential Equations (3-0-3)
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. Prerequisite: MATH 2414.

MATH 2342 Elementary Statistical Methods (3-0-3)
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. Prerequisite: MATH 1314.

MATH 2413 Calculus I (3-2-4)
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. Prerequisite: MATH 2312.

MATH 2414 Calculus II (3-2-4)
Differentiation and integration of transcendental functions; parametric equations and polar coordinates; techniques of integration; sequences and series; improper integrals. Prerequisite: MATH 2413.

MATH 2415 Calculus III (3-2-4)
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. Prerequisite: Math 2414.

PHYS 1101 College Physics I Lab (0-3-1)
PHYS 1301 College Physics I Lecture (3-0-3)
PHYS 1401 College Physics I Lecture + Lab (3-3-4)
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. Co-requisite: PHYS 1101. Prerequisites: MATH 1314 and MATH 1316 or MATH 2312

PHYS 1102 College Physics II Lab (0-3-1)
PHYS 1302 College Physics II Lecture (3-0-3)
PHYS 1402 College Physics II Lecture + Lab (3-3-4)
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. Co-requisite: PHYS 1102. Prerequisites: PHYS 1301 and PHYS 1101, or PHYS 1401.

PHYS 1115 Physical Science I Lab (0-3-1)
PHYS 1315 Physical Science I Lecture (3-0-3)
PHYS 1415 Physical Science I Lecture + Lab (3-3-4)
Course designed for non-science majors that surveys topics from physics, chemistry, geology, astronomy, and meteorology. May or may not include a lab.

PHYS 1117 Physical Science II Lab (0-3-1)
PHYS 1317 Physical Science II Lecture (3-0-3)
PHYS 1417 Physical Science II Lecture + Lab (3-3-4)
Course designed for non-science majors that surveys topics from physics, chemistry, geology, astronomy, and meteorology. May or may not include a lab.

PHYS 2125 University Physics I Lab (0-3-1)
PHYS 2325 University Physics I Lecture (3-0-3)
PHYS 2425 University Physics I Lecture + Lab (3-3-4)
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. Co-requisite: PHYS 2125. Prerequisite: MATH 2413.

PHYS 2126 University Physics II Lab (0-3-1)
PHYS 2326 University Physics II Lecture (3-0-3)
PHYS 2426 University Physics II Lecture + Lab (3-3-4)
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. Co-requisite: PHYS 2126. Prerequisites: PHYS 2325, MATH 2414

POFT 1321 Business Math (2-2-3)
Fundamentals of business mathematics including analytical and critical thinking skills.

TECM 1301 Industrial Mathematics (2-2-3)
Fundamentals of math applicable to industrial trades including fraction and decimal manipulation, measurement, scientific notation, percentage, and problem solving techniques for equations and ratio/proportion applications. Also includes instruction in the use of the scientific calculator.

TECM 1303 Technical Mathematics (3-0-3)
A review of basic mathematics including whole numbers, fractions, mixed numbers, decimals, percents, ratios, and proportions. Converting to different units of measure (standard and/or metric) and other topics as required by specific businesses and industries will be covered.

TSTC Texas State Technical College

Mathematics

ENGL 1301, ENGL 1302 (see English/Communications)

GOVT 2305, GOVT 2306 (see Business and Social/Behavioral Sciences)

HIST 1301, HIST 1302 (see Business and Social/Behavioral Sciences)

MATH (see Math/Natural Sciences)

PHYS (see Math/Natural Sciences)

SPAN 1311, SPAN 1312 (see Spanish)

Mechatronics Technology

CETT 1303 DC Circuits (2-4-3)
A study of the fundamentals of direct current including Ohm's law, Kirchhoff's laws and circuit analysis techniques.

CETT 1305 AC Circuits (2-4-3)
A study of the fundamentals of alternating current including series and parallel AC circuits, phasors, capacitive and inductive networks, transformers, and resonance. Prerequisite: CETT 1303 or IEIR 1302.

CETT 1325 Digital Fundamentals (2-4-3)
An entry level course in digital electronics covering number systems, binary mathematics, digital codes, logic gates, Boolean algebra, Karnaugh maps, and combinational logic. Emphasis on circuit logic analysis and troubleshooting digital circuits. Prerequisite: CETT 1303.

CHEM 1111, CHEM 1311 (See Math/Natural Sciences)

EECT 1307 (see Telecommunications Technology)

ELMT 1301 Programmable Logic Controllers (2-4-3)
An introduction to programmable logic controllers as used in industrial environments including basic concepts, programming, applications, troubleshooting of ladder logic, and interfacing of equipment. Prerequisites: INTC 1357.

ELMT 1305 Basic Fluid Power (2-4-3)
Basic fluid power course covering pneumatic and hydraulic systems, fluid power symbols, operating theory, components, and basic electrical and manual controls.

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. Prerequisite: CETT 1305, CETT 1325.

ELMT 2339 Advanced Programmable Logic Controllers (2-4-3)
Advanced applications of programmable logic controllers as used in industrial environments including concepts of programming, industrial applications, troubleshooting ladder logic, and interfacing

to equipment. Prerequisite: ELMT 1301.

ELMT 2341 Electromechanical System (2-4-3)
Application of electromechanical systems. Emphasizes programmable control devices and solid state systems.

ELPT 2231 AC/DC Drives (1-4-2)
Installation and maintenance of alternating current (AC) and direct current (DC) variable speed drives with emphasis on application, operating characteristics, and troubleshooting techniques.

ENGL 1301 (see English/Communications)

FCEL 1305 Intro-Fuel Cell & Alternative/Renewable Energy (2-4-3)
Types and applications of alternative/renewable energy sources. Emphasizes fuel cell applications and processes, reformation of fuels, heat transfer, chemical reaction, power conditioning, combined heat and power, and distributed generation systems.

IEIR 1302 Introduction to Direct Current Circuits (2-4-3)
Fundamentals of direct current including Ohm's Law. Emphasis on methods of analyzing series, parallel, and combination circuits including measurement devices.

IEIR 1304 Alternating Current Circuits for Industrial Applications (2-4-3)
Fundamentals of alternating current including series and parallel circuits, phasors, and capacitive and inductive networks. Discusion of circuit analysis and measurement. Prerequisite: IEIR 1302.

INMT 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.

INTC 1341 Principles of Automatic Control (2-4-3)
A study of the theory of basic measurements, automatic control systems and design, closed loop systems, recorders, controllers, feedback, control modes and control configurations. Prerequisite: ELMT 2333.

MATH 1314, MATH 1332 (see Math/Natural Sciences)

MCHN 1338 (See Precision Manufacturing Technology)

PSYS 1401 (see Math/Natural Sciences)

QCTC 1303 Quality Control (2-4-3)
Quality control principles and applications.

RBTC 1305 Robotic Fundamentals (2-4-3)
An introduction to flexible automation. Topics include installation, repair, maintenance, and development of flexible robotic manufacturing systems.

SPCH (See Speech Electives)

Medical Assistant

BIOL (see Math/Natural Sciences)

CHEM 1411 (see Math/Natural Sciences)

ENGL 1301 (see English/Communications)

HITT 1301 (see Health Information Technology)

HITT 1305 (see Medical Information Specialist/Transcriptionist)

MATH 1314 (see Math/Natural Sciences)

MDCA 1205   Medical Law & Ethics (2-0-2)
Instruction in principles, procedures, and regulations involving legal and ethical relationships among physicians, patients, and medical assistants. Includes current ethical issues and risk management as they relate to the practice of medicine and fiduciary responsibilities.

MDCA 1321   Administrative Procedures (2-4-3)
Medical office procedures including appointment scheduling, medical records creation and maintenance, interpersonal communications, financial processes, coding, billing, collecting, third party reimbursement, credit arrangements, and computer use in the medical office.

MDCA 1343 (see Medical Information Specialist/Transcriptionist)

MDCA 1348 Pharmacology & Administration of Medications (2-4-3)
Instruction in concepts and application of pharmacological principles. Focuses on drug classifications, principles and procedures of medication administration, mathematical systems and conversions, calculation of drug problems, and medico-legal responsibilities of the medical assistant.

MDCA 1352   Medical Assistant Lab Procedures (2-4-3)
Procedures depicted in the Current Clinical Laboratory Improvement Act (CLIA). Includes blood collection, specimen handling, basic urinalysis, identification of normal ranges, quality assurance, and quality control. May include electrocardiography.

