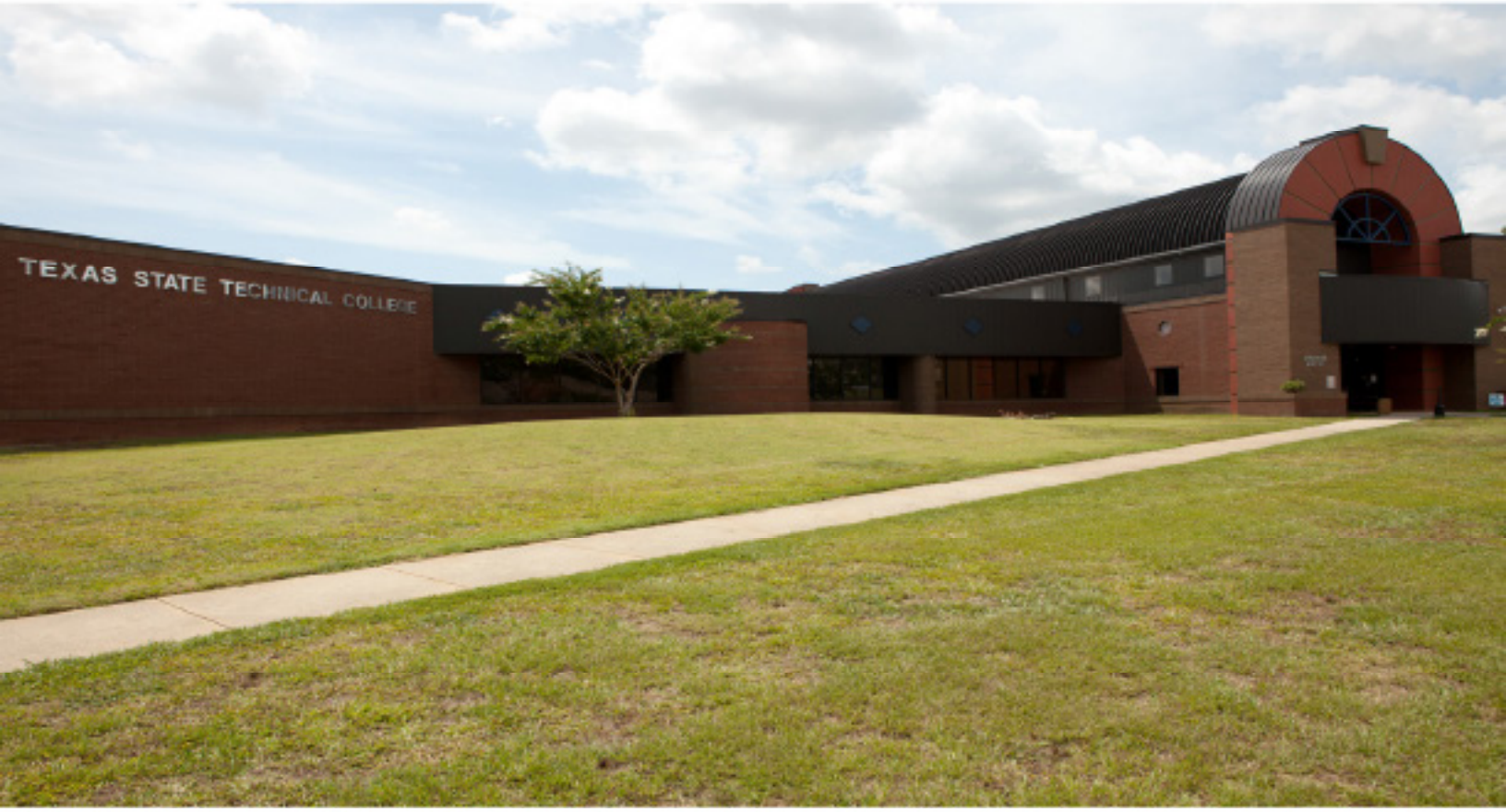
TSTC™

Catalog 2014-2015



www.tstc.edu

TSTC Texas State Technical College 50 1965 · 2015

Texas State Technical College Marshall Career Offerings

Automotive

Diesel Equipment Technology*

Business, Commerce and Service

Office Technology

Medical Office Technology

Logistics Technology**

Computer Information Technology and Media

Computer Systems Desktop Support*

Computer Systems/Networking Administration*

Cyber Security*

Multimedia Technology

Software Development Technology

Energy and Utilities

Electric Utility Construction and Maintenance

Engineering and Manufacturing

Applied Engineering: High Voltage Electrical**

Basic Machining*

Basic Welding*

Combination Welding*

Computer Aided Drafting*

Course Descriptions

Computer Aided Manufacturing*

Heating, Ventilation & Air Conditioning**

Industrial Maintenance*

Industrial Mechatronics Technician

Instrumentation

Process Operations Technician

Biomedical Equipment Technology

**Program also offered at the TSTC North Texas campus in Red Oak, Texas.*

***Program only offered at the TSTC North Texas campus in Red Oak, Texas.*

TSTC Texas State Technical College™

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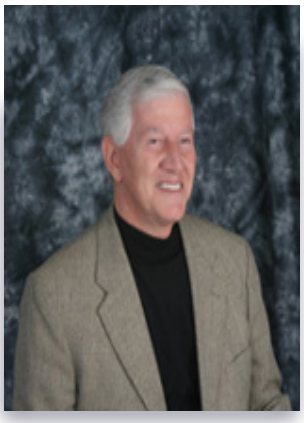
1965 · 2015

A letter from the President



Welcome to Texas State Technical College Marshall! Whether you are a new high school graduate or have been in the workplace for many years, our goal is to prepare you to enter or re-enter the world of work with both the knowledge and skills needed for success. TSTC Marshall can help you reach your goals regardless of your past educational experience.

TSTC Marshall is growing rapidly, due to the establishment of new programs and important revisions and extensions of others. TSTC prides itself in keeping pace with business and industry so that our graduates are "work- ready" the first day on the job. The level of student achievement is accomplished through both academic and "hands-on" technical education and training, using industry-standard equipment. Most of our curricula are laboratory-based, and you will gain invaluable experience while you learn. While TSTC's brand of education is work-based, it is also rigorous, requiring significant time and work on your part; but, the work will be worth the effort.

While we emphasize work, at TSTC Marshall, there are also opportunities for student activities and social interactions with others. Student housing is available, and student organizations provide opportunities for students to develop their professionalism and serve others.

Our first priority is your learning and your success! You will find our faculty and staff to be responsive and caring. Thank you for enrolling at TSTC Marshall.

Randall E. Wooten
President

Texas State Technical College Marshall Administration

Randall E. Wooten, President
B.S. Texas A&M University - Commerce
M.S. Troy University
M.S. Air Command & Staff College
M.S. Air War College

Barton Day, Vice President of Student Learning
B.B. A. University of Management and Technology
M.S. University of Management and Technology

Deborah Sanders, Vice President of Financial Services
B.S. Southeastern Oklahoma State University
M.B.A. Oklahoma City University

Brett Bright, Vice President of Student Services
B.A. East Central University
M.Ed. East Central University

Afton Barber, Ph.d. Executive Director of Institutional Effectiveness, Research, & Organizational Development
B. A. Southern Methodist University
M. S. University of Texas at Tyler
Ph.D. University of Texas at Tyler

Annette Ellis, Associate Dean of Student Services
B.A. University of Texas at Tyler
M.S. University of Texas at Tyler

Felicia Hill, Human and Organization Development Consultant
B.A.A.S. University of North Texas Denton
E.M.B.A. Texas Woman's University, Denton

Dennis J. Burrer, Excutive Director, Office of Information Technology Solutions
B.S. California State University, Chico
M.S. University of Southern California

Deborah Coleman, Executive Assistant to the President
B.S. Kaplan University

James E. Rowland, Provost
TSTC North Texas Center
B.S. United States Air Force Academy
M.S. Central Michigan University

April Graham, Vice President of Instruction
TSTC North Texas Center
B.S. East Texas State University
M.A. Stephen F. Austin State University

Anita Knight, Vice President of Corporate Solutions
TSTC North Texas Center
B.A. DePaul University

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Institutional Purpose and Goals

Statement of Purpose

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

"The Texas State Technical College System is a 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.

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

Texas State Technical College Marshall is a coeducational, two-year, public technical college within the Texas State Technical College System. The College offers programs of study leading to Certificates of Completion and Associate of Applied Science degrees. These educational programs include preparation for high demand, advanced, and emerging technology fields; developmental education; and general education courses in the humanities, mathematics, and sciences. The College provides a comprehensive teaching and learning environment with a constant focus on individual student achievement and skill enhancement. The College cultivates student-focused strategic partnerships with school districts, colleges, universities and employers and provides supportive transitions through articulated educational and professional pathways.

Texas State Technical College Marshall is committed to the economic development of Texas. To enhance the economic competitiveness of the state, the College provides specialized training and services for business and industry, continuing education, and community service programs. Additionally, TSTC Marshall offers courses to students at the secondary level that can apply towards both their high school graduation requirements as well as credit at the college level.

The faculty and staff of Texas State Technical College Marshall believe strongly in the worth and dignity of each individual and provide students with opportunities for personal and intellectual growth by offering a full range of services. These services include career and guidance counseling, tutoring, student activities, accommodations for students with special needs, financial aid, housing, and access to information on local healthcare providers.

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.

The TSTC System

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

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

Today, serving as the corporate college for Texas, TSTC offers new and 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. In addition to the four colleges, in 2013, TSTC Marshall opened the TSTC Marshall North Texas Extension Center in Red Oak, Texas.

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

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

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

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; Rosenberg, TX
Linda McKenna, Executive Committee Place 1;
Penny Forrest, Executive Committee Place 2;
Joe K. Hearne, Member;
Ivan Andarza, Member;
Keith Honey, Member;
John K. Hatchel, Member. and
James Virgil (J.V.) Martin, Member.

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

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.

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

Notes:

2014-2015 College Calendar
Texas State Technical College Marshall

FALL 2014

AUGUST 22, 2014	F	END OF SUMMER SEMESTER
AUGUST 25-29, 2014	M-F	SEMESTER BREAK
AUGUST 29, 2014	F	FALL REGISTRATION ENDS
SEPTEMBER 1 2014**	M	STUDENT AND STAFF HOLIDAY
SEPTEMBER 2, 2014	T	FALL 2014 FIRST CLASS DAY
NOVEMBER 27-28, 2014**	TH-F	STUDENT AND STAFF HOLIDAY
DECEMBER 12, 2014	F	END OF SEMESTER
DECEMBER 15, 2014 – JAN. 9, 2015	M-F	SEMESTER BREAK
DECEMBER 24, 2014 – JAN. 2, 2015	W-F	STAFF HOLIDAYS

SPRING 2015

JANUARY 9, 2015	F	SPRING REGISTRATION ENDS
JANUARY 12, 2015	M	SPRING 2015 FIRST CLASS DAY
JANUARY 19, 2015**	M	STUDENT AND STAFF HOLIDAY
MARCH 16-20, 2015	M-F	SPRING BREAK
MAY 1, 2015	F	END OF SEMESTER
MAY 4-8, 2015	M-F	SEMESTER BREAK

SUMMER 2015

MAY 8, 2015	F	SUMMER REGISTRATION ENDS
MAY 11, 2015	M	SUMMER 2014 FIRST CLASS DAY
MAY 25, 2015**	M	STUDENT AND STAFF HOLIDAY
JULY 3, 2015**	F	STUDENT AND STAFF HOLIDAY
AUGUST 21, 2015	F	END OF SEMESTER
AUGUST 24-28, 2015	M-F	SEMESTER BREAK
AUGUST 31, 2015	M	FALL 2015 FIRST CLASS DAY

NOTES:

***THE ASSISTANT COMMISSIONER OF ACADEMIC AFFAIRS AND RESEARCH FOR THE TEXAS HIGHER EDUCATION COORDINATING BOARD GRANTED A WAIVER APRIL 22, 2010 TO TSTC TO ALLOW TSTC A VARIANCE ON THE COMMON CALENDAR START DATES FOR SPRING AND SUMMER TERMS FOR THE YEARS 2011-2012 THROUGH 2020-2021.

**"EVENING AND WEEKEND CLASSES ON OR AROUND HOLIDAYS MAY BE RESCHEDULED OR CANCELLED AT THE OPTION OF THE COLLEGE.

OFFICIAL DAY WILL BE THE 11TH CLASS DAY.

REFUND SCHEDULE WILL BE 14TH DAY FOR 70%, 19TH DAY FOR 25%

PRORATE PAYMENT DUE DATE TO 19TH DAY

For an expanded calendar go to
www.marshall.tstc.edu

* Tuition & housing payments must be received in Business Office by 5 p.m.
Please check with Admissions and Records Office or College Relations for the 2013-2014 Calendar.

Notes:

Admissions Information

Personal Interviews and Campus Tours

Prospective students and their families are strongly encouraged to visit TSTC before registering for classes. During a campus visit each prospective student is assigned to an admissions advisor or education and career specialist (ECS), who serves as a personal contact to help in the transition to college. These staff members assist prospects and applicants throughout the testing, application, and registration processes. Contact the College Relations Office at 903..923.3207 to schedule a personal interview and campus tour.

Admission Requirements

General Admission Requirements

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

- Graduate from a high school accredited by a state department of education and/or a recognized regional accrediting association.
- Transfer from another college, university, or other higher education institution that is regionally accredited.
- Complete a GED Certificate (General Education Development), as certified by a state education agency.
- Meet international student criteria. Potential students who are not United States citizens must present proper documentation for an appropriate visa category. Additional information relating to academic background and financial support, as well as a personal interview, may be required for admission. See "International Students" under the Admission Procedures section for further information.
- Meet individual approval criteria. Potential students who do not meet any of the above requirements and are age 17 or older and no longer attending high school may be admitted through individual approval.
- Meet exceptional admission criteria. Potential students who are under age 17 may be admitted through the exceptional admission program under one of the following categories; provided they present sufficient evidence that they can do college-level work as determined by the institution.
- Age 16 or older and currently enrolled in high school without a diploma or GED, or age 16 and a graduate of an unaccredited or home high school.
- Age 16 and no longer attending high school, or age 15 or younger.

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

Admission Procedures

General Admission Procedures

These procedures apply to students enrolling in college credit programs:

1. Complete an online admission application at www.tstc.edu.
2. Note that proof of Texas residency may be required to obtain resident tuition rates.
3. Depending on the category under which the applicant qualifies for admission, submit the following additional documents.
   (a) High school graduate: an official copy of high school transcript
   (b) College or university transfer: official transcripts from all institutions of higher education attended previously
   (c) GED: a copy of GED certificate or official score report
   (d) Individual approval students: individual approval form
   (e) Exceptional admission students:
   - Age 16 or older and currently enrolled in high school without a diploma or GED: exceptional admission form signed by parent or guardian and high school representative;
   - Qualifying scores in writing and/or reading and/or mathematics on approved assessment instruments. Age 16 or older and a graduate of a home high school or unaccredited high school: exceptional admission form (signed by parent or guardian if age 16).
   - Age 16 and no longer attending high school, or age 15 or younger: exceptional admission form signed by parent of guardian and high school
   - representative; qualifying scores in writing, reading, and mathematics (Note: An information session with a TSTC official is also required. Contact the Admissions and Records Office for more information.)

   (f) International students: see "International Students" in this section for details
4. Submit scores from an approved TSI test, take a TSTC-administered placement test, or provide appropriate

documentation of TSI exemption or waiver. If needed, make arrangements to take an assessment test by contacting the Admissions and Records Office.

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

Former TSTC Students

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

International Students

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

The following documentation may be required.

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

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

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

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

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

Academic Fresh Start

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

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

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

Early Admission/ Concurrent High School/Dual Credit

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

Students must earn passing grades in all college courses that they have attempted in order to maintain satisfactory academic progress. Enrollment in developmental courses is not permitted for a student enrolling under the exceptional

admission program (concurrent high school or dual credit),

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

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

Contact the TSTC Admissions and Records Office or your high school counselor for more information.

Testing Services

Testing Services provides TSI tests along with other proctored departmental tests and certifications. Selected TSTC campuses may offer GED testing as well. Other instruments are offered that may provide information and guidance in academic and career areas that helps in understanding personal strengths and weaknesses.

Placement Testing

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

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

Registration for Classes

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

Notes:

Tuition and Fees

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

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

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

Tuition

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

State Tuition Rates Effective Fall 2011

- *Resident of Texas*: $82 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 2011

- $46 per semester credit hour

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

Tuition Rebate for Certain Undergraduates

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

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

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

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

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

Information pertaining to the Tuition Rebate Program is presented to students during new student orientation. Additional information pertaining to the Tuition Rebate

Program for undergraduate students may be found on the TSTC Marshall Website or may be obtained from the Admissions and Records Office.

The institutional contact for the Tuition Rebate Program is the Associate Dean of Student Services.

Student Payments

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

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

Past Due Accounts

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

Methods of Payments

Cash

All tuition and fees may be paid in cash.

Personal Checks

All tuition and fees may be paid by personal check at the cashier's office or online through the student's WebAdvisor account. Students who pay by check must present a valid TSTC identification card and a valid Texas driver's license. Checks from parents or legal guardians are to be made out to "Texas State Technical College."

Credit and Debit Cards

All tuition and fees of $5 or more may be paid by credit or debit card. Students paying with credit or debit cards may make payments at the cashier window in the Business Office or online through WebAdvisor at http://mytstc.edu.

Installment Payment Plan

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

In order to validate the payment plan option, the initial payment and the signed Installment Agreement must be returned to the Business Office at the time of registration. . The payments are due as follows:

Fifteen Week Term.
1/3 prior to the beginning of the term plus the $25 installment plan fee
1/3 prior to the 6th class week
1/3 prior to the 11th class week

Twelve-Week or Longer Term:
1/3 prior to the beginning of the term plus the $25 installment plan fee
1/3 prior to the 5th class week
1/3 prior to the 9th class week

Less than Twelve-Week Term:
½ prior to the beginning of the term plus the $25 installment plan fee
½ before the class week prior to the halfway point of the term

A student who elects to pay in installments will:

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

Emergency Tuition Loans

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. A student who is unable to repay the emergency tuition loan on the date due may apply for a possible extension for repayment. Contact the Business Office for more information.

Housing

Single Student Housing

4-Bedroom, 1 bath

(4 occupants-private)……..$1,205/semester/ person

2-Bedroom, 1 bath

(2-occupants-private)…….$1,399/semester/ person

Apartments are furnished with twin bed, chest, desk and chair, local "analog" phone service, mini blinds, sofa, chair, coffee table, end table, bar stools, full-size stove, refrigerator, central heat and a/c; utilities included, specifically electricity, water, garbage pick-up, cable, wireless internet connections and on-site laundry facility.

Fees Paid Only Once

Security Deposit - $150.00 Residents are required to have a $150.00 deposit on their account at all times. Should charges for damages or fines be deducted from this deposit, residents are required to bring their deposit back up to $150.00.

Fees Paid Each Semester

Installment/Payment Set-Up Fee - $25.00. This fee is charged only if the rental fee is not paid in full at the beginning of the semester and the student has elected an installment payment plan. The payment installment plan allows the student to pay one-third the total housing charges prior to the beginning of the semester with the remaining balance paid in 2 equal installments during the semester.

Handicap accessible apartments are available. Applicants must register with the Student Counselor to request special accommodations. Special needs must be indicated on the housing application.

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 Business Office for more information.

TYPE OF FEE	AMOUNT OF FEE (2011-2012)	NOTES
Non-Resident E-Learning Fee	$300 per semester credit hour	For out-of-state residents enrolled in distance learning credit courses. Courses are exempt from all other state and designated tuition.
Testing Center Exam Fee	Cost of exam	Applies to tests taken at TSTC Testing Centers and to TSTC Challenge Exams; includes fee for test administration
Program-specific Fees and Costs	Varies	For some credit programs
Continuing Education/Workforce Training Fees and Costs	Varies	For some continuing education/workforce training courses
Out-of-State Resident and Worker Continuing Education Tuition	At least twice the continuing education tuition rate for the associated course-section	For non-residents who are brought from outside the state by their employers to attend the course
Credit Award Evaluation Fee	$25 per evaluation	Applies to evaluation of CEUs and/or experiential learning for the purpose of awarding TSTC semester credit
External Certification of Specialty	Cost of exam	
Allied Health Malpractice Insurance	Cost of insurance	For students in allied health programs
Student Medical Health and Accident Insurance	Cost of insurance	Optional, unless required by program
Library Fines	Varies by College	10 cents per day

Waivers and Exemptions

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

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

WAIVERS & EXEMPTIONS FOR RESIDENTS	OFFICE
Students who graduate early from a Texas high school	Financial Aid Office Administration/Admission Building 903.935.1010
Students who are the highest ranking graduate of their high school class (valedictorian)	Financial Aid Office Administration/Admission Building 903.935.1010
High school graduates who received AFDC benefits while in high school	Financial Aid Office Administration/Admission Building 903.935.1010
Texas veterans or dependents of Texas veterans who were killed in action or died while in service (Hazlewood)	Financial Aid Office Administration/Admission Building 903.935.1010
Children of POWs and MIAs as certified by the U.S. Department of Defense	Admissions and Records Administration/Admission Building 903.935.1010
Children of disabled Firefighters or Peace Officers as certified by the Texas Higher Education Coordinating Board	Admissions and Records Administration/Admission Building 903.935.1010
Blind or Deaf Students as certified by the Texas Rehabilitation Commission, the Texas Commission for the Blind, or the Texas Commission for the Deaf and Hard of Hearing (Blind or Deaf students are certified by the Department of Assistive and Rehabilitative Services – Rehabilitation Services, Blind and Deaf-Blind Services, and Deaf and Hard of Hearing Services.)	Admissions and Records Administration/Admission Building 903.935.1010
Students employed as Certified Educational Aides as authorized by the Texas Higher Education Coordinating Board	Financial Aid Office Administration/Admission Building 903.935.1010
Students in foster or other residential care as certified by the Texas Department of Protective and Regulatory Services	Admissions and Records Administration/Admission Building 903.935.1010

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 waiver.

WAIVERS & EXEMPTIONS FOR 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.	Admissions and Records Administration/Admission Building 903.935.1010
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.	Admissions and Records Administration/Admission Building 903.935.1010

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.

WAIVERS & EXEMPTIONS FOR RESIDENTS	OFFICE
Military personnel stationed in Texas and their spouses and children	Admissions and Records Administration/Admission Building 903.935.1010
Individuals employed at least half time as teachers or professors at Texas institutions of higher education and their spouses and children	Admissions and Records Administration/Admission Building 903.935.1010
Individuals employed at least half time as teaching or research assistants at Texas institutions of higher education and their spouses and children	Admissions and Records Administration/Admission Building 903.935.1010
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	Admissions and Records Administration/Admission Building 903.935.1010
Students who receive a competitive scholarship of at least $1,000	Admissions and Records Administration/Admission Building 903.935.1010
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. Louisiana residents (statewide) are included but applies only to enrollment at TSTC Marshall	Admissions and Records Administration/Admission Building 903.935.1010
Students from Mexico or Canada enrolled through a Texas Higher Education Coordinating Board approved Exchange Program	Admissions and Records Administration/Admission Building 903.935.1010
Students from Mexico who demonstrate financial need	Financial Aid Office Administration/Admission Building 903.935.1010
Nonimmigrant aliens residing in Texas in accordance with NATO treaties and their spouses and children	Admissions and Records Administration/Admission Building 903.935.1010

Refunds

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 Admissions and Records Office. Students who concurrently add and drop the same number of credit hours will not be charged or refunded for these simultaneous transactions.

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

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

Length of Class Term in Weeks	Last Class Day for 70 Percent Refund	Last Class Day 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

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

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 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 and Federal Stafford loans, Perkins loans and PLUS loans, and other federal awards. **Students must attend classes to remain eligible for federal financial aid. Students who are considering withdrawing from all classes before completing 60% of the semester should contact Financial Aid Office to learn how this would affect their financial aid**.

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

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

If any funds are to be returned after the refund of Title IV aid, they are used to repay TSTC funds, state funds, and other private sources. If there is an unpaid balance, then all aid sources are repaid before any funds are returned to the student. Funds released to a student due to a credit balance on the student's account do not relieve the student's obligation to repay Title IV funds when the studentwithdraws.

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. Unsubsidized Federal Stafford loans
2. Subsidized Federal Stafford loans
3. Unsubsidized Direct Stafford loans (other than PLUS loans)

4. Subsidized Direct Stafford loans
5. Federal Perkins loans
6. Federal PLUS loans
7. Direct PLUS loans
8. Federal Pell Grants for which a return of funds is required.
9. Academic Competitiveness Grants for which a return of funds is required.
10. National Smart Grants for which a return of funds is required.
11. Federal Supplemental Educational Opportunity Grants (FSEOG) for which a return of funds is required
12. Other Title IV aid
13. Other Federal, State, Private or Institutional Aid
14. The Student

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

Bookstore Refunds

Conditions for Return or Exchange are as follows:

1. TSTC Marshall Bookstore receipt required for all returns and exchanges.
2. A 20% restocking fee will be assessed for returns and/or exchanges without a schedule change.
3. Exchanges only (no returns) allowed during first class week.
4. No refunds, returns or exchanges after 9 days from purchase date or 9th class day, whichever occurs first, no exceptions.
5. To obtain a full refund, books must be in new condition. Any markings other than the original price tag and/or the removal of shrink-wrap will deem the book used.
6. Any refunds after the official census date will require the presentation of a TSTC Marshall cash register receipt and accompanied by a valid, completed drop slip. Refunds under this circumstance will be 50% of qualified receipt price. Census information is available at the TSTC Marshall Admissions and Records Office 7. The bookstore will determine whether returned books are in new or used condition.
8. Special orders or books other than textbooks are not returnable.
9. Exchanges only will be made for defective books provided they are currently being used in class.

Please Note:
Tools, supplies,electronics, and notions are non-refundable, unless they are defective. Items determined to be defective will be eligible for exchange only (no refunds).

The items must be returned within 14 days of purchase date and must be accompanied by the original sales receipt. Return policies are also posted on our website at. http://www.tstc.edu/mar_bookstore/bookstorerefunds

Textbooks purchased after refund period are ineligible for refunds.

Adult Continuing Education books must be returned within 3 days of purchase. Book condition rules apply.

Campus Living Housing Refunds

The Housing Security deposit may be refunded after the student moves from his/her apartment and after the following conditions have been met: room inspection; clearance with the Housing Office; return of all keys; and fulfillment of lease agreement. No reduction in fees can be made for late entry during a registration period. Students who vacate housing at any time prior to the end of the semester continue to be responsible for payment of the entire semester's rent according to the terms of the lease agreement. A portion of the security deposit may be refunded if the semester rent has been paid in full and certain other conditions are met (see "Housing") in the Housing section of this catalog.

