Tarrant County College District

2011-2012 CATALOG

Additional general information available at

www.tccd.edu

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GENERAL INFORMATION

Statement of Vision

Tarrant County College will be a nationally recognized community college of choice for academic excellence and lifelong learning.

Statement of Values

Tarrant County College is committed to the following values:

Student Success – belief in providing quality instruction, resources, and support services to assist our students in achieving their lifelong goals;

Access – belief in providing educational opportunities for all members of the community;

Excellence – belief in providing outstanding quality in educational programs, administrative support, and services to its students, faculty and staff;

Service to the Community – belief in the importance of engaging with the community to enhance economic vitality and quality of life;

Diversity – belief that the College should reflect the diversity of the community;

Innovation and Creativity – belief in cultivating a learning environment that evaluates and incorporates emerging technologies and methodologies to enhance the quality of instruction and administrative support for our students, faculty and staff.

Mission Statement

Tarrant County College District, a comprehensive two-year institution established in 1965, is dedicated to providing quality education that exceeds the expectations of the people of Tarrant County. Accordingly, the mission is as follows:

Tarrant County College provides affordable and open access to quality teaching and learning.

Role and Scope

The College implements its mission through a clearly defined set of programs, services and partnerships that include the following:

- University transfer programs;
- Workforce education programs;
- Technical programs;
- Developmental courses;
- Adult literacy courses;
- Continuing education and community services;
- An extensive curriculum; a highly qualified, enthusiastic, innovative faculty and staff; appropriate technology, equipment, and learning resources; diverse modes of instruction and delivery; support services to foster student success; work and partnerships in support of the cultural and economic development of the community; and
- A commitment to institutional effectiveness–an ongoing process of self-examination, self-improvement, and an unending pursuit of excellence.

Institutional Goals

Tarrant County College District has developed the following goals to fulfill the mission of the College.

  I. **Support student learning and success** through excellence in teaching and learning, support services, flexible instructional delivery systems, student engagement, learning outcomes assessment, and dynamic curricula.
 II. **Ensure affordability, accessibility and diversity** reflective of the community.
III. **Promote institutional effectiveness** through continuous improvement, collaboration with and service to the community, employee engagement, professional development, and optimal environment conducive to quality teaching and learning.

Accreditation and Affiliations

Tarrant County College District is accredited by the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC) to award the associate degree. SACSCOC may be contacted at 1866 Southern Lane, Decatur, Georgia 30033-4097 or by calling 404-679-4500 for questions about the accreditation of Tarrant County College District.

The threefold purpose for publishing the Commission's address and contact number is to enable interested constituents (1) to learn about the accreditation status of Tarrant County College District, (2) to file a third-party comment at the time of Tarrant County College District's decennial review, or (3) to file a complaint against Tarrant County College District for alleged noncompliance with a standard or requirement.

Normal inquiries about Tarrant County College District, such as admission requirements, financial aid, educational programs, etc., should be addressed directly to Tarrant County College District and not to the Commission's Office.

TCC's educational programs and courses are approved by the Texas Higher Education Coordinating Board. Memberships also are held in the Texas Association of Community Colleges, Association of Texas Colleges and Universities, and the American Association of Community Colleges.

Achieving the Dream™

Achieving the Dream is a national movement designed to increase the success of community college students. For Tarrant County College District, Achieving the Dream is about making the institution the best it can be so that its students are the best they can be.

Since May 2010, TCC has been involved with Achieving the Dream. Broad engagement has included all segments of the college community, the Tarrant County College District Board of Trustees, and the greater Tarrant County community. All have been involved in reviewing data on the success of our students and dialoguing about what is needed to improve their success. Based on these dialogues, TCC is focusing on two priority areas: 1) create a comprehensive first-year-experience program for TCC students, and 2) increase student success in developmental education and gateway courses.

TCC is committed to providing access to all students and is working to improve student success through Achieving the Dream.

GENERAL REGULATIONS

Official Communications

A request that a student report to an administrative or faculty office may be made by letter, email or telephone. Failure to comply with such a request may result in disciplinary action. Each student is responsible for monitoring his/her "my.tccd.edu" email account for official communications.

Communications to the entire student body are considered properly delivered when they are placed on official campus bulletin boards, on CampusCruiser, and/or on the TCC website. Each student is responsible for regularly checking the bulletin boards and websites.

Change of Address

Students who change their home address or mailing address are expected to notify the College of this change immediately using WebAdvisor, or by contacting the campus Registrar's Office. Documentation may be required.

Use of Legal Name

Students are required to provide their full legal name to the College. Students' permanent records, including official transcripts, are required to identify students by their full legal name.

Use of Student Number

A student number is required to identify students' permanent records. The automated student information system assigns a random number, called the Colleague ID, to every student. The Colleague ID is used for all internal printed materials and provides additional protection to students' privacy. Students are urged to become familiar with their Colleague ID and to use it when communicating with College offices.

Students are requested to provide their Social Security Number to the College for maintenance of their student records. This number allows the College to meet federal and State reporting requirements, enables communication with financial aid providers and service agencies, allows reporting to IRS regarding eligibility for the American Opportunity Tax Credit and Lifetime Learning Credit, and substantially eases transfer of information between the College and other colleges and universities. Students who do not provide their Social Security Number risk loss of services and benefits and may encounter delays when transferring from or to other institutions. The College makes every effort to protect students' Social Security Numbers from inappropriate disclosure. Questions about College use of the Social Security Number should be forwarded to the District Records Office or the campus Registrar's Office.

Student Conduct and Discipline

Tarrant County College has established rules and regulations for student conduct and behavior. These items may be found in the Student Handbook which is available on the TCC website. Failure to abide by all rules and regulations may be grounds for disciplinary action.

The Vice President for Student Development Services is responsible for enforcing campus student discipline as outlined in the Student Handbook and makes

recommendations to the President regarding student violations of the College Regulations and adherence to the District's disciplinary procedures. These procedures will assure prompt and appropriate action, as well as provide due process in accordance with the guidelines stipulated by the Texas Higher Education Coordinating Board.

Administrative Withdrawal

The College reserves the right to withdraw a student from class if, in the judgment of College officials, such withdrawal is in the best interest of the student or the student body at large.

Religious Holy Days

In accordance with state law, TCC allows an excused absence to students for the observance of a "religious holy day," defined as a holy day observed by a religion whose places of worship are exempt from property taxation under section 11.20, Tax Code.

Students shall be excused from attending classes or other required activities, including exams, during time needed for travel for the purpose of the observance of a religious holy day. The law mandates that students are required to complete assignments or exams missed during the absence within a reasonable time.

OFFICIAL NOTICES

The College provides the following information in response to federal or state mandates or as a service to the College community. Additional information about these and other important topics is available through the TCC website.

Access to Student Records

The Family Educational Rights and Privacy Act of 1974 (PL93-380), commonly referred to as FERPA, provides that all records pertaining to a student that are maintained by the College must be open to inspection by the student and may not be made available to any other person without the written authorization of the student. A "student" is defined as a person who has registered and paid for one or more Undergraduate (UG) or Continuing Education (CE) courses and who remains enrolled through the official date of record for that term.

The act further provides that certain portions of the student record are deemed directory information and under some circumstances may be released without the student's written permission. TCC directory information includes name, current address and telephone number, major, dates of attendance, full-time or part-time enrollment status, degrees and awards received and dates granted, previous educational institution(s) attended, and eligibility and participation in officially recognized activities and sports. It should be noted that current address and telephone number are considered restricted directory information. These items are released only if a legitimate educational interest is established. NOTE: Email addresses are not considered directory information.

A student may request that all items of directory information be kept confidential by contacting the campus Registrar's Office or District Records Office. A written request is required. The request may be canceled only upon receipt of the student's written authorization.

Additional information concerning FERPA may be obtained from the campus Registrar's Office, the District Records Office, or online through the TCC website.

Student Right to Know - Crime Statistics

The Campus Annual Security Report can be viewed on the TCC website. A printed copy of this report is available on request from any campus Police Department.

Student Right to Know - Graduation Statistics

Federal law requires that all institutions of higher education disclose graduation rates to students, applicants and potential students. Graduation rates for TCC can be provided upon request to the District Office of Institutional Research.

Solomon Amendment

The 1995/1996 National Defense Authorization Act and the 1997 Omnibus Consolidated Appropriations Act gave branches of the military access to student information including student's name, address, telephone number, age or date of birth, class, and major. The Solomon Amendment requires institutions to comply with requests from the military for student information.

Selective Service

Almost all males 18 through 25 years of age living in the United States must register with the Selective Service. Almost all non-citizens also are required to register, including illegal aliens, legal permanent residents, and refugees. If a male non-citizen takes up residence in the United States prior to his 26th birthday, he must register. Additional information can be found on the TCC website.

Students Subject to Additional Tuition and Fees

Tarrant County College does not at this time require additional charges for either of the following categories of excess hours but is required by law to inform students that charges may be instituted by TCC and/or may be incurred when attending other Texas colleges and universities.

Additional Charges for Students with Excessive Semester Credit Hours

Texas legislation allows state colleges and universities to charge additional tuition and/or fees for students who enter a Texas public higher education institution beginning in fall 1999 and who exceed by more than 45 hours the semester credit hours required for the degree. For undergraduate students initially enrolling fall 2006 or later, the limit is 30 semester credit hours above the number of hours required for the degree. The legislation exempts technical and workforce education courses. At this time, TCC is not charging additional tuition for excessive hours.

Additional Charges for Students Who Exceed 27 Developmental Semester Credit Hours

Texas legislation allows state colleges and universities to charge additional tuition and/or fees for students who exceed 27 semester credit hours in developmental courses. The 27-hour limit does not include any courses in English for Speakers of Other Languages that are taken prior to the students' initial entrance test (i.e., TASP, THEA, ACCUPLACER, Compass, MAPS, ASSET). It also does not include any courses in study or thinking skills. At this time, TCC is not charging additional tuition for excess developmental hours.

Additional Charges for Repeated Courses

Recent legislation disallows state funding for any course for which a student enrolls more than two times, regardless of grade received. Tracking of enrollments is the responsibility of the College and will begin with enrollments in the fall 2002 semester. State regulations allow an institution of higher education to charge a higher tuition rate to a student whose hours can no longer be submitted for state funding. At this time, TCC is not charging additional tuition for these courses.

Texas Tuition Rebate Program

Section 54.0065 of the Texas Education Code provides that some students may earn a rebate up to $1,000 if they meet the following:

1. They have enrolled for the first time in an institution of higher education in the fall 1997 semester or later;
2. They are requesting a rebate for work related to a first baccalaureate (bachelor's) degree received from a Texas public university (not a community college degree);
3. They have been a resident of Texas, have attempted all coursework at a Texas public institution of higher education, and have been entitled to pay resident tuition at all times while pursuing the degree; and
4. They have attempted no more than 3 hours in excess of the minimum number of semester hours required to complete the degree under the catalog under which they were graduated. Hours attempted include transfer credits, course credit earned exclusively by examination, courses that are dropped after the official census date, for-credit developmental courses, optional internship and cooperative education courses, and repeated courses. Courses dropped for reasons that are determined by the institution to be totally beyond the control of the student shall not be counted.