MDCA 1402 (see Medical Information Specialist/Transcriptionist)

MDCA 1417 Procedures in a Clinical Setting (2-6-4)
Emphasis on patient-centered assessment, examination, intervention, and treatment as directed by physician. Includes vital signs, collection and documentation of patient information, asepsis, minor surgical procedures, and other treatments as appropriate for the medical office.

MDCA 1460   Clinical - Medical/Clinical Assistant (0-16-4)
A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional.

MDCA 2266   Practicum - Medical/Clinical Assistant (0-14-2)
Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

PLAB 1323 Phlebotomy (2-3-3)
Skill development in the performance of a variety of blood collection methods using proper techniques and universal precautions. Includes vacuum collection devices, syringes, capillary skin puncture, butterfly needles and blood culture, and specimen collection on adults, children, and infants. Emphasis on infection prevention, proper patient identification, labeling of specimens and quality assurance, specimen handling, processing, and accessioning. Topics include professionalism, ethics, and medical terminology.

POFT 1301 (see English/Communications)

PSYC 2301, PSYC 2314 (see Business and Social/Behavioral Sciences)

SPCH (see Speech Electives)

Medical Information Specialist/Transcriptionist

BIOL 2301, BIOL 2101 (see Math/Natural Sciences)

HITT 1166 Practicum-Health Information /Medical Records (0-8-1)
Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

HITT 1301 (see Health Information Technology)

HITT 1305 Medical Terminology (2-3-3)
Study of word origin and structure through the introduction of prefixes, suffixes, root words, plurals, abbreviations and symbols, surgical procedures, medical specialties, and diagnostic procedures.

HITT 1311 Health Information Systems
Introduction to health IT standards, health-related data structures, software applications and enterprise architecture in health care and public health.

HITT 1342 (see Health Information Technology)

MDCA 1321 (see Medical Assistant)

MDCA 1343 Medical Insurance (2-4-3)
Emphasizes accurate ICD-9 and CPT coding of office procedures for payment/ reimbursement by patient or third party and prevention of insurance fraud. Additional topics may include managed care or medical economics.

MDCA 1402 Human Disease/Pathophysiology (3-3-4)
A study of anatomy and physiology with emphasis on human pathophysiology, including etiology, prognosis, medical treatment, signs and symptoms of common diseases of all body systems. Prerequisite: BIOL 2401.

MRMT 1307 Medical Transcription I (2-4-3)

Fundamentals of medical transcription with hands-on experience in transcribing physician dictation including basic reports such as history and physicals, discharge summaries, consultations, operative reports, and other medical reports. Utilizes transcribing and information processing equipment compatible with industry standards. Designed to develop speed and accuracy.

MRMT 2333 Medical Transcription II (2-4-3)
Production of advanced reports of physician dictation with increasing speed and accuracy including history and physicals, consultations, discharge summaries, operative reports, and other medical reports.

Nurse Assistant

ENGL 1301 (see English/Communications)

HITT 1305 (see Medical Information Specialist/Transcriptionist)

NURA 1301 Nurse Aide for Health Care I (2-4-3)
Knowledge, skills, and abilities essential to provide basic care to residents of long-term care facilities. Topics include resident's rights, communication, safety, observation, reporting and assisting residents in maintaining basic comfort and safety. Emphasis on effective interaction with members of the health care team.

NURA 1360 Clinical - Nursing Assistant Aide (0-15-3)
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.

POFT 1301 (see English/Communications)

SPCH (see Speech Electives)

TECM 1301 (see Math/Natural Sciences)

Physics

ENGL 1301, ENGL 1302 (see English/Communications)

CHEM (see Math/Natural Sciences)

GOVT 2305, GOVT 2306 (see Business and Social/Behavioral Sciences)

HIST 1301, HIST 1302 (see Business and Social/Behavioral Sciences)

MATH 1314, MATH 1332 (see Math/Natural Sciences)

PHYS (see Math/Natural Sciences)

SPAN 1311, SPAN 1312 (see Spanish)

Precision Manufacturing Technology- Mold, Tool and Die Making

ENGL 1301 (see English/Communications)

MATH 1314, MATH 1316 (see Math/Natural Sciences)

MCHN 1302 Print Reading For Machining Trades (3-0-3)
A study of blueprints for machining trades with emphasis on machine drawings.

MCHN 1305 Metals and Heat Treatment (2-3-3)
Designed for students going into the workforce as manual machinists, tool designers, or heat treat operators. Topics include properties of metals and heat treatment of metals.

MCHN 1308 Basic Lathe (1-6-3)
An introduction to the common types of lathes. Emphasis on basic parts, nomenclature, lathe operations, safety, machine mathematics, blueprint reading, and theory.

MCHN 1313 Basic Milling Operation (1-6-3)
An introduction to the common types of milling machines, part nomenclature, basic machine operations and procedures, safety, machine mathematics, blueprint reading, and theory.

MCHN 1320 Precision Tools & Measurement (2-3-3)
An introduction to the modern science of dimensional metrology. Emphasis on the identification, selection, and application of various types of precision instruments associated with the machining trade. Practice of basic layout and piece part measurements while using standard measuring tools.

MCHN 1335 Grinders Outside, Internal, Surface (1-6-3)
An introduction to types and operation of outside diameter, internal diameter, and surface grinders. Emphasis on identification, selection, and replacement of grinding wheels. Related topics include safety, math, blueprint reading, and precision measuring tools.

MCHN 1338 Basic Machine Shop I (1-6-3)
An introductory course that assists the student in understanding the machinist occupation in industry. The student begins by using basic machine tools such as the lathe, milling machine, drill press, power saw, and bench grinder. Machine terminology, theory, math, part layout, and bench work using common measuring tools is included. Emphasis is placed on shop safety, housekeeping, and preventative maintenance.

MCHN 1343 Machine Shop Math (3-0-3)
Designed to prepare the student with technical, applied mathematics that will be necessary in future machine shop-related courses.

MCHN 1358 Intermediate Lathe Operation (1-6-3)
Continuation of Basic Lathe with emphasis on continued proficiency in lathe operations.

MCHN 2302 Intermediate Milling Operation (1-6-3)
A continuation of Basic Milling Operations with emphasis on continued

proficiency in mill operation. Identify and operate milling machines and accessories.

MCHN 2303 Fundamentals of CNC Machine Controls (1-6-3)
Programming and operation of Computer Numerical Controlled (CNC) machine shop equipment.

MCHN 2335 Advanced CNC Machining (1-6-3)
The study of advanced CNC operation with an emphasis on programming and operations of machining and turning centers.

MCHN 2337 Advanced Milling Operations (1-6-3)
Study of advanced milling machine operations. Identification and/or use of milling cutters and accessories.

MCHN 2370 Mold Making/Repair (1-8-3)
This course is designed to give the student basic concepts of common mold making practices. Different types of molds used in industry and the associated terminology with be stressed. Standard mold bases and mold components are covered. The student will rebuild mold sections by manufacturing and installing core and cavity inserts, and rebuilding ejector systems by modifying or installing new ejector pins where necessary. The student will qualify the reconstructed mold base assembly. Prerequisite Fourth semester standing.

MCHN 2372 Tool & Die Making and Repair (1-8-3)
This course is designed to give the student the basic concepts involved in tool and die construction that will include bending, blanking, piercing, guiding, stripping, and die stops. Compound, progressive and inverted dies will be covered. The student will repair or manufacture precision machined die parts that perform trimming, notching, piercing, blanking, piloting, or forming, and install them in a die. The student will set up a repaired die in a punch press and sample. Prerequisite: Fourth semester standing.

MCHN 2447 Specialized Tools & Fixtures (2-6-4)
An advanced course in the designing and building of special tools, such as jigs, fixtures, punch press dies, and molds. Machining and assembling of a production tool using conventional machine shop equipment. Application of production tool theory, care, and maintenance.

MCHN 2480 Cooperative Education - Machine Tool Technology/Machinist
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.

SPCH (see Speech Electives)

WLDG 1206 (see Welding Technology)

Registered Nursing

BIOL (see Math/Natural Sciences)

CHEM 1311, CHEM 1111 (see Math/Natural Sciences)

ENGL 1301 (see English/Communications)

FDNS 1341 (see Vocational Nursing)

MATH 1314 (see Math/Natural Sciences)

PSYC 2301, PSYC 2314 (see Business and Social/Behavioral Sciences)

RNSG 1201 Pharmacology (2-1-2)
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 1210 Introduction to Community-Based Nursing (2-1-2)
Overview of the delivery of nursing care in a variety of community-based settings; 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 1341 Common Concepts of Adult Health (3-0-3)
Basic integration of the role of the professional nurse as a provider of patient-centered care, patient safety advocate, member of health care team, and member of the profession. Study of the common concepts of caring for adult patients and families with medical-surgical health care needs related to body systems, emphasizing knowledge, judgment, skills, and professional values within a legal/ethical framework. This course lends itself to a blocked approach.