If housing is not available, the security deposit will be refunded. In the event you do not attend TSTC, submit a written notice to the Housing Office at least 30 days prior to the first day of class in order to obtain a deposit refund. Approximately four weeks are required to process refunds. The security deposit is forfeited unless the payments for the entire contract period have been paid in full.

There are limited reasons that a student may break a lease agreement. Should circumstances arise that would necessitate a cancellation, the student will need to contact the Housing Office/ Associate Dean of Student Services. Even with an approved reason, students must comply with the proper check-out procedures before the agreement can be terminated.

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 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 that the completed file be received in the Financial Aid Office according to the following schedule:

To enroll in the:	Apply for financial assistance by:
Fall term	May 1
Spring term	October 1
Summer term	March 1

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

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

How to Apply

Instructions for Financial Aid

These are the first steps in applying for financial assistance.

Step One: Complete the FAFSA through the Internet at www.fafsa.ed.gov. For more information regarding this, contact Customer Service at 1-800-801-0576.

Step Two: If you would like the TSTC Financial Aid Office to assist you in submitting your FAFSA electronically, please take the following to that office:

a) Completed FAFSA

b) Additional documentation if your file contains conflicting information or if your file is selected for verification by the U.S. Department of Education.

Step Three: You will receive an Electronic Student Aid Report (ESAR) in the mail or email from the processing center in approximately four to six weeks. Review the ESAR for accuracy and report any discrepancies to the TSTC Financial Aid Office immediately.

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

Step Five: Pre-register according to College registration dates and guidelines. If you register early, your financial aid will be credited to your student account prior to the start of the term.

Additional steps may be required to apply for some types of financial assistance. For example, a separate loan application may be needed, since promissory notes go to the lenders. and certain programs of study require additional documentation before financial assistance applications are processed. 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. Contact the Financial Aid Office for more complete information and assistance.

Federal Pell Grant

This federal aid program provides financial assistance for obtaining a postsecondary education. It is intended to be the base of a student's financial aid package. Eligibility is based on a student's financial need.

Federal Supplemental Educational Opportunity Grant (FSEOG)

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

Texas Public Education Grant (TPEG)

This state program provides financial assistance in obtaining a postsecondary education. Eligibility is based on a student's financial need and awards are made on a first-come, first-served basis.

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.

Federal and State Work-Study Program (FWSP)

Work-study programs are designed to stimulate and promote part-time on-campus employment of students, particularly those who need financial assistance. Funds are available to the college to help create job opportunities for eligible students; however, these funds are limited and students must apply early.

Federal Loans

Various types of federal loans are available, including the Federal Direct Subsidized Stafford, Federal Direct Unsubsidized Stafford, 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 students whose significant physical or mental disabilities have resulted in substantial vocational disabilities. Learning disorders are among the eligible conditions. 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 and be tested and counseled before eligibility is determined. The amount of DARS assistance depends on available funds and individual need. A full-time DARS representative is on campus to assist DARS clients while attending TSTC. Contact your local Department of Assistive and Rehabilitative Services 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 Texas Workforce Commission Office 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' Benefits (G.I. Bill)

TSTC is approved for training veterans and their eligible dependents under the provisions of various laws commonly called the G.I. Bill. A veteran with remaining entitlement may receive a monthly check, which varies in amount based on class load and the type of eligibility that the veteran has. Fees and tuition are paid by the student at registration. A spouse or child of a veteran may receive benefits under certain conditions. The DD form 214 and all official college, university and military transcripts may be required. Veterans who are eligible for assistance under any of the Department of Veterans' Affairs programs should contact Admissions and Records Office.

Scholarships

Each year a number of individuals, businesses, and organizations provide scholarships for TSTC students. These allow students to be recognized for their hard work, as well as for their need for assistance. Most of these scholarships, which vary in amount, are available to students after they complete one or two terms. 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.

Waivers and Exemptions

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

Maintaining Financial Aid Eligibility

To remain eligible for financial aid, a student must meet the Standards of Academic Progress 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.

Students receiving financial aid must continually be aware of their grades. 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.

Financial Aid Standards of Academic Progress

Students must maintain at least a 2.0 Financial Aid Grade Point Average (GPA) in each term for which aid is approved and must also maintain at least a 2.0 Financial Aid Cumulative GPA for all courses taken. Both credit and developmental education courses are included in these calculations. Transfer students begin enrollment at TSTC in good standing and their progress is monitored from that point on. See "Grade Point Averages" and "Scholastic Standing" in the Academic Information section for more details.

In addition, students must successfully complete the number of credits outlined in the following chart, based on the hours they attempt each term. Successful completion means a student has received a minimum grade of D. Courses in which students receive grades of F, IP (in progress), and W (withdrawal) are not considered completed courses. See "Grading Standards" in the Academic Information section of this catalog.

Credit Hours Attempted:	Minimum Credit Hours to be Completed:
More than 12 credit hours	67%
9 to 12 credit hours	8 credits
6 to 8 credit hours	6 credits
Less than 6 credit hours	100%

Students enrolled in required remediation (developmental studies) as indicated by testing or as recommended by counseling, may receive financial aid for no more than 27 semester hours of remedial courses. All remedial courses attempted, including failures, incompletes, and withdrawals are counted toward the 27-semester hour maximum.

Courses that are repeated are not funded, unless the courses are needed to meet graduation requirements. Audited courses, continuing education courses, workforce training courses, and those courses for which a student enrolls after the official class day are not considered for funding.

Failure to Meet Financial Aid Standards of Academic Progress

The first time a student fails to meet the financial aid standards of academic progress, he/she is placed on financial aid warning for the next term of enrollment.

The student remains on warning if he/she subsequently earns a Financial Aid Cumulative GPA of less than 2.0 and has a Financial Aid Term GPA of 2.0 or higher. A student who fails to meet the standards of academic progress during the warning term is placed on financial aid suspension. Applications for financial aid, including loans, are not certified while a student is on financial aid suspension. Any student that goes on financial aid warning will be automatically enrolled in the "College Success" class for the following semester.

To regain eligibility for financial aid, the student must enroll at TSTC on at least a half-time basis for up to two terms, pay the expenses related to that enrollment, and attain the financial aid standards of academic progress. After this is achieved, the student is again eligible to apply for financial aid.

Appeal Process Related to Standards of Academic Progress

If there are mitigating circumstances, a student who has been denied financial aid because of failure to meet the financial aid standards of academic progress may file a written appeal to the director of financial aid. A student may have only one appeal granted while he/she is at TSTC.

Maximum Time Frame for Receiving Financial Aid

Students may receive financial assistance for up to 150 percent of the certificate or degree required credit hours. Students who change programs or who enter new programs after graduation should consult with the Financial Aid Office to confirm their continuing eligibility for financial aid.

Refunds for Financial Aid Recipients

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

Notes:

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 Points
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 specialized course and may be used, at the discretion of a college, up to six credit hours in a program)	Not Computed
IP	In Progress (For use when a student has not had sufficient time to complete the course due the registration date, extended illness, or ther circumstances beyond the student's control. A grade of IP will be changed to a grade of "F" if the student doesn't complete the course by date specified by the faculty member, or within one year, whichever is less)	Not Computed
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 "W" if the student does not complete the course requirements within two years of the date the IM grade was awarded	Not Computed
W	Withdrawal	Not Computed
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)	Not Computed
AUD	Audit of Course	Not Computed
S	Satisfactory (for use in Continuing Education courses and programs)	Not Computed
UN	Unsatisfactory (for use in Continuing Education courses and programs)	Not Computed
X	No Grade Assigned	Not Computed
FA	Failing (prior to September 1988)	0
I	Incomplete (prior to September 1988)	Not Computed
U	Unsatisfactory (prior to September 1988)	0
WF	Withdrew Failing (prior to September 1988)	0
WP	Withdrew Passing (prior to Septemember1988)	Not Computed

Grade Point Averages

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

Term Grade Point Average

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

Cumulative Grade Point Average

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

Standards of Progress Grade Point Average

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

Scholastic Standing

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

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

Good Standing

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

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

Scholastic Probation

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

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

Scholastic Suspension

Scholastic suspension occurs when a student on scholastic probation fails to maintain minimum academic standards. A student on scholastic probation who fails to achieve a SOP Term GPA of 2.00 or higher is suspended for one calendar year. A suspended student may appeal for a waiver of the suspension to the instructional dean or his/her designee. A student on scholastic suspension is permitted to reapply for enrollment after one calendar year from the scholastic suspension term. A student who re-enters the college after having been suspended is placed on scholastic probation and is subject to the minimum requirements governing scholastic probation.

Scholastic Honors

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

Grade Reports

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

Official transcripts may be withheld if any financial obligations to TSTC have not been paid or if official transcripts have not been received from previously attended

institutions. Students who have not complied with all exit requirements will not be provided with transcripts.

Classification

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

Course Load

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

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

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

Student Success Program

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

The Student Success Program at TSTC meets the TSI requirements for colleges to assess students for college readiness, to develop learning plans for students whose skill levels are not at college level and to determine when students are ready to perform freshman-level academic coursework The primary focus of the Student Success Program is on students' achievements of their educational goals.

College Readiness Requirements

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

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

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

College Readiness Advising Programs

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

TSI Test Standards

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

Approved Test	Reading	Writing	Math
TSI Assessment	351+	363 with Essay Score = 4	350
TSI Assesment Writing Essay		5+	

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

Students with disabilities will take a test approved for TSI purposes with appropriate accommodations. if such accommodations are requested and available at the time of registration.

TSI Testing Schedule

Approved TSI tests are administered at each TSTC college on a variety of schedules. Check with Testing Services for specific dates and times.

Exemptions from College Readiness Standards

Students who meet the following score standards may be exempt from college readiness standards if the tests have been taken within the approved time frame. Students must provide official scores to Testing Services prior to enrollment in order to qualify for this exemption:

- ACT: Composite score of 23, combined with a minimum of 19 on the English and/or the Mathematics tests; test date no more than five years prior to enrollment
- SAT: Combined score of 1070 (Critical Reading Section + Mathematics Section), a minimum of 500 on both the Verbal (Critical Reading) and Mathematics tests; test date no more than five years prior to enrollment
- TAKS: Minimum score of 2200 on both English Language Arts and/or Math Sections with at least a 3 on Writing Component of the 11 grade TAKS; test date no more than five years prior to enrollment.

Other Exemptions:

- A student who has graduated with an associate or baccalaureate degree from an institution of higher education.
- 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.
- A student who has previously attended any institution and has been determined to have met readiness standards by that institution.
- A student who is enrolled in a certificate program of one year or less (Level-One certificates, 42 or fewer semester credit hours or the equivalent) at a public junior college, a public technical institute, or a public state college.
- A student who is serving on active duty as a member of the armed forces of the United States, the Texas National Guard, or as a member of a reserve component of the armed forces of the United States and has been serving for at least three years preceding enrollment.
- A student who on or after August 1, 1990, was honorably discharged, retired, or released from active duty as a member of the armed forces of the United States or the Texas National Guard or service as a member of a reserve component of the armed forces of the United States.
- An institution may exempt a non-degree-seeking or non-certificate-seeking student.

College Readiness Courses

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

WRITING			
	ENGL	1301, 1302	Composition
	ENGL	1207, 2308	Creative Writing
	ENGL	2311, 2314, 2315	Technical & Business Writing
	WRIT	0200	Writing Skills II (or equivalent capstone developmental writing course)
READING			
	ENGL	2xxx	Any 2nd year English Literature Course
	GOVT	2301, 2302	U.S. Government
	HIST	1301, 1302	U.S. History
	HIST	2301	Texas History
	HUMA	1301	Introduction to Humanities
	PSYC	2301	General Psychology
	READ	0200	Reading Skills II (or equivalent capstone developmental reading course)
	SOCI	1301	Introduction to Sociology
MATHEMATICS			
	DMTH	0200,	Intermediate Algebra (or equivalent capstone developmental math course)
	MATH	1314	College Algebra
	MATH	1316	Plane Trigonometry
	MATH	1324, 1325	Mathematics for Business & Social Sciences
	MATH	1332, 1333	Contemporary Mathematics
	MATH	1350, 1352	Fundamentals of Mathematics
	MATH	1342, 1442,	Elementary Statistical Methods
	MATH	1348,	Analytic Geometry

Advising

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

TSTC provides advising assistance for the following:

- enrollment and financial aid processes;
- career counseling, assessment, and goal-setting;
- course selection and scheduling;
- degree planning;

- referrals to counselors, faculty advisors, and other student and instructional services; and
- job search and placement assistance.

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

New Student Orientation

New Student Orientation begins with an overview of TSTC Marshall's services and policies to make the transition to college an easy one. It provides an opportunity to receive important information about the admissions process, financial aid, business office procedures, housing, library, student activities, campus safety, distance learning, Student Services and the Learning Success Center. Most importantly, New Student Orientation provides the opportunity for students to meet their faculty members and receive information about degree plans and career opportunities and register for classes.

New Student Orientation is mandatory for all new students enrolling at TSTC Marshall and must be completed prior to first class day. It is designed to be an important early step in the College's retention program.

Degree and Program Planning

Credentials

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

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

Institutional Awards

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

Degree and Certificate Plans

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

Courses may be substituted if they are approved by the chairperson of the student's major field of study and the Admissions and Records Office. 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 Admissions and Records Office, and a grade of C or better must have been earned in the course(s).

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

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

Change of Major

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

To change majors, students must follow these procedures.

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

1. All TSI-related requirements are met (associate's only).
2. All required course work is satisfactorily completed.
3. At least 25% of the total required credit hours are earned at the college granting the degree or certificate.
4. The student's cumulative grade point average is 2.0 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, certificate of completion graduate or marketable skills achievement award or technical skills or technical skills mastery completer is judged by his/her employer to be lacking in technical job skills identified as exit competencies for the program under which the student graduated or completed, TSTC will provide the graduate with up to 12 tuition-free semester credit hours of additional skill training, in accordance with the following.

1. The graduate must have earned the degree certificate or award since May 1992 in a technical or occupational program or pathway published in the TSTC catalog.
2. The graduate must have earned at least 75% of the total credits of the associate degree or certificate of completion at TSTC, and must have completed the degree or certificate of completion within five years of initial enrollment.
3. The graduate must be employed full-time in an area directly related to the program concentration, as certified by the Vice President of 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, Vice President of Student Learning, 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 Marshall provides developmental education for students who need assistance with basic academic skill review, according to the Texas Success Initiative Plan filed with the Texas Higher Education Coordinating Board. The Developmental Education program enhances these basic skills through personalized goals and a variety of instructional methods to ensure college-level coursework success for students. Developmental education services include preparation for collegiate-level studies and training in the basic skill review of reading, writing, and mathematics for each program's entry-level standards.

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

The following developmental education courses are offered at TSTC Marshall.

MATHEMATICS

Course	Course Title	Prerequisite
DMTH 0803	Math Lab (Program Specific)	
NCBM 0060	Math Lab (Paired with College Algebra)	DMTH 0803 for Electronics or Required Placement Scores Co-Requisite: MATH 1314

READING & WRITING

Course	Course Title	Prerequisite
READ 0050	Basic Reading Skills	
INRW 0100	Integrated Reading and Writing Skills I	READ 0050 or Required Placement Scores
INRW 0200	Integrated Reading and Writing Skills II	INRW 0100 or Required Placement Scores Co-Requisite ENGL 1301
READ 080x	Reading Lab	Instructor approval

STUDY SKILLS

Course	Course Title	Prerequisite
DORI 0100	College Success Skills	

General Education Courses

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

HUMANITIES/ARTS

Course	Course Title	Prerequisite
ENGL1301	Composition I	INRW 0200 (co-req) or Required Placement Scores
ENGL1302	Composition II	ENGL 1301
ENGL2311	Technical & Business Writing	INRW 02000 or Required Placement Scores
ENGL 2322	British Literature I	ENGL 1301
HUMA 1301	Introduction to Humanities	INRW 0200 or Required Placement Scores
SPCH 1311	Intro to Speech Communication	INRW 0200 or Required Placement Scores

SOCIAL /BEHAVIORAL SCIENCES

Course	Course Title	Prerequisite
GOVT 2302	Federal Government	INRW 0200 or Required Placement Scores
GOVT 2306	Texas Government	INRW 0200 or Required Placement Scores
HIST 1301	United States History 1	INRW 0200 or Required Placement Scores
PSYC 2301	General Psychology	INRW 0200 or Required Placement Scores
PSYC 2302	Applied Psychology	INRW 0200 or Required Placement Scores

NATURAL SCIENCES/MATHEMATICS

Course	Course Title	Prerequisite
BIOL 2401	Anatomy & Physiology	INRW 0200 or Required Placement Scores
BIOL 2402	Anatomy & Physiology II	BIOL 2401
BIOL 2406	Environmental Biology	INRW 0200 or Required Placement Score
CHEM 1411	General Chemistry	NCBM 0060 or Required Placement Scores
PHYS 1310	Fundamentals of Physics	MATH 1314
PHYS 1401	College Physics I	MATH 1316
MATH 1314	College Algebra	Required Placement Scores Co-Requisite NCBM 0060
MATH 1316	Plane Trigono-mentry	MATH 1314
MATH 1324	Finite Math for Business	NCBM 0060 or Required Placement Score
MATH 1332	Contemporary Mathematics	DMTH 0803 or Required Placement Scores
MATH 1342	Statistics	NCBM 0060 or Required Placement Scores
MATH 2313	Calculus	Pre-Calculus Math or equivalent

Prerequisites and Co-Requisites

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

Credit Award for Assessments and Training

Credit awards for Texas State Technical College (TSTC) courses based on credit by examination or non-traditional training and experiences is available to students who plan to enroll at TSTC and to currently enrolled students. TSTC awards credit for various examinations published by the College Board, including the College Board Advanced Placement Program (AP) and the College Level Examination Program Subject Exams (CLEP-S). TSTC also awards credit for training received while in the United States Armed Services, for credit earned through the

International Baccalaureate Diploma Program and, for credit earned in high school dual credit courses. Students may also be eligible to receive credit awards for other types of training and experience subject to review and approval by the appropriate college official.

General Rules and Regulations

The total number of semester credit hours awarded for Credit Awards may vary depending upon the student's program of study; however, the total credit awarded (including transfer credits) cannot exceed 75% of the total credits required for the student's declared program of study. At least 25% of the total credits in a TSTC student's certificate or AAS degree plan must be earned through regular SCH instruction at a TSTC college 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 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	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	HUMA1301, 1302
College Algebra	50	3	MATH 1314
Trigonometry	50	3	MATH 2413
Calculus w/ Elementary Functions	50	4	MATH 2413
Pre Calculus	50	3	MATH 2312
Introductory Psychology	50	3	PSYC 2301
Human Growth and Devel	50	3	PSYC 2314
Introductory Sociology	50	3	SOCI 1301

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 Test Name	Score	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	CHEM1411, 1412
Computer Science A	3	3	COSC1 301, ITSC 1307,1302
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. Govnerment & 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

Credit for Military Training

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

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

Students who wish to receive credit for military training should obtain a transcript from the Defense Activity for Non-Traditional Education Support (DANTES). This agency maintains the educational records of the service members who have completed DANTES Subject Standardized Tests

(DSSTs), CLEP examinations, USAFI (United States Armed Forces Institute), and GED tests.

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

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

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

International Baccalaureate Diploma Program (IBD)

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

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

Credit Award for Continuing Education Units and Experiential Learning

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

Experiential learning allows students to receive college credit for equivalent educational experiences acquired

through earlier schooling situations, work/on-the-job training or life experiences. Upon approval of the appropriate department chair and/or dean, a student may develop a petition for a course or courses offered by TSTC to gain college-level credit. Petitions are reviewed by the appropriate department chair and/or dean and submitted to the Vice President for 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 from Workforce Development Office. Testing center and/or evaluation fees may apply.

Audited Courses

Students may audit courses with permission from the course instructors and the Admissions and Records Office. 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 Business Office 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 Admissions and Records 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 Workforce Development Office for details.

Distance Learning

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

Distance learning courses are not self-paced. However, depending on the nature of the instructional method, students may complete course requirements as their schedules permit. Students enrolled in distance learning courses must meet deadlines, take scheduled tests, etc., but typically they do not have to be in classrooms at

specific times, except when required by the instructors. Those students who take courses via the Internet complete assignments using computers and communicate with instructors through e-mail, fax, and by telephone. Some distance learning courses require proctored testing.

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

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

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 Admissions and Records Office, instructors and/or department chairs. The completed forms must be submitted to the Admissions and Records Office, 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 Admissions and Records Office. The effective date is the date the course schedule change form is received in the Admissions and Records Office. 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 have completed at least 75% of the term and who are called to active military service may request an excused absence rather than withdrawal from their courses. Students who request leave based on military service will be given grades of "IM" in all courses and will have two years from the end of the term to complete course work. Grades of "IM" awarded to students called to military service will be changed to "W" grades if the required course work is not completed by the end of the two-year period.

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

Student Participation

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

Student Absence on 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 Associate Dean of Student Services within the first 10 days of the term.

Articulation Agreements

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

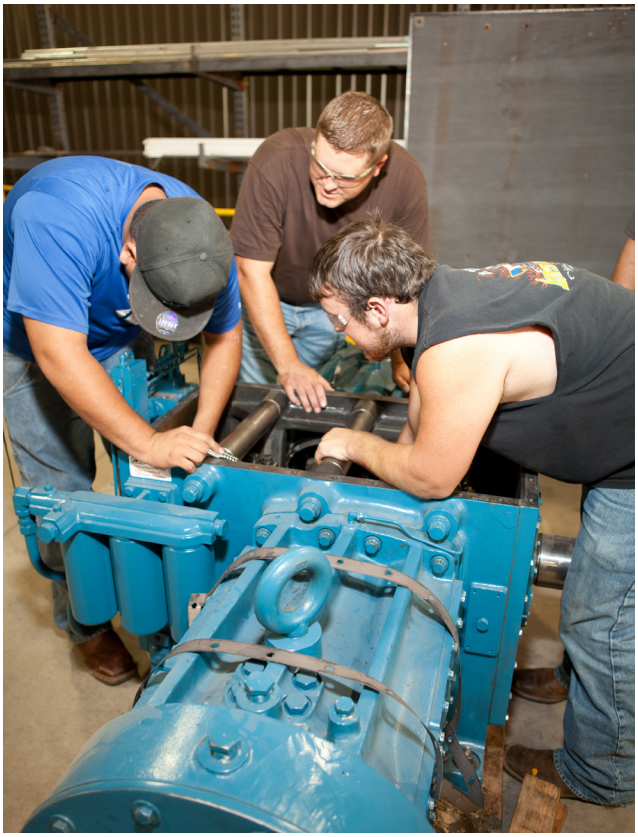
TSTC expects all students to engage in scholastic pursuits in a manner that is beyond reproach. Students are expected to maintain complete honesty and integrity. Any student found guilty of scholastic dishonesty is subject to disciplinary action. Scholastic dishonesty includes, but is not limited to,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

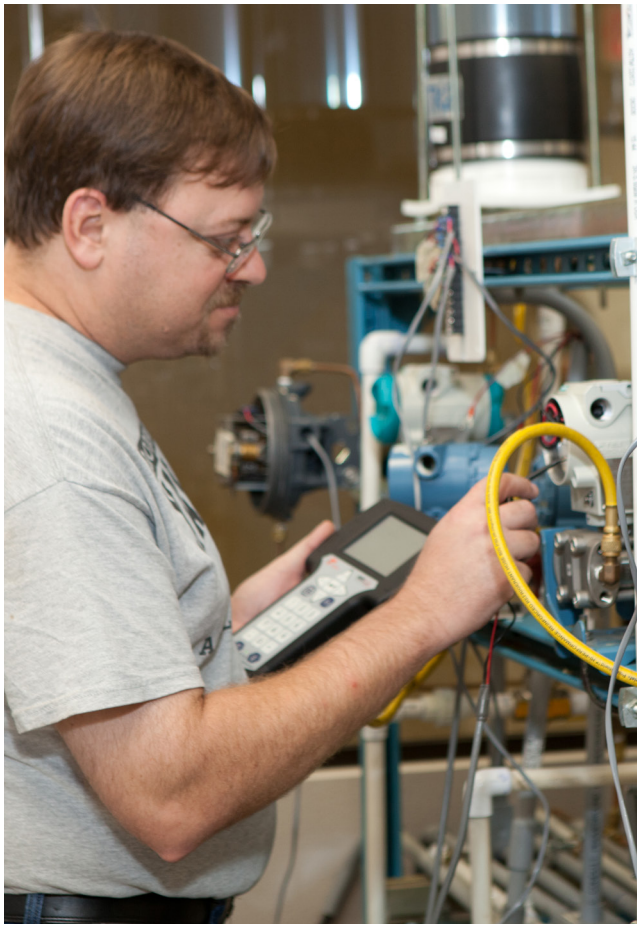
- copying from another student's test paper or other academic work;
- using materials during a test that have not been authorized by the individual giving the test;
- collaborating with another student, without authorization, during an examination or in preparing academic work;
- bribing another person 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 is administered by instructors. If a student wishes to appeal a decision, they must visit the Division Director or Program Chair of their field of study. More detailed information on discipline for scholastic dishonesty may be found in the Student Handbook.





Workforce Training

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

- Training and retraining programs that respond to requests or needs of business or other institutions and agencies
- Specialized customized training courses, work shops, seminars, and clinics
- Training for industrial start-up or expansion programs
- Continuing education to train for new careers and to provide skill update and professional development.

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 or competencies 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 prior to the first class meeting.

Class Records and Certificates

Students completing CE courses earn one (1) CE 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.

Customized Training for Business and Industry

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

Assessment Center

The TSTC Assessment Center provides individualized assessment and validation of skills for both corporate clients and to individuals that may/may not have pre-existing technical expertise and/or the appropriate related documentation. Clients may be individually evaluated to determine existing or desired skill sets and then referred to an expert who will assess and validate these skills. If a client needs a few additional skills to qualify for some form of documentation, he/she may pursue the option to enroll in an appropriate CE course or can take advantage of individual remediation, which can be scheduled on a fee-per-hour basis. This center exists to validate skill sets and to aid both the employment seeker and the technical employee.

Student Services

Student Housing

Campus Living

Most college students say they learn and grow as much by living on campus as they do by attending classes. The living environment at TSTC gives students opportunities for social interaction, interpersonal relationships and cultural activities. Residential living is an important component of the student's total development as a student. The students are encouraged to join in residential living and expand their experience through human relationships, new ideas and cultural diversity. TSTC offers on-campus housing available to the single student and accommodations are available for students with disabilities.