The American Opportunity Tax Credit

Students may be eligible to claim an American Opportunity Tax Credit (AOC) against their federal income taxes. The AOC may be claimed for the qualified tuition and related expenses of students enrolled at least half time in one of the first two years of postsecondary education when enrolled in a program leading to a degree, certificate or other recognized educational credential. Eligible tuition and fees are determined by the IRS and will be offset by any grants, scholarships or refunds received. More information is available at www.irs.gov.

Lifetime Learning Credit

Students may be eligible to claim a Lifetime Learning Credit against their federal income taxes. The Lifetime Learning Credit may be claimed for the qualified tuition and related expenses of students enrolled in eligible educational institutions.

If a student is claiming a Hope Credit, none of that student's expenses for that year may be applied toward the Lifetime Learning Credit. More information is available at www.irs.gov.

CONTINUING EDUCATION SERVICES

Continuing Education Services is comprised of the campus Continuing Education Services offices and the Districtwide offices of Corporate Services, Workforce Services, and the Small Business Development Center. Classes may vary in length from one session to a full semester and, in most cases, are open to interested persons without regard to previous educational background and without formal admission. Traditional college credit is not granted for most of these classes; however, Continuing Education Units (CEUs) and Certificates of Completion are awarded in selected courses and programs.

The offices of Continuing Education Services, located at each campus, provide a wide range of basic skills, technical, vocational, and community service noncredit programs, courses, workshops, forums, and seminars for working professionals and the general public. These courses and programs offer opportunities for individuals to stay current in new developments in their present occupations or to further their education for new careers or new fields of interest. Each campus offers career programs in a variety of occupational areas. Continuing education programs for the general public include the Senior Education Program for adults 55 and older and College for Kids offered at all campuses. Personal enrichment courses in arts and crafts, dance, physical fitness, and more are also available.

The office of Corporate Services, located at TCC training centers in the community, works with Tarrant County employers to design and deliver contract and customized training programs to continually upgrade the skills of the current and future workforce and keep pace with ever-changing technologies. Grant-funded skills development training programs are available for qualifying businesses.

The office of Workforce Services operates a network of learning centers in the community to assist people in improving their basic reading, math and ESL skills at little or no cost to qualified adults. Grant-funded skills development training programs are available for qualifying disadvantaged, unemployed, underemployed and/or disabled adults.

The Small Business Development Center offers training and consulting services throughout the community for small business owners or potential owners to provide practical assistance and solutions to grow and prosper in today's business world. The program is part of a nationwide system that links the resources of federal, state and local government to colleges, universities and the private sector to meet the specialized and complex needs of small businesses.

Continuing Education Services is designed to provide educational opportunities to people wherever they may be located within the TCC District. Additional information or a current catalog is available at the Continuing Education Services office at any campus or off-campus location and online.

The Continuing Education Unit (CEU)

The Continuing Education Unit is a nationally recognized unit of measurement for successful participation in a noncredit continuing education program.

It is the policy of Tarrant County College to award Continuing Education Units for certain noncredit courses. TCC Continuing Education Services is responsible for assuring

that all courses for which CEUs are offered meet criteria established by the Southern Association of Colleges and Schools Commission on Colleges.

Participants in TCC's programs that award CEUs have a permanent transcript available on request. This transcript may be used for job promotion, certification and other student benefits. One CEU is defined as 10 contact hours of participation in an organized continuing education experience under reasonable sponsorship, capable direction, and quality instructors. One unit is awarded for each 10 clock hours of successful instruction participation with decimal units given for fewer than 10 hours. The following criteria are applied for the awarding of CEUs:

1. The training program is planned to meet the educational needs of the group to be served, and representatives of that group participate in the planning process.
2. A statement of purpose and goals is prepared before the program starts, including specific objectives.
3. Qualified instructors are selected to conduct the training.
4. Regular attendance or participation in the program is a minimum requirement. Alternative criteria for performance may be established.
5. An evaluation plan is developed and implemented in determining how well the program objectives are accomplished.
6. All CEUs are recorded in the TCC District computer system. These records are permanent and confidential. Transcripts are available upon request by the participant.

A brochure providing more detailed information is available at the Continuing Education Services office at any campus or off-campus location and online.

STUDENT SERVICES

Student Handbook

A Student Handbook is made available on the TCC website.

Advising and Counseling Centers

Advisement and testing information is available on each campus in the Advising and Counseling Center. At each location, a qualified staff of Counselors and Academic Advisors is available for consultation with students. Academic Advisors and Counselors are available to assist students in the selection of coursework for specific degrees and educational objectives. Academic Advisors are also available to assist students who are undecided about their academic direction and can provide information, identify appropriate options to consider, and make referrals for additional assistance.

NOTE: Effective Fall 2010, academic advisement is required for all First Time in College (FTIC) students and must be completed before registration is allowed.

Counselors can assist students in coping with such personal problems as anxiety, depression, or other issues. They can also help students investigate better ways to achieve academic success through developing effective study habits, enhancing communication skills, minimizing test anxiety, improving time management, and exploring opportunities for the further development of critical and independent thinking.

New students must complete admissions processing prior to testing and advisement. Returning and reactivation students are urged to review their academic plans and consult with their Program Coordinator, Faculty Advisor, Academic Advisor, or Counselor prior to each registration.

Transfer Centers are available on each campus to help students plan for transferring to four-year institutions. TCC staff members provide information regarding admissions requirements, programs of study, transferability of courses, and scholarships. In addition, representatives from various colleges and universities visit the TCC campus Transfer Centers on a consistent basis to meet with students who need assistance with the transfer process.

Testing Centers

A Testing Center on each campus administers placement tests, including ACCUPLACER, THEA (only offered for a cohort of students for grant purposes at Northeast and South campuses), and various departmental placement tests. Information on the Texas Success Initiative is available in the campus Testing Centers.

Testing Centers also administer the College's program of credit-by-examination (CBE), College Level Examination Program (CLEP), and interpret test scores for advanced placement (AP). Students with appropriate work experience or training are urged to contact the Testing Center to determine if credit-by-examination/experience is available and appropriate in a particular area.

Other services offered through the Testing Centers vary by campus, but usually include career development assessment for students needing assistance in choosing a major field of study or career pathway. Students should contact their campus Testing Center for additional information and appointments.

Support Services

TCC provides special assistance for students with unique personal and/or academic needs. These services are available to all students.

The Center for Academic Success on Trinity River Campus and the Campus Learning Centers on Northwest and Southeast campuses provide special assistance in computerized tutorial programs and assessment instruments. Northeast Campus offers special services through the Advising and Counseling Center.

Various campus offices, in coordination with instructional and student support services, provide assistance for all students, including first-time-in college students, to improve their opportunities for academic success. These services include counseling, mentoring, tutoring, advisement, study skill assistance, and workshops on various relevant topics.

Retention programs on all campuses are administered to help students successfully acclimate to the college environment. Students needing these services should first contact the Advising and Counseling Center on the campus attended.

Disability Support Services

In compliance with the Americans with Disabilities Act and Section 504 of the Rehabilitation Act of 1973, Disability Support Services provides equal access to College programs, services and activities for qualified students with disabilities.

Requests for accommodation are reviewed on a case-by-case basis, and are determined based on disability and the documentation provided.

For additional information and eligibility requirements regarding Disability Support Services, see the TCC website.

Health Services

The College maintains student Health Services to provide nursing intervention for students in the event of an injury or illness. Opportunities for health education, health counseling, and referral information to an appropriate health-care agency or provider are readily available through Health Services and its professional nursing staff. Students with health problems are encouraged to contact Health Services regarding any major illnesses or diseases, or to request disabled parking permits for temporary conditions. The application form (VTR-214) for permanent disabled parking is available from the county tax assessor-collector's office.

An integral part of Health Services is the promotion of a balanced lifestyle to enhance the collegiate experience. Students are encouraged to use its services, which are included in student tuition without further charge to students currently enrolled in the College. All services are confidential.

Bacterial Meningitis

Senate Bill 1107 passed by the 82nd Texas Legislature on May 6, 2011, sets the requirements for all Texas colleges and universities concerning bacterial meningitis. Further information may be obtained from the campus Registrar's Office.

An Act relating to the vaccination against bacterial meningitis of entering students at public and private or independent institutions of higher education.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF TEXAS:

SECTION 1. This Act shall be known as the Jamie Schanbaum and Nicolis Williams Act.

SECTION 2. Section 51.9192, Education Code, is amended by amending Subsections (b), (c), and (e) and adding Subsection (d-1) to read as follows:

(b) This section applies only to an entering student at an institution of higher education or private or independent institution of higher education. This section does not apply to a student of an institution who is enrolled only in online or other distance education courses or who is 30 years of age or older. For purposes of this subsection, "entering student" includes:

(1) a new student as defined by Section 51.9191; and

(2) a student who previously attended an institution of higher education or private or independent institution of higher education before January 1, 2012, and who is enrolling in the same or another institution of higher education or private or independent institution of higher education following a break in enrollment of at least one fall or spring semester.

(c) Except as provided by Subsection (d), a student to whom this section applies or a parent or guardian of the student must provide to the institution, at the time and in the manner prescribed by rules adopted by the Texas Higher Education Coordinating Board, a certificate signed by a health practitioner or an official immunization record evidencing that the student has received a bacterial meningitis vaccination dose or booster during the five-year period preceding the date established by the coordinating board under Subsection (e).

(d-1) An institution of higher education or private or independent institution of higher education shall provide, with the registration materials that the institution provides to a student to whom this section applies before the student's initial enrollment in the

institution, written notice of the right of the student or of a parent or guardian of the student to claim an exemption from the vaccination requirement in the manner prescribed by Subsection (d) and of the importance of consulting a physician about the need for immunization to prevent the disease.

(e)   The Texas Higher Education Coordinating Board, in consultation with institutions of higher education and private or independent institutions of higher education, shall adopt rules for the administration of this section, including rules establishing the date by which a student who is required to comply with Subsection (c) must have received the vaccination required by that subsection, which may not be later than the 10th day before the first day of the semester or other term in which the student initially enrolls unless the student is granted an extension by the institution as provided by the rules adopted under this subsection. The rules must authorize an institution of higher education or private or independent institution of higher education to extend the compliance date for an individual student to a date that is not later than the 10th day after the first day of the semester or other term in which the student initially enrolls.

SECTION 3. The changes in law made by this Act to Section 51.9192, Education Code, apply only to entering students enrolling in public or private or independent institutions of higher education in this state on or after January 1, 2012.

Career and Employment Services

The Office of Career and Employment Services assists students and alumni in locating employment which is compatible with their job needs and educational objectives. Current and former students seeking full-time, part-time, or temporary employment are encouraged to use this service.

The following employment services are available:
- Current job openings (both part-time and full-time, on and off campus)
- On-campus employment recruitment and employment interviews
- Information regarding career exploration, employment trends, salary scales, and labor market
- Workshops on job search topics and career decision-making, including résumé writing and interviewing techniques
- Career development assistance

TCC Police Department

The Tarrant County College Police Department is charged with the responsibility of protecting the life and property of individuals who comprise the student body, faculty and staff of the TCC community. The primary responsibilities of the TCC Police Department are to provide campus security and to provide students with a safe and secure learning environment.