RNSG 1343 Complex Concepts of Adult Health (3-0-3)
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 1360 Clinical - Registered Nursing/Registered Nurse (0-16-3)
RNSG 1361 Clinical - Registered Nursing/Registered Nurse (0-16-3
RNSG 2362 Clinical - Registered Nursing/Registered Nurse (0-12-3)
A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional.

RNSG 1412 Nursing Care of the Childbearing and Childrearing Family (3-4-4)
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 childbearing 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 1413 Foundations for Nursing Practice (3-4-4)
Introduction to the role of the professional nurse as provider of patient-centered care, patient safety advocate, member of health care team, and member of the profession. Content includes fundamental concepts of nursing practice, history of professional nursing, a systematic framework for decision-making and critical thinking. The mechanisms of disease and the needs and problems that can arise are discussed and how the nursing process helps manage the patient through these issues. Emphasis on knowledge, judgment, skills and professional values within a legal/ethical framework. This course lends itself to a blocked approach.

RNSG 2221 Professional Nursing: Leadership and Management (2-1-2)
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 2313 Mental Health Nursing (3-0-3)
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 2331 Advanced Concepts of Adult Health (2-4-3)
Application of advanced concepts and skills for the development of the professional nurse's roles with adult patients and families involving multiple body systems. Emphasis on advanced knowledge, judgment, skills, and professional values within a legal/ethical framework. This course lends itself to a blocked approach.

Spanish

SPAN 1311 Beginning Spanish I (3-0-3)
Fundamental skills in listening comprehension, speaking, reading and writing, including basic vocabulary, grammatical structures and culture. (Students must take SPAN 1311 & 1312 in proper sequence for credit.)

SPAN 1312 Beginning Spanish II (3-0-3)
This course is a continuation of SPAN 1311 covering fundamental skills in listening, comprehension, speaking, reading and writing. This course includes basic grammatical structures and culture. (Students must take SPAN 1311 & 1312 in proper sequence credit.) Prerequisite: SPAN 1311.

SPAN 2311 Intermediate Spanish I (3-0-3)
Review and application of skills in listening comprehension, speaking, reading and writing. This course emphasizes conversation, vocabulary acquiring, reading, and composition, and includes discussion of the people, events, history, and culture of selected countries. Prerequisite: SPAN 1312 or equivalent.

SPAN 2323 Introduction to Latin American Literature (3-0-3)
This course introduces the literature, including the prose, poetry and drama, of Latin America. Prerequisite: SPAN 1312

SPAN 2324 Hispanic Culture (3-0-3)
Representative readings of the literature, art, history and geography that have helped shape the Hispanic culture of the United States. Prerequisite: SPAN 1312

Speech Electives

SPCH 1311 Introduction to Speech Communication (3-0-3)
Introduces basic human communication principles and theories embedded in a variety of contexts interpersonal, small group, and public speaking.

SPCH 1315 Public Speaking (3-0-3)
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 the ability to effectively evaluate oral presentations.

SPCH 1318 Interpersonal Communication (3-0-3)
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 (3-0-3)
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 (3-0-3)
Discussion and small group theories and techniques as they relate to group processes and interaction.

Surgical Technology

BIOL (see Math/Natural Sciences)

CHEM 1311, CHEM 1111 (see Math/Natural Sciences)

ENGL 1301 (see English/Communications)

HITT 1305 (see Medical Information Specialist/Transcriptionist)

HPRS 2300 (see Allied Health Related Skills)

MATH 1314 (see Math/Natural Sciences)

PSYC 2301, PSYC 2314 (see Business and Social/Behavioral Sciences)

SPCH (see Speech Electives)

SRGT 1244 Tech Sciences for the Surgical Technology (2-0-2)
In-depth coverage of specialized surgical modalities. Areas covered include endoscopy, microsurgery, therapeutic surgical energies, and other integrated science technologies. Prerequisites: SRGT 1405.

SRGT 1405 Intro to Surgical Technology (3-2-4)
Orientation to surgical technology theory, surgical pharmacology and anesthesia, technological sciences, and patient care concepts. Prerequisite: BIOL 2401.

SRGT 1409 Fundamentals of Perioperative Concepts and Techniques (3-2-4)
In-depth coverage of perioperative concepts such as aseptic principles and practices, infectious processes, wound healing, and creation and maintenance of the sterile field. Prerequisite: BIOL 2401.

SRGT 1441 Surgical Procedures I (3-3-4)
Introduction to surgical pathology and its relationship to surgical procedures. Emphasis on surgical procedures related to the general, OB/GYN, genitourinary, and orthopedic surgical specialties incorporating instruments, equipment, and supplies required for safe patient care. Prerequisites: SRGT 1409.

SRGT 1442 Surgical Procedures II (3-3-4)
Introduction to surgical pathology and its relationship to surgical procedures. Emphasis on surgical procedures related to the thoracic, peripheral vascular, plastic/reconstructive, EENT, cardiac, and neurological surgical specialties incorporating instruments, equipment, and supplies required for safe patient care. Prerequisite: SRGT 1441.

SRGT 1460 Clinical I: Surgical Technology/Technologist (0-16-4)
A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. Prerequisite: BIOL 2401.

SRGT 1461 Clinical II: Surgical Tech/Technologist (0-24-4)
A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. Prerequisite: SRGT 1460.

SRGT 2462 Clinical III: Surgical Tech/ Technologist (0-24-4)
A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. Prerequisite: SRGT 1461.

Telecommunications Technology

CETT 1303 (see Mechatronics Technology)

CETT 1305 (see Mechatronics Technology)

CETT 1325 (see Mechatronics Technology)

CSIR 1303 Telecommunications Systems Installer (2-4-3)
This course reviews fundamentals of telecommunications media, including terminology, rules and regulations, safety procedures, industry standards and protocols, installation, connectorization, maintenance, and troubleshooting. General principles of customer service within a technical environment are also studied. The competencies acquired are summarized in a comprehensive project covering network, telephone and coaxial wiring, fiber optics cables, satellite television systems, structural wiring, and "smart house" concepts.

CSIR 1355 Industry Certifications (2-4-3)
Preparation for the certifications required by industry.

CSIR 1359 Digital Data Communication (2-4-3)
Introduction to the theory and troubleshooting skills needed in the digital data communication field.

CSIR 1391 Special Topics/Communications System Install & Repair (2-4-3)
Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. This course was designed to be repeated multiple times to improve student proficiency.

CSIR 2350 Telecommunications Maintenance (2-4-3)
Focus on technical knowledge/skills related to assembly installation operation, maintenance and repair of one and two way communications equipment/systems, including television cable systems, mobile and stationary communication devices. Topics include diagnostics, use of test equipment, and principles of mechanics, electricity, and electronics as they relate to repair.

CSIR 2351 Fiber Optic Communication System Installation & Repair (2-4-3)
Focus on installation, and repair of fiber optic communication systems including networks and peripherals. Topics include fiber optic technology; state-of-the-art networking systems; installation/repair of fiber optic systems; testing equipment.

EECT 1300 Technical Customer Service (2-2-3)
General principles of customer service within a technical environment. Topics include internal/external customer relationships, time-management, best practices, and verbal and non-verbal communications skills.

EECT 1303 Intro to Telecommunications (2-4-3)
An overview of the telecommunications industry. Topics include the history of the telecommunications industry, terminology, rules and regulations, and industry standards and protocols.

EECT 1307 Convergent Technologies (2-4-3)
A study of telecommunications convergent technologies including telephone, LAN, WAN, wireless, voice, video, and internet protocol.

EECT 1342 Telecommunication outside Plant (2-4-3)
A study of outside plant facilities with emphasis on cabling layout

design, splicing, bonding, grounding and facility protection systems. Safety practices and procedures are included.

EECT 1344 Telecommunications Broadband Systems (2-4-3)
A survey of telecommunications broadband transmissions systems including protocols, testing, applications and safety practices.

EECT 1380 Coop: Electrical & Communications Engineering (1-39-6)
EECT 1680 Coop: Electrical & Communications Engineering (1-39-6)
EECT 2680 Coop: Electrical & Communications Engineering (1-39-6)
Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component. Prerequisites: CSIR 1359, EECT 1342.