New campus residents must participate in a housing orientation session specifically designed for those who live in one of TSTC's apartments. This initial orientation introduces students to key personnel and resources needed to make a good adjustment to apartment living.

Student Housing Requirement

Effective for students entering Fall 2006, all students under the age of 21 with fewer than two completed semesters the first day of the class term are required to live in campus housing. Exemptions to this practice may be obtained if the student lives with parents or legal guardians; is married or has dependent children; has a special medical need as verified by a physician that cannot be provided by the college; is enrolled in only distance learning courses; or lives within a 50 mile radius of TSTC Marshall. Special circumstances justifying an exemption may be authorized upon the approval of the Associate Dean of Student Services.

Housing Reservations

Submit an application for enrollment to TSTC Marshall before applying for housing. The housing application and deposit of $150.00 should be paid well in advance of enrollment if possible. The deposit can be made by check or money order payable to Texas State Technical College. If the student decides not to enroll or live in campus housing, the individual must request in writing a full refund of the deposit at least 30 days prior to the first class day of the semester. Security deposits for campus residents will be retained until they properly clear/vacate housing and request a refund. See the section labeled "Housing Deposit" for a full description of the refund process.

Housing Assignments

Returning students have priority in housing assignments however, they must reserve their own rooms for future occupancy before the end of the current semester. Room assignments for new students are made based upon the date the deposit was paid and the application received by the Housing Office. All possible consideration will be given to requests for specific apartments or roommates; however, the college reserves the right to assign students to different apartments or roommates either before or during an academic period when it is in the best interest of the college to do so. The college also reserves the right to require students to move to another building or apartment 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 available online and in the Housing office. Residents may move into their assigned apartments on the Friday before classes begin if advance rent and room deposits have been paid or satisfactory arrangements for rent payments have been made with the Director of Residence Life/Student Activities. A lease agreement must also be signed at this time. All apartment residents must carry school identification while in the area of the apartments so that campus residency can be confirmed by college officials, if requested. Residents who cease to be TSTC Marshall students effectively terminate their lease and must vacate their apartment immediately. In this circumstance, the student is still obligated for the entire semester's rent. The security deposit may also be forfeited.

Housing Deposit

The College may retain the deposit or some portion of the deposit for property loss or damage, excessive cleaning, and repairs. Residents who live in campus housing are expected to pay for disciplinary fines, loss, damage, repair or cleaning costs assigned to them during a semester in a timely manner. In situations where charges have been deducted from a resident's housing deposit at the end of a semester, the deposit must be restored to the full amount by the beginning of the next semester if that student wants to continue living on campus. If the resident withdraws from the College but owes money for any reason, the College will apply the deposit to the resident's bill and refund the balance, if any.

To qualify for up to a refund of the security deposit, the resident must pay for the entire semester's rent, present a clean and undamaged room and apartment at the housing check-out inspection, return all keys and keycard, and present a written request for a refund of his/her security deposit. Students should allow up to 30 days for refunds.

Testing Services

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

Student Activities

Social Activities

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

Intramural and Recreational Sports

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

Student Government

The Student Government Association (SGA) is the governing body that represents students and advises the college administration on issues of student interest and concern. In October, each instructional program elects one representative to serve on the SGA. Contact the Director of Residence Life and Student Activities 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 Director of Residence Life/Student Activites.

Student Publications

Students who are interested in writing, photography, or journalistic projects are encouraged to become involved with the various college publications. Contact the Director of Residence Life /Student Activities.

Student Identification Cards

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

Library Resource Center

The Library 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.

The Texas State Technical College Library at Marshall shares the TSTC System Vision of "strengthening the competitiveness of Texas business and industry by building the state's capacity to develop the highest quality workforce." The Library also supports the vision by connecting people with ideas, in support of technical teaching and learning and workforce and economic development. The library is furnished with the state-of-the-art technology and is the host for print and electronic databases that support the college curriculum.

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.

Student Health

Health Services

TSTC Marshall offers limited health services to its students. For more information on student health services contact the Associate Dean of Student Services. The college schedules occasional education programs for students on a variety of health related topics. Students who do not have access to health and accident insurance are strongly encouraged to purchase the optional student insurance offered through the College.

Health Insurance

Information on health insurance is provided in the "Student Insurance" section of this catalog.

HIV Policy and Procedures

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

Bacterial Meningitis Notification

Beginning on January 1, 2012, all entering students are required to show evidence of an initial bacterial meningitis vaccine or a booster dose during the five-year period preceding and at least 10 days prior to the first day of the first semester in which the student initially enrolls at an institution. An entering student includes a first-time student of an institution of higher education or private or independent institution of higher education and includes a transfer student, or a student who previously attended an institution of higher education before January 1, 2012, and who is enrolling in the same or another institution of higher education following a break in enrollment of at least one fall or spring semester.

Exceptions to Bacterial Meningitis Vaccination Requirement

- A student is not required to submit evidence of receiving the vaccination against bacterial meningitis if the student meets any of the following criteria: The student is 22 years of age or older by the first day of the start of the semester (effective 1/1/2014); or
- the student is enrolled only in online or other distance education courses; or
- the student is enrolled in a continuing education course or program that is less than 360 contact hours, or continuing education corporate training; or
- the student is enrolled in a dual credit course which is taught at a public or private K-12 facility not located on a higher education institution campus; or
- the student is incarcerated in a Texas prison.

A student is not required to submit evidence of receiving the vaccination against bacterial meningitis if the student submits to the institution:

- An affidavit or certificate signed by a physician who is duly registered and licensed to practice medicine in the United States, stating that in the physician's opinion, the vaccination would be injurious to the health and well-being of the student; or
- An affidavit signed by the student stating that the student declines the vaccination for reasons of conscience, including a religious belief. A conscientious exemption form from the Texas Department of State Health Services (DSHS) must be used.

Student Health Insurance

Because of the new Affordable Health Care Act, you will soon see some changes in your student account for insurance coverage.

The Affordable Health Care Act requires minimum requirements for dates of coverage, as well as minimum levels of coverage. TSTC's existing health insurance coverage was designed for the particular needs of typical college students, but the coverage does not meet these minimum requirements. Therefore, after the 14/Spring semester, TSTC will not be able to offer health coverage at an affordable cost to TSTC students. Should this change in the future, we will notify the TSTC student body.

TSTC can still provide coverage for accident insurance, needle stick insurance, and malpractice insurance.

If you want medical insurance for your own peace of mind, you may obtain this through www.healthcare.gov, or several vendors in the community.
We apologize for the inconvenience, but unfortunately this change is due to federal regulations and the Affordable Health Care Act. Should you have questions, please contact Peggy Adams in the Administration Building, Rm. 133 or 903-935-1010 ext. 3218 for the Marshall campus. For North Texas, please contact Tara Monk at 972.617.4729.

Campus Security

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

Information provided by the State of Texas concerning registered sex offenders may be obtained through the website that is maintained by the TSTC Marshall Security Office. Additional information relating to state- or federally-

mandated public information requirements is also available on that website.

Student Success

The Department of Learning Success seeks to improve student success and retention through identification of at-risk students and implementation of constructive intervention that promotes positive student success patterns.

The department provides the following support for students:

- Developmental Education classes for students desiring access to higher education, yet classified as academically under-prepared by the Texas Success Initiative (TSI) standards in areas of reading, writing, or math
- The Learning Success Center, a free, walk-in tutoring service for students desiring individualized or group supplemental instruction, and/or computer lab and printing access
- Comprehensive orientation services and orientation classes to acquaint students with the college environment and to equip students with the academic skills necessary for college success
- Learner Support Services for special populations students who demonstrate a need for academic support

The Department of Learning Success enhances all students' chances of college and career success. The program's components are designed to promote solid academic foundations, provide student support, and foster success among the student body.

Counseling Office

Counseling Services supports student success by providing a licensed professional counselor who is available to discuss personal, social, educational, and career concerns. The counselor's purpose is to help students identify their educational goals, to facilitate their success in achieving these goals, and to provide professional assistance with obstacles encountered. Information disclosed during counseling sessions is strictly confidential, except when it involves potential danger to oneself or others, child abuse, or criminal conduct.

Students are encouraged to make appointments, however, walk-ins are welcomed and accommodated, based on counselor availability.

The Counseling Office provides various types of assistance designed to aid special population students in reaching their true potential at Texas State Technical College Marshall. The 1998 Carl Perkins Act defines Special Population as:

- Individuals with disabilities
- Individuals from economically disadvantaged families, including foster children
- Individuals preparing for non-traditional training/employment
- Single parents, including single pregnant women
- Displaced homemakers
- Individuals with other barriers to educational achievement

Services Available

- Academic Guidance
- Personal Counseling Referral
- ADA Accommodations
- Career Planning and Placement
- Transportation Assistance
- Disability Services*
- Childcare Assistance*
- Textbook Assistance*

*These Services are funded by the Carl D. Perkins grant and are contingent upon availability of funds and adherence to program policies. Eligibility screening is required. For more information, please call the Counselor at 903.923.3309.

Child Care Services

The Child Care Assistance Program is available to TSTC students who qualify. (See Student Counselor for qualifications.) If qualifications are met, the student must maintain a 2.0 GPA each semester, have an overall GPA of 2.0 or higher, and remain a full-time student.

TSTC Marshall will not assume any responsibility for the selection of a childcare facility or responsibility for care of children enrolled in a selected facility. Although students select the childcare provider of their choice, the provider must be licensed and /or registered by the State of Texas.

Services for Students with Disabilities

Disability Services' reasonable accommodations are provided for students with physical, learning, or psychological disabilities. Each student, after self-reporting and providing appropriate documentation, is evaluated individually to determine suitable accommodations. Students are encouraged to contact the Counselor's Office early to allow sufficient time for processing accommodation requests. The Student Counselor collaborates with both college personnel and disabled students to develop appropriate accommodations to assist in the student's academic endeavors. In order to provide effective educational support to students, the Counselor's Office also has assistive devices and software available for students' usage in its resource center.

Learning Success Center

The Learning Success Center (LSC) seeks to prepare students for satisfactory achievement in either academic or technical courses. The programs and resources of the LSC are designed to aid students in developing academic and study skills that empower students with confidence in their ability to learn successfully.

The LSC offers the following assistance:

- Free, walk-in peer tutoring
- Individualized study skills advising
- Academic skills workshops
- Student support programs
- Computer and printer access

Counseling Services

Counseling Services supports student success by providing a licensed professional counselor who is available to discuss personal, social, educational, and career concerns. The counselor's purpose is to help students identify their educational goals, to facilitate their success in achieving these goals, and to provide professional assistance with obstacles encountered. Information disclosed during counseling sessions is strictly confidential, except when it involves potential danger to oneself or others, child abuse, or criminal conduct.

Job Placement Services

CAREER SERVICES: The Career Service Office is utilized by TSTC students as an OneStop Shop for career services and job placement in their degree field. Services include career assessment, job search assistance, resume and cover letter preparation, mock interviews, and career counseling. TSTC students are also encouraged to attend Industry Career Day, which are held every semester, to connect with potential business contacts for future employment opportunities. Employers seeking students and graduates for potential employment are urged to contact the Career Services Office to receive information on how to post jobs for TSTC students and even view student profiles, including their resume and cover letter. The Career Service Office utilizes a host of resources to provide students with the latest job openings, employer contacts, and labor market trends for their chosen field of study.

TSTC JOBSTAR: TSTC and the Career Service Office offer CSO, or TSTC JobSTAR, to all TSTC students to assist them with connecting with potential employers. JobSTAR allows students to build a professional profile, which includes their resume, cover letter, and letters of reference, that can reviewed by employers for future hiring. Employers can post jobs on the site for viewing by students and search for qualified candidates through the student's profiles.

INTERVIEWSTREAM: InterviewStream is a web-based software program that allows students to practice mock interviews and interviewing skills, giving them confidence before going in for a real-world interview. The software allows students to choose from degree specific interviews or they can select their own interview questions from a database of over 6,000 interview questions. Access for the site can be obtained through student's JobSTAR accounts and is available 24/7 from any mobile device, tablet, or computer with webcam and microphone.

www.hireTSTC.com: This is an OneStop shop website for TSTC students to access TSTC JobSTAR, InterviewStream, and Career Spots videos. Students can also view the latest job postings from JobSTAR, upcoming events from the Career Service Office, contact information for the Career Service Office, and much more.

ON CAMPUS JOB OPPORTUNITIES: Students seeking employment on campus either through the Work-Study Program or Student Worker positions, may obtain applications by visiting the Human Resource Department in Office #216 or visiting the TSTC Marshall website and searching the About Us tab for HOD. Students are able to print the Part-Time Job Placement Application directly from the site.

Student Conduct and Discipline

Student Conduct

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

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

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, which can be viewed online at http://www.tstc.edu/mar_student/studenthandbook.

Student Discipline Procedures

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

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

General Information

Buildings and Facilities

Texas State Technical College Marshall has three primary instructional facilities, a Student Housing complex, an Admissions/Administration building and the Technology and Transportaion Building (TNT). The south building is a 90,000+ square foot learning center designed specifically for advanced and emerging technology studies with state of the art, industry standard equipment and laboratories that are designed to give students hands-on experience, preparing them for careers in the new global economy. This facility also houses the college Library which shares the TSTC System Vision of "strengthening the competitiveness of Texas business and industry by building the state's capacity to develop the highest quality workforce." The Library also supports the vision by connecting people with ideas, in support of technical teaching and learning and workforce and economic development. The Library is furnished with the state-of-the-art technology and is the host for print and electronic databases that support the college curriculum. A second instructional facility is located approximately one-third mile north and contains 60,000 square feet of classrooms, laboratories and offices.

The Student Housing complex consists of 8 units that can house 202 residents. Residents have access to a housing commons area where students and their guests can gather to play pool, ping-pong, watch a large screen TV or visit in comfortable surroundings.

The Admission/Administration Building is a "one-stop" student enrollment center. The student can visit with the college recruiters, apply for admissions, apply for financial aid, pay tuition/fees, have an ID card made, and visit with the Business Office all under one roof. It also houses the President's office, and the Human Resources and Institutional Effectiveness offices.

The Technolgy and Transportation (TNT) Building is a new facility set up for a more advanced welding program with the ability to fabricate and manufacture more projects in a spacious and safe environment. Additionally the new building houses additional equipment into the 5000 square foot mechanical bay for maintenance of larger equipment, which will also house the Diesel Equipment Technology program. Industrial Maintenance Technology also was moved into approximately 10000 square foot of laboratories with a much more open floor plan to better enhance the learning environment.

Texas State Technical College North Texas is located in Red Oak, TX just beyond the southern boundary of the Dallas Metroplex. The site first occupied approximately 30,000 square feet of space located in Red Oak ISD's CATE (Career and Technology Education) Building on Louise Ritter Drive. The space is designed specifically for advanced and emerging technology studies, with state-of-the-art, industry-standard equipment and laboratories designed to give students hands-on experience preparing them for careers the new global economy. This facility houses programs such as Computer Systems Network Administration, Computer Systems Cyber Security, Computer Systems Desktop Support, Computer Aided Drafting, and Heating, Ventilation, Air Conditioning, & Refrigeration.

The site on Louise Ritter Drive also houses the College's Student Services, Admissions, and Financial Services offices. All TSTC services can be accessed from this location which is designed to serve students and the public. Here, the public can receive assistance with admissions, recruiting, financial aid, testing, new student orientation, registration, and account information. This facility also houses the Provost's Office, and the office of Corporate Solutions.

A second instructional facility, the TSTC Industrial Technology Center (ITC) is built approximately one-third mile north and contains 103,000 square feet of classrooms, laboratories and offices for programs such as Diesel, Manufacturing, Logistics, Industrial Maintenance, Welding, and Applied Engineering: High Voltage Electrical. The facility is designed to perform as a functional, safe industrial space that replicates work environments existing in business and industry today. In addition to the "industrial feel" of the building, the space provides pockets of educational space which facilitates instruction and students working in teams.

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.

Education Foundations

Historically, TSTC has had two recognized non-profit foundations created for the purpose of assisting TSTC in achieving its mission. The TSTC Regents Circle, which was founded in 2000, supported the entire TSTC System. The Rolling Plains Technical Foundation, which was founded in 1973, supported TSTC West Texas. In 2011, the two foundations consolidated to operate as one collective organization, known as The TSTC Foundation.

Release of Student Records

In compliance with the "Family Education Rights and Privacy Act of 1974"(FERPA), affords students certain rights with the respect to their education records. These rights include:

• The right to inspect and review the student's education records within 45 days of the request for access. Students should submit to the Registrar. The College 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 College official to whom the request was submitted, that official shall advise the student of the correct official to whom the request should be addressed.

• The right to request the amendment of the student's educational records if found inaccurate, misleading, or otherwise erroneous. Students may ask the College to amend a record that they believe is inaccurate or misleading. A letter of correction(s) must be mailed to the College official responsible for the record. This document shall clearly identify the part of the record in question and specify why it is inaccurate or misleading. If the College reaches a decision not to amend the record as requested, the student will be notified in writing and advised of his or her right to an official hearing regarding the issue. Additional information regarding the actual hearing procedures will be provided to the student upon notification of a hearing.

• The right to consent to disclosures of personally identifiable information contained in a student's education records, except to the extent that FERPA authorizes disclosure without consent.

NOTE: One exception which permits disclosure without consent is disclosure to school officials with legitimate

COMPACT WITH TEXANS

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

TSTC's Vision

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

TSTC's Values

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

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 Marshall
2650 EAST END BLVD. SOUTH
MARSHALL, TX 75672
903.935.1010
(http://www.tstc.edu)

TSTC's Formal Written Complaint Handling Procedure

Most questions or complaints can be addressed through routine college channels. If additional assistance is needed, you are encouraged to file a formal written complaint. TSTC is committed to your satisfaction. The Customer Service Representative for our college is the Associate Dean of Student Services.

Submit your complaint in writing by filling out the Effective Customer Relations Form. Alternatively, you may communicate verbally:

** Associate Dean of Student Services at (903) 935-1010

The TSTC Customer Service Representative will acknowledge your complaint and let you know the matter is receiving attention. You will be notified in writing within five working days of receiving the complaint as to the length of time it will take to resolve the issue.

The TSTC Customer Service Representative will investigate the complaint.

A solution that is consistent with TSTC policies, as well as applicable local, state, and federal laws, will be proposed to you in writing in the time frame specified.

You will be contacted by the Customer Service Representative within ten days of the written response to determine your satisfaction with the proposed solution and to be sure that the provisions of the solution have been implemented.

If you are not satisfied with the proposed solution, you may request that your complaint be considered by a Dispute Resolution Committee appointed by the college president. This committee will review all available documentation and render a decision as to the resolution of the complaint. All decisions of the committee are final and are not open to further review.

Texas Higher Education Coordinating Board Complaint Procedure

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

AUTOMOTIVE

Diesel Equipment Technology*

The Diesel Equipment Technology program at TSTC Marshall provides skilled and knowledgeable entry-level employees to heavy equipment industries all over East Texas. From maintenance to engine specialists, to field technicians, employers actively seek out TSTC Marshall's Diesel graduates.

Excavators, dump trucks, bulldozers, BobCats, tractors, these monstrous machines that construct our highways, shopping centers and homes are advanced machines that require well-trained and highly skilled technicians to repair and maintain them. Cooperative work opportunities within the industry allow students to experience different types of jobs before graduating. A degree from TSTC pays off. Most Diesel Equipment Technology students are employed by their last semester and every graduate from this program is working full time.

Experience the power! Experience the power of becoming a much-in-demand, qualified Diesel Equipment Technology graduate. Trucking, construction, agriculture, airline ground support services, off-shore drilling, forestry, and marine and public transportation all depend on diesel power. With the increased use of highly sophisticated pneumatic, hydraulic, and electronic systems on heavy equipment today, successful students find many opportunities for employment.

At Texas State Technical College Marshall, the Diesel Equipment Technology program provides superior educational training on the latest industry-standard equipment.

Diesel Equipment Technology
Certificate of Completion

Total Credits: 41

Major Requirments			Credits
DEMR	1317	Basic Brake Systems	3
DEMR	1321	Power Train I	3
DEMR	1323	HVAC Troubleshooting & Repair	3
DEMR	1330	Steering & Suspension I	3
DEMR	1405	Basic Electrical Systems	4
DEMR	1435	Auto Power Shift & Hydrostatic Trans I	4
DEMR	1449	Diesel Engine II	4
DEMR	2334	Advanced Diesel Tune-Up & Troubleshooting	3
DEMR	2432	Electronic Controls	4
HEMR	1401	Tracks & Undercarriages	4
HYDR	1305	Basic Hydraulics	3
WLDG	X3XX	Approved Welding Elective	3
		Total	41

Diesel Equipment Technology
Associate of Applied Science Degree

Total Credits: 71

Major Requirments			Credits
BMGT	2347	Critical Thinking and Problem Solving	3
DEMR	1317	Basic Brake Systems	3
DEMR	1321	Power Train I	3
DEMR	1323	HVAC Troubleshooting & Repair	3
DEMR	1330	Steering & Suspension I	3
DEMR	1405	Basic Electrical Systems	4
DEMR	1435	Auto Power Shift & Hydrostatic Trans I	4
DEMR	1449	Diesel Engine II	4
DEMR	2334	Advanced Diesel Tune-Up & Troubleshooting	3
DEMR	2335	Advanced Hydraulics	3
DEMR	2348	Failure Analysis	3
DEMR	2432	Electronic Controls	4
HEMR	1304	Natural Gas Compression	3
HEMR	1401	Tracks & Undercarriages	4
HYDR	1305	Basic Hydraulics	3
POFI	1301	Computer Applications I	3
WLDG	X3XX	Approved Welding Elective	3
Sub Total			56
General Education Requirements			Credits
ENGL	X3XX	ACGM Approved English Elective	3
HUMA	1301	Introduction to Humanities	3
MATH	X3XX	ACGM Approved Math Elective	3
PSYC	X3XX	ACGM Approved Social & Behavioral Science Elective	3
XXXX	X3XX	ACGM Approved General Academic Elective	3
Sub Total			15

**Course is offered at the TSTC North Texas campus in Red Oak, TX.*

BUSINESS, COMMERCE AND SERVICE

Professional Office Technology

The Professional Office Technology program at TSTC Marshall is tailored to meet the growing needs of individuals either currently working or those seeking entry-level positions in office administration. Secretaries and administrative assistants are increasingly assuming responsibilities once reserved for managerial and professional staff. Secretaries and administrative assistants usually work in schools, hospitals, corporate settings and government agencies.

We offer an Associates of Applied Science degree in Professional Office Technology. The courses offered through the Professional Office Technology program are designed to equip graduates with the knowledge and skills necessary to run an organization efficiently. Students learn computer software applications, communication skills (both verbal and written), and critical thinking skills. Students also become proficient in typing, presentations (both visual and verbal), office procedures, and the ability to work independently in this ever-changing world of technology.

In addition, TSTC Marshall offers a Professional Office Technology – Medical Specialization certificate of completion. This certificate is designed to provide students with the specialized skills necessary to prepare them for employment in a medical office and to develop students' office skills along with specialization directed toward medical terminology, anatomy and physiology for medical assistants, and general medical office procedures.

Professional Office Technology
Associate of Applied Science Degree

Total Credits: 69

Major Requirments			Credits
ACNT	1303	Introduction to Accounting	3
ACNT	1311	Introduction to Computerized Accounting	3
BMGT	1327	Principles of Management	3
BMGT	2309	Leadership	3
HRPO	1311	Human Relations	3
HRPO	2301	Human Resource Management	3
ITSC	1309	Integrated Software Applications I	3
ITSC	2321	Integrated Software Applications II	3
ITSW	1307	Introduction to Database	3
LAWT	1301	Copyright & Ethical Issues	3
MRKG	1301	Customer Relations	3
POFI	2331	Desktop Publishing	3
POFT	1301	Business English	3
POFT	1309	Administrative Office Procedures	3
POFT	1319	Records & Information Management	3
POFT	1329	Beginning Keyboarding	3
POFT	2331	Administrative Systems	3
XXXX	X3XX	Approved Technical Elective	3
		Total	54

General Education Requirments			Credits
ENGL	1301	Composition I	3
HUMA	X3XX	ACGM Approved Humanities Elective	3
MATH	X3XX	ACGM Approved Math Elective	3
PSYC	X3XX	ACGM Approved Social & Behavioral Science Elective	3
SPCH	X3XX	ACGM Approved Speech Elective	3
		Total	15

Professional Office Technology - Medical Office Specialization
Certificate of Completion

Total Credits: 42

Major Requirments			Credits
ACNT	1303	Introduction to Accounting I	3
ACNT	1311	Introduction to Computerized Accounting	3
HITT	1301	Health Data Content & Structure	3
POFM	1302	Medical Software Applications	3
HRPO	1311	Human Relations	3
MDCA	1309	Anatomy & Physiology for Medical Assistants	3
MDCA	1313	Medical Terminology	3
MRKG	1301	Customer Relationship Management	3
POFI	1301	Computer Applications I	3
POFM	1300	Medical Coding Basics	3
POFM	1317	Medical Administrative Support	3
POFM	1327	Medical Insurance	3
POFT	1301	Business English	3
POFT	1329	Beginning Keyboarding	3
		Total	42

Logistics Technology

**The Logistics Program is located at the TSTC North Texas campus in Red Oak, Texas.*

Without an efficient system to facilitate the packing and transporting of goods and services, Texas's economy would grind to a halt. Today's logistics systems are technologically advanced and require skilled technicians to keep them operating smoothly. Logisticians analyze and coordinate an organizations' supply chain - the system that moves a product from supplier to consumer. They manage the entire life cycle of a product, which includes how a product is acquired, distributed, allocated and delivered.