The TCC Police Department is staffed with certified Texas Peace Officers, and officers are assigned to each of the College's four campuses and the May Owen District Center to enforce rules, policies and state law. Any law enforcement matter, including traffic accident investigations, is handled by the TCC Police Department. Each campus has concurrent jurisdiction with a municipal police agency that supports and backs up the TCC police.

Crimes should be reported to the Police Department by calling the central dispatcher 817-515-8911 from phones outside the College system or ext. 8911 from College phones. These numbers are answered 24 hours a day, seven days a week. All emergencies, including police matters, medical, fire, traffic accidents, and others, should be reported to

these phone numbers. When medical emergencies are life-threatening, 9-1-1 (9-911 from a campus phone) should be called first, and then the TCC Police Department should be notified at one of these numbers. 911-callers should provide the operator with the location of the emergency.

The Campus Annual Security Report may be viewed on the TCC website. A printed copy of this report also is available on request from any campus Police Department.

Parking Information

Adequate parking is available at each campus. Each student who parks a car on campus will be required to obtain a parking permit. Temporary parking permits and permits for special parking needs or circumstances are available at each campus Police Department. Permit numbers are recorded by student ID number or Social Security Number.

Persons who have obtained disabled permits from the Texas Department of Transportation are not required to have a student permit to park in parking areas designated for the disabled.

Permits must be hung from the rearview mirror with the permit front number-side facing the window. Temporary permits are placed on the lower right corner (passenger side) of the front window or placed on the dashboard on the passenger side where they can be read through the window. Permits are valid on all campuses until their expiration date.

Students are restricted to parking in the white-painted parking lanes. Safe and courteous driving is required. Parking and traffic regulations are set forth in detail in the Student Handbook and the Campus Motor Vehicle Regulations brochure, issued when permits are obtained.

Permits may be obtained in the fall and spring terms through the campus Police Departments from 8 a.m.-5 p.m. Monday-Friday, and from the Business Services Offices from 5 p.m.-7 p.m. Monday-Thursday. During summer terms, permits can be obtained from the campus Police Departments from 7:30 a.m.-6 p.m. Monday-Thursday, and from the Business Services Offices from 6 p.m.-7 p.m. Monday-Thursday.

ENROLLMENT INFORMATION

Students are encouraged to apply for admission to the College through the TCC website. Applications also may be submitted by mail to the Office of Admissions Services or in person to the campus Registrar's Office. All materials required for entrance to Tarrant County College should be on file in the Admissions Services Office prior to registration.

Entrance to TCC does not guarantee admission to a specific vocational-technical program. Students should consult the program brochure, program coordinator, campus Registrar's Office, or Advising and Counseling Center for additional information concerning specialized program requirements. Through its program of courses in developmental English and in English as a Second Language, TCC seeks to ensure each student that a deficiency in English language skills will not be an obstacle to enrollment in any educational program.

Tarrant County College reserves the right to refuse enrollment to any applicant who does not comply with College policy or procedures, or where evidence exists about any student whose enrollment would be incompatible with the aims and objectives of the College, or to any student whose presence on campus, in the judgment of the College, would not be in the best interest of the student or the College.

Right To an Academic Fresh Start

Under the provisions of the Texas Education Code, Section 51.929, a Texas resident applying for admission/reactivation to the College or to any specialized admission program is entitled to elect to have all academic coursework that was earned 10 or more years prior to the requested enrollment date ignored for enrollment purposes and GPA computation. The applicant must complete the Right to an Academic Fresh Start Agreement with the campus Registrar's Office or the Office of Admissions Services prior to registration, confirming the decision to enroll under the Academic Fresh Start statute. An applicant who makes the decision to apply under this statute may not receive any course credit for courses taken at any college or university 10 or more years prior to the starting date of the term of enrollment.

Students who were awarded Academic Fresh Start through another Texas public college or university may request TCC recognition of that agreement by completing a Right to an Academic Fresh Start agreement and presenting an official transcript from the awarding institution showing the beginning Academic Fresh Start term.

An applicant who chooses to exercise the Right to an Academic Fresh Start must meet all TCC admission/reactivation requirements and must submit official transcripts from all colleges or universities attended for credit courses.

The Right to an Academic Fresh Start can be rescinded by the student through a request made to the campus Registrar's Office or the Office of Admissions Services.

Continuing Students

Students who were enrolled at any TCC campus at any time during the last year are eligible to register for any future term UNLESS

- they have an outstanding debt to TCC; or
- they have been placed on academic suspension/dismissal; or
- they have been notified by the College about additional requirements or conditions.

Students returning to TCC after an absence of more than one year will be prompted to update demographic and academic information prior to registration for classes, and should contact the campus Registrar's Office or District Admissions Services Office if they have lived outside Texas and/or out of Tarrant County since last enrolled. Those whose residency status has changed are responsible for additional tuition charges incurred.

Conditional Admission

Conditional admission may be extended to many students allowing registration prior to completion of required documentation. However, those conditionally admitted must be aware that they may not be able to qualify for Financial Aid, Veterans' Educational Benefits, transcript evaluation/degree planning, or many other College benefits and services until all required documentation has been submitted.

In addition, required documentation may be the basis for TSI scores/status, residency determination, and course prerequisites. Most students will need to submit transcripts when applying for admission or very soon afterward. All students should seek regular admission no later than the end of their first term of TCC enrollment.

Conditional admission is not available to those students requiring Special Processing. (See #3, Special Processing, under the New Applicants section of this catalog.)

New Applicants

Students who have not previously enrolled at TCC must apply for admission to the College. Beginning in Fall 2011, First Time in College (FTIC) students will be required to submit their admissions application at least 14 calendar days prior to the start of the session to be considered for admission for that session.

1. High School/GED Graduates, home school graduates, and other nontraditional graduates who have not attended any regionally accredited college or university should submit one of the items below. Graduates who will be under age seventeen (17) when classes begin may be asked to meet additional criteria.
    - Application for admission.
    - Official high school transcript, GED certificate, or other proof of graduation.

2. Transfer Students who have attended another regionally accredited college should submit the following:
    - Application for admission.
    - Official transcript from each previously attended regionally accredited college or university.

    NOTE:
    (1) If a student's previous college was not regionally accredited, a transcript is not required; rather, a student may be asked to submit a high school transcript or diploma.
    (2) Students who hold a baccalaureate (or higher) degree will not have to present a transcript for admissions purposes, but will be asked to submit proof of degree. (Note: Transcripts may be required to establish prerequisites or for course-by-course evaluation.)
    (3) Students who are currently enrolled at another college/university may be granted conditional admission until the term ends and the official transcript is available. (See TRANSCRIPT REQUIREMENTS and TRANSCRIPT EVALUATION entries.) Transcript evaluation will be provided for each student planning to complete any college or university degree or certificate.

3. Special Processing
    - Admission by Individual Approval - Students 18 years of age or older who are no longer in high school may be admitted by Individual Approval. Testing in basic skills is required. More information is available at the campus Registrar's Office.
    - Early High School Enrollment/Dual Credit - Students enrolled in their junior year of high school who meet academic requirements may enroll for college courses prior to completion of their high school work, with the approval and recommendation of their high school. Needs-based scholarships are available for dual-credit students who meet criteria. More information is available at the campus Registrar's Office or at the campus Financial Aid Office.
    - Academic/Disciplinary Suspension - Students who have been placed on suspension by their previous college or university must submit all required documentation for admission consideration by the campus registrar. Suspended students seeking to transfer to TCC will be subject to the same academic criteria as TCC students.
    - Specialized Admission Programs - Students seeking admission to any selective admission program may be admitted to the College but will be

required to submit all required documentation prior to consideration for admission by that program.

Transcript Requirements

Each transfer applicant should arrange for an official transcript to be sent to TCC from each regionally accredited institution previously attended for credit coursework. Transcripts are considered official when they are signed by the Registrar, bear the seal of the institution, and/or are received through approved electronic transmission.

Credit for courses in which a passing grade has been earned may be transferred to Tarrant County College from colleges and universities accredited through one of the comprehensive regional accrediting associations.

Coursework cannot be transferred from institutions that are not regionally accredited as a college or university, but students who have gained proficiency through completion of coursework or other educational experiences should consult an academic advisor regarding credit by examination/credit by experience.

Students who have attended an international college or university should see the Evaluation of Foreign Credentials section in this catalog or contact the District Office of International Admissions/Services for additional information about transcripting requirements and transfer of international coursework.

Students concurrently attending TCC and any other regionally accredited college or university should submit an updated transcript from that institution at the end of each term of concurrent enrollment. Transcripts should be submitted prior to initial enrollment or as soon as possible during the first TCC term. Official transcripts are required to determine an applicant's academic prerequisites, residency status, and TSI completion. In addition, all official transcripts must be on file before students may qualify for most financial aid programs, for veterans' educational benefits, and for other College services such as transcript evaluation and degree planning.

Transcript Evaluation

Students working toward a TCC associate degree or a certificate of completion require a transcript evaluation. Evaluations should be requested online only after all transcripts are on file. Students who have completed coursework through a foreign college or university may request an evaluation through the Office of International Admissions.

Students transferring to TCC can expect that approved academic courses earned at any Texas public institution will be accepted in transfer. Students who dispute a transfer decision made by TCC should contact the District Admissions Services Office to request a review of the coursework involved.

Students planning to transfer TCC coursework to another college or university are advised to contact the transfer institution to determine its transfer policy. TCC has established transfer agreements with all area colleges and universities. Campus Advising and Counseling Centers maintain course transfer information provided by area institutions.

International Baccalaureate Diploma

Students who have received the International Baccalaureate Diploma may be eligible to receive up to 24 hours of transfer credit for courses completed with a minimum grade of 4. An official transcript must be submitted to the District Office of Academic Support Services.

Credit for Military Service

Limited credit for military service is available to students who

- Graduated from a public or private high school accredited by a generally recognized accrediting organization or a Department of Defense high school or earned a GED, and
- Were honorably discharged after serving at least two years of active service in the Armed Forces or were honorably discharged because of a disability.

Request forms are available from the campus Registrar's Office.

Students may also submit an official ACE Registry Transcript summarizing military training to the District Office of Academic Support Services for evaluation and determination of applicable credit.

International Admissions

Non-Citizens Without Visa

Non-citizen students seeking TCC admission who do not hold a temporary visa of any category are not required to meet international admission requirements.

1. Documentation of Status - A copy of USCIS form I-551/I-151 (green card/permanent resident card) or I-485 to document permanent resident or immigrant status or a copy of form I-94 to document refugee or asylee status should accompany the application.
2. Undocumented Immigrant Status - Certain immigrants who do not have an I-551/I-151 or other USCIS approval may be eligible for enrollment on the same basis as documented students. More information is available at the campus Registrar's Office or the Office of International Admissions.

International Admissions Requirements

All non-citizen applicants holding any temporary visa category issued by the United States Citizenship and Immigration Services (USCIS) must meet international admission requirements. Admission as an international student requires compliance with all requirements and procedures established for the visa category by the USCIS. Students applying for transient status or for admission while concurrently enrolled in an area college or university must contact the Office of International Admissions for specific procedures and requirements. The following must be submitted to the Office of International Admissions by the designated deadlines.