EECT 2330 Telecommunications Switching (2-4-3)
The operation of telecommunications switching equipment and related software. Topics include installation, testing, maintenance, and troubleshooting. Prerequisite: EECT 1303.

EECT 2337 Wireless Telephony Systems (2-4-3)
Principles of wireless/cellular telephony systems to include call processing, hand-off, site analysis, antenna radiation patterns, commonly used test/maintenance equipment and access protocol.

EECT 2435 Telecommunications (2-4-4)
A study of modern telecommunications systems incorporating microwave, satellite, optical, and wire/cable-based communications systems. Instruction in installation, testing, and maintenance of communications systems components.

ENGL 1301 (see English/Communications)

IEIR 1302, IEIR 1304 (See Mechatronics Technology)

MATH 1314, MATH 1332 (see Math/Natural Sciences)

POFT 1301 (see English/Communications)

SPCH (see Speech Electives)

TECM 1303 (see Math/Natural Sciences)

Transferable Academic Courses

ACCT 2301 Principles of Accounting I - Financial (3-1-3)
Accounting, concepts and their application in transaction analysis and financial statement preparation; analysis of financial statements; and asset and equity accounting in proprietorships, partnerships, and cor-porations. Introduction to cost behavior budgeting, responsibility ac-counting, cost control, and product costing.

ACCT 2302 Principles of Accounting II – Managerial (3-1-3)
Accounting concepts and their application in transaction analysis and financial statement preparation; analysis of financial statements;

and asset and equity accounting in proprietorships, partnerships, and corporations. Introduction to cost behavior, budgeting, responsibility accounting, cost control, and product costing. Prerequisites ACCT 2301.

ACCT 2401 Principles of Accounting I - Financial (3-3-4)
Accounting concepts and their application in transaction analysis and financial statement preparation; analysis of financial statements; and asset and equity accounting in proprietorships, partnerships, and corporations. Introduction to cost behavior, budgeting, responsibility accounting, cost control, and product costing.

BUSI 1301 Business Principles (3-0-3)
Introduction to the role of business in modern society. Includes overview of business operations, analysis of the specialized fields within the business organization, and development of a business vocabulary.

BUSI 2301 Business Law (3-0-3)
Principles of law which form the legal framework for business activity.

COSC 1301 Microcomputer Applications (2-2-3)
Overview of computer information systems. Introduces computer hardware, software, procedures, systems, and human resources and explores their integration and application in business and other segments in society. The fundamentals of computer problem solving and programming in a higher level programming language may be discussed and applied.

COSC 1436 Programming Fundamentals I (3-2-4)
Introduces the fundamental concepts of structured programming. Topics include software development methodology, data types, control structures, functions, arrays, and the mechanics of running, testing, and debugging. This course assumes computer literacy.

COSC 1437 Programming Fundamentals II (3-2-4)
Review of control structures and data types with emphasis on structured data types. Applies the object-oriented programming paradigm, focusing on the definition and use of classes along with the fundamentals of object-oriented design. Includes basic analysis of algorithms, searching and sorting techniques, and an introduction to software engineering. Prerequisite: COSC 1336/1436.

ENVR 1401 Environmental Science I (3-3-4)
General interest course requiring a minimum of previous science background and relating scientific knowledge to problems involving energy and the environment. Includes a laboratory.

Vocational Nursing

BIOL (see Math/Natural Sciences)

FDNS 1341 Nutrition in the Life Cycle (3-0-3)
Analysis of nutrition assessment indicators for each age group. Social consideration to growth standards, maternal weight gains, eating behaviors of various age groups, and the physiology of aging as it relates to nutrient adequacy in the mature adult.

HITT 1305 (see Medical Information Specialist/Transcriptionist)

HPRS 1204 (see Allied Health Related Skills)

PSYC 2314 (see Business and Social/Behavioral Sciences)

RNSG 1301 Pharmacology (3-1-3)
Introduction to the science of pharmacology with emphasis on the actions, interactions, adverse effects, and nursing implications of each drug classification. Topics include the roles and responsibilities of the nurse in safe administration of medications within a legal/ethical framework. This course lends itself to either a blocked or integrated approach.

VNSG 1119 Professional Development (1-0-1)
Study of the importance of professional growth. Topics include the role of the licensed vocational nurse in the multi-disciplinary health care team, professional organizations, and continuing education.

VNSG 1230 Maternal Neonatal Nursing (2-1-2)
A study of the biological, psychological, and sociological concepts applicable to basic needs of the family including childbearing and neonatal care. Topics include physiological changes related to pregnancy, fetal development, and nursing care of the family during labor and delivery and the puerperium.

VNSG 1261 Introductory Clinical-Practical Nurse (0-12-2)
A health-related work-base learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional.

VNSG 1304 Foundations of Nursing (3-0-3)
Introduction to the nursing profession including history, standards of practice, legal and ethical issues, and role of the vocational nurse. Topics include mental health, therapeutic communication, cultural and spiritual diversity, nursing process, and holistic awareness.

VNSG 1329 Medical-Surgical Nursing I (3-1-3)
Application of the nursing process to the care of the adult patient experiencing medical-surgical conditions along the health-illness continuum in a variety of health care settings.

VNSG 1334 Pediatric Nursing (3-0-3)
Study of the care of pediatric client and family during health and disease. Emphasis on growth and developmental needs.

VNSG 1402 Applied Nursing Skills I (3-3-4)
Introduction to and application of primary nursing skills. Emphasis on utilization of the nursing process and related scientific principles.

VNSG 1432 Medical-Surgical Nursing II (3-1-4)
Continuation of Medical-Surgical Nursing I with application of the nursing process to the care of the adult patient experiencing medical-surgical conditions along the health-illness continuum in a variety of health care settings.

VNSG 1462 Intermediate Clinical–Practical Nurse (0-20-4)
A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional.

VNSG 2413 Applied Nursing Skills II (3-2-4)
Application of nursing skills to meet more complex client needs utilizing the nursing process and related scientific principles.

VNSG 2463 Advanced Clinical-Practical Nurse (0-20-4)
A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional

Welding Technology

ENGL 1301 (see English/Communications)

MATH 1322 (see Math/Natural Sciences)

NDTE 2311 Preparation for Certified Welding Inspector Exam (2-2-3)
Welding fundamentals, welding inspection and code interpretation in preparation for the certified welding inspector examination.

SPCH (see Speech Electives)

WLDG 1206 Fundamentals of Gas Tungsten Arc Welding (GTAW)
Fundamentals of Gas Tungsten Arc Welding (GTAW). Includes setup and safe use of GTAW equipment as well as instruction in flat positions on joint designs.

WLDG 1313 Intro to Blueprint Reading for Welders (2-2-3)
A study of industrial blueprints. Emphasis placed on terminology, symbols, graphic description, and welding processes. Includes systems of measurement and industry standards. Also includes interpretation of plans and drawings used by industry to facilitate field application and production.

WLDG 1317 Introduction to Layout & Fabrication (2-4-3)
A fundamental course in layout and fabrication related to the welding industry. Major emphasis on structural shapes and use in construction.

WLDG 1323 Welding Safety, Tools, & Equipment (3-0-3)
An introduction to welding careers, equipment and safety practices, including OSHA standards for industry.

WLDG 1337 Introduction to Welding Metallurgy (2-2-3)
A study of ferrous and nonferrous metals from the ore to the finished product. Emphasis on metal alloys, heat treating, hard surfacing, welding techniques, forging, foundry processes, and mechanical properties of metal including hardness, machinability, and ductility.

WLDG 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 1421 Intro to Welding Fundamentals (2-6-4)
An introduction to the fundamentals of equipment used in oxy-fuel and arc welding, including welding and cutting safety, basic oxy-fuel welding and cutting, basic arc welding processes and basic metallurgy.

WLDG 1430 Intro to Gas Metal Arc (GMAW) (2-6-4)
A study of the principles of gas metal arc welding, setup and use of Gas Metal Arc Welding (GMAW) equipment, and safe use of tools/ equipment. Instruction in various joint designs.

WLDG 1434 Introduction to Gas Tungsten Arc Welding (GTAW) (2-6-4)
Principles of gas tungsten arc welding (GTAW), including setup, GTAW equipment. Instruction in various positions and joint designs.

WLDG 1435 Intro to Pipe Welding (2-6-4)
An introduction to welding of pipe using the shielded metal arc welding process (SMAW), including electrode selection, equipment setup, and safe shop practices. Emphasis on weld positions 1G and 2G using various electrodes.