Logistics Technology
Associate of Applied Science Degree

Total Credits: 60

Major Requirements			Credits
BMGT	1309	Information and Project Management	3
BMGT	1313	Principles of Purchasing	3
ITSC	1309	Integrated Software Applications I	3
LMGT	1319	Introduction to Business Logistics	3
LMGT	1321	Introduction to Materials Handling	3
LMGT	1323	Domestic and International Transportation Management	3
LMGT	1325	Warehouse and Distribution Center Management	3
LMGT	1340	Contemporary Logistics Issues	3
LMGT	1341	Freight Loss and Damage Claims	3
LMGT	1346	Radio Frequency Identification (RFID)-Wireless Info Systems	3
LMGT	1349	Materials Requirement Planning	3
LMGT	2330	International Logistics Management	3
LMGT	2334	Principles of Traffic Management	3
LMGT	2388	Internship - Logistics and Materials Management OR	
BMGT	*2303*	*Problem Solving and Decision Making*	*3*
POFT	1300	Career Exploratoin/Planning	3
		Total	45

General Education Requirments			Credits
ENGL	X3XX	ACGM Approved English Elective	3
HUMA	1301	Introduction to Humanities	3
MATH	X3XX	ACGM Approved Math Elective	3
PSYC	X3XX	ACGM Approved Social & Behavioral Science Elective	3
SPCH	X3XX	ACGM Approved Speech Elective	3
		Total	15

COMPUTER, INFORMATION TECHNOLOGY & MEDIA

Computer Systems Desktop Support*

The Computer Systems Desktop Support Associate of Applied Science degree trains the candidate to support the information technology infrastructure of the new economy. Information Technology, once thought a luxury, is a mainstay of modern commerce and a requirement of the global marketplace. East Texas companies daily use modern data communications technology to participate in the global economy. The need for trained Desktop Support professionals to maintain and support the hardware and end users is more present than ever.

Area companies needing qualified personnel include financial institutions such as banks, insurance companies, and accounting firms; educational institutions such as public school districts, private schools and colleges; area hospitals and medical offices; law offices; telecommunication companies such as cable, wireless carriers, and phone companies; municipal government offices; manufacturers; IT firms such as resellers, ISPs, software developers; and many other industries in the greater East Texas area.

A course of study in Computer Systems Desktop Support will include training on basic hardware and operating systems. This will cover skills such as installing, building, upgrading, repairing, configuring, troubleshooting, and preventive maintenance. Additional areas of training include soft skills, security, and networking.

Computer Systems Desktop Support
Certificate of Completion I

Total Credits: 24

Major Requirements			Credits
CPMT	1311	Introduction to Computer Maintenance	3
CPMT	1345	Computer Systems Maintenance	3
CPMT	1347	Computer Systems Peripherals	3
CPMT	2345	Computer Systems Troubleshooting	3
ITNW	1308	Implementing & Supporting Client Operating Systems	3
ITNW	1325	Fundamentals of Networking Technologies	3
ITNW	1358	Network+	3
ITSC	1316	Linux Installation & Configuration	3
		Total	24

Computer Systems Desktop Support
Certificate of Completion II

Total Credits: 45

Major Requirments			Credits
BMGT	1309	Information and Project Management	3
CPMT	1311	Introduction to Computer Maintenance	3
CPMT	1345	Computer Systems Maintenance	3
CPMT	1347	Computer Systems Peripherals	3
CPMT	2345	Computer Systems Troubleshooting	3
EECT	1300	Technical Customer Service	3
ITNW	1308	Implementing & Supporting Client Operating Systems	3
ITNW	1325	Fundamentals of Networking Technologies	3
ITNW	1351	Fundamentals of Wireles LANS	3
ITNW	1358	Network+	3
ITSC	1316	Linux Installation & Configuration	3
ITSC	2386	Internship - Computer & Information Services	3
ITSE	1329	Programming Logic & Design	3
ITSY	1300	Fundamentals of Information Security	3
ITSY	1342	Information Technology Security	3
		Total	45

Computer Systems Desktop Support
Associate of Applied Science Degree

Total Credits: 60

Major Requirments			Credits
CPMT	1311	Introduction to Computer Maintenance	3
CPMT	1345	Computer Systems Maintenance	3
CPMT	1347	Computer Systems Peripherals	3

CPMT	2345	Computer Systems Troubleshooting	3
ITNW	1308	Implementing & Supporting Client Operating Systems	3
ITNW	1325	Fundamentals of Networking Technologies	3
ITNW	1351	Fundamentals of Wireles LANS	3
ITNW	1358	Network+	3
ITSC	1316	Linux Installation & Configuration	3
ITSE	1329	Programming Logic & Design	3
ITSY	1342	Information Technology Security	3
ITNW	2350	Enterprise Network OR	
ITSC	2386	Internship - Computer & Information Sciences	3
ITSY	1300	Fundamentals of Informational Security	3
		Total	45

General Education Requirements			Credits
ENGL	X3XX	ACGM Approved English Elective	3
HUMA	X3XX	Introduction to the Humanities	3
MATH	X3XX	ACGM Approved Math Elective	3
PSYC	X3XX	ACGM Approved Social & Behavioral Science	3
XXXX	X3XX	ACGM Approved General Academic Elective	3
		Total	15

**Course is offered at the TSTC North Texas campus in Red Oak, TX.*

Computer Systems/Networking Administration*

The Computer Systems Network Administration Associate of Applied Science degree prepares the candidate to support business information technology needs in the global economy. Data communications networks, once thought a luxury, are a mainstay of modern commerce and a requirement of the global marketplace. East Texas companies daily use modern data communications technology to remain competitive. The need for trained network technicians to maintain these data communication networks is more present than ever.

Area companies needing qualified personnel include financial institutions such as banks, insurance companies, and accounting firms; educational institutions such as public school districts, private schools and colleges; area hospitals and medical offices; law offices; telecommunication companies such as cable, wireless carriers, and phone companies; municipal government offices; manufacturers; IT firms such as resellers, ISPs, software developers; and many other industries in the greater East Texas area.

A course of study in Computer Systems Network Administration will include training in skills needed to install, configure, and troubleshoot basic networking hardware, peripherals, and protocols. Training also includes basic PC hardware and operating system installation, configuration and support. Additional areas of study include network operating systems, and network administration

Computer Systems /Networking Administration Associate of Applied Science Degree

Total Credits: 63

Major Requirements			Credits
BMGT	1309	Information & Project Management	3
ITNW	1308	Implementing & Supporting Client Operating Systems	3
ITNW	1325	Fundamentals of Networking Technologies	3
ITNW	1345	Implementing Network Directory Services	3
ITNW	1353	Supporting Network Server Infrastructure	3
ITNW	1358	Network +	3
ITNW	2312	Routers	3
ITNW	2335	Network Troubleshooting and Support	3
ITNW	2354	Internet/Intranet Server	3
ITSE	1316	Linux Installation & Configuration	3
ITSC	1325	Personal Computer Hardware	3
ITSC	2386	Internship - Computer & Information Sciences OR	
ITNW	*2350*	*Enterprise Network*	3
ITSE	1329	Programming Logic & Design	3
ITSY	1300	Fundamentals of Information Security	3
ITSY	1342	Information Technology Security	3
ITSY	2330	Intrusion Detection	3
		Total	48

General Education Requirements			Credits
ENGL	X3XX	ACGM Approved English Elective	3
HUMA	X3XX	ACGM Approved Humanities Elective	3
MATH	X3XX	ACGM Approved Math Elective	3
PSYC	X3XX	ACGM Approved Social & Behavioral Science Elective	3
SPCH	1311	Introduction to Speech Communication	3
		Total	15

Computer Systems/Networking Administration Certificate of Completion I

Total Credits: 21

Major Requirements			Credits
ITNW	1308	Implementing & Supporting Client Operating Systems	3
ITNW	1325	Fundamentals of Networking Technologies	3
ITNW	1358	Network +	3
ITNW	2312	Routers	3
ITSC	1325	Personal Computer Hardware	3
ISTY	1300	Fundamentals of Information Security	3
ITSY	1342	Information Technology Security	3
		Total	21

Computer Systems/Networking Administration Certificate of Completion II

Total Credits: 48

Major Requirements			Credits
BMGT	1309	Information & Project Management	3
ITNW	1308	Implementing & Supporting Client Operating Systems	3
ITNW	1325	Fundamentals of Networking Technologies	3

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ITNW	1345	Implementing Network Directory Services	3
ITNW	1353	Supporting Network Server Infrastructure	3
ITNW	1358	Network +	3
ITNW	2312	Routers	3
ITNW	2335	Network Troubleshooting and Support	3
ITNW	2354	Internet/Intranet Server	3
ITSC	1316	Linux Installation & Configuration	3
ITSC	1325	Personal Computer Hardware	3
ITNW	2386	Internship - Computer & Information Sciences OR	
ITNW	*2350*	*Enterprise Network*	3
ITSE	1329	Programming Logic & Design	3
ITSY	1300	Fundamentals of Information Security	3
ITSY	1342	Information Technology Security	3
ITSY	2330	Intrusion Detection	3
		Total	48

**Course is offered at the TSTC North Texas campus in Red Oak, TX.*

Cyber Security*

Are you computer savvy? Are you looking for a way to start your career as an information technology professional? If you want to receive the training necessary to work for businesses and organizations that need to protect valuable information and computer systems from hackers and viruses, our Cyber Security Associate of Applied Science is for you.

The courses you will take in the Cyber Security Associate of Applied Science degree program cover computer technology, networking fundamentals and ethical issues. You will learn how to protect electronic data through both offensive and defensive tactics. Firewalls, VPN and computer forensics are an integral part of the program. Computer maintenance courses are also offered, providing you with needed hardware knowledge. You will take courses covering Linux platforms, Microsoft operating systems and software suites, and Cisco networking systems. These courses will give you the knowledge you need to design security programs for a variety of organizations.

Area companies needing qualified security professionals include financial institutions such as banks, insurance companies, and accounting firms; educational institutions such as public school districts, private schools and colleges; area hospitals and medical offices; law offices; telecommunication companies such as cable, wireless carriers, and phone companies; municipal government offices; manufacturers; IT firms such as resellers, ISPs, software developers; and many other industries in the greater East Texas area.

The Cyber Security program requires that students demonstrate basic reading, writing and mathematical skills before enrolling.

Cyber Security
Certificate of Completion I

Total Credits: 18

Major Requirements			Credits
ITNW	1325	Fundamentals of Networking Technologies	3
ITNW	2312	Routers	3
ITNW	2335	Network Troubleshooting and Support	3
ITSE	1329	Programming Logic & Design	3
ITSY	1300	Fundamentals of Information Security	3
ITSY	1342	Information Technology Security	3
		Total	18

Cyber Security
Certificate of Completion II

Total Credits: 48

Major Requirements			Credits
ITNW	1308	Implementing & Supporting Client Operating Systems	3
ITNW	1325	Fundamentals of Networking Technologies	3
ITNW	1345	Implementing Network Directory Services	3
ITNW	1353	Supporting Network Server Infrastructure	3
ITNW	2312	Routers	3
ITNW	2335	Network Troubleshooting and Support	3
ITSC	1316	Linux Installation & Configuration	3
ITSC	1325	Personal Computer Hardware	3
ITSE	1307	Introduction to C++ Programming	3
ITSE	1329	Programming Logic & Design	3
ITSE	1359	Introduction to Scripting Languages	3
ITSY	1300	Fundamentals of Information Security	3
ITSY	1342	Information Technology Security	3
ITSY	2301	Firewalls and Network Security	3
ITSY	2330	Intrusion Detection	3
ITSY	2343	Computer System Forensics	3
		Sub Total	48
Total		48	

Cyber Security
Associate of Applied Science Degree

Total Credits: 63

Major Requirements			Credits
ITNW	1308	Implementing & Supporting Client Operating Systems	3
ITNW	1325	Fundamentals of Networking Technologies	3
ITNW	1345	Implementing Network Directory Services	3
ITNW	1353	Supporting Network Server Infrastructure	3
ITNW	2312	Routers	3
ITNW	2335	Network Troubleshooting and Support	3
ITSC	1316	Linux Installation & Configuration	3
ITSC	1325	Personal Computer Hardware	3
ITSE	1307	Introduction to C++ Programming	3
ITSE	1329	Programming Logic & Design	3
ITSE	1359	Introduction to Scripting Languages	3
ITSY	1300	Fundamentals of Information Security	3
ITSY	1342	Information Technology Security	3
ITSY	2301	Firewalls and Network Security	3
ITSY	2330	Intrusion Detection	3
ITSY	2343	Computer System Forensics	3
		Sub Total	54

General Education Requirements			Credits
ENGL	X3XX	ACGM Approved English Elective	3

HUMA	X3XX	ACGM Approved Humanities/Fine Arts Eective	3
MATH	X3XX	ACGM Approved Math Elective	3
ENGL	2311	Technical Writing	3
PSYC	X3XX	ACGM Approved Social & Behavioral Science Elective	3
		Sub Total	15
		Total	69

Course is offered at the TSTC North Texas campus in Red Oak, TX.

Multimedia Technology

Multimedia Technology is an exciting field that touches every aspect of today's business community. From personnel to marketing to sales, Multimedia Technology provides dynamic communication tools that drive their businesses.

Learning the art of effective communication through the use of graphics design, image editing, computer assisted voice, video editing, and data communications is your gateway to an exciting and rewarding career.

Our programs are loaded with cutting edge technology, state of the art equipment, engaging course work and a confident, enthusiastic staff!

We are thrilled to offer you the opportunity to become a major player in the field by having mastered such multimedia technology as Adobe Master Collection Suite. The Multimedia Technology degree also includes general academic and soft skill courses to compliment the technical skill set to create a well rounded individual ready to hit the ground running in industry.

Multimedia Technology
Associate of Applied Science Degree

Total Credits: 72

Major Requirements			Credits
ARTC	1302	Digital Imaging I	3
ARTC	1313	Digital Publishing I	3
ARTC	2305	Digital Imaging II	3
ARTV	1343	Digital Sound	3
ARTV	1351	Digital Video	3
ARTV	2341	Advanced Digital Video	3
BUSG	2309	Small Business Management/ Entrepreneurship	3
IMED	1301	Introduction to Multimedia	3
IMED	1305	Multimedia Courseware Development I	3
IMED	1341	Interface Design	3
IMED	1345	Interactive Multimedia I	3
IMED	1359	Writing for Digital Media	3
IMED	1391	Special Topics in Educational/ Instructional Media	3
IMED	2305	Multimedia Courseware Development II	3
IMED	2311	Portfolio Development	3
ITSC	1325	Personal Computer Hardware	
ITSE	1301	Web Design Tools	3
ITSW	1310	Introduction to Presentation Graphics Software	3
LAWT	1301	Copyright & Ethical Issues	3
		Total	57

General Education Requirements			Credits
ENGL	1301	Composition I	3
HUMA	1301	Introduction to Humanities	3
MATH	X3XX	ACGM Approved Math Elective	3
MATH	X3XX	ACGM Approved Math Elective	3
PSYC	X3XX	ACGM Approved Social & Behavioral Science Elective	3
		Total	15

Software Development Technology

Software Engineering Technology is a challenging field that offers a variety of career opportunities. As a Software Engineering Technician, you have the freedom to choose your particular niche in the computer industry. You can major in software development or simply specialize in Windows programming or UNIX programming. As varied as the career opportunities are, so is your earning potential.

The SET degree provides an effective mix of courses to create well balanced computer programmers; we focus on concepts and techniques that are applicable to any programming language as well as detailed functionalities of the following technologies:

Programming Languages:	Database Systems
C	MS Access
C++	SQL Server
C#.NET	
Visual Basic.NET	
ADO.NET	
Java	

The SDT degree also includes general academic and soft skill courses to compliment the technical skill set to create a well rounded individual ready to hit the ground running in industry.

This is a large industry and your opportunity to become a major player has never been better!

Software Development Technology
Associate of Applied Science Degree

Total Credits: 69

Major Requirements			Credits
INEW	2338	Advanced Java Programming	3
ITNW	1308	Implementing & Supporting Client Operating Systems	3
ITNW	1325	Fundamentals of Networking	3
ITSC	1316	Linux Installation & Configuration	3
ITSE	1301	Web Design Tools	3
ITSE	1307	Introduction to C++ Programming	3
ITSE	1329	Programming Logic & Design	3

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ITSE	1330	Introduction to C# Programming	3
ITSE	1332	Introduction to Visual Basic .NET Programming	3
ITSE	1359	Introduction to Scripting Languages	3
ITSE	2309	Database Programming	3
ITSE	2310	iOS Application Programming	3
ITSE	2317	JAVA Programming	3
ITSE	2331	Advanced C++ Programming	3
ITSE	2386	Internship - Computer Programming	3
ITSW	1307	Introduction to Database	3
ITSW	2337	Advanced Database	3
ITSY	1300	Fundamentals of Information Security	3
		Total	54

General Education Requirments			Credits
ENGL	1301	Composition I	3
HUMA	1301	Introduction to Humanities	3
MATH	1314	College Algebra	3
MATH	X3XX	ACGM Approved Math Elective	3
PSYC	X3XX	ACGM Approved Social & Behavioral Science Elective	
		Total	15

Software Development Technology Certificate of Completion I

Total Credits: 21

Major Requirements			Credits
ITNW	1308	Implementing & Supporting Client Operating Systems	3
ITSE	1301	Web Design Tools	3
ITSE	1307	Introduction to C++ Programming	3
ITSE	1329	Programming Logic & Design	3
ITSE	1359	Introduction to Scripting Languages	3
ITSW	1307	Introduction to Database	3
ITSW	2337	Advanced Database	3
		Total	21

Software Development Technology Certificate of Completion II

Total Credits: 54

Major Requirements			Credits
INEW	2338	Advanced Java Programming	3
ITNW	1308	Implementing & Supporting Client Operating Systems	3
ITNW	1325	Fundamentals of Networking	3
ITSC	1316	Linux Installation & Configuration	3
ITSE	1301	Web Design Tools	3
ITSE	1307	Introduction to C++ Programming	3
ITSE	1329	Programming Logic & Design	3
ITSE	1330	Introduction to C# Programming	3
ITSE	1332	Introduction to Visual Basic .NET Programming	3
ITSE	1359	Introduction to Scripting Languages	3
ITSE	2309	Database Programming	3
ITSE	2310	iOS Application Programming	3
ITSE	2317	JAVA Programming	3
ITSE	2331	Advanced C++ Programming	3
ITSE	2386	Internship - Computer Programming	3
ITSW	1307	Introduction to Database	3
ITSW	2337	Advanced Database	3
ITSY	1300	Fundamentals of Information Security	3
		Total	54

ENERGY & UTILITIES

Electric Utility Construction and Maintenance

Congratulations if you are considering a career as a utility lineman. You have selected one of the highest paying and most exciting trades that exist. Texas State Technical College's Electric Utility Construction & Maintenance is an intensive training program that is designed for men and women who are actively pursuing a career as a lineman.

The Electric Utility Construction & Maintenance prepares individuals to work as lineman in the construction, maintenance, and repair of electric utility overhead and underground systems. Students combine electrical distribution system classroom study with laboratory and practical applications. Students will be expected to master competencies such as electrical distribution safe work practices; basic electrical theory; overhead pole line and underground electrical construction operation and maintenance; fundamentals of electric power systems management; and electrical distribution equipment installation and installation of residential/ commercial service metering.

Upon successful completion of the program, individuals will receive an Associate of Applied Science Degree or Certificate of Completion and will possess the necessary skills for employment in the field of Electric Utility Distribution Lineman.

Electric Utility Construction and Maintenance Associate of Applied Science Degree

Total Credits: 60

Major Requirements			Credits
BMGT	1309	Information and Project Management	3
BMGT	2309	Leadership	3
BMGT	2347	Critical Thinking and Problem Solving	3
CVOP	1145	Commercial Driver's License Overview	1
CVOP	1201	Commercial Driver's License Driving Skills	2
DFTG	1325	Blueprint Reading & Sketching	3
ELPT	1311	Basic Electrical Theory	3
ELPT	1321	Introduction to Electrical Safety & Tools	3
ELPT	2323	Transformers	3
ELPT	2339	Electrical Power Distribution	3
LNWK	1301	Orientation & Line Skill Fundamentals	3
LNWK	1311	Climbing Skills	3
LNWK	2322	Distribution Line Construction	3
POFI	1301	Computer Applications I	3
XXXX	X3XX	Approved Technical Elective	3
XXXX	X3XX	Approved Technical Elective	3
		Total	45

General Education Requirments			Credits
ENGL	1301	Composition I	3
HUMA	1301	Introduction to Humanities	3
MATH	1314	College Algebra	3
PSYC	X3XX	ACGM Approved Social & Behavioral Science Elective	3
XXXX	X3XX	ACGM Approved Math or Science Elective	3
		Total	15

Electric Utility Construction and Maintenance Certificate of Completion

Total Credits: 45

Major Requirements			Credits
BMGT	1309	Information and Project Management	3
BMGT	2309	Leadership	3
BMGT	2347	Critical Thinking and Problem Solving	3
CVOP	1145	Commercial Driver's License Overview	1
CVOP	1201	Commercial Driver's License Driving Skills	2
DFTG	1325	Blueprint Reading & Sketching	3
ELPT	1311	Basic Electrical Theory	3
ELPT	1321	Introduction to Electrical Safety & Tools	3
ELPT	2323	Transformers	3
ELPT	2339	Electrical Power Distribution	3
LNWK	1301	Orientation & Line Skill Fundamentals	3
LNWK	1311	Climbing Skills	3
LNWK	2322	Distribution Line Construction	3
POFI	1301	Computer Applications I	3
XXXX	X3XX	Approved Technical Elective	3
XXXX	X3XX	Approved Technical Elective	3
		Total	45

^^ Program Entrance Requirements (Prior to Registration)

1. THEA testing is required. THEA scores must be passing or place student in the highest level of developmental coursework in all three areas (Math 200, Reading 200 and Writing 200).
http://www.marshall.tstc.edu/welcome/thea.shtml

2. Demonstrated electrical pole climbing ability using fall restraint.

ENGINEERING & MANUFACTURING

High Voltage Electrical Applied Engineering

Technicians with the vision to understand the long-term demand for Electrical Systems are trained to design, install, maintain, test, troubleshoot, and construct our nation's complex electrical systems will continue to enjoy outstanding salaries and career longevity. Electrical Power & Control Technicians who specialize in Electrical Systems can choose a variety of entry paths into the field, whether it's working for large corporations as crew electricians, or serving as specialists working alongside engineers and industrial system designers.

High Voltage Electrical Applied Engineering Associate of Applied Science Degree

Total Credits: 60

Major Requirements			Credits
DFTG	1313	Drafting for Specific Occupations	3
ELPT	1341	Motor Controls	3
ELPT	1351	Electrical Machines	3
OSHT	1320	Energy Industrial Safety	3
ELPT	2319	Programmable Logic Controllers I	3
ELPT	2323	Transformers	3
ELPT	2335	Electrical Theory and Devices	3
ELPT	2339	Electrical Power Distribution	3
ELPT	2343	Electrical Systems Design	3
ELPT	2380	Co-op: Electrical and Power Transmission Installation OR	
INTC	*2336*	*Distributed Control and Programmable Logic*	3
ELPT	2347	Electrical Testing and Maintenance	3
IEIR	1302	Introduction to Direct Current Circuits	3
IEIR	1304	Alternating Current Circuits for Industrial Applications	3
INTC	1341	Principles of Automatic Control	3
INTC	2333	Instrumentation Systems Installation	3
		Total	45

General Education Requirements			Credits
ENGL	X3XX	ACGM Approved English Elective	3
HUMA	X3XX	Introduction to Humanities	3
MATH	X3XX	ACGM Approved Math Elective	3
PSYC	X3XX	ACGM Approved Social & Behavioral Science Elective	3
XXXX	X3XX	ACGM Approved General Academic Elective	3
		Total	15

**Course is offered at the TSTC North Texas campus in Red Oak, TX.*

Basic Machining

The Basic Machining Certificate program is an entry level, 16 semester hour program that could lead to a 40 semester hour certificate and/or on to an Associate of Applied Sciences degree in Computer Aided Manufacturing. The program prepares basic machine operators in a machine shop. The fundamentals of general machine shop operations are introduced including lathe, milling, and basic CNC machine. This program is often used by local businesses to prepare new hires to begin work in their shops

Basic Machining Certificate of Completion

Total Credits: 16

Major Requirments			Credits
BMGT	1309	Information & Project Management	3
DFTG	1325	Blueprint Reading & Sketching	3
MCHN	1343	Machine Shop Mathematics	3
MCHN	1338	Basic Machine Shop I	3
MCHN	2431	Operation of CNC Turning Centers	4
		Total	16

Computer Aided Drafting*

Drafters prepare technical drawings and plans used by production and construction workers to build everything from manufactured products such as toys, toasters, industrial machinery, and spacecraft to structures such as houses, office buildings, and oil and gas pipelines.

Drafters' drawings provide visual guidelines; show the technical details of the products and structures; and specify dimensions, materials, and procedures. Drafters fill in technical details using drawings, rough sketches, specifications, codes, and calculations previously made by engineers, surveyors, architects, or scientists. For example, drafters use their knowledge of standardized building techniques to draw in the details of a structure. Some use their knowledge of engineering and manufacturing theory and standards to draw the parts of a machine to determine design elements, such as the numbers and kinds of fasteners needed to assemble the machine. Drafters use technical handbooks, tables, calculators, and computers to complete their work.

Computer Aided Drafting Associate of Applied Science Degree

Total Credits: 60

Major Requirements			Credits
ARCE	1352	Structural Drafting	3
DFTG	1309	Basic Computer Aided Drafting	3
DFTG	1317	Architectural Drafting	3
DFTG	1325	Blueprint Reading & Sketching	3
DFTG	1329	Electro-Mechanical Drafting	3
DFTG	1333	Mechanical Drafting	3
DFTG	2312	Technical Illustration & Presentation	3

DFTG	2319	Intermediate Computer Aided Drafting	3
DFTG	2332	Advanced Computer Aided Drafting	3
DFTG	2340	Solid Modeling/Design	3
DFTG	2386	Internship - Drafting & Design Technology	3
DFTG	2330	Civil Drafting	3
MCHN	1338	Basic Machine Shop I	3
POFI	1301	Computer Applications I	3
QCTC	1301	Total Quality Management	3
		Total	45

General Education Requirements			Credits
ENGL	X3XX	ACGM Approved English Elective	3
HUMA	1301	Introduction to Humanities	3
MATH	X3XX	ACGM Approved Math Elective	3
PSYC	X3XX	ACGM Approved Social & Behavioral Science Elective	3
XXXX	X3XX	ACGM Approved General Academic Elective	3
		Sub Total	15

Computer Aided Drafting Certificate of Completion

Total Credits: 27

Major Requirements			Credits
DFTG	1325	Blueprint Reading & Sketching	3
DFTG	1309	Basic Computer Aided Drafting	3
DFTG	1317	Architectural Drafting	3
DFTG	1329	Electro-Mechanical Drafting	3
DFTG	1333	Mechanical Drafting	3
DFTG	2319	Intermediate Computer Aided Drafting	3
DFTG	2340	Solid Modeling/Design	3
GISC	1311	Introduction to Geographical Systems	3
MCHN	1338	Basic Machine Shop I	3
		Total	27

Computer Aided Drafting-GIS Specialization Certificate of Completion

Total Credits: 25

Major Requirements			Credits
DFTG	1309	Basic Computer Aided Drafting	3
DFTG	2319	Intermediate Computer Aided Drafting	3
GISC	1311	Intro to Geographic Information Systems	3
GISC	1321	Introduction to Raster-Based GIS	3
GISC	2301	Data Acquisition and Analysis in GIS	3
GISC	2404	GIS Design with Vector Analysis	4
ITSW	1307	Introduction to Database	3
POFI	1301	Computer Applications I	3
		Total	25

**Course is offered at the TSTC North Texas campus in Red Oak, TX.*

Computer Aided Manufacturing*

Texas State Technical College Marshall's Computer Aided Manufacturing CAM program has a proven track record for helping students acquire the skills to manufacture world-class ultra-precision machined components and the skills needed in the manufacturing sector to fill thousands of high-paying positions. At TSTC, you can develop the skills and knowledge sought by manufacturing industries, including commercial and military aircraft, medical, telecommunication, automotive and oil tool manufacturing.