1. International Student Application.
2. Official transcript in English showing completion of high school or secondary school or official transcript(s) in English of all previously completed college coursework. NOTE: All foreign credentials submitted must be the original. If transfer credit is desired, the student must arrange for credential evaluation and pay all costs of such translation/evaluation. A list of acceptable professional evaluation services is available on request from the District Office of International Admissions. An overall grade point average of at least 2.0 is required for students transferring from a college or university within the United States.
3. Any student applying from outside the United States must take the Test of English as a Foreign Language (TOEFL) and have results with a minimum score of 550 on paper-based, 213 on computer-based, or 79 on Internet-based tests.

4. The state of Texas requires that each student complete the Texas Success Initiative (TSI) to ensure that all new-to-college students are provided (1) assessment of their readiness for freshman-level academic coursework and (2) advisement and educational support necessary to assist students who are not ready to enroll in academic coursework. TSI is designed to measure competency in reading, writing and mathematics and to indicate the need for remedial work to address deficiencies. Many transfer students also may have to meet the TSI requirements. The state-approved tests are available on each campus through the Testing Centers (either THEA or ACCUPLACER). To be considered for admission to Tarrant County College, prospective students must arrive in the United States at least two weeks before enrollment to arrange for testing. The THEA or ACCUPLACER test can be taken only at designated Texas sites, and enrollment without THEA or ACCUPLACER scores can result in administrative withdrawal from the College and/or notification to USCIS. A student on an F1 visa must pass both the reading and writing parts of the test.
5. Original financial statement documenting adequate funds to cover one year's expenses plus a bank endorsement of the availability of such funds (expenses are outlined below). Financial information must be current. All financial documents must be no more than six months old. NOTE: A USCIS form I-134 is required if the student is sponsored by someone currently residing in the United States.
6. Copies of I-94 Arrival/Departure Record form 1-20 A-B, passport, and visa.
7. A student must maintain full-time status. A student enrolled for 12 or more hours during the fall or spring term is considered a full-time student.
8. Evidence of health insurance valid through academic year.

NOTE: Students applying for admission from outside the United States may submit items 6 and 8 after acceptance into the College but prior to registration for classes.

Specialized Admissions

Occupational Programs

Program costs and/or availability of facilities make it necessary for some occupational programs to require specialized admission procedures in addition to those outlined above for general enrollment at the College. These procedures are designed to ensure fairness to each applicant in a limited enrollment program.

Applicants should obtain special admissions materials early in the calendar year. Those who are accepted are usually notified by early summer. Those who are not accepted may resubmit in subsequent years.

TCC's specialized admissions programs include:

Northeast Campus
Dental Hygiene
Emergency Medical Services
Trinity River Campus
Health Information Technology
Nursing
Physical Therapist Assistant
Radiologic Technology
Respiratory Care
Surgical Technology
Northwest Campus
Railroad Dispatcher Certificate

Criteria for admission to these programs are listed with the respective program curricula. Individuals desiring complete information on admission procedures to health professions programs should contact the Health Sciences Department on either Northeast Campus or Trinity River Campus. For Railroad Dispatcher, students should contact the Management Department on the Northwest Campus.

Some of the health occupations programs have physical requirements for admission.

Pre-Registration Testing and the Texas Success Initiative

Texas Success Initiative and Placement Testing

Texas House Bill 286 created the Texas Success Initiative (TSI) to ensure that all new-to-college students are provided (1) assessment of their readiness for freshman-level academic coursework, (2) advisement and educational support necessary to assist students who are not ready to enroll in academic coursework, and (3) evaluation to determine when they are ready to enroll in college-level coursework.

TSI measures reading, writing and mathematics skills to determine a student's readiness to enroll and perform in freshman-level academic coursework. Students are required to test and to be advised based on the results of their TSI assessment scores. Students will not be denied admission to the Tarrant County College District based on TSI or other college placement scores. However, testing is usually required prior to enrollment in classes.

Testing Centers on each campus administer tests required for the Texas Success Initiative, including ACCUPLACER and THEA (formerly known as TASP). Testing appointments may be required. A fee of $29 is required. Students should contact the campus Testing Center for additional information about placement tests, testing schedules, fees, and registration procedures.

Test scores are usually available immediately following testing. Academic advisors can assist students with score interpretation.

Placement Testing Requirements for Mathematics, English and Reading-Restricted Courses

All students, regardless of TSI status, will be required to submit appropriate test scores before enrolling in college-level mathematics, English and/or reading restricted courses. Successful completion of prerequisite courses may substitute for placement test scores. Although some students may be exempt from TSI requirements, a college-level placement test may be required to assist in course placement. Scores required for placement into college-level math courses may be higher than those required to achieve TSI-complete status. Testing requirements for specific courses are outlined in the Course Descriptions section of the Catalog. Additional information is available at the Advising and Counseling Center on any campus or from the academic department.

Developmental Studies

Students who score below specified levels in any section of the THEA, ACCUPLACER, or approved alternative test will be required to enroll in developmental studies until C or higher grades are earned in developmental courses or until the student passes a retest in the same skill area. A First Time In College (FTIC) student assessed as needing remediation in any developmental skill area is required to be continuously enrolled in at least one required developmental course until all of the required developmental courses are complete. All students must have an Academic Success Plan by

the end of their first term. More information about the Academic Success Plan is available in campus Advising and Counseling Centers.

Attendance in Developmental Courses

Students taking developmental mathematics, reading and/or writing courses are required to attend class and to keep up with course assignments. Since attendance and participation are essential to student success, the following guidelines apply:

- A student in an on-campus course who misses 15 percent of the class meetings and does not keep up with course assignments may be withdrawn at the discretion of the instructor.
- Student attendance in online courses has two requirements:
  1. Successful completion of the online course orientation, and
  2. Active participation in the course as described in the Instructor's Course Requirements (ICR).

  A student in an online course not completing the orientation and not actively participating in the course may be withdrawn at the discretion of the instructor.

Student Transition to College Success Course

Tarrant County College is committed to supporting students in meeting their educational goals by requiring a learning skills course (STSC 0111 Transition to College Success) for those First Time In College (FTIC) students who do not meet the required standards in one or more areas of a state-supported assessment test.

Texas Success Initiative Exemptions and Waivers

TSI Exemptions and Waivers apply only to TSI requirements. Documentation of eligibility for an exemption or waiver is required. Students should contact the campus Registrar for additional information about TSI requirements and restrictions and to determine specific documentation required.

Students who qualify for a TSI Exemption or Waiver are not required to test for TSI purposes or develop and follow an Academic Success Plan. However, placement tests may be required for registration in certain courses regardless of TSI status, and all course prerequisites must be met.

NOTE: Although not required by TSI, all students are encouraged to develop and follow an Academic Success Plan.

Exemptions:

1. TASP Exempt/Passed - Students who were classified TASP Exempt or TASP Passed prior to Fall 2003.
2. Degree - Students who have earned an associate or higher degree from a regionally accredited postsecondary institution or from a recognized international institution.
3. Transfer - Students whose previous Texas public college or university determined that they have met Minimum Passing Standards in Reading, Writing and/or Math are exempt in the curricular area(s) indicated but must develop and pursue a Plan for Academic Success in any remaining area(s).
4. Private or Out-of-State Transfer - Students who have earned at least 3 semester hours of college-level credit at a regionally accredited collegiate institution.
5. Score Exempt - Students who achieved certain scores on the SAT, ACT or TAKS test.

6. Military Exempt - Students who were honorably discharged, retired or released from active duty or from Texas National Guard on or after August 1, 1990.

Waivers*:

1. Certificate Waiver - Students pursuing a one-year Certificate of Completion of no more than 42 semester hours may qualify for a delay of mandatory testing.
2. Casual Student Waiver - Students who are not seeking a degree or certificate from a Texas public institution of higher education may qualify; enrollment may be restricted.
3. Military Waiver - Students serving on active duty as a member of the Armed Forces of the United States or the Texas National Guard, or serving as a member of a reserve component of the Armed Forces of the United States for at least the three-year period preceding enrollment.

*All TSI waivers must be renewed each term. All course prerequisites must be met. Placement testing will be required for enrollment in mathematics, writing or reading restricted courses.

Completing Texas Success Initiative Requirements

A status of TSI Complete or Exempt in Mathematics, Writing and Reading is required to receive any degree and some certificates of completion. To achieve this status, a student must meet <u>one</u> of the following requirements for each skill area:

Mathematics
- Earn a grade of C or better in MATH-0304 or MATH-0106
- Pass the ACCUPLACER elementary algebra test with a score of 63 or higher OR an approved alternative test with an appropriate score, or
- Earn a grade of C or higher in one of the following courses:
  MATH-1314 MATH-1316 MATH-1324 MATH-1325
  MATH-1332 MATH-1342 MATH-2412 MATH-2513
- Students with a professionally diagnosed mathematics disability may contact Disability Support Services on campus to discuss alternatives available for completion of the mathematics requirement.

Writing
- Earn a grade of C or better in ENGL-0325
- Pass the ACCUPLACER writing test with an objective score of 80 and an essay score of 5 OR pass with an essay score of 6 or better, or
- Earn a grade of C or higher in one of the following courses:
  ENGL-1301   ENGL-1302

Reading
- Earn a grade of C or better in either RDNG-0361 or RDNG-0363 and achieve an 11th grade reading level on the Nelson-Denny test
- Pass the ACCUPLACER reading test with a grade of 78 or higher, or
- Earn a grade of C or better in one of the following courses:
  ENGL-2322   ENGL-2323   ENGL-2327   ENGL-2328
  ENGL-2332   ENGL-2333   GOVT-2305   GOVT-2306
  HIST-1301   HIST-1302   PHIL-1301   PSYC-2301
  SOCI-1301

SPECIAL NOTE CONCERNING TRANSFER STUDENTS: Students transferring from a regionally accredited college or university who have completed one or more of the above designated courses with a grade of C or higher will be considered TSI-Satisfied in that curricular area. An official transcript from the transfer institution is required.

COURSE PLACEMENT GUIDE

Reading*

ACCUPLACER	THEA	COURSE PLACEMENT
0-77	0-229	**READING-0361** **A student who completes RDNG-0361 with a grade of C or higher may progress to RDNG-0363. Completing either RDNG-0361 or RDNG-0363 with a grade of C or higher and achieving the 11th grade reading level on the Nelson Denny test constitute readiness for collegiate courses.**
78	230	**COLLEGE READINESS PASSING SCORES**

Writing*

ACCUPLACER		THEA	COURSE PLACEMENT
Objective Score	Essay		A student may enroll in this course by achieving the minimum required score(s) on one of the placement tests OR earning a grade of C or better in the previous level course.
	3-4	150-219	**ENGL-0324 Developmental English**
0-45	5		**ENGL-0324 Developmental English**
46-79	5		**ENGL-0325 Developmental English**
80	5	220	**ENGL-1301 Composition I**
	6-8		**ENGL-1301 Composition I**

Mathematics*

ACCUPLACER			THEA	COURSE PLACEMENT
Arithmetic	Elementary Algebra	College Level Math	Score	A student may enroll in this course by achieving the minimum required score(s) on one of the placement tests OR earning a grade of C or higher in the previous level course.
0-54			Less than 230	**MATH-0302**
55 or greater	62 or less		Less than 230	**MATH-0304**
	63		230-269	**MATH -0350**
		55	230-269	**MATH-1332 or MATH-1342**
		64	270-300	**MATH-1314 or MATH-1324**
		75	270-300	**MATH-1350**
		86		**MATH-1316 or MATH-1325**
		92		**MATH-2412**
		103		**MATH-2513**
	63		230	**TSI completed with these scores OR a grade of C or better in MATH-0304 or MATH-0106**

*Students should consult the campus Advising and Counseling Center for more information.