WLDG 1457 Intermediate Shielded Metal Arc Welding (SMAW) (2-6-4)
A study of the production of various fillets and groove welds. Preparation of specimens for testing in all test positions.

WLDG 2413 Intermediate Welding Using Multiple Processes (2-6-4)
Instruction using layout tools and blueprint reading with demonstration and guided practices with some of the following welding processes: oxy-fuel gas cutting and welding, shield metal arc welding (SMAW), gas metal arc welding (GMAW), flux-cored arc welding (FCAW), gas tungsten arc welding (GTAW), or any other approved welding process.

WLDG 2435 Advanced Layout & Fabrication (2-6-4)
An advanced course in layout and fabrication. Includes production and fabrication of layout, tools, and processes. Emphasis on application of fabrication and layout skills.

WLDG 2443 Advanced Shield Metal Arc 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.

WLDG 2453 Advanced Pipe Welding (2-6-4)
Advanced topics involving welding of pipe using the shielded metal arc welding (SMAW) process. Topics include electrode selection, equipment setup, and safe shop practices. Emphasis on weld positions 5G and 6G using various electrodes.

Wind Energy Technology

CETT 1303 (see Mechatronics Technology)

CETT 1305 (see Mechatronics Technology)

CETT 1325 (see Mechatronics Technology)

ELMT 1301 (see Mechatronics Technology)

ELMT 1305 (see Mechatronics Technology)

ELMT 1391 Special Topics in Electromechanical Technology/Technician (3-0-3)
Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. This course was designed to be repeated multiple times to improve student proficiency.

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.

ENGL 1301 (see English/Communications)

INMT 1317 (see Mechatronics Technology)

MATH 1314 (see Math/Natural Sciences)

TECM 1303 (see Math/Natural Sciences)

WIND 1300 Introduction to Wind Energy (3-0-3)
Introduction of wind technology, wind farm design, and wind power delivery.

WIND 1302 Wind Safety (3-1-3)
Introduction to safety procedures and practices relating to turbine towers. Includes first aid training and CPR certifications.

WIND 1470 Wind Turbine SCADA and Networking (2-4-4)
Topics in Supervisory Control and Data Acquisition systems, Industrial Ethernet communications systems as they apply to the wind energy industry.

WIND 2310   Wind Turbine Materials and Electro-Mechanical Equipment (2-4-3)
Identification and analysis of the components and systems of wind turbine.

WIND 2455 Wind Turbine Troubleshooting and Repair (2-5-4)
Operation, maintenance, troubleshooting, and repair of wind turbine electro-mechanical systems

WIND 2459 Wind Power Delivery System (2-5-4)
Components, equipment, and infrastructure used in the production and transmission of electricity as related to wind turbine power.

TSTC Texas State Technical College

PERSONNEL DIRECTORY

Personnel Directory

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Joe M. Gurecky, Vice Chairman
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Members
Ivan Andarza
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System Executive Officers

Michael L. Reeser
Chancellor

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Vice Chancellor of Business Intelligence

Rick Herrera
Vice Chancellor of Technology, System Chief Technology Officer

Jonathan Hoekstra
Vice Chancellor of Finance, System Chief Financial Officer

Roger Miller
Vice Chancellor for External Relations

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College Presidents

Dr. Stella Garcia, Interim
TSTC Harlingen

Rob Wolaver
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Kyle Smith, Interim
TSTC West Texas

Randall Wooten
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TSTC Harlingen Administration

Dr. Stella Garcia
Interim President
Ph.D., Our Lady of the Lake University

Mary Gallegos Adams
Vice President for Student Development
B.B.A., University of Texas Pan American

Dr. Gisela Figueroa
Vice President for Financial and Administrative Services
Ph.D., Our Lady of the Lake University

Rebecca L. Silva
Vice President for Student Learning
M.Ed., Pennsylvania State University

Javier De Leon
Vice President for College Readiness & Corporate Education
M.P.A., University of Texas Pan American

Barbara Bennett
Associate Vice President for Student Learning
M.S., Eastern Illinois University

Dr. Gina Cano-Monreal
Associate Vice President for Organizational Development
Ph.D., Saint Louis University

Dr. Grady Deaton
Associate Vice President for Facilities/ADA Coordinator
Ed.D., Universidad Autonoma de Tamaulipas

Cledia Hernandez
Associate Vice President Corporate & Community Education
B.S., University of Texas at Brownsville

Dr. Sandra Nieto
Associate Vice President for College Readiness & Advancement
Ph.D., Capella University

Celina Sauceda-Garza
Associate Vice President for Institutional Assessment
M.A., University of Texas at Brownsville

Christine Stuart-Carruthers
Associate Vice President for Enrollment Management
M.Ed., The Pennsylvania State University

Professional Staff

Ruben Abarca
Associate Project Manager
A.A.S., Texas State Technical College Harlingen

Salvador Acevedo
Coordinator Programs
B.A., University of Texas at Pan American

Jaime E. Aguilar
Systems Analyst I - Financial Aid
B.S., University of Texas at Brownsville

Melissa Alemán
Assistant Director – Human Resources
A.A.S., Texas State Technical College Harlingen

Adan Alvarez
Project Manager
B.S., University of Texas at Arlington

Graciela Angulo
Operations Associate - Bookstore

Paula Arredondo
Registrar
B.B.A., University of Texas at Brownsville

Nereida Balli
Project Manager
B.A.T., University of Texas at Brownsville

Maria L. Barrera
Coordinator - Contract and Grant
B.A.A.S., University of Texas at Brownsville

Ermelinda Barron
Coordinator - Tutoring Services
B.S., Texas A&M University – Corpus Christi

David Joseph Basler
Coordinator - Dual Enrollment
B.B.A., Texas A&M University

Dr. Robert Bennett
Director - Instructional Projects
D.M.D., Southern Illinois University

Ester Bodnar
Assistant Director – Institutional Effectiveness
A.A.S., Texas State Technical College Harlingen

Enrique Carrillo
Safety Officer
A.A.S., Texas State Technical College Harlingen

David Casanova
Coordinator – Technical Program
B.S., Texas A&M University Kingsville

Laura Casas
Director-Talent Search
M.B.A., University of Texas at Brownsville

Mary E. Castañon
Director, Instructional Administration
B.A.A.S., University of Texas at Brownsville

Arturo Castillo
Program Manager - Challenger Learning Center
J.D., Thurgood Marshall School of Law

Emilia Cazares
Academic Advisor - Dual Enrollment
B.B.A., University of Texas Pan American

Adele Clinton-Solis
Director of Student Life
M.S., University of Texas Pan American

Dora Colvin
Assistant Director-Office of Admissions
B.A., University of Texas Pan American

Anna Cortez
Equity Advocate Counselor
B.A., University of Texas Pan American

Clarisa De la Fuente
Director-Dual Enrollment
B.A., University of Texas Pan American

Corina De la Rosa
Coordinator - Disabilities Programs
B.S.W., University of Texas Pan American

Myra Deleon
Testing Administrator
A.A.S., Texas State Technical College at Harlingen

Daniel De La Garza
Senior Buyer
B.B.A., University of Texas Pan American

Carolina Duran
Accountant
B.B.A., University of Texas Pan American

Cassandra Elizondo
Testing Administrator
B.A., University of Texas at Brownsville

Sharon Farias
Executive Assistant to President

Tillie Flores
Assistant Director - Financial Aid
A.A.S., Texas State Technical College Harlingen

Robert Foshie
Academic Advisor
B.A., Grand Canyon University

Joe Garcia
Supervisor - Custodial Services

Juan Garcia
Director-Curriculum
M.S., University of Texas at Pan American

Juan Garza
Director - Resource Development
B.A.A., University of Texas at Brownsville

Lorena Y. Garza
Director - University Center
B.A., University of Texas at Pan American

Deborah Gibson
Supervisor, Accounting
B.S., University of Houston

Alma Gomez
Academic Advisor
B.S., University of Texas at Brownsville

Elma Gomez
Academic Advisor
B.A., University of Texas at Brownsville

Janette Gomez
Counselor, Student
M.S., Texas A&M University at Kingsville

Jose Alfredo Gonzalez
Coordinator - Media Center
A.A.S., Texas State Technical College Harlingen

Julie Gonzalez
Human Resources Advisor

Lizette Gonzalez
Academic Advisor
B.A., University of Texas Pan American

Llesmin Gonzalez
Senior Testing Administrator
B.A., University of Texas at Brownsville