In the CAM program at TSTC, you can progress through a series of machine tool operation courses to develop and challenge your process skills using conventional and Computer Numerical Controlled, or CNC machines. You will also learn about the various materials used in today's manufacturing industry.

Today's machinists can interpret complex drawings, select the appropriate materials and perform the machining processes to transform engineering concepts into quality, working components. Through a unique partnership with HAAS automation, CAM has established a regional training facility that enhances the learning experience. In this facility, you can learn CNC programming and operations.

Computer Aided Manufacturing Associate of Applied Science Degree

Total Credits: 67

Major Requirements			Credits
BMGT	1309	Information & Project Management	3
BMGT	2347	Critical Thinking & Problem Solving	3
DFTG	1309	Basic Computer Aided Drafting	3
DFTG	1325	Blueprint Reading & Sketching	3
MCHN	1326	Introduction to Computer Aided Manufacturing	3
MCHN	1338	Basic Machine Shop I	3
MCHN	1343	Machine Shop Mathematics	3
MCHN	1380	Cooperative Education	3
MCHN	1452	Intermediate Machining I	4
MCHN	2431	Operation of CNC Turning Centers	4
MCHN	2434	Operation of CNC Machining Centers	4
MCHN	2435	Advanced CNC Machining	4
POFI	1301	Computer Applications I	3
PSYT	1313	Psychology of Personal Adjustment	3
RBTC	1305	Robotics Fundamentals	3
WLDG	1307	Introduction to Welding Using Multiple Processes	3
		Total	52

General Education Requirements			Credits
ENGL	X3XX	ACGM Approved English Elective	3
HUMA	1301	Introduction to Humanities	3
MATH	X3XX	ACGM Approved Math Elective	3
PSYC	X3XX	ACGM Approved Social & Behavioral Science Elective	3
XXXX	X3XX	ACGM Approved General Academic Elective	3
		Total	15

Computer Aided Manufacturing Certificate of Completion

Total Credits: 40

Major Requirements	Credits

BMGT	1309	Information & Project Management	3
BMGT	2347	Critical Thinking & Problem Solving	3
DFTG	1325	Blueprint Reading & Sketching	3
MCHN	1338	Basic Machine Shop I	3
MCHN	1343	Machine Shop Mathematics	3
MCHN	1452	Intermediate Machining I	4
MCHN	2431	Operation of CNC Turning Centers	4
MCHN	2434	Operation of CNC Machining Centers	4
MCHN	2435	Advanced CNC Machining	4
POFI	1301	Computer Applications I	3
PSYT	1313	Psychology of Personal Adjustment	3
WLDG	1307	Introduction to Welding Using Multiple Processes	3
		Total	40

**Course is offered at the TSTC North Texas campus in Red Oak, TX.*

Industrial Maintenance *

The Industrial Maintenance program is designed by industry experts and employers. The courses in this program are directed at cutting edge mechanical and electrical operations, providing you with knowledge and skills in hydraulics, pneumatics, pumps and compressors, machinery installation and alignment, programmable logic controllers, motor controls, electrical installation and wiring, air conditioning and refrigeration, machine shop, power transmissions, troubleshooting, and welding. The classroom learning is supplemented with hands-on training utilizing real-world equipment to provide you with the skills and technical background needed to be successful in most industrial environments.

Industrial Maintence
Associate of Applied Science Degree

Total Credits: 69

Major Requirements			Credits
BMGT	2347	Critical Thinking & Problem Solving	3
DFTG	1325	Blueprint Reading & Sketching	3
ELPT	1311	Basic Electrical Theory	3
ELPT	1341	Motor Control	3
ELPT	1345	Commercial Wiring	3
ELPT	1351	Electrical Machines	3
ELPT	2319	Programmable Logic Controllers I	3
ELPT	2331	AC/DC Drives	3
HART	1307	Refrigeration Principles	3
HYDR	1305	Basic Hydraulics	3
HYDR	1345	Hydraulics & Pneumatics	3
INMT	1305	Introduction to Industrial Maintenance	3
INMT	2301	Machinery Installation	3
INMT	2303	Pumps, Compressors & Mechanical Drives	3
INMT	2345	Industrial Troubleshooting	3
POFI	1301	Computer Applications I	3
WLDG	1307	Introduction to Welding Using Multiple Processes	3
XXXX	X3XX	Approved Technical Elective	3
		Total	54

General Education Requirments			Credits
ENGL	X3XX	ACGM Approved English Elective	3
HUMA	1301	Introduction to Humanities	3
MATH	X3XX	ACGM Approved Math Elective	3
PSYC	X3XX	ACGM Approved Social & Behavioral Science Elective	3
XXXX	X3XX	ACGM Approved Math or Science Elective	3
		Total	15

Introduction to Industrial Maintence
Certificate of Completion

Total Credits: 39

Major Requirements			Credits
DFTG	1325	Blueprint Reading & Sketching	3
ELPT	1311	Basic Electrical Theory	3
ELPT	1341	Motor Control	3
ELPT	1345	Commercial Wiring	3
ELPT	2319	Programmable Logic Controllers I	3
HYDR	1305	Basic Hydraulics	3
HYDR	1345	Hydraulics & Pneumatics	3
INMT	1305	Introduction to Industrial Maintenance	3
INMT	2301	Machinery Installation	3
INMT	2303	Pumps, Compressors & Mechanical Drives	3
INMT	2345	Industrial Troubleshooting	3
MCHN	1338	Basic Machine Shop I	3
WLDG	1307	Introduction to Welding Using Multiple Processes	3
		Total	39

**Course is offered at the TSTC North Texas campus in Red Oak, TX.*

Heating, Ventilation, Air Conditioning and Refrigeration

****The HVAC Program is located at the TSTC North Texas campus in Red Oak, Texas.***

With a career in Heating, Ventilation, & Air Conditioning (HVAC) graduates enter the workforce knowing all the stages of HVAC systems, starting with design and ending with system performance. TSTC's program strives to teach students the basic fundamentals of HVAC while exposing them to the newest technologies found in the industry

Heating, Ventilation,Air Conditioning and Refrigeration Technology
Associate of Applied Science Degree

Total Credits: 60

Major Requirements			Credits
ELPT	1311	Basic Electrical Theory	3
ELPT	1341	Motor Control	3
ELPT	1345	Commercial Wiring	3
HART	1307	Refrigeration Principles	3
HART	1310	HVAC Shop Practices and Tools	3
HART	1341	Residential Air Conditioning	3
HART	1345	Gas and Electric Heating	3
HART	1356	EPA Recovery Certification Preparation	3
HART	2336	Air Conditioning Troubleshooting	3

HART	2338	Air Conditioning Installation and Startup	3
HART	2341	Commercial Air Conditioning	3
OSHT	1320	Energy Industrial Safety	3
HART	2349	Heat Pumps	3
HART	2380	HVAC Cooperative Education	3
HART	2342	Commercial Refrigeration	3
		Total	45

General Education Requirements			Credits
ENGL	X3XX	ACGM Approved English Elective	3
HUMA	X3XX	Introduction to Humanities	3
MATH	X3XX	ACGM Approved Math Elective	3
PSYC	X3XX	ACGM Approved Social & Behavioral Science Elective	3
XXXX	X3XX	ACGM Approved Math or Science Elective	3
		Total	15

Heating, Ventilation, Air Conditioning and Refrigeration
Certificate of Completion I

Total Credits: 36

Major Requirements			Credits
ELPT	1311	Basic Electrical Theory	3
HART	1307	Refrigeration Principles	3
HART	1356	EPA Recovery Certification Program	3
OSHT	1320	Energy Industrial Safety	3
HART	1310	HVAC Shop Practices and Tools	3
ELPT	1341	Motor Controls	3
HART	1341	Residential Air Conditioning	3
HART	1345	Gas and Electric Heating	3
HART	2380	Cooperative Education - Heating, Air Conditioning and Refrigeration	3
HART	2336	Air Conditioning Troubleshooting	3
HART	2338	Air Conditioning Installation	3
HART	2349	Heat Pumps	3
		Total	36

Heating, Ventilation, Air Conditioning and Refrigeration
Certificate of Completion II

Total Credits: 45

Major Requirements			Credits
ELPT	1311	Basic Electrical Theory	3
HART	1307	Refrigeration Principles	3
HART	1356	EPA Recovery Certification Program	3
OSHT	1320	Energy Industrial Safety	3
HART	1310	HVAC Shop Practices and Tools	3
ELPT	1341	Motor Controls	3
HART	1341	Residential Air Conditioning	3
HART	1345	Gas and Electric Heating	3
HART	2380	Cooperative Education - Heating, Air Conditioning and Refrigeration	3
HART	2336	Air Conditioning Troubleshooting	3
HART	2338	Air Conditioning Installation	3
HART	2349	Heat Pumps	3
HART	2341	Commercial Air Conditioning	3
ELPT	1345	Commercial Wiring	3
HART	2342	Commercial Refrigeration	3
		Total	45

Heating, Ventilation, Air Conditioning and Refrigeration
Enhanced Certificate

Total Credits: 9

Major Requirements			Credits
HART	2345	Residential Air Conditioning Systems Design	3
HART	1351	Energy Management	3
RBPT	2350	Residential Retrofit Strategies	3
		Total	9

Industrial Mechatronics Technician

Mechatronics is a new interdisciplinary field involving mechanical, instrumentation, electronic, robotics/automation, computer components and control systems. Because industrial applications are becoming increasingly multidisciplinary, today's technicians need skills that cross a variety of disciplines. Mechatronics courses combine various disciplines to teach students a holistic approach to developing solutions for engineering applications.

Businesses and industries are asking for graduates with Mechatronics skills and problem solving abilities. Mechatronics does not map to any particular trade or job category; rather, it refers to a host of integrated skills that can be applied in a variety of job contexts. Furthermore, there is an expanding demand for bilingual technicians and team leaders with Mechatronics knowledge and experience in companies in Texas and surrounding regions. Skills found under the Mechatronics Technology umbrella includes "practical" knowledge in the integration of electrical systems, fluid power, electronics, computer controls, PLCs, instrumentation, robotics and information technology

Industrial Mechatronics Technician
Associate of Applied Science Degree

Total Credits: 68

Major Requirements			Credits
CETT	1441	Solid State Circuits	4
DFTG	1325	Blueprint Reading and Sketching	3
ELPT	1311	Basic Electrical Theory	3
ELPT	1320	Fundamentals of Electricity II	3
ELPT	1341	Motor Control	3
ELPT	2319	Programmable Logic Controllers I	3
HYDR	1305	Basic Hydraulics	3
INMT	1305	Introduction to Industrial Maintenance	3
INMT	2301	Machinery Installation	3
MCHN	1338	Basic Machine Shop I	3
MCHN	2403	Fundamentals of Computer Numerical Control (CNC)	4
POFI	1301	Computer Applications I	3
RBTC	1305	Robotics Fundamentals	3
XXXX	X3XX	Approved Technical Elective	3
XXXX	X3XX	Approved Technical Elective	3
XXXX	X3XX	Approved Technical Elective	3

XXXX	X3XX	Approved Technical Elective	3
		Sub Total	53

General Education Requirements			**Credits**
ENGL	1301	Composition I	3
HUMA	1301	Introduction to Humanities	3
MATH	X3XX	ACGM Approved Math Elective	3
PSYC	X3XX	ACGM Approved Social & Behavioral Science Elective	3
XXXX	X3XX	ACGM Approved Math or Science Elective	3
		Sub Total	15

Instrumentation

Instrumentation covers several fields of study-from the distribution of electricity to an assortment of control applications including computers, smart transmitters, fiber optics, programmable logic controllers, field buss, robotics, and more. TSTC designed the program to prepare graduates to work in the areas of engineering and design; installation and calibration; maintenance, testing and troubleshooting; computer instrumentation and robotic interfacing; networking; sales; and electrical construction.

The term instrumentation technician includes a broad range of duties and responsibilities within the instrumentation field. The job title may include instrument technician, instrument repairman, instrument planner, nuclear instrumentation technician, instrument foreman, and instrument supervisor or junior instrument engineer.

Instrumentation technician may also identify the area of work such as power plant, nuclear power plant, chemical industry, tobacco industry, paper and wood pulp, research and development, electronics, aircraft, water treatment, biomedical, aerospace and many others.

Instrument technicians troubleshoot, maintain, repair, replace and install process control and manufacturing equipment to produce quality products and ensure environmental protection, safety and cost-effective operations. Technicians work with pneumatic, mechanical, electronic and computer based process control equipment.

Industrial firms are recruiting men and women as entry-level employees who can apply mathematical concepts, communicate complex ideas, compose accurate and correct reports, solve problems, and be self motivated.

Instrumentation
Associate of Applied Science Degree

Total Credits: 60

Major Requirements			Credits
CETT	1341	Solid State Circuits	3
ELPT	1319	Fundamentals of Electricity I	3
ELPT	1320	Fundamentals of Electricity II	3
ELPT	1341	Motor Control	3
ELPT	1351	Electrical Machines	3
ELPT	2319	Programmable Logic Controllers I	3
ELPT	2331	AC/DC Drives	3
ELPT	2455	Programmable Logic Controllers II	3
INCR	1344	Microprocessor Systems Maintenance	3
INMT	1317	Industrial Automation	3
INTC	1341	Principles of Automatic Control	3
INTC	1343	Application of Industrial Automatic Controls	3
INTC	2330	Instrumentation Systems Troubleshooting	3
POFI	1301	Computer Applications I	3
XXXX	X3XX	Approved Technical Elective	3
		Total	45

General Education Requirments			Credits
ENGL	1301	Composition I	3
HUMA	1301	Introduction to Humanities	3
MATH	X3XX	ACGM Approved Math Elective	3
PSYC	2301	General Psychology	3
XXXX	X3XX	ACGM Approved Math or Science Elective	3
		Total	15

Process Operations Technician

A process technician is a key member of a team of people responsible for planning, analyzing, and controlling the production of products from the acquisition of raw materials through the production and distribution of products to customers in a variety of process industries. These industries include, but are not limited to, chemical, food and beverage, oil exploration and production, pharmaceuticals, power generation, pulp and paper, refining and wastewater treatment.

Process Operations technicians are the backbone of industry. They are responsible for efficient and safe operation of all process equipment within the plant, monitoring of all process and utility systems and equipment to ensure they operate within their proper parameters, collection of product and utility samples and performing lab analysis to ensure products meet specifications, provide ownership and responsibility for an area of the facility while on shift to ensure the safety of all who work this area through adherence to policies and procedures, preparation of equipment and systems for maintenance activities, and performance of minor mechanical and/or maintenance activities on equipment and systems.

Process Operations Technician
Associate of Applied Science Degree

Total Credits: 68

Major Requirments			Credits
POFI	1301	Computer Applications I	3
PTAC	1302	Introduction to Process Technology	3
PTAC	1332	Process Instrumentation I	3
PTAC	1308	Safety, Health, & Environment	3
PTAC	1410	Process Technology I – Equipment	4
PTAC	2314	Principles of Quality	3
PTAC	2336	Process Instrumentation II	3
PTAC	2348	Safety, Health, & Environment II	3
PTAC	2420	Process Technology II – Systems	4
PTAC	2438	Process Technology III – Operations	4
PTAC	2446	Process Troubleshooting	4
PTRT	1301	Introduction to Petroleum Industry	3
XXXX	X3XX	Approved Enterprise Elective	3
XXXX	X3XX	Approved Enterprise Elective	3
XXXX	X3XX	Approved Technical Elective	3
XXXX	X3XX	Approved Technical Science Elective	3
		Total	52

General Education Requirments			Credits
CHEM	1411	General Chemistry I	4
ENGL	1301	Composition I	3
HUMA	1301	Introduction to Humanities	3
MATH	X3XX	ACGM Approved Math Elective	3
PSYC	2302	Applied Psychology	3
		Total	16

Welding*

Texas State Technical College Marshall offers two welding certificates that focus on combination welding practices used in industry today. The programs provide hands-on welding, layout, and fitting skills that are presently used and practiced in today's technology advanced workforce. Extensive training in welding processes, oxy-fuel welding and cutting, shielded metal arc (SMAW) and gas metal arc (GMAW) provides the students with advance insight in understanding how the welding processes work and why certain welding processes are used. As a graduate, you may go to work as a welder in general fabrication shops, on construction sites, in pressure vessel shops or shipyards.
In less than one year the student has skills and knowledge required for the welder qualification test for the American Welding Society.

Basic Welding
Certificate of Completion

Total Credits: 30

Major Requirements			Credits
DFTG	1325	Blueprint Reading & Sketching	3
WLDG	1340	AWS Level 1 Certification Review	3
WLDG	1453	Intermediate Layout & Fabrication	4
WLDG	1457	Intermediate Shielded Metal Arc Welding (SMAW)	4
WLDG	2406	Intermediate Pipe Welding	4
WLDG	2413	Intermediate Welding Using Multiple Processes	4
WLDG	2443	Advanced Shielded Metal Arc Welding (SMAW)	4
WLDG	2447	Advanced Gas Metal Arc Welding (GMAW)	4
		Total	30

Combination Welding
Certificate of Completion

Total Credits: 42

Major Requirments			Credits
DFTG	1325	Blueprint Reading & Sketching	3
WLDG	1340	AWS Level 1 Certification Review	3
WLDG	1412	Introduction to Flux Cored Ard Welding (FCAW)	4
WLDG	1434	Introduction to Gas Tungsten Arc Welding (GTAW)	4
WLDG	1453	Intermediate Layout & Fabrication	4
WLDG	1457	Intermediate Shielded Metal Arc Welding (SMAW)	4
WLDG	2406	Intermediate Pipe Welding	4
WLDG	2413	Intermediate Welding Using Multiple Processes	4
WLDG	2443	Advanced Shielded Metal Arc Welding (SMAW)	4
WLDG	2447	Advanced Gas Metal Arc Welding (GMAW)	4
WLDG	2451	Advanced Gas Tungsten Arc Welding (GTAW)	4
		Total	42

Biomedical Equipment Technology

The Biomedical Equipment Technology (BET) program at TSTC Marshall provides the necessary academic and technical skills needed in this dynamic field.

BET is a field that is mostly electronic in nature and deals with a variety of sophisticated equipment. Because much of this equipment interfaces with the human body, this field is very diverse and crosses several disciplines such as selectronics, math, chemistry, physiology and networking. A person employed within this field is referred to as a Biomedical Equipment Technician (BMET).

A BMET is a specially-trained electronics technician with an emphasis in technology that is utilized in the health care field. A BMET is directly responsible for the repairing, troubleshooting, and calibrating of a wide variety of sophisticated equipment. BMETs are employed within the health care field by hospitals, clinics, commercial MROs, manufacturers, etc.

All hospitals, health clinics, and many doctor's offices have biomedical equipment that is used to provide patient care. The service and repair of biomedical equipment requires a highly-skilled technician; one with thorough knowledge of the technology and skills used to test equipment to verify the proper operation.

As a student you will learn to inspect, calibrate, troubleshoot, repair and modify the type of equipment used in the medical care industry. Your training will consist of theory and laboratory experiences using real medical instrumentation, such as respirators, patient monitors, defibrillators, electrosurgical devices and imaging units, etc. You will also receive theory and experience in electronics that is needed in the understanding of medical electronic systems function.

Biomedical Equipment Technology
Associate of Applied Science Degree

Total Credits: 60

Major Requirments			Credits
BIOM	1201	Biomedical Equipment Technology	2
BIOM	1309	Applied Biomedical Equipment Technology	3
BIOM	1415	Medical Equipment Networks	4
BIOM	1341	Medical Circuits/Troubleshooting	3
BIOM	1250	Diagnostic Ultrasound Imaging System	2
BIOM	1355	Medical Electronic Applications	3
BIOM	2301	Safety in Health Care Facilities	3
BIOM	2311	General Medical Eqiupment	3
BIOM	2315	Physiological Instruments I	3
BIOM	2219	Fundamentals of X-ray & Medical Imaging Systems	2
BIOM	2331	Biomedical Clinical Instrumentation	3
BIOM	2389	*Internship - Biomedical Technology*	3
		Technology OR	6
CETT	1409	DC-AC Circuits	4
CETT	1341	Solid State Circuits	3
ITSC	1309	Integrated Software Applications I	3
		Total	44

General Education Requirments			Credits
CHEM	X4XX	ACGM Approved Chemistry Elective	4
ENGL	1301	Composition I	3
HUMA	1301	Introduction to Humanities	3
MATH	1314	College Algebra 3	
PSYC	2301	General Psychology	3
		Total	16

Course Descriptions

Developmental Education Courses

DMTH

DMTH 0803 Mathematics Lab (program specific) (0-3-3) This course is designed for students to participate in remedial studies customized to each student's major division of study. Course content may include topics in basic mathematics, geometry, introductory algebra, and/or intermediate algebra. (Developmental/No college credit granted.) Prerequisite: Placement test.

DORI

DORI 0100 College Success Skills (0-2-1) This course is designed to build personal and academic success skills and to provide students with self-knowledge essential for workplace success and life-long learning. Topics covered include: an overview of college resources, procedures and policies; the development of an enthusiasm for learning; study and test-taking skills; critical thinking; memory, reading, and note taking skills; self-analysis and self-discipline. (Developmental/No college credit granted).

INRW

INRW 0100 Integrated Reading & Writing Skills I (4-0-4) This course integrates critical introductory-level reading and writing skills, including vocabulary development and a concentration on paragraph structure, organization, writing, and revising. (Developmental/No college credit granted). Prerequisite: READ 0050 or equivalent as determined by placement test.

INRW 0200 Integrated Reading & Writing Skills II (3-0-3) This course is a continuation of INRW 0100 and is paired with ENGL 1301. Emphasis is placed on reading and writing skills that are essential to success in academic and technical/occupational fields of study. (Developmental/No college credit granted). Prerequisite: INRW 0100 or equivalent as determined by placement test. Corequisite: ENGL 1301.

NCBM

NCBM 0060 Math Lab (paired w/College Algebra) (0-2-2) This course supplements MATH 1314 – College Algebra and is designed for students to participate in remedial studies on an individual basis. Content may be customized to each student's specific deficiencies. (Developmental/No college credit granted.) Prerequisite: DMTH 0803 for Electronics or equivalent as determined by placement test. Co-requisite: MATH 1314.

READ

READ 0050 Basic Reading Skills (3-1-3) This is a fundamental reading course designed for students who need intensive, diagnostic-based instruction in basic word attack skills, vocabulary development, and basic comprehension strands. (Developmental/No college credit granted.) Prerequisite: Placement test.

READ 080X Reading Lab (0-X-X) This course is designed for students to participate in remedial studies on an individual basis. Course content is customized to each student's specific deficiencies. Semester credit hours vary depending on students' specific needs. Course may be repeated for credit. (Developmental/No college credit granted.) Prerequisite: Permission from the instructor.

Academic Courses

ACCT

ACCT 2301 Principles of Accounting I (2-2-3) 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. Prerequisite: MATH 1324 or MATH 1314.

BIOL

BIOL 1406 Biology for Science Majors I (3-3-4) This lecture and lab course should combine all of the elements of BIOL 1306 Biology for Science Majors I (lecture) and BIOL 1106 Biology for Science Majors I (lab), including the learning outcomes listed for both courses.

BIOL 1409 Biology for Non-Science Majors II (3-3-4) This lecture and lab course should combine all of the elements of BIOL 1309 Biology for Non-Science Majors II (lecture) and BIOL 1109 Biology for Non-Science Majors II (lab), including the learning outcomes listed for both courses.

BIOL 2401 Anatomy & Physiology I (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. Prerequisite: INRW 0200 or equivalent as determined by placement test.

BIOL 2402 Anatomy & Physiology II (3-3-4) Continuation of the study of 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. Prerequisite: BIOL 2401.

BIOL 2406 Environmental Biology (3-3-4) Human interaction with and effect upon plant and animal communities. Conservation, pollution, energy, and other contemporary ecological problems. Prerequisite: INRW 0200 or equivalent

as determined by placement test.

CHEM

CHEM 1411 General Chemistry I (3-3-4) Basic principles are introduced. Emphasis is placed on fundamental laws, atomic structure, bonding, acids and bases, selected elements and their compounds. Prerequisite: DMTH 0802 or equivalent as determined by placement test.

ENGL

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: INRW 0200 or equivalent as determined by placement test.

ENGL 1302 Composition II (3-0-3) Continuation of ENGL 1301. Principles and techniques of written, expository, and persuasive composition; analysis of literary, expository, and persuasive texts; and critical thinking. Prerequisite: ENGL 1301.

ENGL 1311 Business English (3-0-3) Principles, techniques, and skills needed for college level scientific, technical, or business writing. Prerequisite: INRW 0200 or equivalent as determined by placement test.

ENGL 2311 Technical and Business Writing (3-0-3) Principles, techniques, and skills needed for college level scientific, technical, or business writing. Prerequisite: ENGL 1301.

ENGL 2322 British Literature I (3-0-3) Selected significant works of British literature. May include study of movements, schools, or periods. Prerequisite: ENGL 1301.

GOVT

GOVT 2305 Federal Government (3-0-3) Introduction to the theory and practice of politics and government in America at the national, state, and local levels, with special attention to Texas. Topics include political theory, the American and Texas constitutions, federalism, political participation and elections, the institutions of government, and domestic and foreign policies. Prerequisite: INRW 0200 or equivalent as determined by placement test.

GOVT 2306 Texas Government (3-0-3) Introduction to the theory and practice of politics and government in America at the national, state, and local levels, with special attention to Texas. Topics include political theory, the American and Texas constitutions, federalism, political participation and elections, the institutions of government, and domestic and foreign policies. Prerequisite: INRW 0200 or equivalent as determined by placement test.