Academic Advisement

Academic advisement is available to all students. Advisement and testing information is available in the Advising and Counseling Center on each campus.

Advisement is required for all First Time In College (FTIC) students and must be completed before registration is allowed. All others may self-advise but are urged to seek the assistance of trained advisors. Students should seek advisement following admission and the completion of required testing.

As one portion of TCC's advisement program, Counselors, Academic Advisors, and Faculty Advisors assist students with their programs of study. To comply with regulations of the Texas Success Initiative, all FTIC students must participate in the testing and advisement process.

Counselors or Academic Advisors provide program and course advisement for students whose educational objective includes an Associate of Arts or an Associate of Science degree and/or a university degree, and for undeclared majors. Counselors, Academic Advisors, occupational program coordinators, and/or Faculty Advisors provide program and course advisement for students seeking an Associate of Applied Science degree or a Certificate of Completion.

Program of Study (Major)

Students are urged to declare their Program of Study (Major) as early as possible in their academic career. Those who are undecided should visit with an Academic Advisor prior to the end of their first year of enrollment. A program of study may be declared or changed through WebAdvisor on the TCC website.

Registration

Access to Online Services

Access to registration and all other online services is secured by each student's User ID and self-assigned TCC password. Registration and other services are available through WebAdvisor at the TCC website. Accessing records through unauthorized User ID and password can result in disciplinary action.

Registration

Current students and applicants who have completed admission processing are eligible to register online or on site. Students should use online services for registration and tuition/fee payment.

Online Services

> The College offers many services through Web access to the College's database. Internet access is provided through on-campus computer stations located near Registrar's Offices, Learning Resource Centers, and other campus locations.
> Accessing records through unauthorized User ID and password can result in disciplinary action.

Assisted Registration

> Registration assistance is provided on each campus through the Registrar's Office and Advising and Counseling Centers.

Registration Time Assignments

> Most students are allowed to register at any time during scheduled registration periods; however, the College may assign specific registration times as needed to offer optimum system performance. Registration for all sessions will end seven days prior to the start of classes for that session. Students are encouraged

to plan early and make arrangements to register for their courses at least seven days prior to the start of their classes.

Auditing a Course

Students who have been admitted to the College may audit courses on a space-available basis. Audit registration is permitted only on a day designated during the week prior to the first class day of the session. No college credit is awarded for audited courses. Students who already have credit for a course must comply with the College's policy on repetition of courses. The cost for auditing courses is the same as registration for credit. Senior citizens (persons 65 years of age or older) are permitted to audit credit and continuing education courses without payment of tuition (unless enrolled in Senior Education Program). (See Senior Citizen Waiver information in this catalog.)

Audit students must meet the same prerequisites to enroll in a course as a credit student. However, they are not required to take tests or other examinations required of students registered for credit, and no grades are assigned for courses that are audited. Audit students are required to conform to the same conduct in the classroom and on campus as credit students.

Students already registered for credit may not change from credit to audit status during audit registration or at any time during the session. Students registered for audit may not change their enrollment to credit status during or following audit registration.

TUITION AND FEES INFORMATION

Residency Determination

The state of Texas requires that each student certify legal residence at the time of enrollment.

The student is responsible for registering under the proper residence classification. Any question concerning the right to classification as a resident of Texas or of Tarrant County should be clarified prior to enrollment at Tarrant County College.

Students needing additional information about residency determination should contact the campus Registrar's Office. For additional information on rules and regulations determining residence status, visit www.collegeforalltexans.com or the Texas Higher Education Coordinating Board www.thecb.state.tx.us.

Tuition Categories

The state of Texas has established legal guidelines to determine whether students are Legal Residents for Tuition Purposes. Residency status is determined at the time of application for admission to the College and can be updated when students meet and document their change of status. For additional information on rules and regulations determining residence status, visit "CB Rules" under the Community and Technical Colleges link on the Texas Higher Education Coordinating Board website: www.thecb.state.tx.us.

Each student is assigned to one of three tuition categories:
- In-State/In-County status is assigned to those who have lived in Texas under circumstances specified in Rules and Regulations, and who are residents of Tarrant County.
- Out-of-County status is assigned to those who qualify for In-State status, but who do not reside in Tarrant County.

- Out-of-State status is assigned to those who do not qualify for In-State status.

Appeal of Residency Determination

Students who have been classified as Out-of-County or Out-of-State may appeal that determination by first completing a new residency questionnaire and discussing their concerns with the campus Registrar.

Reclassification of Residency Status

Students who have been classified as Out-of-County should request reclassification by the Registrar's Office if they establish residence in Tarrant County; a Tarrant County address — not a post office box — must be provided. Students who have been classified as Out-of-State should request reclassification by the campus Registrar's Office when their circumstances change in such a way as to meet state requirements. A Residency Reclassification form must be completed and submitted with necessary documentation.

Tuition Waivers and Exemptions

In addition to established financial aid programs, the state of Texas and Tarrant County College offer a number of opportunities to reduce tuition.

Visit www.collegeforalltexans.com for specific requirements for each exemption or waiver. Students must submit required documentation to the Registrar's Office. Tuition must be paid by the established deadline if documentation or approval of an Exemption or Waiver is pending. Overpayments will be refunded only if documentation and approval are completed by the state-defined Official Day of Record. Students should contact the campus Registrar's Office for additional information.

Basic Peace Officer: Employed Peace Officers enrolled in Criminal Justice degree programs may qualify for an exemption of tuition and fees. Requirements and restrictions are applicable.

Blind and/or Deaf Students: Certain blind and/or deaf students who are Texas residents may qualify for an exemption of all tuition. Certification of condition and other criteria must be met.

Children of Disabled or Deceased Public Servants: Several different exemptions and waivers are available to firefighters, police officers and other public servants. Requirements, restrictions and limitations vary.

Competitive Scholarship Waiver of Out-of-State Tuition Rate: Available for nonresident or foreign students receiving competitive scholarships of $1,000 or more administered through the TCC Financial Aid Office.

Economic Diversification: Individuals and their dependents whose family has been transferred to Texas as a part of the state's economic development plan may qualify for an in-state tuition rate.

Fire Science Students: Texas residents enrolled in a TCC fire science program may be exempt from payment of tuition for up to one year.

Students in Foster Care/Adopted Students: Certain students who have been under the care of the Texas Department of Protective and Regulatory Services may be exempt from payment of tuition.

Good Neighbor Scholarship: Students from other Western Hemisphere countries (except Cuba) approved for this award by the Texas Higher Education Coordinating Board qualify for an in-state tuition rate.

Hazlewood Act: Texas veterans who joined the military from Texas or were Texas residents at the time of enlistment, who served at least 181 days on active duty status

(other than for training), and who received an honorable discharge may qualify for tuition waivers of up to 150 credit hours. The spouse/children of Texas veterans killed in action or disabled as a result of military duty may also qualify for Hazlewood Act benefits. Veterans eligible for Hazlewood Act benefits can transfer the benefits to their children, one child at a time. The child must be under 25 years of age.

Active Military and Dependents and Military Veterans: Non-Texas military personnel and/or their dependents stationed in Texas or living in Texas may qualify for an in-state tuition rate.

Veterans and/or veterans' spouses or dependent children who are 25 years of age or younger may pay in-state tuition regardless of the time spent in Texas prior to enrolling if the veteran is receiving federal educational benefits from the U.S. Department of Veterans Affairs. The veteran/spouse or child/ren must sign a letter of intent to establish Texas residence while enrolled at TCC.

Tarrant County Property Owners: Texas residents who live outside Tarrant County but own property in the county may qualify for an in-county tuition rate.

Dallas County Community College District Students: Texas resident DCCCD students enrolling in TCC programs not available to them through DCCCD may qualify for an in-county tuition rate.

University Teaching/Research Assistants: Teaching and research assistants of Texas public universities may qualify for an in-county tuition rate.

Senior Citizens: Texas resident students age 65 or older may be exempt from payment of all tuition for up to 6 hours per term and/or from payment of tuition if auditing credit course(s).

College/University Teachers and Professors: Certain teachers and professors of Texas public colleges and universities may qualify for an in-county tuition rate.

Texas High School Valedictorians: The highest-ranking graduates of high schools accredited through TEPSAC are exempt from payment of tuition for their first two terms of enrollment.

Non-Citizen Permanent Residents without INS documentation: Certain undocumented non-citizens who have resided in Texas for at least one year, who are Tarrant County residents and cannot petition for legal status, may qualify for an in-state tuition rate.

Nursing Faculty and Nursing Preceptors: Certain nursing faculty and those hospital preceptors participating in nurse training programs may qualify for tuition waiver.

Spouse or Dependent of Deceased Texas Public Servants: The spouse and dependents of a deceased Texas Public Servant killed in the line of duty on or after September 1, 2001, may qualify for an exemption of tuition and fees with a stipend to be provided for books.

Disabled Peace Officers: Peace Officers permanently disabled in the line of duty and unable to continue employment as a result of disability may qualify for an exemption of tuition and fees.

Texas Tomorrow Fund: Provides a tax-advantaged investment vehicle for college savings. The investment covers in-state tuition plus required textbooks, supplies and equipment.

Children of MIA/POWs: Dependents of MIA/POWs may qualify for an exemption of tuition and fees if they are less than 21 years of age and receive a majority of support from a parent.

Texas Higher Education Coordinating Board Reimbursed Programs

Required documentation for these programs should be submitted to the campus Business Services Office each term.

Texas Tomorrow Fund: Students who have benefits available from a contract purchased from the Texas Prepaid Higher Education Tuition Program may use these benefits toward tuition. Students should present their Texas Guaranteed Tuition Plan ID card and indicate their desire to use the plan each term to the campus Business Services Office.

Payment Methods

For the convenience of our students, several payment methods are available:

1. Credit cards: Accessing the website allows for payment by major credit card.
2. Campus Business Services Office: Payment by check, cash or credit card can be made at any campus Business Services Office.
3. FACTS Nelnet Payment Plan: TCC has contracted with Nelnet Business Solutions to provide students several convenient payment plan options. These payment plan options are in line with the provisions of Section 54.007 of the Texas Education Code. Students should enroll online by connecting to the e-cashier website through the TCC website. The cost of the program is a $25 per term nonrefundable FACTS Enrollment Fee. There is a $30 returned payment fee.
4. Third Party Sponsors: If tuition is to be paid by an agency or company, a voucher from the agency or company must be submitted to the Business Services Office by the payment deadline.

It is the student's responsibility to be aware of tuition payment due dates assigned for a term. Failure to pay tuition or to make payment arrangements by the deadline may result in students being dropped from their courses. Students should not assume that a course will be automatically dropped for nonpayment. Students are responsible for dropping any course they do not wish to be enrolled in.