Monica Gonzalez
Academic Advisor - Talent Search
B.A., University of Texas - Pan American

Roxanne Gonzalez
Academic Advisor - Dual Enrollment
B.A., Texas A&M University Kingsville

Cerafin Grajales
Associate Project Manager
A.A.S., Texas State Technical College

Pedro Guardiola
Buyer I
A.A.S., Texas State Technical College Harlingen

Steve Guevara
Director Veterans Center
B.T., University of Texas at Brownsville

Martha Gutierrez
Coordinator of Industrial Training
B.S., University of Texas Pan American

Nancy Hendriks
Director, Learning Resource Center
M.L.S., Wayne State University

Todd Holland
Coordinator Strategic Partnerships
B.A., Life Pacific College

Susan Holmes
Director-Career Services
B.A., Texas Christian University

Brittany Johnson
Academic Advisor
B.A., Texas A&M University

Delia Leal
Director - Staff Development
M.A.E., University of Phoenix

Juan Leal
Director-Continuing Education
B.B.A., University of Texas at Brownsville

Luis Leal
Supervisor – Bookstore
M.A., University of Phoenix

Velma Leal
Coordinator of Support Services
B.S., University of Texas at Brownsville

Juan Lopez
Director, Physical Plant
B.A., University of Texas at Brownsville

Lynda Lopez
Executive Director Marketing
B.A., Southwest Texas State University at San Marcos

Diana Lucio
Director – CAMP
M.P.A., Baruch College

Antonia Luna
Director – HEP
M.A., University of Texas Pan American

Amy Lynch
Director – Institutional Advancement
B.A., University of Texas Pan American

Johann Martinez
Veterans Program Officer
B.A.A., University of Texas at Brownsville

Katie Martinez
Systems Analyst I
A.A.S., Texas State Technical College Harlingen

Adam McGrath
Graphic Designer
Diploma of Graphic Arts, RMIT University - Melbourne

Yvette G. Mendoza
Coordinator for Center for Science & Math Education
B.A., University of Texas at Brownsville

Connie Moncus
Project Manager
M.B.A., - University of Texas Brownsville

Jessica Morales
Academic Advisor - Talent Search
B.A., University of Texas at Brownsville

Rosalinda Morales
Placement Officer - HEP
B.A., University of Texas at Brownsville

Melinda Ortiz
Director - Upward Bound
M.S., Our Lady of the Lake University

Valentin Osejo
Supervisor of Property & Accountability
B.B.A., University of Texas Pan American

Belinda Palomino
Supervisor of Student Activites
B.A., University of Texas Pan American

Fred Pena Jr.
Director – Financial Aid
B.B.A., University of Texas at Brownsville

Carmen Perez
Buyer I

Gustavo Perez
Systems Analyst I
A.A.S., Texas State Technical College

Jennifer Porras
Pretech Advisor
A.A.S., Texas State Technical College at Harlingen

Mary Sanchez Prepejchal
Director of Human Resources
B.A., University of Houston

Nora Ramirez
Academic Advisor
A.A.S., Texas State Technical College Harlingen

Lydia Ramos
Project Manager
A.A.S., Texas State Technical College at Harlingen

Claudia Rodriguez
Systems Analyst I
B.A.T., University of Texas at Brownsville

Clista Rodriguez
Project Coordinator
B.A., University of Texas at Brownsville

Linda Rodriguez-Guillen
Director of Procurement Management/HUB
B.B.A., St. Mary's University

Maximo Salazar
Academic Advisor
B.A., University of Texas at Brownsville

Norma Salazar
Director - Student Success
M.S., University of Texas Pan American

Josie Saldivar
Coordinator - Career Plan/Placement
B.A.T., University of Texas Brownsville

Amanda Sandoval
Academic Advisor
M.A., University of Texas Pan American

Rosa Isela Serafin
Academic Advisor - Challenger Learning Center
B.A., Texas Women's University

Gloria Serra
Academic Advisor - HEP
B.S., University of Texas at Brownsville

Elizabeth Silva
Director- Career & Guidance
M.Ed., University of Texas Pan American

Arturo Solano
Director of Financial Services
B.A.T., University of Texas at Brownsville

Celina Solis-Hernandez
Institutional Research Specialist
B.B.A., University of Texas Pan American

Cynthia Sparks
Mentoring Coordinator
B.A., University of Texas at Arlington

Jose Adan Trevino
Coordinator – Special Projects
B.S., University of Texas at Pan American

Jessica Turrubiates
Academic Advisor
B.T., University of Texas at Brownsville

Edda M. Urrea
Director, Community Standards
M.A., Texas A&M University Kingsville

Jennifer Vasquez
Graphic Designer
A.A.A., Art Institute of Dallas

Viola Vela
Accountant
B.B.A., University of Texas Brownsville

Kelly Withrow
Librarian Technical Services
M.L.S., - Kent State University

Lenora Yanez
Director - Office of Admissions
B.A., University of Texas at Brownsville

Jessica Ybarra
Instruction Technology Specialist II
Certificate, Texas State Technical College Harlingen

Judith Ybarra
Resource Development Specialist
B.A., University of Texas at Brownsville

Sanjuana Zavala
Academic Advisor - Upward Bound
B.S., University of Texas at Brownsville

David Zieske
Academic Advisor
A.A.S., Texas State Technical College

Antonia Zuniga
Coordinator- Budgets
CER- Texas State Technical College

Justin Zuniga
Webmaster
A.A.S., Texas State Technical College Harlingen

Melani Zuniga
Coordinator of Publications
A.A.S., Texas State Technical College Harlingen

Faculty

Mohamed Agharbi
Master Instructor, Developmental Math
M.S., Texas A&M University

Myriam Aguila
Instructor, Education & Training
M.Ed., University of Texas at Brownsville

Alejandro Alcoser
Instructor, Department Chair,
Computer Systems Management Technology
M.Ed., University of Texas at Brownsville

Cristina Aldape
Master Instructor, General Studies
B.S.W., University of Texas Pan American

Jose Alvarez
Instructor, Physics
M.S., University of Detroit

Aaron Anzaldua
Instructor, Telecommunications Technology
A.A.S., Texas State Technical College Harlingen

Kyumars Ardalani
Associate Professor, Department Chair, Mathematics
M.S., Texas A&M University

Gladys Arjona
Instructor, Dental Hygiene
M.Ed, TX A&M Kingsville

Claudia Arnold
Instructor, General Studies
B.A., University of Texas at Brownsville

Felicidad Balcos
Associate Professor, Communications/Humanities
M.A., University of the Philippines

Patrick Bauer
Master Instructor, Culinary Arts
B.S., University of Houston

Randy Bauer
Senior Instructor, Department Chair,
Dental Laboratory Technology
A.A.S, Texas State Technical College Harlingen

Pedro Bazan
Master Instructor, Developmental Math
M.S., University of Texas Pan American

Beverly Bendiks
Associate Professor, Communication & Humanities
M.A. University of Texas Pan American

Edelmiro Benitez
Instructor, Business Management Technology
B.A.T., University of Texas at Brownsville

Daniel Bodnar
Master Instructor, Department Chair, Telecommunications
B.S., Texas A & M University-Corpus Christi

Melissa Bowery
Instructor, LVN Program
A.A.S., University of Texas at Brownsville

Yvonne Browning
Master Instructor, Developmental English
M.A., Trinity University

Jill B. Brunson
Instructor, Dental Assistant
Certificate, Southwestern Oklahoma State University

Elizbeth Bryant
Instructor, Social/Behavioral Sciences
M.S., Southern University

Jorge Cabrera
Instructor, Department Chair,
Air Conditioning & Refrigeration Technology
A.A.S., Texas State Technical College Harlingen

David Campos
Instructor, Architecture Design & Engineering Graphics Technology
A.A.S., Texas State Technical College

Ruby Campuzano
Senior Instructor, Department Chair,
Business & Behavioral/ Social Sciences
M.S., University of Texas Pan American

Omar Cano
Associate Professor, Academic Science
M.S., University of Texas Pan American

Joseph Cantu
Instructor, Auto Collision Technology
A.A.S., Texas State Technical College Harlingen

Abel Castillo
Instructor, Automotive Technology
A.A.S., Texas State Technical College Harlingen

Charles D. Castillo
Instructor, Academic Science
M.S., University of Texas Pan American

Cynthia Chavez
Instructor, Communication & Humanities
M.A., University of Texas Pan American