HIST

HIST 1301 United States History I (3-0-3) Survey of the political, social, economic, military, cultural, and intellectual history of the United States from the discovery of America to the present. Prerequisite: INRW 0200 or equivalent as determined by placement test.

HUMA

HUMA 1301 Introduction to the Humanities (3-0-3) An interdisciplinary, multi-perspective assessment of cultural, political, philosophical, and aesthetic factors critical to the formation of values and the historical development of the individual and of society. Students will prepare and present both written and oral reports. Prerequisite: INRW 0200 or equivalent as determined by placement test.

MATH

MATH 1314 College Algebra (3-0-3) A study of quadratics; polynomial, rational, logarithmic, and exponential functions; systems of equations; progressions; sequences and series; and matrices and determinants. Co-requisite: DMTH 0802, Prerequisite: DMTH 0803 or equivalent as determined by placement test.

MATH 1316 Plane Trigonometry (3-0-3) Trigonometric functions, identities, equations, and applications. Prerequisite: MATH 1314.

MATH 1324 Finite Math for Business (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. (The content level of MATH 1324 is expected to be at or above the level of college algebra, MATH 1314) Prerequisite: DMTH 0802 or equivalent as determined by placement test.

MATH 1332 Contemporary Mathematics I (3-0-3) A course designed for non-mathematics and non-science majors. Topics may include introductory treatments of sets, logic, number systems, number theory, relations, functions, probability and statistics. Prerequisite: DMTH 0803 or equivalent as determined by placement test.

MATH 1342 Elementary Statistical Methods (3-0-3) Presentation and interpretation of data, probability, sampling, correlation and regression, analysis of variance, and the use of statistical software. Prerequisite: DMTH 0802 or equivalent as determined by placement test.

MATH 2313 Calculus I (3-0-3) Functions, limits, continuity, differentiation, integration, applications, sequences and series, vector analysis, partial differentiation, and multiple integration. This course may include topics in analytic geometry. Prerequisite: MATH 1316.

PHYS

PHYS 1310 Elementary Physics (3-0-3) Conceptual level survey of topics in physics intended for liberal arts and other non-science majors. May or may not include a laboratory. Presents special topics in classical physics, such as basic mechanics, optics, acoustics, or electricity. Prerequisite: DMTH 0802 or equivalent as determined by placement test.

PHYS 1401 College Physics (3-3-4) Algebra-level physics sequence, with laboratories, that includes study of mechanics, heat, waves, electricity and magnetism, and modern physics. Prerequisite: MATH 1316.

PSYC

PSYC 2301 General Psychology (3-0-3) A survey of the major topics in psychology, introducing the study of behavior and the factors that determine and affect behavior. Prerequisite: INRW 0200 or equivalent as determined by placement test.

PSYC 2302 Applied Psychology (3-0-3) Survey of the applications of psychological knowledge and methods in such fields as business, industry, education, medicine, law enforcement, social work, and government work. Prerequisite: INRW 0200 or equivalent as determined by placement test.

SPCH

SPCH 1311 Introduction to Speech Communication (3-0-3) Theories and practice of communication in interpersonal, small group, and public speech. Prerequisite: INRW 0200 or equivalent as determined by placement test.

SPCH 1315 Public Speaking (3-0-3) Research, composition, organization, delivery, and analysis of speeches for various purposes and occasions. Prerequisite: INRW 0200 or equivalent as determined by placement test.

SPCH 1318 Interpersonal Communication (3-0-3) Theories and exercises in verbal and nonverbal communication with focus on interpersonal relationships. Prerequisite: INRW 0200 or equivalent as determined by placement test.

Technical Courses

ACNT

ACNT 1303 Introduction to Accounting I (2-3-3) A study of analyzing, classifying, and recording business transactions in a manual and computerized environment. Emphasis on understanding the complete accounting cycle and preparing financial statements, bank reconciliations, and payroll. Prerequisite: INRW 0200, DMTH 0802.

ACNT 1311 Introduction to Computerized Accounting (2-3-3) A study of analyzing, classifying, and recording business transactions in a manual and computerized environment. Emphasis on understanding the complete accounting cycle and preparing financial statements, bank reconciliations, and payroll. Prerequisite: INRW 0200, DMTH 0802, ACNT 1303.

ARCE

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. Prerequisite: DFTG 1309.

ARTC

ARTC 1302 Digital Imaging I (2-4-3) Digital imaging using raster image editing and/or image creation software: scanning, resolution, file formats, output devices, color systems, and image-acquisitions. Prerequisite: INRW 0200.

ARTC 1313 Digital Publishing I (2-4-3) The fundamentals of using digital layout as a primary publishing tool and the basic concepts and terminology associated with typography and page layout. Prerequisite: INRW 0200.

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. Prerequisite: ARTC 1302.

ARTV

ARTV 1343 Digital Sound (2-4-3) Digitizing sound and incorporating it into multimedia or web titles for various delivery systems. This course 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. Prerequisite: ARTC 1302.

ARTV 2341 Advanced Digital Video (2-4-3) Advanced digital video techniques for post-production. Emphasizes 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. Prerequisite: ARTV 1351.

BIOM

BIOM 1201 Biomedical Equipment Technology (1-2-2) Introduction to current biomedical job responsibilities, salaries, and classifications in the health care industry. Prerequisite: DMTH 0802, INRW 0200.

BIOM 1205 Soldering Skills and Shop Safety (2-2-2) Preparation for selection of soldering equipment and application of safety practices at work. Laboratory development of proficiency in soldering and desoldering electronic components. Prerequisite: DMTH 0802, INRW0200.

BIOM 1281 Cooperative Education - Biomedical Technology/Technician (0-9-2) 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: Permission of Program Chair.

BIOM 1309 Applied Biomedical Equipment Technology (2-4-3) Introduction to biomedical instrumentation as related to anatomy and physiology. Detailed coverage of anatomical systems that use medical equipment for monitoring, diagnosis, and treatment. Prerequisite: DMTH 0802, INRW 0200.

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. Prerequisite: ITNW 1325.

BIOM 1341 Medical Circuits/Troubleshooting (2-4-3) Development of skills in logical isolation of troubles in malfunctioning medical electronic circuits and utilization of appropriate test equipment. Prerequisite: CETT 1341.

BIOM 1350 Diagnostic Ultrasound Imaging System (2-4-3) A course in diagnostic ultrasound imaging systems. Basic systems troubleshooting and problem solving are covered. Prerequisite: CETT 1305.

BIOM 1355 Medical Electronic Applications (2-4-3) Presentation of sensors, transducers, and supporting circuits used in medical instrumentation devices. Prerequisite: CETT 1341.

BIOM 1491 Special Topics in Biomedical Engineering-Related Technology/Technician (2-4-4) Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. This course was designed to be repeated multiple times to improve student proficiency. Prerequisite: Approval from Division Director.

BIOM 2289 Internship – Biomedical Technology/Technician (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. Prerequisite: BIOM 2311.

BIOM 2301 Safety in Health Care Facilities (2-3-3) Study of codes, standards and management principles related to biomedical instrumentation. Emphasize on the proper use and application of safety test equipment, preventive maintenance procedures, and documentation of work performed. Prerequisite: BIOM 1309.

BIOM 2311 General Medical Equipment I (2-4-3) Analysis of selected current paths from a larger schematic. Discussion of equipment and disassembly and reassembly of equipment. Prerequisite: CETT 1341.

BIOM 2315 Physiological Instruments I (2-4-3) Theory of operation, circuit analysis, and troubleshooting physiological instruments. Prerequisite: CETT 1341.

BIOM 2319 Fundamentals of X-Ray and Medical Imaging Systems (2-4-3) Radiation theory and safety hazards, fundamental circuits, and application of X-ray systems including circuit analysis and troubleshooting. Prerequisite: BIOM 2341.

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. Prerequisite: CETT 1341.

BIOM 2337 Respiratory Equipment Maintenance (2-4-3) A study of the principles of operation, theory, and maintenance of respiratory equipment. Prerequisite: CETT 1341.

BIOM 2343 General Medical Equipment II (2-4-3) Study of the theory and principles of operation of a variety of basic electro-mechanical equipment with emphasis on repair and service of actual medical equipment. Prerequisite: BIOM 2311.

BIOM 2357 Biomedical Equipment Technician (BMET) Proficiency Review (2-4-3) An overview of the certification examination topics for biomedical equipment technicians. Prerequisite: CETT 1341.

BIOM 2380 COOP - Biomedical Technology (1-19-3) An intermediate or advanced course with lecture and work-based instruction that helps students gain practical experience in the discipline, enhance skills, and integrate knowledge. Indirect supervision is provided by the work supervisor while the lecture is provided by the college faculty or by other individuals under the supervision of the educational institution. Cooperative education may be a paid or unpaid learning experience. Prerequisite: BIOM 2311.

BIOM 2381 Cooperative Education - Biomedical Technology/Technician (1-19-3) Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component. Prerequisite: BIOM 2311.

BIOM 2388 Internship - Biomedical Technology/Technician (0-20-3) A work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts. A learning plan is developed by the college and the employer. Prerequisite: Prerequisite: Approval from Division Director.

BIOM 2389 Internship - Biomedical Technology/Technician (0-20-3) A work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts. A learning plan is developed by the college and the employer. Prerequisite: BIOM 2311.

BIOM 2680 COOP: Biomedical Technology (1-39-6) An intermediate or advanced course with lecture and work-based instruction that helps students gain practical experience in the discipline, enhance skills, and integrate knowledge. Indirect supervision is provided by the work supervisor while the lecture is provided by the college faculty or by other individuals under the supervision of the educational institution. Cooperative education may be a paid or unpaid learning experience. Prerequisite: BIOM 2311.

BMGT

BMGT 1309 Information and Project Management (2-2-3) Information and project management including task determination, time management, scheduling management, status reports, budget management, customer service, professional attitude, and project supervision. Prerequisite: DMTH 0803, INRW.

***BMGT 1313 Principles of Purchasing (2-2-3)** The purchasing process as it relates to such topics as inventory control, price determination, vendor selection, supply chain management, negotiation techniques, and ethical issues in purchasing. Prerequisite: DMTH 0803, INRW 0200.

BMGT 1327 Principles of Management (2-2-3) Concepts, terminology, principles, theories, and issues in the field of management. Prerequisite: DMTH 0803, READ 0050, INRW 0200.

***BMGT 2303 Problem Solving and Decision Making (2-2-3)** Decision-making and problem-solving processes in organizations utilizing logical and creative problem solving techniques. Application of theory is provided by experiential activities using managerial decision tools. Prerequisite: DMTH 0803, INRW 0200.

BMGT 2309 Leadership (2-2-3) Concepts of leadership and its relationship to management. Prepares the student with leadership and communication skills needed to motivate and identify. Prerequisite: DMTH 0803, READ 0050, INRW 0100.

BMGT 2347 Critical Thinking and Problem Solving (2-2-3) Instruction in interpreting data for effective problem solving and recommending corrective action with emphasis on a structured approach to critical thinking and problem solving in a team environment. Prerequisite: DMTH 0803, READ 0050, INRW 0100.

**Course is offered at the TSTC North Texas campus in Red Oak, TX.*

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BUSG

BUSG 2309 Small Business Management/Entrepreneurship (2-2-3) Starting, operating, and growing a small business. Includes essential management skills, how to prepare a business plan, accounting, financial needs, staffing, marketing strategies, and legal issues. Prerequisite: DMTH 0803,INRW 0200.

CETT

CETT 1303 DC Circuits (2-4-3) A study of the fundamentals of direct current including Ohm's law, Kirchoff's laws and circuit analysis techniques. Emphasis on circuit analysis of resistive networks and DC measurements. Prerequisite: DMTH 0802, INRW 0200.

CETT 1305 AC Circuits (2-4-3) A study of the fundamentals of alternating current including series and parallel AC circuits, phasors, capacitive and inductive networks, transformers, and resonance. Prerequisite: CETT 1303.

CETT 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.

CETT 1329/1429 Solid State Devices (2-4-3) A study of diodes and other semiconductor devices, including analysis of static and dynamic characteristics, biasing techniques, and thermal considerations. Prerequisite: CETT 1409.

CETT 1341 Solid State Circuits (2-4-3) A study of various semiconductor devices incorporated in circuits and their applications. Emphasis on circuit construction, measurements, and analysis. Prerequisite: CETT 1305.

CETT 1345 Microprocessor (2-4-3) An Introductory Course in microprocessor software and hardware; its architecture, Timing Sequence, Operation, and Programming; And Discussion of Appropriate Software Diagnostic Languages And Tools. No prerequisite listed.

CETT 1409 DC-AC Circuits (2-4-3) Fundamentals of DC circuits and AC circuits operation including Ohm's law, Kirchoffs laws, networks, transformers, resonance, phasors, capacitive and inductive and circuit analysis techniques. Co-requisite: MATH 1314.

CETT 1441 Solid State Circuits (2-4-4) A study of various semiconductor devices incorporated in circuits and their applications. Emphasis on circuit construction, measurements, and analysis. Prerequisite: CETT 1409.

CPMT

CPMT 1304 Microcomputer System Software (2-4-3) Skill

development in the installation, configuration, maintenance and troubleshooting of system software in microcomputers. Prerequisite: INRW 0200, DMTH 0803.

CPMT 1311 Introduction to Computer Maintenance (2-4-3) An introduction to the installation, configuration, and maintenance of a microcomputer system. Emphasis on the evolution of microprocesses and microprocessor bus structures. Prerequisite: INRW 0200, DMTH 0803; Co-requisite: CPMT 1345.

CPMT 1345 Computer Systems Maintenance (2-4-3) Examination of the functions of the components within a computer system. Development of skills in the use of test equipment and maintenance aids. Prerequisite: INRW 0200, DMTH 0803; Co-requisite: CPMT 1311.

CPMT 1347 Computer System Peripherals (2-4-3) Theory and practices involved in computer peripherals, operation and maintenance techniques, and the use of specialized test equipment. Emphasis is placed on the theory of operation and maintenance of computer peripheral devices. Prerequisite: CPMT 1345; Co-requisite: CPMT 2345.

CPMT 2345 Computer System Troubleshooting (2-4-3) Principles and practices involved in computer system troubleshooting techniques and repair procedures including advanced diagnostic test programs and the use of specialized test equipment. Prerequisite: CPMT 1345; Co-requisite: CPMT 1347.

CPMT 2350 Industry Certification Preparation (2-3-3) Overview of the objectives for industry specific certification exam(s). Prerequisite: DMTH 0803, DMTH 0803, INRW 0100.

CPMT 2366 Practicum (or Field Experience) - Computer Installation and Repair Technology/Technician (2-4-3) Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student. Prerequisite: CPMT 2345.

CTEC

CTEC 1449 Environmental Chemistry (2-4-4) Instruction in laboratory operations for the analysis of environmental contaminants according to current federal, state and local standards. Prerequisite: College-level or Applied General Chemistry I.

CTEC 2486 Internship - Chemical Technology/Technician (0-20-4) A work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts. A learning plan is developed by the college and the employer. Prerequisite: Permission of Program Chair.

CTEC 2487 Internship - Chemical Technology/Technician (0-20-4) A work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts. A learning plan is developed by the college and the employer. Prerequisite: Permission of Program Chair.

CVOP

CVOP 1145 Commercial Drivers License Overview (1-0-1) Overview of the State of Texas Class A Commercial Drivers License written test and preparation for mastery of the Commercial Drivers License written examination. Prerequisite: INRW 0100.

CVOP 1201 Commercial Drivers License Driving Skills (1-3-2) Overview of the State of Texas Class A Commercial Drivers License driving test. In-depth coverage of in-cab air brake test, proper shifting, right and left-hand turns, movement in traffic, parking of a tractor trailer, highway and city driving, and backward movement and control.

CVOP 1245 Commercial Drivers License Overview (2-0-2) Overview of the State of Texas Class A Commercial Drivers License written test and preparation for mastery of the Commercial Drivers License written examination. Prerequisite: INRW 0100.

CVOP 2205 Fundamental Driving Skills (0-5-2) Operation of a tractor-trailer combination. Emphasis on the safe maneuvering and control of the tractor-trailer in numerous traffic situations and sharing the highway with other vehicles. No prerequisite listed.

CVOP 2209 Semi Tractor-Trailer Operator Driving Skills (2-0-2) Operation of a tractor-trailer combination in city and highway conditions including control and maneuvering of the vehicle through various traffic situations with numerous tractor-trailer combinations. No prerequisite listed.

CVOP 2233 Advanced Driving Skills I (1-2-2) Operation of a tractor-trailer combination in city and highway conditions. Includes controlling and maneuvering the vehicle through various traffic situations in different conditions with numerous tractor-trailer combinations. No prerequisite listed.

CVOP 2337 Advanced Driving Skills II (2-3-3) Continuation of tractor-trailer operation in city and highway conditions. Exploration and practical applications of space management techniques, improved methods for control in difficult traffic situations, and effective operation in various conditions. No prerequisite listed.

DEMR

DEMR 1317 Basic Brake Systems (2-4-3) An introduction to the basic principles of brake systems of diesel powered equipment. Emphasis on maintenance, repairs, and troubleshooting. Course also covers design, construction and use of these systems. Prerequisite: DMTH 0803,INRW 0100.

DEMR 1321 Power Train I (2-4-3) Fundamental repair and theory of power trains including clutches, transmissions, drive shafts, and differentials. Emphasis on inspection and repair. Prerequisite: DMTH 0803, INRW 0100.

DEMR 1323 Heating, Ventilation and Air Conditioning (HVAC) Troubleshooting and Repair (2-4-3) Introduction to heating, ventilation, and air conditioning theory, testing, and repair. Emphasis on refrigerant reclamation, safety procedures, specialized tools, and repairs. Students learn safe refrigerant handling procedures and EPA-compliant recovery methods. Prerequisite: DMTH 0803, INRW 0100.

DEMR 1330 Steering and Suspension I (2-4-3) A study of design, function, maintenance, and repair of steering and suspension systems. Emphasis on troubleshooting and repair of failed components. Prerequisite: DMTH 0803, INRW 0100.

DEMR 1405 Basic Electrical Systems (2-4-4) Basic principles of electrical systems of diesel powered equipment with emphasis on starters, alternators, and batteries. Instruction covers basic electrical fundamentals, safety, the proper use of test equipment, as well as testing/diagnosis of lighting and accessory equipment, starting and charging systems. . Prerequisite: DMTH 0803, INRW 0100.

DEMR 1435 Automatic Power Shift and Hydrostatic Transmissions I (2-4-4) A study of the operation, maintenance, and repair of automatic power shift hydrostatic transmissions. Prerequisite: DMTH 0803, INRW 0100.

DEMR 1449 Diesel Engine II (2-4-4) An in-depth coverage of disassembly, repair, identification, evaluation, and reassembly of diesel engines. Prerequisite: DMTH 0803, INRW 0100.

DEMR 2334 Advanced Diesel Tune-Up and Troubleshooting (2-4-3) Advanced concepts and skills required for tune-up and troubleshooting procedures of diesel engines. Emphasis on the science of diagnostics with a common sense approach. Presents an organized, systematic approach to identifying and solving non-start conditions and tuning for optimum performance. Prerequisite: DEMR 1405.

DEMR 2335 Advanced Hydraulics (2-4-3) Advanced study of hydraulic systems and components including diagnostics and testing of hydraulic systems. Introduces organized, common-sense trouble-shooting techniques for electronic and computerized controls. Prerequisite: HYDR 1305.

DEMR 2348 Failure Analysis (2-4-3) An advanced course designed for analysis of typical part failures on equipment. Teaches identification of the contributing causes and conditions that lead to these failures. Prerequisite: DEMR 1317, DEMR 1321, DEMR 1449.

DEMR 2432 Electronic Controls (2-4-4) Advanced skills in diagnostic and programming techniques of electronic control systems. Teaches a systematic approach to electronic diagnostics. Prerequisite: DEMR 1405, DEMR 1449.

DEMR 2488 Internship - Diesel Mechanics Technology/ Technician (0-20-4) A work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts. A learning plan is developed by the college and the employer. Prerequisite: Permission from the program chair.

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DFTG

DFTG 1305 Technical Drafting (2-4-3) Introduction to the principles of drafting to include terminology and fundamentals, including size and shape descriptions, projection methods, geometric construction, sections, auxiliary views, and reproduction processes. Prerequisite: DMTH 0803, READ 0100, WRIT 0100; Co-requisite DFTG 1309.

DFTG 1309 Basic Computer Aided Drafting (2-4-3) An introduction to computer-aided drafting. Emphasis is placed on setup; creating and modifying geometry; storing and retrieving predefined shapes; placing, rotating, and scaling objects, adding text and dimensions, using layers, coordinating systems and plot/print to scale. Prerequisite: DMTH 0803, INRW 0100.

***DFTG 1313 Drafting for Specific Occupations (2-3-3)** Discussion of theory and practice with drafting methods and the terminology required to prepare working drawings in specific or various occupational fields. Prerequisite: DMTH 0803, INRW 0100.

DFTG 1317 Architectural Drafting-Residential (2-4-3) Architectural drafting procedures, practices, and symbols, including preparation of detailed working drawings for residential structure with emphasis on light frame construction methods. Prerequisite: DFTG 1309.

DFTG 1325 Blueprint Reading and Sketching (2-2-3) An introduction to reading and interpreting "working drawings" for manufactured products and associated tooling; use sketching techniques to create pictorial and multiple-view drawings. Prerequisite: DMTH 0803.

DFTG 1329 Electro-Mechanical Drafting (2-4-3) A basic course including layout and design of electro-mechanical equipment from engineering notes and sketches. Emphasis on drawing of electronic enclosures, interior hardware, exterior enclosures, detailed and assembly drawings with a parts list, and flat pattern layouts. Prerequisite: 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. Prerequisite: DFTG 1309, DFTG 1305.

DFTG 2312 Technical Illustration and Presentation (2-3-3) Pictorial drawing including isometrics, obliques, perspectives, charts, and graphs. Emphasis on rendering and using different media. This is a Capstone Course. Prerequisite: DFTG 2319.

DFTG 2319 Intermediate Computer Aided Drafting (2-4-3) A continuation of practices and techniques used in basic

computer-aided drafting emphasizing advanced dimensioning techniques, the development and use of prototype drawings, construction of pictorial drawings, construction of 3 dimensional drawings, interfacing 2d and 3d environments and extracting data. Prerequisite: DFTG 1309.

DFTG 2332 Advanced Computer Aided Drafting (2-4-3) Use of advanced techniques, including the use of a customized system and the principles of data manipulation for drawing production enhancement. Presentation of advanced drawing applications, such as three-dimensional modeling and linking graphic entities to external non-graphic data. Prerequisite: DFTG 1309, DFTG 1305.

DFTG 2340 Solid Modeling/Design (2-4-3) A computer-aided modeling course. Development of three-dimensional drawings and models from engineering sketches and orthographic drawings and utilization of three-dimensional models in design work. Prerequisite: DFTG 1305, DFTG 1309, DMTH 0803.

DFTG 2386 CAD Internship (0-9-3) A work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts. A learning plan is developed by the college and the employer. Prerequisite: DFTG 2319.

DFTG 2430 Civil Drafting (2-4-4) An in-depth study of drafting methods and principles used in civil engineering. Prerequisite: DFTG 1309, DFTG 1305.

**Course is offered at the TSTC North Texas campus in Red Oak, TX.*

EECT

EECT 1204 (1-3-2) Theory and use of tools and equipment for electronic soldering techniques.

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. Prerequisite: INRW 0200.

ELPT

ELPT 1311 Basic Electrical Theory (2-4-3) Basic theory and practice of electrical circuits. Includes calculations as applied to alternating and direct current. Emphasis will be placed on electrical symbols, schematics, and the operation of multimeters. Prerequisite: DMTH 0803, INRW 0100.

ELPT 1319 Fundamentals of Electricity I (2-4-3) An introduction to basic direct current (DC) theory including electron theory and direct current applications. Prerequisite: ELPT 1321.

ELPT 1320 Fundamentals of Electricity II (2-3-3) Introduces alternating current (AC). Includes AC voltage, frequency, mechanical and electrical degrees, waveforms, resistors, capacitors, and inductors. Prerequisite: ELPT 1311.

ELPT 1321 Introduction to Electrical Safety and Tools (2-4-3) A Comprehensive Overview of Safety Rules and Regulations and the Selection, Inspection, Use, and Maintenance of Common Tools for Electricians. Prerequisite: DMTH 0803, INRW 0100.

ELPT 1341 Motor Control (2-4-3) Operating principles of solid-state controls along with their practical applications. Topics include braking, jogging, plugging, safety interlocks, wiring and schematic diagram interpretations. Prerequisite: ELPT 1311.

ELPT 1345 Commercial Wiring (2-4-3) Instruction in commercial wiring methods. The theory and basic principles pertaining to the science and art of electrical wiring are covered. The terms, electrical symbols, names of devices, methods and materials used in electrical installations, and problems encountered in electrical construction work are also presented. Prerequisite: ELPT 1311.

ELPT 1351 Electrical Machines (2-4-3) Direct current (DC) motors, single-phase and polyphase alternating current (AC) motors, generators, and alternators. Emphasis on construction, characteristics, efficiencies, starting, and speed control. Prerequisite: ELPT 1341.

ELPT 1380 Cooperative Education (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: Permission from the program chair.

ELPT 1381 Cooperative Education (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: Permission from the program chair.

***ELPT 1391 Special Topics in Electrical and Power Transmission (Electrical Workplace Safety Certification) (2-2-3)** 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. *ELPT 2335 Electrical Theory and Devices (2-3-3) Electrical and electronic measuring devices and their applications to the use of electrical power. Includes calculating and balancing single-phase and three-phase systems. *ELPT 2335 Electrical Theory and Devices (2-3-3) Electrical and electronic measuring devices and their applications to the use of electrical power. Includes calculating and balancing single-phase and three-phase systems.

E**LPT 2319 Programmable Logic Controllers I (2-4-3)** Fundamental concepts of programmable logic controllers, principles of operation, numbering systems as applied to electrical controls. Prerequisite: ELPT 1311.

ELPT 2323 Transformers (2-2-3) A Study of Transformer Types, Construction. Prerequisite: ELPT 1321.

ELPT 2331 AC/DC Drives (2-4-3) Installation and maintenance of alternating current (AC) and direct current (DC) variable speed drives with emphasis on application, operating characteristics, and troubleshooting techniques. Prerequisite: ELPT 1341.