NOTICE: DELINQUENT INSTALLMENT CONTRACTS, UNPAID RETURNED CHECKS, AND FINANCIAL AID CHARGEBACKS WILL BE SENT TO A THIRD-PARTY AGENCY FOR COLLECTION. THE STUDENT WILL BE RESPONSIBLE FOR ALL COLLECTION COSTS AND ATTORNEY FEES.

Tuition

All tuition is subject to change without notice. A student is not officially registered until payment has been made in full, third-party sponsorship is submitted, or a payment plan has been completed. Until all financial obligations to the College have been satisfied, students may not re-enroll or receive official transcripts or diplomas.

Tuition at Tarrant County College is as follows:

1. Legal resident of Tarrant County for tuition purposes:
   $50 per semester hour.
2. Legal resident of any other Texas county for tuition purposes:
   $73 per semester hour.
3. Legal resident of another state for tuition purposes:
   $165 per semester hour.
4. Nonresident alien for tuition purposes:
   $165 per semester hour.

Other TCC Charges

In addition to tuition, students enrolled at TCC may be required to pay one or more of the following charges as applicable:

• Private music lessons (1 semester hour).. $50
• Private music lessons (2 semester hours)...$90

- Returned check/declined credit card $15
- Promissory note transaction $25
- Promissory note late payment $25
- Replacement diplomas $30
- Liability insurance ....All nursing and allied health students
  will be required to pay a fee for liability insurance as provided by the College.
- Police and/or library fines ....As assessed
- Placement testing $29
- Other testing..As assessed
- Special trips (e.g. student field trips)..As assessed
- Special course fees ....As assessed
- ITV rental tape ....$15 per tape

Continuing Education (noncredit courses):
   See Continuing Education Catalog for specific information.

Refunds

Students officially dropping and/or withdrawing during a regular 16-week session are eligible for a refund of tuition according to the following schedule:

   Prior to the first calendar class day...100%
   During the first 15 calendar class days 70%
   During the 16th through 20th calendar class days 25%
   After the 20th calendar class day...None

Students officially dropping and/or withdrawing from a summer session are eligible for a refund of tuition and fees according to the following schedule:

   Prior to the first calendar class day 100%
   During the first five calendar class days...70%
   During the sixth and seventh calendar class days...............................25%
   After the seventh calendar class day ....None

PLEASE NOTE

For non-regular semester-length courses, students should contact the campus Business Services Office for refund schedules. The following table illustrates how refunds would be determined for non-regular length courses.

Length of Class – Term in Weeks	Last day for 70% refund	Last day for 25% 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

- Refund of tuition is subject to change by legislative and/or TCC Board of Trustees action without notice.
- Refunds are generated automatically on withdrawal. Refunds will be made to the credit card used for payment unless others forms of payment, such as check, cash or financial aid, have been made to the student's account. If there is a mixture of payment methods, the refund may be a combination of check and refund to the credit card of payment. A refund may take approximately four to six weeks to process. The refund check will be mailed to the address on file at the time of refund. For additional information, contact the campus Business Services Office.
- IMPORTANT NEWS: Financial Aid students withdrawing before the 60 percent refund point in time in the term may be required to repay funds unearned due to requirements for the return of Title IV funds.
- All tuition is subject to change without notice.
- Refund percentages are calculated/based on invoiced amounts, not payments made.
- Tuition for noncredit courses will be based on anticipated cost.
- Refund policy on noncredit courses is listed in the Continuing Education semester catalog.
- Students must be cautioned that there will be at least a 30 percent penalty for partial and/or complete withdrawals after classes begin.

STUDENTS WHO HAVE OPTED FOR THE INSTALLMENT PAYMENT PLAN AND ARE DROPPING CLASSES AND/OR WITHDRAWING ARE RESPONSIBLE FOR THE FULL PAYMENT OF THE PROMISSORY NOTE. **REFUNDS WILL BE APPLIED TO ANY BALANCE DUE ON THE NOTE.**

STUDENT FINANCIAL AID SERVICES
TCC awards more than $92 million each year in financial aid.

Introduction

There are many financial aid programs for students taking credit courses at TCC, including grants, scholarships, college work-study and loans. The application used to determine eligibility for most financial aid programs is the Free Application for Federal Student Aid (FAFSA).

FAFSA applications are normally available in January. Students are encouraged to apply for financial aid as soon as possible after the availability date, since funds for programs are limited and application delays are sometimes incurred because of data verification regulations. A student may apply electronically at www.fasfa.gov.

A priority funding deadline of May 1 has been established for supplemental grant funding that is available. All required applications must be submitted at least three weeks prior to the beginning of a registration period for funds to be available prior to classes beginning. If this is not the case, the student must be prepared to pay using personal funds.

General Eligibility Requirements

Students applying for federal and state funds must meet certain eligibility requirements. To receive aid, the following general eligibility requirements must be met:

- Enroll, or be accepted for enrollment, in an associate degree or credit certificate program (at least 3 hours of enrollment for most programs).

- Maintain satisfactory academic progress (SAP), including at least a 2.0 cumulative GPA, completing 67 percent of courses and completing the academic program within 150 percent of the published program length. Students should contact the Financial Aid Office for a complete copy of the SAP.
- Be either a U.S. citizen or eligible non-citizen.
- Register with Selective Service if you are male.
- Do not owe a refund on a federal loan or be in default on a federal educational loan.
- Have a high school diploma or GED or make minimum scores on a Department of Education-approved Ability to Benefit Exam.
- Have a valid Social Security Number.
- Not be incarcerated in a federal or state prison.
- For most programs, demonstrate need as determined by the FAFSA.

Required Applications

In addition to meeting the general eligibility requirements, approximately 30 percent of applicants are selected for a review in a process called verification. Students selected for verification will be required to submit a signed copy of their 2010 tax return (including parents' form if applicable) and an institutional verification form (IVF).

Approximately two to four weeks after receiving the FAFSA results and any other required documents, the Student Financial Aid Services Office will email students an award notice detailing their eligibility for aid. The award letter will include details on award types, award amounts, and disbursement procedures. Award recipients may view their awards online in WebAdvisor.

Student Financial Aid Services Notices

Financial aid eligibility will be re-evaluated when enrollment changes occur through the official date of record of the latest course to start in a term. Students who drop hours during this time may have to repay part of their aid. In addition, students who withdraw from ALL classes prior to the 60 percent point of a term may have to repay funds to TCC and the federal government. Students should consult with the Student Financial Aid Services Office prior to making a change in course load.

Students are advised that all Student Financial Aid Services communication is sent to the student's CampusCruiser (CC) email account. CC should be checked regularly for communications from Student Financial Aid Services.

The campus Student Financial Aid Services Office should also be consulted for information about scholarship programs.

Stars of Tomorrow Program

The Tarrant County College "Stars of Tomorrow" Program provides financial awards that more than cover the cost of tuition at TCC for Tarrant County high school graduates who are in the top half of their class and whose families meet specified income thresholds. Students in public and private schools as well as those who are home-schooled and meet the program's criteria are eligible. Funding for the program is a "package" comprised of state and federal financial aid and income from the earnings of an endowment derived from the leasing of mineral rights and other private sources. Complete eligibility requirements and application instructions are available at the TCC website.

Contact Information

More information on financial aid programs at TCC is available online at the TCC website, through email at fahelp@tccd.edu or at the campus Student Financial Aid Services Office. In compliance with the Higher Education Amendments of 1976, student consumer information is available on request from the Financial Aid Office.

Veterans' Educational Benefits

All persons who will be using educational assistance from the Department of Veterans Affairs (DVA) while enrolled at TCC should contact the campus Registrar's Office as soon as initial admission requirements are met. Questions regarding eligibility and certification of DVA educational benefits should be directed to the Registrar's Office. The Registrar's Office will answer questions about Veteran's Educational Benefits, certify enrollment to the DVA, and monitor degree plans and academic progress. Veterans can apply for a determination of eligibility for DVA educational programs (GI Bill) by accessing the DVA website and by completing and submitting appropriate forms at the Registrar's Office. Veterans/spouses/dependents receiving GI Bill benefits are responsible for complying with DVA regulations.

Certification of VA benefits will be processed when all required documents are provided. DVA benefits are paid based on enrollment (full time, ¾ time, or at least ½ time). The Department of Veterans Affairs and TCC consider 12 hours to be full time during the fall and spring 16-week sessions and 4 hours to be full time during each summer session. Enrollment as a less than ½ time student will result in no monthly benefits being paid except for reimbursement of tuition charged to the VA student. Chapter 33 veterans enrolling in 100 percent distance learning classes will receive only 50 percent of the national housing allowance average.

Veterans must complete and submit an information sheet for DVA benefits each term. The form serves as the veteran's authorization to submit an enrollment certification to the Department of Veterans Affairs.

ACADEMIC INFORMATION

Terms and Special Sessions

Tarrant County College provides all credit coursework in semester units (semester credit hours). The standard fall and spring terms include 16 weeks of instruction. In addition, each term usually includes two sessions of 8 weeks each and a Weekend College of 13-16 weeks. A Maymester is held before summer classes and a Wintermester before the beginning of spring classes.

The summer term includes two special sessions of 6 weeks each and a variety of other sessions varying from 3 weeks to 12 weeks. State regulations currently limit the amount of credit that may be earned during summer terms.

Withdrawal dates, refund dates, and other calendar events for each session are included in the TCC master calendar. Dates for special sessions are individually assigned. Students whose course enrollment determines eligibility for financial aid benefits, veterans' educational benefits, insurance coverage, tuition reimbursement, or any other entitlement should check with their benefit program to determine the effect of special session enrollment. Students may not withdraw from any course after the withdrawal date for the session.

Detailed information about special session offerings is included in the Schedule of Classes on the TCC website. Students should check with the department office of the course involved or with the campus Registrar's Office for additional information about particular special session offerings.

Schedule of Classes

A Schedule of Classes for credit courses is published for each fall, spring and summer term. The Schedules of Classes for both credit and noncredit are available online through the TCC website. The College reserves the right to add, change or cancel any course section as necessary.

Attendance Policy

Regular and punctual class attendance is expected at Tarrant County College. In case of absence, it is the student's responsibility to contact the instructor. Students absent on official school business are entitled to make up coursework missed. In all other cases, the instructor will judge whether the student will be permitted to make up work and will decide on the time and nature of the makeup. However, the student is expressly responsible for any work missed regardless of the cause of the absence. The student must discuss such work with the instructor and should do so immediately on returning to school. Communication between the student and instructor is most important, and it is the student's responsibility to initiate such communication. If students do not appear at the prearranged time for makeup work, they forfeit their rights for further makeup of that work.

Class attendance and participation are essential to student success. Effective with the Spring 2012 term, the following attendance guidelines will apply:

- A student in an on-campus course missing a cumulative of 15 percent of the class meetings **and** not keeping up with the course assignments will be dropped **at the discretion of the instructor**.

- A student in an online course is required to successfully complete the online course orientation **and** actively participate in the course as described in the Instructor's Course Requirements (ICRs). A student not meeting these requirements will be dropped **at the discretion of the instructor**.

See also section on Attendance in Developmental Studies.