Dr. Edna Claus
Professor, Division Director
Computer Information Systems
Ph.D., Texas A&M Kingsville

Steven Coffman
Instructor, Game & Simulation Programming
A.A.S., Texas State Technical College Harlingen

Norma Colunga-Hernandez
Associate Professor, Department Chair,
Computer Networking & Security Technology
M.S., Western Christian Science

Nicki Cone
Associate Professor, Division Director, Education & Humanities
M.A., Texas A& M University

Scott Contois
Instructor, Developmental Math
M.S., Western Illinois University

Tom Cross
Instructor, Department Chair, Aviation Maintenance Technology
A.A.S., Texas State Technical College Harlingen

San Juana Cuellar
Associate Professor, Business & Behavioral/Social Sciences
M.B.A., University of Texas Pan American

John R. Davidson
Senior Instructor, Social/Behavioral Science
M.A., University of Texas at Brownsville

Gilbert De Leon
Master Instructor, HEP
B.S., University of Texas Pan American

Marilupe Delgado
Associate Professor, Developmental English
M.A., University of Texas Brownsville

Dr. Tony M. Desjardins
Instructor, Department Chair, Education & Training
Ed.D., University of Houston

Carl Eads
Master Instructor, Department Chair, Culinary Arts
B.B.A., University of Texas Pan American

Laura Esquivel
Instructor, Dental Hygiene
A.A.S., Texas State Technical College Harlingen

Eva Euler
Instructor, Department Chair, Dental Hygiene Technology
M.Ed., Texas A&M University Kingsville

Eva Fernandez
Instructor, Developmental Math
B.S., University of Texas at Brownsville

Kristina Flores
Instructor, Nursing
Certificate, St. Michael's School of Nursing and Technology

Veronica Flores
Instructor, Medical Information Specialist
A.A.S., Texas State Technical College

Dr. Emmanuel Formacio Serna
Instructor, Biology/Nursing Preparatory Programs
M.D., Universidad Popular Autonoma Medical

Garnet Gaither
Master Instructor
Digital Media Design Technology
B.F.A., Texas A & M University College Station

Mirna Garcia
Associate Professor, Department Chair, Developmental English
M.S., University of North Texas

John T. Garrett
Associate Professor, Department Chair,
Academic Core
M.Ed., University of Texas at Brownsville

Ageda Garza
Instructor, Surgical Technology
A.A.S., University of Texas Pan American

Gabriel Garza
Instructor, Digital Media Design
A.A.S., Texas State Technical College Harlingen

Rene Garza
Instructor, Communication & Humanities
M.F.A., UT Pan American

Sammy Gavito
Instructor, Department Chair, Agriculture Technology
M.A., Texas A&M University Kingsville

Michael Gay
Master Instructor, Biology
M.A.I.S., University of Texas Pan American

Raul Gaytan
Instructor, Mechatronics Technology
BSEE, University of Texas Pan American

David Gomez
Instructor, Department Chair, Wind Energy & Turbine Technology
A.A.S., Texas State Technical College Harlingen

Ana Gonzales
Instructor, Health Information Technology
B.S., Texas State University

Emily Gonzales
Instructor, Medical Assistant
Certificate, Valley Baptist Academy

Alfonso Gonzalez
Instructor, Building Construction Technology
A.A.S., Texas State Technical College Harlingen

Dr. Daniel Gonzalez
Professor, Assistant Department Chair, Academic English
Ed.D., University of Houston

Elsa Gonzalez
Associate Professor, Behavioral/Social Sciences
M.A., Texas State University - San Marcos

Isaac Gonzalez
Instructor, Machining Technology
A.A.S., Texas State Technical College

Veronica Guerrero
Instructor, Nurse Assistant
CER, Laredo Junior College

Adan Gutierrez, Jr.
Instructor, Division Director, Industrial/Manufacturing
B.S., Texas A&M University at Corpus Christi

Arnold Gutierrez
Instructor, HEP
B.A.A.S., University of Texas at Brownsville

Jesus A. Gutierrez
Instructor, Developmental English
B.A., Texas A&M University

Heather Hall
Instructor, Academic English
M.A., University of Texas Pan American

Paul Hansen
Associate Professor, Developmental English
M.A., University of Texas at Brownsville

John Hensley
Instructor, Student Success
M.S.W., University of Texas Pan American

Adam Hernandez
Instructor, Department Chair, Mechatronics Technology
B.S., Texas AM University of Kingsville

Felipe Hernandez
Instructor, Computer Systems Management Technology
A.A.S., Texas State Technical College Harlingen

Dr. Luis Hernandez
Instructor, Chemistry/Chemical-Environmental Technology
Ph.D., New York University

Robert Hernandez
Instructor, Chemical-Environmental Technology
B.S., University of Texas at Austin

Yanina Hernandez
Associate Professor, Academic Foreign Language
M.A., University of New Mexico

Adriana Hinojosa-Vassberg
Instructor, Department Chair, LVN Program
A.A.S., University of Texas at Brownsville

Mary Elizabeth Hollmann
Instructor, Education & Training
M.Ed., University of Texas at Browsnville

Mehrdad Hosseinpour
Master Instructor, Developmental Math
M.S., Texas A&M University

Lucretia Human
Instructor, Dental Hygiene
B.S., Northern Arizona University

Cesar Ibarra
Instructor, Computer Networking & Security Technology
B.A.T., University of Texas at Brownsville

Antonio Jayoma
Instructor, Interim Department Chair, RN Program
M.S.P.H., University of Texas at Brownsville

Timothy A. Kikos
Associate Professor, English/Spanish
M.A., University of Texas Pan American

Richard Kirk
Associate Professor, Social/ Behavioral Science
M.Ed., University of Texas at Brownsville

Velma Kotzur,
Associate Professor, Department Chair, General Studies
M.A.I.S., University of Texas Pan American

Matthew Lansford
Instructor, Aviation Maintenance Technology
A.A.S., Texas State Technical College

Jean Lashbrook
Senior Instructor, Division Director - Allied Health
Nurse Assistant Technology
A.A.S., R.N., New York University

Jessica Leal
Instructor, Department Chair,
Chemistry/Chemical Environmental Technology
M.S., University of Texas Pan American

Eldwin Leija
Instructor, Mechatronics Technology
B.S., University of Texas Pan American

Paul Leonard
Associate Professor, Department Chair,
Academic Science
M.S., University of Texas Pan American

Frank Lewis
Associate Professor, English/Spanish
M.A., American University

Jazmin Ley
Instructor, Academic Engineering
M.S., University of Texas Pan American

Ricardo Limas
Instructor, Department Chair, Machining Technology
A.A.S., Texas State Technical College

George Lister
Instructor, Department Chair,
Wind Energy Technology - Ingleside
M.S., National University

Patricia Lister
Enrollment Management Specialist,
Wind Energy Technology- Ingleside
M.S., University of Texas at Dallas

Ray Longoria
Instructor, Interim Department Chair,
Biomedical Equipment Technology
A.A.S., Texas State Technical College

Rogelio Longoria
Instructor, Air Conditioning & Refrigeration Technology
A.A.S., Texas State Technical College Harlingen

Miguel Loya
Instructor, Architectural Design & Engineering Graphics Technology
A.A.S., Texas State Technical College

Tony Lozano
Instructor, Department Chair,
Game & Simulation Programming
A.A.S., Texas State Technical College Harlingen

Alicia Lugo
Instructor, Department Chair Nurse Assistant/Medical Assistant
B.S., University of Texas Brownsville

Elizabeth Martinez
Instructor, Computer Systems Management Technology
B.S., Texas A&M University Corpus Christi

Cindy B. Mata
Instructor, Department Chair, Business Management Technology
B.B.A., University of Texas Pan American

Norberto Mendoza
Instructor, Agriculture Technology
M.A., Angelo State University

Monica Mercado
Instructor, Communication & Humanities
M.A., University of Texas Pan American

Julian Montalvo
Instructor, Automotive Technology
A.A.S., Texas State Technical College Harlingen

Al Montemayor
Master Instructor, Computer Networking and
Security Technology
M.A., Trinity University

Kenneth Moore
Instructor, Department Chair, Welding Technology
A.A.S., Texas State Technical College

Shelly Mozingo
Instructor, Vocational Nursing
B.S.N., Texas A&M University

Michael Murphy
Sr. Instructor, Department Chair, Developmental Math
B.A., University of Houston

Sam Nauman
Associate Professor, Developmental Math
M.B.A., Southern New Hampshire University