***ELPT 2335 Electrical Theory and Devices (2-3-3)** Electrical and electronic measuring devices and their applications to the use of electrical power. Includes calculating and balancing single-phase and three-phase systems.

ELPT 2339 Electrical Power Distribution (2-3-3) Design, operation, and technical details of modern power distribution systems including generating equipment, transmission lines, plant distribution, and protective devices. Includes calculations of fault current, system load analysis, rates, and power economics. Prerequisite: LNWK 2322.

***ELPT 2343 Electrical systems Design (2-3-3)** Electrical design of commercial and/or industrial projects including building layout, types of equipment, placement, sizing of electrical equipment, and all electrical calculations according to the requirements of the National Electrical Code (NEC).

***ELPT 2347 Electrical Testing and Maintenance (2-4-3)** Proper and safe use of electrical power equipment test devices and the interpretation of test results. Includes protective relay testing and calibration, direct current (DC) testing, insulation power factor testing, and medium voltage switchgear.

ELPT 2380 COOPERATIVE EDUCATION (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: Permission from the program chair.

**Course is offered at the TSTC North Texas campus in Red Oak, TX.*

GISC

GISC 1311 Introduction to GIS (2-3-3) Introduction to basic concepts of vector GIS using several industry specific software programs including nomenclature of cartography and geography. Prerequisite: DMTH 0803, INRW 0100.

GISC 1321 Introduction to Raster-Based GIS (2-3-3) Instruction in GIS data sets including rater-based information such as images or photographs, acquisition of such data, and processing and merging with vector data. Prerequisite: DMTH 0803, INRW 0100.

GISC 2301 Data Acquisition & Analysis in GIS (2-3-3) Study of the management of geographic information, system life cycles, and costs and benefits. Includes institutional issues such as data providers, data management, combination of attribute and graphical data, information storage and access, Texas and national standards for spatial data; and applications of GIS for data modeling and analysis. Prerequisite: DMTH 0803, INRW 0100.

GISC 2404 Geographic Information Systems (GIS) Design with Vector Analysis (2-4-3) Using GIS as a problem solving tool from the first stages of designing an analysis project, through the data collection and manipulation phase, to the final phase of presenting the project. Prerequisite: GISC 1311.

HART

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. Prerequisite: ELPT 1311 or equivalent.

***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 (2-3-3)** 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 (2-3-3)** Study of the procedures and principles used in servicing heating systems including gas fired furnaces and electric heating systems.

***HART 1351 Energy Management (2-4-3)** Study of basic heat transfer theory; sensible and latent heat loads; building envelope construction; insulation, lighting, and fenestration types; and conduct energy audit procedures. The course also develops energy audit recommendations based on local utility rates, building use, and construction. Laboratory activities include developing energy audit reports, installing energy saving devices, and measuring energy consumption.

***HART 2336 Air Conditioning Troubleshooting (2-3-3)** An advanced course in application of troubleshooting principles and use of test instruments to diagnose air conditioning and refrigeration components and system problems including conducting performance tests. Prerequisite: HART 1341.

***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. Prerequisite:

HART 1307, HART 1341.

***HART 2341 Commercial Air Conditioning (2-3-3**) A study of components, applications, and installation of air conditioning systems with capacities of 25 tons or less. Prerequisite: HART 1341, HART 2349.

***HART 2345 Residential Air Conditioning Systems Design (2-3-3)** Study of the properties of air and results of cooling, heating, humidifying or dehumidifying; heat gain and heat loss calculations including equipment selection and balancing the air system. Prerequisite: HART 1341, HART 2349.

***HART 2349 Heat Pumps (2-3-3)** A study of heat pumps, heat pump control circuits, defrost controls, auxiliary heat, air flow, and other topics related to heat pump systems. Prerequisite: HART 1341.

***HART 2380 Cooperative Education - Heating, Air Conditioning and Refrigeration Technology/Technician (1-15-3)** 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: Approval from Division Director.

**Course is offered at the TSTC North Texas campus in Red Oak, TX.*

HEMR

HEMR 1304 Natural Gas Compression (2-4-3) An introductory course in the principles of the operation of gas compressors and natural gas engines. Prerequisite: DEMR 1449.

HEMR 1401 Tracks and Undercarriages (2-4-4) Covers operation and maintenance of final drives, track systems, and undercarriages used on track and wheel type equipment. Students learn maintenance and inspection procedures on both tracked and wheeled equipment. Prerequisite: DMTH 0803, INRW 0100.

HITT

HITT 1301 Health Data Content and Structure (2-4-3) Introduction to systems and processes for collecting, maintaining, and disseminating primary and secondary health related information including content of health record, documentation requirements, registries, indices, licensing, regulatory agencies, forms, and screens. Prerequisite: DMTH 0803, INRW0100, MDCA 1313.

HITT 1311 Computers in Health Care (2-4-3) Concepts of computer technology related to health care data. Prerequisite: DMTH 0803,INRW 0100.

HRPO

HRPO 1311 Human Relations (3-0-3) General principles of customer service including skills, knowledge, attitudes, and behaviors. Prerequisite: INRW 0200.

HRPO 2301 Human Resources Management (2-3-3) Behavioral and legal approaches to the management of human resources in organizations. Prerequisite: INRW 0200.

HRPO 2307 Organizational Behavior (2-2-3) The analysis and application of organizational theory, group dynamics, motivation theory, leadership concepts, and the integration of interdisciplinary concepts from the behavioral sciences. Prerequisite: INRW 0100.

HYDR

HYDR 1305 Basic Hydraulics (2-4-3) Fundamentals of hydraulics including types of hydraulic pumps, cylinders, valves, motors, and related systems. Introduction to hydraulic schematic symbols as related to components. Prerequisite: DMTH 0803, INRW 0100.

HYDR 1345 Hydraulics and Pneumatics (2-4-3) Fundamentals of hydraulics and types of hydraulic pumps, cylinders, valves, motors, and related systems including operations, maintenance, and system analysis. Prerequisite: HYDR 1305, ELPT 1341.

IEIR

***IEIR 1302 Introduction to Direct Current Circuits (2-3-3)** 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 (1-4-3)** Fundamentals of alternating current including series and parallel circuits, phasors, and capacitive and inductive networks. Discussion of circuit analysis and measurement.

**Course is offered at the TSTC North Texas campus in Red Oak, TX.*

IMED

IMED 1301 Introduction to Multimedia (2-4-3) A survey of the theories, elements, and hardware/software components of multimedia. Topics include digital image editing, digital sound and video editing, animation, web page development, and interactive presentations. Emphasis on conceptualizing and producing effective multimedia presentations. Prerequisite: INRW 0200.

IMED 1305 Multimedia Courseware Development I (2-4-3) Instruction in courseware development. Topics include interactivity, branching, navigation, evaluation techniques and interface/information design using industry standard authoring software. Prerequisite: ARTC 1302.

IMED 1341 Interface Design (2-4-3) Skill development in the interface design process including selecting interfaces relative to a project's content and delivery system. Emphasis on aesthetic issues such as iconography, screen composition, colors, and typography. Prerequisite: ARTC 2305.

IMED 1345 Interactive Multimedia I (2-4-3) Exploration of the use of graphics and sound to create interactive multimedia animations using industry standard authoring software. Prerequisite: DMTH 0803, INRW 0100.

IMED 1359 Writing for Digital Media I (2-4-3) Written communication for digital media environments including professional websites or other digital content. Prerequisite: INRW 0200.

IMED 1391 Special Topics in Educational/Instructional Media Design (1-4-3) Topics address recently identified current events, skills, knowledge's, 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. Prerequisite: ARTC 2305.

IMED 2305 Multimedia Courseware Development II (2-4-3) In-depth coverage of programming/scripting using an authoring system with emphasis on advanced development of courseware products. Prerequisite: ARTC 1302.

IMED 2311 Portfolio Development (2-4-3) Emphasis on preparation and enhancement of portfolio to meet professional standards, professional organizations, presentation skills, and job-seeking techniques. Prerequisite: ARTC 2305.

IMED 2313 Project Analysis and Design (2-4-3) Introduction to the planning process for multimedia or web including costing, preparation, production legal issues, and guidelines for pre-production preparation and creation of a comprehensive design document including target audience analysis, purpose and goals, objectives content outline, flow chart, and storyboard. Emphasis on content design and production management. Prerequisite: ARTC 2305.

IMED 2388 Internship-Education/ Instructional Media (0-9-3) An experience external to the college for an advanced student in a specialized field involving a written agreement between the educational institution and a business or industry. Mentored and supervised by a workplace employee, the student achieves objectives that are developed and documented by the college and that are directly related to specific occupational outcomes. This may be a paid or unpaid experience. This course may be repeated if topics and learning outcomes vary. Prerequisite: Permission from the program chair.

INCR

INCR 1344 Instrumentation Repair (2-4-3) Analysis of the procedures necessary to isolate faults in microcomputer or programmable logic controller (PLC) based process control systems including symptom analysis, schematic and print reading, and proper use of test equipment to isolate failures to the repairable unit. Prerequisite: ELPT 2319, INTC 1341 or INTC 1355.

INEW

INEW 2332 Comprehensive Software Project: Coding, Testing, and Implementation (2-4-3) A comprehensive application of skills learned in previous semesters in a simulated workplace. Includes coding, testing, maintenance, and documentation of a complete software and/or hardware solution. This course may be used as a capstone course for a certificate or degree. Prerequisite: Permission from the program chair.

INEW 2338 Advanced Java Programming (2-4-3) A continuation of Java programming techniques such as servlets, and advanced graphical functions. Prerequisite: ITSE 1329.

INMT

INMT 1305 Introduction to Industrial Maintenance (2-4-3) Basic mechanical skill and repair techniques common to most fields of industrial maintenance. Precision measuring instruments will be included. General safety rules common in industry including lock-out/tag-out will also be studied. Emphasis will be placed on industrial policies and procedures. Also covered will be pipefitting practices, standards, specifications, the use of various materials/fittings and material takeout/makeup process. Prerequisite: DMTH 0803, INRW 0100.

INMT 1380 Cooperative Education – Industrial/Manufacturing Technology/Technician (1-19-3) Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component. Prerequisite: Permission from the program chair.

INMT 1381 Cooperative Education – Industrial/Manufacturing Technology/Technician (1-19-3) Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component. Prerequisite: Permission from the program chair.

INMT 1580 Cooperative Education – Industrial/Manufacturing Technology/ Technician (1-39-5) 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: Permission from the program chair.

INMT 2301 Machinery Installation (2-4-3) Students utilize skills acquired in previous studies. Machinery foundation, locations, installation, and alignment activities are practiced and tested. Emphasis is on the various methods of shaft alignment including laser shaft alignment. Also included in the course will be weight estimation, rigging devices, chains, straps, binders, fork truck safety and associated equipment with emphasis on safe rigging practices. Prerequisite: DMTH 0803, INRW 0100.

INMT 2303 Pumps, Compressors and Mechanical Drives (2-4-3) A study of the theory and operation of various types of pumps and compressors. Topics include mechanical power transmission systems including gears, V-belts, and chain drives. Prerequisite: DMTH 0803, INRW 0100.

INMT 2345 Industrial Troubleshooting (2-4-3) An advanced study of the techniques used in troubleshooting various types of industrial equipment to include mechanical, electrical, hydraulic, and pneumatic systems and their control devices. Emphasis will be placed on the use of schematics and diagrams in conjunction with proper troubleshooting procedures. Prerequisite: ELPT 1341, HYDR 1305.

INTC

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: DMTH 0802, INRW 0200.

INTC 1343 Application of Industrial Automatic Controls (2-4-3) Automatic process control including measuring devices, analog and digital instrumentation, signal transmitters, recorders, alarms, controllers, control valves, and process and instrument diagrams. Includes connection and troubleshooting of loops. Prerequisite: DMTH 0803, INTC 1341, INCR 1344.

INTC 1355 Unit Operations (2-4-3) An in-depth study of industrial processes including fluid flow and material transport, distillation, extraction, and automatic control requirements of these processes. Instruction in control system design and control loop adjustments and analysis. Prerequisite: INTC 1341, INTC 1356.

INTC 1356 Instrument Calibration (2-4-3) A study of techniques for calibrating electronic and pneumatic transmitters, controllers, recorders, valves, and valve positioners including tear down, assembly, alignment, and calibration of equipment. Prerequisite: INTC 1341 or INTC 1355.

INTC 1380 Cooperative Education - Instrumentation Technology/Technician (1-19-3) Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component. Prerequisite: Permission from the program chair, DMTH 0802, INRW 0200.

INTC 1381 Cooperative Education - Instrumentation Technology/Technician (1-19-3) Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component. Prerequisite: Permission from the program chair, DMTH 0802, INRW 0200.

***INTC 2333 Instrumentation Systems Installation (1-4-3)** Synthesis, application, and integration of instrument installation components. Includes a comprehensive final project.

INTC 2336 Distributed Control and Programmable Logic (2-4-3) An overview of distributed control systems including configuration of programmable logic controllers, smart transmitters, and field communicators. Functions of digital systems in a process control environment. Prerequisite: ELPT 2319.

INTC 2380 Cooperative Education - Instrumentation Technology/Technician (1-19-3) Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component. Prerequisite: Permission from the program chair, DMTH 0802,INRW 0200.

INTC 2381 Cooperative Education - Instrumentation Technology/Technician (1-19-3) Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component. Prerequisite: Permission from the program chair, DMTH 0802, INRWT 0200.

INTC 2688 Internship - Instrumentation Technology/Technician (0-18-6) A work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts. A learning plan is developed by the college and the employer: Permission from the program chair.

ITCC

ITCC 1301 Cisco Exploration 1 – Network Fundamentals (2-4-3) A course introducing the architecture, structure, functions, components, and models of the internet. Describes the use

of OSI and TCP layered models to examine the nature and roles of protocols and services at the applications, network, data link, and physical layers. Covers the principles and structure of IP addressing and the fundamentals of Ethernet concepts, media, and operations. Build simple LAN topologies by applying basic principles of cabling; perform basic configurations of network devices, including routers and switches; and implementing IP addressing schemes. ITNW 1325.

ITCC 1304 Cisco Exploration – Routing Protocols and Concepts (2-4-3) This course describes the architecture, components, and operation of routers, and explains the principles of routing and routing protocols. Students analyze, configure, verify, and troubleshoot the primary routing protocols RIPv1, RIPv2, EIGRP, and OSPF. Recognize and correct common routing issues and problems. Model and analyze routing processes. Prerequisite: ITNW 1358.

ITCC 1340 Switching Basics (2-4-3) A course introducing the architecture, structure, functions, components, and models of the internet. Describes the use of OSI and TCP layered models to examine the nature and roles of protocols and services at the applications, network, data link, and physical layers. Covers the principles and structure of IP addressing and the fundamentals of Ethernet concepts, media, and operations. Build simple LAN topologies by applying basic principles of cabling; perform basic configurations of network devices, including routers and switches; and implementing IP addressing schemes. Prerequisite: ITNW 1358.

ITCC 2308 Cisco Exploration 3 - LAN Switching and Wireless (2-4-3) This course helps students develop an in-depth understanding of how switches operate and are implemented in the LAN environment for small and large networks. Detailed explanations of LAN switch operations, VLAN implementation, Rapid Spanning Tree Protocol (RSTP), VLAN Trunking Protocol (VTP), Inter-VLAN routing, and wireless network operations. Analyze, configure, verify, and troubleshoot VLANs, RSTP, VTP, and wireless networks. Campus network design and Layer 3 switching concepts are introduced. Prerequisite: ITNW 1358.

ITCC 2310 Cisco Exploration 4 – Accessing the WAN (2-4-3) This course explains the principles of traffic control and access control lists (ACLs) and provides an overview of the services and protocols at the data link layer for wide-area access. Describes user access technologies and devices and discover how to implement and configure Point-to-Point Protocol (PPP), Point-to-Point Protocol over Ethernet (PPPoE), DSL, and Frame Relay. WAN security concepts, tunneling, and VPN basics are introduced. Discuss the special network services required by converged applications and an introduction to quality of service (QoS). Prerequisite: ITNW 1358.

ITNW

ITNW 1308 Implementing and Supporting Client Operating Systems (2-4-3) Skills development in the management of client as desktop operating systems. Prerequisite: CPMT 1304.

ITNW 1325 Fundamentals of Networking/Technologies (2-4-3) Instruction in networking technologies and their implementation. Topics include the OSI reference model, network protocols, transmission media, and networking hardware and software. Prerequisite: INRW 0200, DMTH 0802.

ITNW 1345 Implementing Network Directory Services (2-4-3) Provides students with the knowledge and skills necessary to install, configure, and administer Network Directory service. Prerequisite: ITNW 1308, ITNW 1358.

ITNW 1351 Fundamentals of Wireless LANs (2-4-3) Design, plan, implement, operate, and troubleshoot Wireless Local Area Networks (WLANs). Includes WLAN design, installation, and configuration; and WLAN security issues and vendor interoperability strategies. Prerequisite: ITNW 1325.

ITNW 1353 Supporting Network Server Infrastructure (2-4-3) Skills development in installing, configuring, managing, and supporting a network infrastructure. Prerequisite: ITNW 1345.

ITNW 1354 Implementing and Supporting Servers (2-4-3) Implement, administer, and troubleshoot information systems that incorporate servers in a networked computing environment. Prerequisite: ITNW 1308.

ITNW 1358 Network+ (2-4-3) Assists individuals in preparing for the Computing Technology Industry Association (CompTIA) Network+ certification exam and career as a network professional. Prerequisite: ITNW 1325.

ITNW 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. Prerequisite: ITNW 1358.

ITNW 2352 Administering SQL Server (2-4-3) Administering SQL Server is a skills development course in the installation, configuration, administration, and troubleshooting SQL server client/server database management system version. Prerequisite: ITSW 2337.

ITNW 2354 Internet/Intranet Server (2-4-3) Hands-on experience in designing, installing, configuring, maintaining, and managing an internet server. Prerequisite: ITSC 1316, ITNW 1358.

ITSC

ITSC 1305 Introduction to PC Operating Systems (2-4-3) A study of personal computer operating systems. Topics include installation and configuration, file management, memory and storage management, control of peripheral devices, and use of

utilities. Prerequisite: DMTH 0803, READ 0200.

ITSC 1309 Integrated Software Applications I (2-4-3) Integration of applications from popular business productivity software suites. Instruction in embedding data, linking and combining documents using word processing, spreadsheets, databases, and/or presentation media software. Prerequisite: DMTH 0803, INRW 0200.

ITSC 1316 Linux Installation and Configuration (2-4-3) Open-source Linux operating system. Includes Linux installation, basic administration, utilities and commands, upgrading, networking, security, and application development. Emphasizes hands-on setup, administration, and management of Linux. Also covers maintaining and securing reliable Linux systems. Prerequisite: CPMT 1304, ITSE 1329.

ITSC 1325 Personal Computer Hardware (2-4-3) Current personal computer hardware including assembly, upgrading, setup, configuration, and troubleshooting. Prerequisite: INRW 0200, DMTH 0803.

ITSC 2321 Integrated Software Applications II (2-4-3) Continued study of computer applications from business productivity software suites. Instruction in embedding data and linking and combining documents using word processing, spreadsheets, databases, and/or presentation media software. Prerequisite: ITSC 1309.

ITSC 2386 Internship - Computer and Information Sciences, General (0-9-3) A work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts. A learning plan is developed by the college and the employer. Prerequisite: CPMT 2345 or ITNW 1358.

ITSC 2487 Internship - Computer and Information Sciences, General (0-20-4) A work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts. A learning plan is developed by the college and the employer. Prerequisite: ITNW 1353 or CPMT 2345.

ITSE

ITSE 1301 Web Design Tools (2-4-3) Designing and publishing Web documents according to World Wide Web consortium W3C) Standards. Includes graphic design issues and exploration of tools available for creating and editing Web documents. Prerequisite: DMTH 0803, INRW 0100.

ITSE 1307 Introduction to C++ Programming (2-4-3) Introduction to computer programming using C++. Emphasis on the fundamentals of structured design with development, testing, implementation, and documentation. Includes language syntax, data and file structures, input/output devices, and files. Prerequisite: ITSE 1329.

ITSE 1329 Programming Logic and Design (2-4-3) A disciplined approach to problem-solving with structured techniques and representation of algorithms using appropriate design tools. Discussion of methods for testing, evaluation, and documenta tion. Prerequisite: DMTH 0802, INRW 0100.

ITSE 1330 Introduction to C# Programming (2-4-3) A study of C# syntax including data types, control structures, functions syntax, and semantics of the language, classes, class relationships, and exception handling. Prerequisite: ITSE 1329.

ITSE 1332 Introduction of Visual Basic.NET Programming (2-4-3) A study of Visual Basic.NET (VB.NET) syntax including: data types, control structures, functions, syntax, and semantics of the language, classes, class relationships, and exception handling. Prerequisite: ITSE 1329.

ITSE 1359 Introduction to Scripting Languages (2-4-3) Introduction to scripting languages including basic data types, control structures, regular expressions, input/output, and textual analysis. Prerequisite: ITSE 1329.

ITSE 1393 Special Topics in Computer System Analysis (2-4-3). This class focuses attention entirely on providing the knowledge and skills to pass EC-Council's Security Audtior certification exam. Certification test will be administered at the end of the course.

ITSE 2304 Visual Basic.NET Database Development with ADO.NET (2-4-3) Visual Basic.NET applications to access data from database. Emphasizes Object-Oriented Programming (OOP) and database programming with ADO.NET. Prerequisite: ITSE 1332.

ITSE 2309 Database Programming (2-4-3). Develop database applications using a structured query language; create queries and reports from database tables; implement data integrity; optimize query performance; create and maintain indexes; and create appropriate documentation.

ITSE 2310 IOS Mobile Programming (2-4-3). Course explores developing applications for iOS devices. Will include Objective-C programming, use of the iOS SDK environment, and current programming issues in the iOS environment.

ITSE 2317 Java Programming (2-4-3) Introduction to object-oriented Java programming including the fundamental syntax and semantics of Java for applications and web applets. Prerequisite: ITSE 1329.

ITSE 2321 Object-Oriented Programming (2-4-3) Introduction to object-oriented programming. Emphasis on the fundamentals of structured design with classes, including development, testing, implementation, and documentation. Includes object-oriented programming techniques, classes, and objects. Prerequisite: ITSE 1331.

ITSE 2331 Advanced C++ Programming (2-4-3). Further application of C++ programming techniques including file access, abstract data structures, class inheritance, and other advanced techniques.

ITSE 2334 Advanced Visual Basic.NET Programming (2-4-3) Continuation of Visual Basic.NET programming using advanced features. Prerequisite: ITSE 1332.

ITSE 2347 Advanced Database Programming (2-4-3) Database development using complex database programming techniques emphasizing multiple interrelated files, menu design, security implementation, and multiple access. Prerequisite: ITSW 1307.

ITSE 2386 Internship - Computer Programming/Programmer, General (1-19-3) A work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts. A learning plan is developed by the college and the employer. Prerequisite: Permission from the program chair.

ITSW

ITSW 1307 Introduction to Database (2-4-3) Introduction to database theory and the practical applications of a database. Prerequisite: INRW 0200.

ITSW 1310 Introduction to Presentation Graphics Software (2-4-3) Instruction in the utilization of presentation software to produce multimedia presentations. Graphics, text, sound, animation and/or video may be used in presentation development. Prerequisite: INRW 0200.

ITSW 2337 Advanced Database (2-4-3) Designed to provide an understanding of advanced functionality of databases. Prerequisite: ITSW 1307.

ITSY

ITSY 1300 Fundamentals of Information Security (2-4-3) An introduction to information security including vocabulary and terminology, ethics, the legal environment, and risk management. Identification of exposures and vulnerabilities and appropriate countermeasures are addressed. The importance of appropriate planning, policies and controls is also discussed.

ITSY 1342 Information Technology Security (2-4-3) Instruction in security for network hardware, software, and data, including physical security; backup procedures; relevant tools; encryption; and protection from viruses. Prerequisite: ITNW 1325.

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.

ITSY 2330 Intrusion Detection (2-4-3). Computer information systems security monitoring, intrusion detection and crisi management. Includes alarm management, signature configuration, sensor configuration, and troubleshooting components. Empasizes identifying, resolving, and documenting network crises and activating the response team. Prerequisites: ITSY 2301

ITSY 2343 Computer System Forensics (2-4-3) In-depth study of system forensics including methodologies used for analysis of computer security breaches. Gather and evaluate evidence to perform postmortem analysis of a security breach.

ITSY 2345 Network Defense & Countermeasures (2-4-3). This class focuses attention entirely on providing the knowledge and skills to pass EC-Council's Certified Ethical Hacker certification exam. Certification test will be administered at the end of the course.

ITSY 2359 Security Assessment and Auditing (2-4-3) Capstone experience for the security curriculum. Synthesizes technical material covered in prior courses to monitor, audit, analyze, and revise computer and network security systems to ensure appropriate levels of protection are in place to assure regulatory compliance.

LAWT

LAWT 1301 Copyright and Ethical Issues (3-0-3) Introduction to basic copyright law and related ethical issues as they apply to creation and use of copyrighted material. Emphasis on the practical application of copyright law through case studies. INRW 0200.

LGLA

LGLA 2305 Interviewing and Investigating (2-2-3) This course is a study of principles, methods, and investigative techniques utilized to locate, gather, document, and manage information. Emphasis on developing interviewing and investigative skills to prepare the paralegal to communicate effectively while recognizing ethical problems. Prerequisite: DMTH 0803, INRW 0200.

LMGT

***LMGT 1319 Introduction to Business Logistics (2-2-3)** A systems approach to managing activities associated with traffic, transportation, inventory management, warehousing, packaging, order processing, and materials handling. Prerequisite: DMTH 0803, INRW 0200.

***LMGT 1321 Introduction to Materials Handling (2-2-3)** This course introduces the concepts and principles of materials management to include inventory control and forecasting activities. Prerequisite: NCBO 0060, INRW 0200.

***LMGT 1323 Introduction to Materials Handling (2-2-3)** An overview of the principles and practices of transportation and its role in the distribution process. Emphasis on the physical transportation systems involved in the United States as well as on global distribution systems. Topics include carrier responsibilities and services, freight classifications, rates, tariffs, and public policy and regulations. Also includes logistical geography and the development of skills to solve logistical transportation problems and issues. Prerequisite: DMTH 0803, INRW 0200.

***LMGT 1325 Warehouse and Distribution Center Management (RFID) – Wireless Information Systems (2-2-3)** Emphasis on physical distribution and total supply chain management. Includes warehouse operations management, hardware and software operations, bar codes, organizational effectiveness, just-in-time, and continuous replenishment. Prerequisite: LMGT 1319.