Classification of Students

A student who has earned fewer than 30 semester hours of college credit is classified as a freshman. A student who has earned 30 or more semester hours of credit is classified as a sophomore.

Course Credit (Semester Credit Hour)

The semester credit hour is the unit of credit at Tarrant County College and is generally defined as the amount of credit given for one classroom hour per week for a 16-week semester. Courses requiring laboratory and many special purpose courses may require additional contact hours per credit hour.

Course Load

A student enrolled for 12 or more semester hours during the fall or spring term is considered a full-time student. Special sessions of less than term length comprise a

proportionate share of full-time or part-time enrollment. Students enrolled in a special session should consult the campus Registrar to determine how special sessions might affect their enrollment status.

Twelve hours constitute a full-time course load during a 16 week session of the fall or spring term. No student will be permitted to enroll for six academic courses or for more than 18 semester hours without permission of the Vice President for Teaching and Learning Services. The College reserves the right to limit the course load of any student.

The allowed student course load during each 6 week session of the summer term is 7 semester hours. The maximum load, with permission of the Vice President of Teaching and Learning Services, shall not exceed 8 semester hours for one 6 week session. The maximum credit that a student can earn during the entire summer term shall not exceed the number of weeks of the student's summer enrollment, up to 17 semester hours. The Maymester is considered part of the summer term.

Students who are employed or who plan to seek employment are cautioned to consider carefully the amount of college work they attempt in relation to the number of hours they are employed each week and to the student and community activities in which they participate. Students who overload themselves in these areas are likely to have scholastic difficulties. A good rule to remember is that two hours of preparation outside class are necessary for each hour of class time.

Transcript of TCC Student Record

The transcript of college work is an official copy of the student's permanent record bearing the College seal and official signature. A student may request a transcript online through the TCC website, in person at the campus Registrar's Office, or by mail. All outstanding debts to the College must be paid to the Business Services Office before the student's record will be released.

Unless a transcript is requested in person, the student should allow a period of one week for delivery of the transcript after the request has been submitted or after the close of a session for which grades are being requested.

If students desire official transcripts of work completed at other institutions, they must request those transcripts from the original institutions.

Grades and Grade Points

The grading system used at Tarrant County College follows:

A (excellent), B (good), C (average), D (passing)*, F (failure),
I (incomplete), W (approved withdrawal), CR (credit)
NC (noncredit), AU (audit), WA (audit withdrawal)
*Grade of D is not considered passing in developmental courses.

The GPA (grade point average) is found by dividing the total number of grade points by the total number of semester hours attempted. Grades of CR, NC, W, I, AU, or WA or grades earned for work in developmental courses do not affect the grade point average.

A: 4 points per semester hour
B: 3 points per semester hour
C: 2 points per semester hour
D: 1 point per semester hour
F: 0 points per semester hour

Grade Review and Change of Grade

Students may petition for review of a grade within 30 calendar days after the first class day of the next long session by following these procedures:

1. The student must inform the instructor and the department chairperson in writing of the reason for review of grade;
2. The instructor should then examine the records and submit his/her recommendations through administrative channels to the campus Vice President for Teaching and Learning Services who will make the final decision regarding the grade and notify the student. If the instructor recommends not changing the grade, it should be explained in a memo. If the decision is to change the grade, the instructor should submit a completed "Change of Grade Request" form. In all cases, copies of the student's written appeal, attendance records, and grade report (with legend) must be attached. The process of review of grade must be completed within 30 calendar days after receipt by the instructor of the written appeal.
3. If the instructor is no longer employed, the department chairperson will then examine the instructor's records, make a recommendation, and send the recommendation through the proper channels to the campus Vice President for Teaching and Learning Services who will notify the student of the decision.

Incomplete Grades

The conditional grade of I may be given to a student only with the approval of the instructor and the campus Vice President for Teaching and Learning Services. Normally, a grade of I will not be assigned more than two weeks prior to final examinations. It is the responsibility of the student to arrange with the instructor for completion of the course when an I is given. Spring and Summer Term Incompletes must be completed no later than October 1 of the following Fall Term. Fall Term Incompletes must be completed no later than February 15 of the following Spring Term. After the deadline, Incomplete grades that have not been changed will automatically change to a grade of F.

Repeating a Course

Only courses specifically designated in this catalog as repeatable for credit may be taken more than two times.

All courses that receive assigned grades appear as part of the student's permanent academic record. When courses are repeated, both grades are included in the GPA for courses taken and repeated prior to fall 1996; only the latest grade is included in the GPA when a course was repeated between fall 1996 and summer 2003. Effective with the fall 2003 semester, when a course is repeated, only the highest grade earned is used to calculate the student's cumulative grade point average.

Credit-by-Examination or Experience

Students who believe that they already possess the knowledge and/or skills taught in certain courses or programs offered by the College may challenge these for credit-by-examination or experience. A request to challenge a course for credit may be based on superior high school achievement in the subject and/or appropriate work or other learning experiences. Credit-by-examination is not available in all courses offered by the College. Credit awarded through credit-by-examination/experience does not satisfy residency requirement toward graduation. Students should direct inquiries concerning courses that

may be challenged for credit-by-examination to the campus Testing Center and/or the department involved.

The successful completion of any credit-by-examination or experience will result in a grade of credit (CR), which will not affect the grade point average. A student must be enrolled at least one full term at TCC and be enrolled at TCC during the term for which credit is posted on the permanent record.

A posting fee of $25 per course is charged to record the course on the student's permanent transcript. Students may apply a maximum of 18 hours of credit toward any TCC degree in any combination of credit-by- examination/experience.

Testing and/or posting fees are charged in accordance with schedules set by TCC policy and/or commercial testing agencies.

Drops or Withdrawals

A student may withdraw from a course or from the College with a grade of W any time on or before the end of the 12th class week in the fall or spring 16-week session. Courses dropped before the Official Day of Record (census date) of the courses are deleted from the student's enrollment, do not earn any grade, and do not appear on the student's transcript. Courses dropped after the official Day of Record will receive a grade and will appear on the student's transcript. However, a student whose first college enrollment occurred in Fall 2007 or later may not drop more than six courses during their cumulative enrollment at any Texas public college or university (see Drop Six Regulation).

A student enrolled in special session courses should be advised of the withdrawal deadline by the instructor or contact the campus Registrar.

A student may withdraw from one or more courses prior to the withdrawal date through the TCC website or by contacting the campus Registrar's Office in person. A student who withdraws online is responsible for verifying that the electronic drop processing was completed by printing a copy of the unofficial transcript or student schedule showing the grade of W. Until a student is officially withdrawn, the student remains on the class roll and may receive a grade of F for the course.

A student unable to withdraw in person or electronically may mail or fax a letter to the campus Registrar specifying the class or classes for which withdrawal is requested. The letter must include the student's name, ID number, date, and class information along with the student's signature. If mailed, the request for withdrawal must be postmarked on or before the last day to drop a class, or if faxed, the date shown on the fax confirmation must be on or before the last day to drop a class.

Drop Six Regulation

Section 51.907 of the Texas Education Code, enacted by the State of Texas, Spring 2007, applies to students who enroll in a Texas public institution of higher education as a first-time freshman in Fall 2007 or later.

The College may not permit a student to drop more than six courses, including those taken at another Texas public institution of higher education. All courses dropped after the Official Day of Record are included in the six-course limit unless (1) the student withdraws from all courses or (2) the drop is authorized by an appropriate College official as an approved Drop Exception.

Drop Exceptions can be approved if the student documents that the drop was required for one of the following reasons and that for that reason the student could not satisfactorily complete the course:

1. The student, a member of the student's family, or a person of equally important relationship to the student experiences a serious illness or other debilitating condition;
2. The student becomes responsible for the care of a sick, injured, or needy person;
3. There is a death in the student's family or of a non-family member of equally important relationship;
4. The student or a member of the student's family, or a person of equally important relationship to the student, is called to active duty service as a member of the Texas National Guard or the Armed Forces of the United States;
5. There is a change of the student's work schedule that is beyond the student's control;
6. The course is dropped while the student is still in high school;
7. The College determines that there is other good cause for the student to drop the course.

Students may request a Drop Exception online at the TCC website.

Enrollment and drop activities of students affected by this legislation will be monitored. Those who drop six or more courses without an approved Drop Exception will incur registration and drop restrictions during all subsequent terms and may incur other enrollment limitations or requirements.

TCC students liable under this legislation who plan to attend another Texas public college or university should determine that institution's policies and penalties for dropping courses and for approving Drop Exceptions.

Final Examinations

At the end of each term, TCC publishes a special schedule for final examinations. The schedule allows a two-hour time period for the final activity of the course.

A student who must be absent from a final examination should petition the campus Vice President for Teaching and Learning Services for permission to postpone the examination. A student absent without permission from a final examination will be graded zero on the examination. Postponed final examinations must be taken within 30 days from the beginning of the next long term.

Other examinations will be scheduled during the course of the term at the discretion of the instructor. Makeup of a test other than the final examination will be at the discretion of the instructor if a student is absent on the day of the test.

Deans' List

The Deans' List includes those students who have completed 12 or more college-level semester hours of work for the term with a grade point average of 3.5 or higher. The Honors List includes those students who have completed 12 or more college-level semester hours for the term and with a grade point average of 3.0 to 3.49. The Merit List includes students who have completed fewer than 12 college-level semester hours in each of two consecutive terms, whose enrollment totals no fewer than 18 hours for the two terms, and whose grade point average for the two terms is 3.5 or higher.

Academic Standing

Academic standing is based on a student's Grade Point Average (GPA) and determines the student's eligibility for many benefits and/or whether they may continue their enrollment. It is the responsibility of the student to determine whether they are on

good standing, probation, suspension or dismissal. At the end of each term, an academic standing is determined based on grades earned for that term.

Good Standing – A student is considered to be in Good Standing when a cumulative GPA of 2.0 or higher is maintained.

Academic Probation – A student who fails to maintain a cumulative GPA of 2.0 or higher is placed on Academic Probation. The student may continue to enroll while on probation unless/until a less than 2.0 term GPA is earned.

Academic Suspension I – A student on academic probation who becomes ineligible to re-enroll is suspended from the College for not less than one long semester (the next fall or spring term; to include summer). As an option, the student may request an Academic Recovery Program that allows the student to re-enroll with limited coursework, commit to sessions with an on-campus counselor, and develop an action plan. After a student has served the first suspension, the student may continue to re-enroll by maintaining a term GPA of 2.0 or greater. A student returning following Suspension I must consult with an on-campus counselor and remain on Suspension I until cumulative GPA reaches "good standing" status.

Academic Suspension II – A student who does not meet the required standard for a second time and incurs a second academic suspension will be suspended for a period of one long semester (including summer). Prior to readmission, the student must consult with an on-campus counselor to obtain permission for readmission and have records reactivated by the campus Registrar. Conditions of readmissions may include special requirements or restrictions. After counseling, the student may be readmitted, but remains on Suspension II until the cumulative GPA improves to "good standing".

Academic Dismissal – A student readmitted after the second suspension must maintain a term GPA of 2.0 or higher or be placed on Academic Dismissal. A student on Academic Dismissal must remain out of TCC for a minimum of one calendar year (12 months). At the end of the initial dismissal period the student can petition for readmission through the Registrar's Office and will be directed through appropriate campus channels for review. Conditions of readmissions may include special requirements and/or restrictions.