Jan Nesmith
Instructor, Computer Networking and Security Technology
B.A.T., University of Texas at Brownsville

Charles Obare
Instructor, Developmental Math
M.S., University of Texas Pan American

Eva Ortega
Instructor, Developmental Math

Clark Owen
Associate Professor, English/Spanish
M.A., University of Texas at Brownsville

Krisotpher Petit
Instructor, Dental Hygiene
A.A.S., Texas State Technical College

Samuel Pizano
Instructor, Architecture Design & Engineering Graphics Technology
A.A.S., Texas State Technical College Harlingen

David Place
Instructor, Digital Media Design Technology
B.F.A., American Intercontinental University

Beyda M. Ramirez
Instructor, Medical Information Specialist/Transcriptionist
B.A.A.S., University of Texas at Brownsville

Roberto Ramirez
Instructor, Automotive Technology
A.A.S., South Texas College

John Reyes
Instructor, Computer Systems Management Technology
B.S., University of Texas Pan American

Raquel Rico
Instructor, Department Chair, Dental Hygiene
M.Ed., University of Texas at Brownsville

Leonardo Robb
Instructor, Aviation Maintenance
A.A.S., Texas State Technical College Harlingen

Arthur Roberts
Instructor, Dental Lab Technology
M.A., Our Lady of the Lake University

Aida Rocha
Instructor, Health Information Technology
B.A.A., University of Texas Brownsville

Jennifer Rodriguez
Associate Professor, Communication & Humanities
M.F.A., University of Texas Pan American

Ramiro Rodriguez
Associate Professor, Academic Foreign Language
M.A., University of Texas at Brownsville

Theresa Ruiz
Instructor, Medical Information Specialist/Transcriptionist
A.A.S., Texas State Technical College

Nancy Gail Russell
Associate Professor, Communication & Humanities
M.F.A., Texas A&M University

Jose Salas
Instructor, Welding Technology
A.A.S., Texas State Technical College

Eduardo Saldivar
Instructor, Academic Science
M.S., University of Texas Pan American

Luana Salinas
Instructor, Vocational Nursing
A.S., University of Texas at Brownsville

Anna San Pedro
Sr. Instructor, Surgical Technology
A.A.S., Texas State Technical College Harlingen

Robert Sanchez
Master Instructor, Department Chair, Surgical Technology
B.S.N., University of Texas Pan American

Nancy Sandrock
Instructor, Registered Nursing
M.S., Case Western Reserve University

Anthony Santos
Instructor, Computer Networking & Security Technology
A.A.S., Texas State Technical College

Johannes Schwarz
Instructor, Department Chair, Building System Technology
A.A.S., Texas State Technical College

Elvia Silva
Master Instructor, Business Management Technology
M.Ed., University of Texas Brownsville

Steven Slagle
Instructor, Social/Behavioral Sciences
M.A., University of Houston Central Campus

Brenda Swinnea
Instructor, Nurse Assistant
A.A.S., University of Texas Pan American

Atiq Syed
Professor, Department Chair, Physics
Ph.D., St. Louis University

Steven Szymoniak
Instructor, Business Management Technology
M.B.A., - Columbia Southern University

William Taliancich
Instructor, Academic English
M.A., University of Texas at Brownsville

Amanda Tamez
Instructor, Developmental Math
B.S., University of Texas at Brownsville

Cinthya Valdez
Instructor, Medical Assistant
A.A.S., Texas State Technical College

Jose Vargas
Instructor, Department Chair, Auto Collision Technology
A.A.S., Texas State Technical College Waco

Jerry Vavra
Instructor, Department Chair, Digital Imaging Technology
B.A., University of Advancing Computer Technology

Diego Villarreal
Instructor, Mechatronics Technology
A.A.S., Texas State Technical College Harlingen

Ida Villarreal
Master Instructor, General Studies
B.A., University of Texas Pan American

Ramiro Villarreal
Instructor, Welding Technology
A.A.S., Texas State Technical College at Harlingen

Santiago Villarreal
Instructor, Digital Media Design Technology
A.A.S., Texas State Technical College Harlingen

Brian Walker
Instructor, RN Program
Doctoral Nurse Anesthesia, Texas Western University

Anneliese White
Instructor, Academic English
M.A., Texas State University at San Marcos

Jonathan White
Associate Professor, English/Spanish
M.F.A., Texas State University - San Marcos

Christa Wimberley
Instructor, Biology
M.S., University of Texas Pan American

Deborah Woods
Instructor, Department Chair,
Health Information Technology,
Medical Information Specialist/Transcriptionist
B.B.A., Beker College

Sessia Wyche
Instructor, Developmental Math
M.S., Texas A&M University at Kingsville

Hector Yanez
Senior Instructor, Divison Director, Engineering
M.Ed., University of Texas at Brownsville

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TSTC Texas State Technical College

Helpful Phone Numbers

Ask-a-Nurse Advice Line	956-364-4306
Career Services	956-364-4106
Cashier	956-364-4413
College Housing	956-364-4235
College Police 24/7	956-364-4911
Community Standards	956-364-4522
Continuing Education	956-364-4615
Marketing	956-364-4111
Office of Student Success	956-364-4163
Office of the Registrar	956-364-4101
President's Office	956-364-4021
Student Accounting	956-364-4409
Student ID Card Center	956-364-4352
Student Life	956-364-4304
Student Services	956-364-4301
TSTC Operator	956-364-4000 or 1-800-852-8784
TSTC Portal Help Desk	1-800-592-8784

Contact Information

Advisement Center 956-364-4997
Monday – Thursday 8 a.m. – 6 p.m.
Friday 8 a.m. – 5 p.m.
Saturday* 8 a.m. – 12 p.m.

Bookstore 956-364-4440
Monday – Thursday 7:45 a.m. – 5:30 p.m.
Friday 7:45 a.m. – 5 p.m.

Enrollment Management 956-364-4992
Monday – Friday 8 a.m. – 5 p.m.

Cashier 956-364-4413
Monday – Thursday 8 a.m. – 6 p.m.
Friday 8 a.m. – 5 p.m.
Saturday* 8 a.m. – 12 p.m.

Counseling & Support Services 956-364-4310
Monday – Thursday 8 a.m. – 6 p.m.
Friday 8 a.m. – 5 p.m.
Saturday* 8 a.m. - 12p.m.

Financial Aid Office 956-364-4330
Monday – Friday 8 a.m.– 6 p.m.
Saturday* (counter only) 8 a.m. – 12 p.m.

Learning Resource Center 956-364-4609
Monday – Thursday 7:30 a.m. – 8 p.m.
Friday 7:30 a.m. – 5 p.m.
Saturday* 12 p.m. – 4 p.m.
Semester Breaks (Monday-Friday) 8 a.m. - 5 p.m.

Mustang Café 956-364-4450
Serving Hours: Monday – Friday
Breakfast 7 a.m. – 10:30 a.m.
Lunch 11 a.m. – 2 p.m.
Hours of Operation: Monday – Friday 6 a.m. – 2 p.m.

Office of Admissions 956-364-4320
Monday – Thursday 8 a.m. – 6 p.m.
Friday 8 a.m. – 5 p.m.
Saturday* 8 a.m. – 12 p.m.

Online Learning 956-364-4950
Monday – Thursday 8 a.m. – 6 p.m.
Friday 8 a.m. – 5 p.m.

Student Accounting 956-364-4409
Monday – Friday 8 a.m. – 5 p.m.

Student Health Services 956-364-4305
Monday – Thursday 8 a.m. – 6 p.m.
Friday 8 a.m. – 5 p.m.
Saturday*° 8 a.m. – 12 p.m.

Testing Center 956-364-4310 or 364-4308
Monday - Wednesday 8 a.m. - 6 p.m.
Students must arrive no later than 1 p.m.

Thursday 8 a.m. - 9 p.m.
Students must arrive no later than 5 p.m.

Friday 8 a.m. - 5 p.m.
Students must arrive no later than 1 p.m.

Saturday* 8 a.m. - 1 p.m.
Students must arrive no later than 8:30 a.m.

Veteran Services 956-364-4387
Monday – Friday 8 a.m.– 6 p.m.
Friday 8 a.m. – 5 p.m.
Saturday*° 8 a.m. – 12 p.m.

Wellness & Sports Center 956-364-4340
Monday – Thursday 8 a.m. – 9 p.m.
Friday 8 a.m. – 2 p.m.

* Closed for Saturday holidays
°One month prior to each semester

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www.tstc.edu