***LMGT 1340 Contemporary Logistics Issues (2-2-3)** Exploration of relevant and changing topics in the logistics management field. Includes group projects, interaction with local industry, class lectures, and case studies. Prerequisite: LMGT 1319.

***LMGT 1341 Freight Loss and Damage Claims (2-2-3)** An analysis of bill of lading contracts and liability for lost or damaged freight, including procedures for filing and documenting claims. Prerequisite: LMGT 1319.

***LMGT 1346 Radio Frequency Identification (RFID) – Wireless Information Systems (2-2-3)** Overview of the wireless communication system and its application with the radio frequency identification (RFID) system. Includes an introduction of the value of both systems as they relate to traffic management, transportation, inventory management, warehousing, packaging, order processing, and materials handling. Prerequisite: LMGT 1319, LMGT 1321.

***LMGT 1349 Materials Requirement Planning (2-2-3)** A study of materials requirement planning that includes net change versus regenerative systems, lot sizing, and the time sharing of dependent demand. Prerequisite: MATH X3XX, INRW 0200.

***LMGT 2330 International Logistics Management (2-2-3)** Identification of the principles and practices involved in international distribution systems including the multinational corporation. Attention to global strategic planning, production, supply, manpower/labor, geography, business communications, cultural, political, and legal issues affecting global distribution and firm/host relationships. Prerequisite: LMGT 1319.

***LMGT 2334 Principles of Traffic Management (2-2-3)** A study of the role and functions of a transportation traffic manager within a commercial or public enterprise. Includes training in rate negotiation, carrier and mode selection, carrier service evaluation, quality control, traffic pattern analysis, documentation for domestic and international shipments, claims, hazardous materials movement, and the state, federal, and international environments of transportation. Prerequisite: LMGT 1319.

***LMGT 2388 Internship: Logistics and Materials (0-10-3)** A work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts. A learning plan is developed by the college and the employer. Prerequisite: Approval from Division Director.

**Course is offered at the TSTC North Texas campus in Red Oak, TX.*

LNWK

LNWK 1301 Orientation and Line Skill Fundamentals (3-0-3) Examination of utility company operations. Topics include company structure, safety and distribution standards handbook, lineman's tools, vocabulary, and work procedures. Discussion of basic electrical systems including the history of power generation and distribution with emphasis on generating plants and substations. Prerequisite: DMTH 0803, INRW 0100.

LNWK 1311 Climbing Skills (2-3-3) Theory and application of pole climbing. Includes safety, climbing techniques, tool inspection, poles inspection, personal protective equipment, and fall protection. Prerequisite: DMTH 0803, INRW 0100.

LNWK 2322 Distribution Line Construction (2-2-3) Study of electric distribution line construction. Includes reading staking sheets and framing specifications, tailboard discussions, pole framing and setting, installing conductors, transformers and other line equipment, and OSHA and NESC regulations. Prerequisite: LNWK 1311.

MCHN

MCHN 1320 Precision Tools and Measurement (2-2-3) 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. Prerequisite: MCHN 1343, INRW 0100.

MCHN 1326 Introduction to Computer-Aided Manufacturing (CAM) (2-3-3) A study of Computer-Aided Manufacturing (CAM) systems. Software is used to develop applications for manufacturing. Emphasis on tool geometry, tool selection, and the tool library. Prerequisite: None

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. Prerequisite: DMTH 0803, READ 0050, INRW 0100.

MCHN 1343 Machine Shop Mathematics (3-0-3) Designed to prepare the student with technical, applied mathematics that will be necessary in future machine shop-related courses. Prerequisite: DMTH 0803, READ 0050, INRW 0100.

MCHN 1380 Cooperative Education – Machine Tool Technology/Machinist (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: Permission from the program chair.

MCHN 1452 Intermediate Machining I (2-6-4) Operation of drills, milling machines, lathes, and power saws. Introduction to precision measuring techniques. Prerequisite: MCHN 1338. MCHN 2403 Fundamentals of CNC (2-6-4) An introduction to G and M codes (RS274-D) necessary to program Computer Numerical Controlled (CNC) machines. Prerequisite: None

MCHN 2403 Fundamentals of CNC (2-6-4) An introduction to G and M codes (RS274-D) necessary to program Computer Numerical Controlled (CNC) machines. Prerequisite: None

MCHN 2431 Operation of CNC Turning Centers (2-6-4) A continuation of Fundamentals of CNC Machine Controls with an emphasis on turning centers. Prerequisite: DMTH 0803, READ 0050, INRW 0100.

MCHN 2434 Operation of CNC Machining Centers (2-6-4) A continuation of fundamentals of CNC Machine Controls with an emphasis on machining centers. Prerequisite: DMTH 0803, READ 0050, INRW 0100.

MCHN 2435 Advanced CNC Machining (2-6-4) The study of advanced CNC operation with an emphasis on programming and operations of machining and turning centers. Prerequisite: MCHN 2434, MCHN 2431.

MDCA

MDCA 1309 Anatomy and Physiology for Medical Assistants (2-4-3) Emphasis on structure and function of human cells, tissues, organs, and systems with overview of common pathophysiology. Prerequisite: DMTH 0803, READ 0100, INRW 0100.

MDCA 1313 Medical Terminology (2-2-3) A study and practical application of a medical vocabulary system. Includes structure, recognition, analysis, definition, spelling, pronunciation, and combination of medical terms from prefixes, suffixes, roots, and combining forms. Prerequisite: READ 0100, WRIT 0100.

MDCA 1343 Medical Insurance (2-4-3) Emphasizes medical office coding procedures for payment/reimbursement by patient or third party. Prerequisite: DMTH 0803, INRW 0100, MDCA 1313.

MRKG

MRKG 1301 Customer Relationship Management (2-2-3) General principles of customer service including skills, knowledge, attitudes, and behaviors. Prerequisite: INRW 0200.

POFI

POFI 1291 Special Topics in Information Processing/Data Entry Technician (1-2-2) 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. No prerequisite listed.

POFI 1301 Computer Applications I (2-3-3) Overview of computer office applications including current terminology and technology. Introduction to computer hardware, software applications, and procedures. Prerequisite: READ 0050 and DMTH 0803 or Better Competency Levels.

POFI 2331 Desktop Publishing (2-4-3) In-Depth coverage of desktop publishing terminology, text editing, and use of design principles. Emphasis on layout techniques, graphics, multiple page displays, and business applications. Define desktop publishing terminology, manipulate test and graphics to create a balanced and focused layout; and create fliers and multiple page documents. Prerequisite: INRW 0200, ITSC 1309.

POFM

POFM 1300 Medical Coding Basics (2-4-3) Presentation and application of basic coding rules, principles, guidelines, and conventions utilizing various coding systems. Prerequisite: DMTH 0803, INRW 0100.

POFM 1317 Medical Administrative Support (2-4-3) Instruction in medical office procedures including appointment scheduling, medical records creation and maintenance, telephone communications, coding, billing, collecting, and third party reimbursement. Prerequisite: INRW 0100, POFI 1301.

POFM 1327 Medical Insurance (2-4-3) Survey of medical insurance including the life cycle of various claim forms, terminology, patient relations, and legal and ethical issues.

POFT

POFT 1300 Career Exploration/Planning (2-2-3) An introduction to career exploration, educational planning, and job searching. Prerequisite: INRW 0100.

POFT 1301 Business English (2-3-3) Introduction to a practical application of basic language usage skills with emphasis on fundamentals of writing and editing for business. Prerequisite: INRW 0200.

POFT 1307 Proofreading and Editing (2-2-3) Instruction in proofreading and editing skills necessary to assure accuracy in business documents. Prerequisite: INRW 0200.

POFT 1309 Administrative Office Procedures I (2-3-3) Study of current office procedures, duties, and responsibilities applicable to an office environment. Prerequisite:INRW 0200.

POFT 1319 Records & Information Management I (2-4-3) Introduction to basic records and information management. Includes the life cycle of a record, manual and electronic records management, and basic filing procedures and rules. Prerequisite: INRW 0200.

POFT 1328 Business Presentations (2-2-3) Skill development in planning and conducting business presentations including communication and media skills. Prerequisite: ITSC 2321.

POFT 1329 Beginning Keyboarding (2-4-3) Skill Development in the operation of keyboard by touch applying proper keyboarding techniques. Emphasis on development of acceptable speed and accuracy levels and formatting basic documents. Prerequisite: INRW 0100.

POFT 2303 Speed and Accuracy Building (2-2-3) Review, correct, and improve keyboarding techniques for the purpose of increasing speed and improving accuracy. Prerequisite: POFT 1329.

POFT 2331 Administrative Systems (2-4-3) Advanced concepts of project management and office procedures integrating software applications. Prerequisite: ITSC 1309.

**Course is offered at the TSTC North Texas campus in Red Oak, TX.*

PSYT

PSYT 1313 Psychology of Personal Adjustment (2-2-3) Development of personal, social, and work adjustment skills. Prerequisite: DMTH 0803, INRW 0100.

PTAC

PTAC 1302 Introduction to Process Technology (2-2-3) Introduction to chemical and refinery plant operations. Topics include process technician duties, responsibilities and expectations; plant organizations; plant process and utility systems; and the physical and mental requirements of the process technician. Prerequisite: DMTH 0803, INRW 0200.

PTAC 1308 Safety, Health, and Environment 1 (2-2-3) Development of knowledge and skills to reinforce the attitudes and behaviors required for safe and environmentally sound work habits. Emphasis on safety, health, and environmental issues in the performance of all job tasks and regulatory compliance issues. Prerequisite: DMTH 0802, INRW 0200.

PTAC 1332 Process Instrumentation I (2-4-3) Study of instruments and instrument systems used in the chemical processing industry including terminology, primary variables, symbology, control loops, and basic trouble shooting. Prerequisite: DMTH 0802, INRW 0200.

PTAC 1410 Process Technology I – Equipment (3-3-4) Instruction in the use of common process equipment. Prerequisite: DMTH 0802, INRW 0200.

PTAC 2314 Principles of Quality (2-2-3) Study of the background and application of quality concepts. Topics include team skills, quality tools, and economics and continuous improvement. Quality is one of the eight core courses in the Process Technology Alliance Curriculum (PTAC), sponsored by the Process Technology Alliance. Quality introduces students to many process industry-related quality concepts including operating consistency, continuous improvement, plant economics, team skills and statistical process control (SPC) and 6 Sigma. Prerequisite: DMTH 0802, INRW 0200.

PTAC 2336 Process Instrumentation II (2-3-3) Continued study of coverage of the varied instruments and instrument systems used in the chemical processing industry including terminology, primary variables, symbology, control loops, and basic troubleshooting. Prerequisite: PTAC 1332 or INTC 1341.

PTAC 2348 Safety, Health and Environment II (2-3-3) Continued instruction in the application of concepts presented in Safety, Health, and Environment 1. Emphasis on emergency response concepts. Prerequisite: PTAC 1308.

PTAC 2420 Process Technology II - Systems (3-3-4) Study of the interrelation of process equipment and process systems including related scientific principles. Prerequisite: PTAC 1410.

PTAC 2438 Process Technology III - Operations (3-3-4) This course combines systems into operational processes with emphasis on operations under various conditions. Topics include typical duties of an operator. Prerequisite: PTAC 1410.

PTAC 2446 Process Troubleshooting (2-4-4) Instruction in the different types of troubleshooting techniques, procedures, and methods used to solve problems. Topics include application of data collection and analysis, cause-effect relationships, and reasoning. Prerequisite: PTAC 1410.

PTRT

PTRT 1301 Overview of Petroleum Industry (2-4-3) An overview of the entire petroleum industry. Purposes and proper procedures in a variety of different petroleum technologies: exploration, drilling, production, transportation, marketing, and refining. Prerequisite: DMTH 0802, INRW 0200.

PTRT 1317 Natural Gas Processing I (3-0-3) An overview of natural gas processing operations. Fundamentals of gas processing, the nature of heat and how it implements the process, gas plant processing equipment, and procedures from raw material to the refined product. Prerequisite: DMTH 0802, INRW 0200.

QCTC

QCTC 1301 Total Quality Management (2-2-3) The study of integrating work processes using team participation through employee empowerment and teamwork emphasizing the philosophy of customer service and satisfaction. Prerequisite: DMTH 0803, READ 0050, INRW 0100.

RBPT

***RBPT 2350 Residential Retrofit Strategies (2-4-3)** Evaluation of existing homes and retrofit strategies to improve energy efficiency and environmental quality. Includes retrofitting a home for onsite power generation. Covers using a whole-house approach to evaluate the effects of comfort, safety, indoor environmental quality, financial incentives, cost effectiveness, environmental impact, energy efficiency, and the movement of heat, moisture, and air through the building enclosure.

**Course is offered at the TSTC North Texas campus in Red Oak, TX.*

RBTC

RBTC 1305 Robotic Fundamentals (2-4-3) An introduction to flexible automation. Topics include installation, repair, maintenance, and development of flexible robotic manufacturing systems. Prerequisite: DMTH 0803, READ 0050, INRW 0100.

SCIT

SCIT 1318 Applied Physics (2-2-3) Motion, optics, electricity, magnetism, solid mechanics, and fluid mechanics relating to industrial applications. Includes properties of matter, heat, and thermodynamics. Prerequisite: DMTH 0802.

SCIT 1414 Applied General Chemistry I (3-3-4) Applications of general chemistry emphasizing industry-related laboratory skills and competencies including laboratory safety and report writing. Addresses supporting chemical theories including atomic and molecular structure, nomenclature, chemical reactivity, gas laws, acids and bases, and solutions. Prerequisite: DMTH 0802.

WLDG

WLDG 1307 Introduction to Welding Using Multiple Processes (2-4-3) An overview of the basic welding processes, including oxy-fuel welding and cutting, shielded metal arc (SMAW), gas metal arc (GMAW), and gas tungsten arc welding (GTAW). Prerequisite: DMTH 0803, READ 0050, INRW 0100.

WLDG 1337 Introduction to Metallurgy (2-3-3) A study of ferrous and non-ferrous 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. Prerequisite: MCHN 1338.

WLDG 1340 AWS Level I Certification Review (2-4-3) A review of various welding processes, welding terminology, and welding technology curriculum in preparation for taking the American Welding Society Level One Certification written test. Demonstrate proficiency with AWS terminology; demonstrate ability to research AWS manuals. Prerequisite: DMTH 0803, READ 0050, INRW 0100.

WLDG 1412 Introduction to Flux Cored Arc (FCAW) Welding (3-4-4) An overview of terminology, safety procedures, and equipment set-up. Practice in performing T-joints, lap joints, and butt joints using self-shielded and gas-shielded electrodes.

WLDG 1434 Introduction to Gas Tungsten Arc (GTAW) Welding (3-4-4) Principles of gas tungsten arc welding (GTAW), including setup, GTAW equipment. Instruction in various positions and joint designs. Prerequisite: DMTH 0803, READ 0050, INRW 0100.

WLDG 1453 Intermediate Layout and Fabrication (3-4-4) A continuation of the introductory Layout and Fabrication course which covers design and production of shop layout and fabrication. Emphasis placed on symbols, blueprints, and written specifications. Identify auxiliary views and calculate steel and pipe dimensions using layout tools and construction templates. Identify fittings, weldments, templates, and tools; and interpret orthographic and isometric drawings. Prerequisite: DMTH 0803, READ 0050, INRW 0100.

WLDG 1457 Intermediate Shielded Metal Arc Welding (SMAW) (3-4-4) A study of the production of various fillets and groove welds. Preparation of specimens for testing in all test positions. Identify principles of arc welding; describe arc welding operations of fillet and groove joints; explain heat treatments of low alloy steels; and explain weld size and profiles. Prepare test plates; perform fillet welds in the overhead position; perform air carbon arc weld removal; perform bevel groove welds with backing plates in various positions; and demonstrate use of tools and equipment. Prerequisite: DMTH 0803, READ 0050, WRIT 0100.

WLDG 2406 Intermediate Pipe Welding (3-4-4) A comprehensive course on the welding of pipe using the shielded metal arc welding (SMAW) process. Position of welds will be 1G, 2G, 5G, and 6G using various electrodes. Topics covered include electrode selection, equipment setup, and safe shop practices. Prerequisite: None.

WLDG 2413 Intermediate Welding Using Multiple Processes (3-4-4) Instruction using layout tools and blueprint reading with demonstration and guided practices with some of the following welding processes: Oxy-Fuel gas cutting and welding, shield metal arc welding (SMAW), gas metal arc welding (GMAW), flux-cored arc welding (FCAW), gas tungsten arc welding (GTAW), or any other approved welding process. Prerequisite: DMTH 0803 and WRIT 0100.

WLDG 2443 Advanced Shielded Metal Arc Welding (SMAW) (3-4-4) Advanced topics based on accepted welding codes. Training provided with various electrodes in shielded metal arc welding processes with open V-groove joints in all positions. Prerequisite: WLDG 1457.

WLDG 2447 Advanced Gas Metal Arc Welding (GMAW) (3-4-4) Advanced topics in GMAW welding, including welding in various positions and directions. Demonstrate proficiency in various welding positions on pipe; describe safety rules and equipment use; and describe the effects of welding parameters in GMAW. Weld various joint designs and diagnose welding problems and perform visual inspection. Prerequisite: WLDG 1457.

WLDG 2451 Advanced Gas Tungsten Arc (GTAW) Welding (3-4-4) Advanced topics in GTAW welding, including welding in various positions and directions. Prerequisite: WLDG 1457.

Continuing Education Courses

CETT

CETT 1005 AC Circuits A study of the fundamentals of alternating current including series and parallel AC circuits, phasors, capacitive and inductive networks, transformers, and resonance. Prerequisite: CETT 1003.

CPMT

CPMT 1011 Introduction to Computer Maintenance An introduction to the installation, configuration, and maintenance of a microcomputer system. Emphasis on the evolution of microprocesses and microprocessor bus structures. Prerequisite: ITSC 1009.

CVOP

CVOP 1013 Professional Truck Driver I Overview of the State of Texas Class A Commercial Drivers License written test. Includes preparation for mastery of the Commercial Drivers License written examination, general truck driving skills with hands-on component, and instruction coordinated with the Department of Transportation.

CVOP 1040 Professional Truck Driver II A continuation of Professional Truck Driver I. General truck driving with hands-on skill development and instruction coordinated with the Department of Transportation.

CVOP 1091 Special Topics in Truck, Bus and Other Commercial Vehicle Operator 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.

DFTG

DFTG 1005 Technical Drafting 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. Co-requisite: DFTG 1009.

DFTG 1009 Basic Computer Aided Drafting An introduction to computer-aided drafting. Emphasis is placed on setup; creating and modifying geometry; storing and retrieving predefined shapes; placing, rotating, and scaling objects, adding text and dimensions, using layers, coordinating systems and plot/print to scale.

DFTG 1017 Architectural Drafting-Residential Architectural drafting procedures, practices, and symbols, including preparation of detailed working drawings for residential structure with emphasis on light frame construction methods. Prerequisite: DFTG 1009.

DFTG 1033 Mechanical Drafting Detail drawings with proper dimensioning and tolerances, use of sectioning techniques, common fasteners, pictorial drawings, including bill of materials. Prerequisite: DFTG 1009.

DFTG 2019 Intermediate Computer Aided Drafting A continuation of practices and techniques used in basic computer-aided drafting emphasizing advanced dimensioning techniques, the development and use of prototype drawings, construction of pictorial drawings, construction of 3 dimensional drawings, interfacing 2d and 3d environments and extracting data. Prerequisite: DFTG 1009.

ITSC

ITSC 1009 Integrated Software Applications I Integration of applications from popular business productivity software suites. Instruction in embedding data, linking and combining documents using word processing, spreadsheets, databases, and/or presentation media software.

ITSC 2021 Integrated Software Applications II Continued study of computer applications from business productivity software suites. Instruction in embedding data and linking and combining documents using word processing, spreadsheets, databases, and/or presentation media software. Prerequisite: ITSC 1009.

MCHN

MCHN 1026 Introduction to Computer-Aided Manufacturing (CAM) A study of Computer-Aided Manufacturing (CAM) systems. Software is used to develop applications for manufacturing. Emphasis on tool geometry, tool selection, and the tool library.

MCHN 2044 Computerized Numerical Control Programming Programming and operation of computer numerically controlled (CNC) machine shop equipment.

WLDG

WLDG 1053 Intermediate Layout and Fabrication A continuation of the introductory Layout and Fabrication course which covers design and production of shop layout and fabrication. Emphasis placed on symbols, blueprints, and written specifications. Identify auxiliary views and calculate steel and pipe dimensions using layout tools and construction templates. Identify fittings, weldments, templates, and tools; and interpret orthographic and isometric drawings.

WLDG 2013 Intermediate Welding Using Multiple Processes 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.
and/or presentation media software. Prerequisite: ITSC 1009.

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M.S. Troy University
M.S. Air Command & Staff College
M.S. Air War College

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Pleasant, W. Eric, M.S.
Texas A&M University-Commerce

Ramirez, Victor, M.A.
University of North Texas Dallas

Roberts, Ruth, M.Ed.
University of Texas at Tyler

Walker, Tom, M.A.
Abilene Christian University

White, Leroy, M.B.A.
University of Phoenix

Wilson, Jim, A.A.S.
Texas State Technical College

Subject Index

Helpful Numbers & Websites

Websites

TSTC Marshall Website
www.tstc.edu/marshall

TSTC North Texas Center Website
www.tstc.edu/red_oak

TSTC Portal and Web Advisor
http://portal.tstc.edu

College for Texans
http://www.collegefortexans.com

Texas Higher Education Assessment (THEA) Test
www.thea.nesinc.com

Emergency Contact Information

TSTC Marshall Security Department Office.
OFFICE: 903.923.3351
ON DUTY OFFICER: 903-503-8538

TSTC North Texas Center Emergency Contact

EMERGENCY: 911
OFFICE: 972.617.4040
OFFICER ON CALL AFTER HOURS: 972.617.4650
POLICE TIP LINE: 972.617.4616

Notice of Campus Closure - TSTC Marshall

Notification for closing TSTC during inclement weather or other emergencies will be posted on Twitter and the TSTC website at www.tstc.edu/marshall or heard or seen on:

Television

KTBS Channel 3
KTAL Channel 6
KLTV Channel 7
KSLA Channel 12
KYTX Channel 19
KFXK-Fox 51

Radio

KISS Country 93.7 FM
KRUF 94.5 FM
KVKI 96.5 FM
99X The Rock Station
KEEL News Radio 710 AM
KWKH 1130 AM

Notice of Campus Closure - TSTC North Texas Center

Notification for closing TSTC during inclement weather or other emergencies will be posted on the TSTC website at www.tstc.edu/red_oak or heard or seen on:

Television	KDFW Channel 4
	KXAS Channel 5
	WFAA Channel 8
	KTVT Channel 11
	KERA Channel 13
Radio	
	KERA 90.1 FM
	KXT 91.7 FM
	KSCS-FM 96.3
	KDGE-FM 102.1
	Mix 102.9
	KKDA-FM 104.5
	106.1 KISS FM
	KRLD News Radio 1080

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http://twitter.com/tstcmarshall

You Tube:
http://www.youtube.com/tstc4u

Flickr:
http://www.flickr.com/photos/tstcmarshall/

Facebook:
http://www.facebook.com/profile.php?=617844668&
www.tstc.edu

Texas State Technical Colleges

www. tstc.edu

TSTC Marshall	903.935.1010
TSTC North Texas Center	972.617.4040
TSTC Harlingen	956.364.4000
TSTC Waco	254.799.3611
TSTC West Texas	
Abilene	325.672.7091
Breckenridge	254.559.7700
Brownwood	325.643.5987
Sweetwater	325.235.7300

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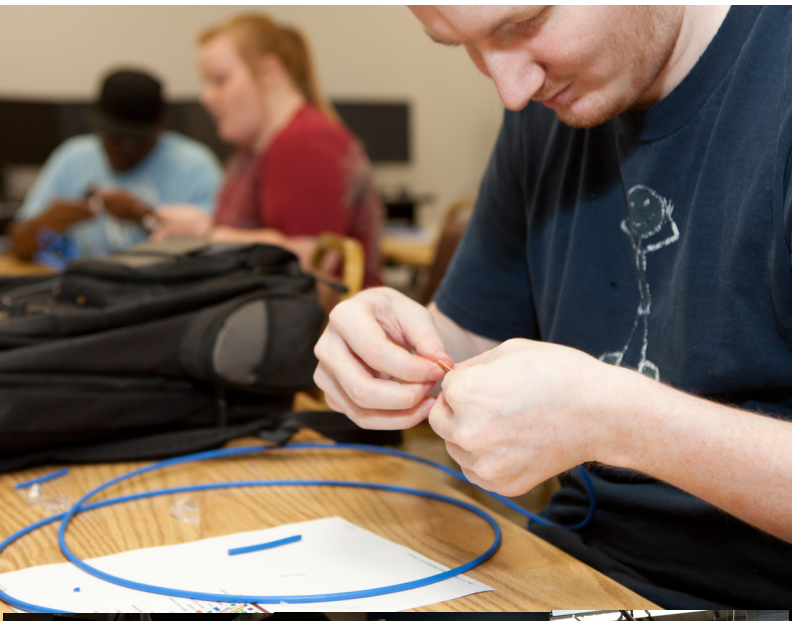

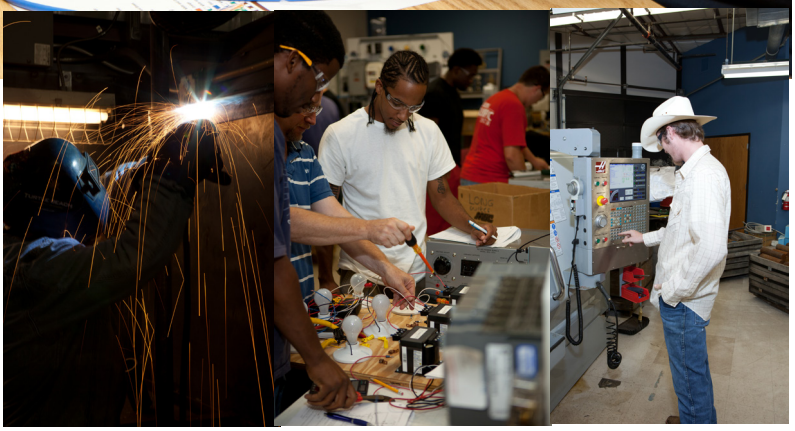

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Marshall, Texas 75671
888.382.8782
903.935.1010

TSTC North Texas Center
156 Louise Ritter Drive
Red Oak, TX 75154
972.617.4040

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Contact Us

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