A returning Academic Dismissal student must a) make an appointment with the campus Vice President for Teaching and Learning Services for readmission approval, b) consult with an on-campus counselor for development of an Academic Recovery plan, and c) see the campus Registrar for reactivation.

Transfer to TCC Following Suspension at Another College/University: A student who has been placed on Academic Suspension or Dismissal by another college or university must meet the same criteria as TCC students. Depending on the circumstances of the suspension the counselor, Registrar, or Vice President of Teaching and Learning Services may require an interview and/or may direct the applicant for additional review through campus channels. Conditions of admission may include special requirements and/or restrictions.

EDUCATIONAL PROGRAMS

Developmental Studies

Tarrant County College considers the provision of a comprehensive program of developmental studies to be an integral part of its mission. Mandatory placement testing in the basic skills of reading, writing, and mathematics identifies students who are

performing below college level; a range of developmental courses in each of the three areas allows students to address and correct their deficiencies.

Developmental courses do not transfer as college credit to other colleges and universities, do not count as credit toward graduation requirements, and are not included in the calculation of the grade point average.

Placement in developmental courses is based on placement scores and, in some instances, on scores on other departmental tests. Additional information about state mandates is available at any campus Advising and Counseling Center.

The following courses listed in the TCC Catalog are developmental:

ENGL   0324 Writing Techniques I
ENGL   0325 Writing Techniques II
ESOL   All English for Speakers of Other Languages (ESOL) courses are developmental. After completion students should test for placement into appropriate course levels.
MATH 0101 Pre-Algebra Part One
MATH 0102 Pre-Algebra Part Two
MATH 0103 Pre-Algebra Part Three
MATH 0104 Beginning Algebra Part One
MATH 0105 Beginning Algebra Part Two
MATH 0106 Beginning Algebra Part Three
MATH 0107 Intermediate Algebra Part One
MATH 0108 Intermediate Algebra Part Two
MATH 0109 Intermediate Algebra Part Three
MATH 0302 Pre-Algebra
MATH 0304 Beginning Algebra
MATH 0350 Intermediate Algebra
RDNG 0160 College Study Skills
RDNG 0361 Reading Techniques I
RDNG 0363 Reading Techniques II
STSC   0111 Transition to College Success

Transfer Dispute Resolution

The Texas Higher Education Coordinating Board intends that approved academic coursework transfer between Texas public institutions, provided that (1) courses are within approved transfer curriculum of the declared major field and (2) published transfer policies are met. Texas public institutions are required to notify students if approved academic coursework earned at another institution will not transfer.

If an academic course or any course with a Texas Common Course Number is not accepted in transfer by another Texas public college or university, students can request that TCC submit a Transfer Dispute Form to the receiving institution. Transfer Dispute Forms are available through the District Records Office. The form must be completed within 15 days from the date the student is notified of the non-transfer. If the College cannot identify an appropriate reason for the course not transferring, the form will be forwarded to the receiving institution and/or to the Texas Higher Education Coordinating Board for resolution.

Graduate Guarantee Program

Transfer Guarantee

Tarrant County College guarantees to its Associate of Arts students who have met the requirements for the degree that course credits will transfer to other public-supported Texas colleges or universities provided the following conditions are met:

1. Transferability means acceptance of credit toward a specific major and degree at a specific institution.
2. Limitations on number of credits accepted in transfer, grades required, relevant grade point average, and duration of transferability apply as stated in the general undergraduate catalog of the receiving institution.
3. Transferability refers to courses in a written degree plan filed in a student's file in the appropriate office at TCC.
4. Only college-level courses with Community College General Academic Course Guide Manual approved numbers are included in this guarantee.

If all the above conditions are met and courses are not accepted by a receiving institution in transfer, the student must notify the District Office of Admissions Services at TCC within 10 days of notice of transfer credit denial so the Transfer Dispute Resolution process can be initiated.

If course denial is not resolved, TCC will allow the student to take tuition-free alternate courses, semester hour for semester hour, which are acceptable to the receiving institution within a one-year period from granting of a degree at TCC. The graduate is responsible for payment of any fees, books or other course-related expenses associated with the alternate course or courses.

Guarantee for Job Competency

If a recipient of an Associate of Applied Science Degree or Certificate of Completion is judged by an employer to be lacking in technical skills identified as exit competencies for a specific degree program, the graduate will be provided up to 12 tuition-free credit hours of additional skill training by TCC under the conditions of the guarantee policy. Special conditions which apply to the guarantee include the following:

1. The graduate must have earned the Associate of Applied Science Degree or Certificate of Completion in a technical, vocational, or occupational program identified in the College Catalog.
2. The graduate must have completed requirements for the Associate of Applied Science Degree or Certificate of Completion with the TCC system, with a minimum 75 percent of credits earned at TCC, and must have completed the degree or certificate within a five-year time span.
3. Graduates must be employed full time in an area directly related to the area of program concentration as certified by the appropriate dean or other administrator.
4. Employment must commence within six months of graduation.
5. The employer must certify in writing that the employee is lacking entry-level skills identified by TCC as program completion requirements and must specify the areas of deficiency within 90 days of the graduate's initial employment.
6. The employer, graduate, campus Vice President for Teaching and Learning Services, and appropriate faculty member will develop a written educational plan for retraining.

7. Retraining will be limited to 12 credit hours related to the identified skill deficiency and to those classes regularly scheduled during the period covered by the retraining plan.
8. All retraining must be completed within a calendar year from the time the educational plan is agreed upon.
9. The graduate and/or employer is responsible for the cost of books, insurance, uniforms, fees, and other course-related expenses.
10. 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 TCC for skill deficiencies shall be limited to 12 credit hours of tuition-free education under the conditions described above. Activation of the "Graduate Guarantee Program" may be initiated by the graduate by contacting the appropriate dean or other administrator within 90 days of the graduate's initial employment.

GRADUATION INFORMATION

Tarrant County College offers four associate degrees and a number of certificates of completion. A student may graduate by completing the catalog degree or certificate requirements in effect at the time of first enrollment at TCC, or those listed in a later Catalog, provided the requirements are met not later than five years from the date of the Catalog selected, the degree or certificate program and requisite courses are still being offered, and mandates of regulating agencies are satisfied. A student must be enrolled during the catalog year selected for graduation.

General Requirements for an **Associate Degree**
1. A minimum of 25 percent of the courses required for the degree must be earned in residence at TCC.
2. A minimum cumulative grade point average of 2.0 is required for all TCC courses.
3. A minimum grade point average of 2.0 is required for all courses presented for graduation.
4. All requirements of the degree must be satisfactorily completed.
5. Texas Success Initiative (TSI) requirements must be satisfactorily completed.
6. Formal application for graduation must be submitted prior to the published deadline.
7. All financial obligations to the College must be met.
8. Students applying to receive a subsequent two-year degree must complete an additional 15 hours in residence applicable to that degree.

General Requirements for a **Certificate of Completion**
1. A minimum of 25 percent of the courses required for the certificate must be earned in residence at TCC.
2. A minimum grade point average of 2.0 is required for all courses presented for graduation.
3. All requirements of the certificate must be satisfactorily completed.
4. Texas Success Initiative (TSI) requirements must be satisfactorily completed ONLY for TSI-liable certificates.
5. Formal application for graduation must be submitted prior to the published deadline.
6. All financial obligations to the College must be met.

Application for Graduation

To be considered a candidate for a degree or certificate, the student must submit an online application for graduation through WebAdvisor before the date specified in the TCC Master Calendar. The candidate must indicate the Catalog year of his or her degree plan.

A student should contact the campus Advising and Counseling Center with any questions about the degree plan and/or graduation requirements.

Only one formal graduation exercise is held each year at Tarrant County College – a formal commencement at the end of the spring term. A student completing graduation requirements during the summer or fall term may choose to participate in the formal commencement exercise conducted at the conclusion of the following spring term.

Graduation Honors

Graduation honors will be awarded to students completing the Associate of Arts, the Associate of Arts in Teaching, the Associate of Science, or the Associate of Applied Science Degree with a superior cumulative grade point average (GPA). The following classifications of honors will be recognized during the graduation exercises and will appear on the student's transcript of college record.

Designation	Cumulative GPA
Highest Honors	4.0
High Honors	3.75 to 3.99
Honors	3.5 to 3.74

The GPA computation to determine honors counts only TCC courses and includes all coursework during the term of graduation. AA, AS, AAT and AAS degree recipients must complete at least 30 semester hours in residence at TCC to qualify for honors.

Graduation with Distinction is awarded to students earning a Certificate of Completion and a GPA of 3.5 or higher. This honors designation will be recognized during the graduation exercises and will appear on the student's transcript of college record. The GPA computation to determine Graduation with Distinction counts only TCC courses and includes all coursework during the term of graduation. Certificate recipients must complete at least 15 semester hours in residence at TCC to qualify for Graduation with Distinction.

DEGREE AND CERTIFICATE PROGRAM INFORMATION

Programs of Instruction

TCC offers three degrees for students whose goal is to transfer to an upper level college or university to complete a baccalaureate or higher degree:

Associate of Arts (AA) – A collegiate degree providing liberal arts curricula in university parallel and the pre-professional areas related to the baccalaureate degree. This is not a degree with a declared major but is a program of first and second year courses which will generally transfer to a four year college or university. The Cornerstone Program is an honors Associate of Arts Degree.

Associate of Arts in Teaching (AAT) – A collegiate degree that will satisfy the lower division requirements for a bachelor's degree leading to initial teacher certification.

Associate of Science (AS) – A collegiate degree related to the baccalaureate degree providing curricula in university parallel and pre-professional areas to students with a major in a science or a related discipline.

In addition, degrees and certificates are offered in occupational/technical areas:

Associate of Applied Science (AAS) – A degree in a workforce field designed for students who wish to begin a career after completing a program of study.

Certificate of Completion (CRT) – A program of study that varies in length and is designed to prepare the student for occupational employment. It is awarded upon completion of specific courses that have been industry validated and sequenced for the purpose of developing and upgrading skills in an occupation.

Transfer to a College/University

Students attending Tarrant County College for one or two years then transferring to a senior college or university should have no difficulty transferring credits if these steps are followed:

- Select a major field of study and a senior college or university that offers a bachelor's degree in that field.
- Review the institution's college catalog and identify the freshman and sophomore courses suggested.
- See a TCC academic advisor or counselor for help in selecting the TCC courses that correspond to the requirements of the senior college.
- Complete the TCC courses with a grade point average of at least 2.0.
- Apply for admission to the senior college early in the last semester at TCC.
- Request the TCC Registrar's Office to send an official transcript to the transfer institution.

Core Curriculum

In order to provide a solid foundation for students' education and to make transfers between colleges and universities as smooth and seamless as possible, each state-supported institution of higher education in Texas has adopted a core curriculum of 42 to 48 semester credit hours. By completing these core curriculum courses, students achieve college-level competence in the skills that are fundamental to all disciplines of learning:

1. *Critical Thinking Skills* to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information.

2. *Communication Skills* to include effective written, oral, and visual communication.

3. *Empirical and Quantative Skills* to include applications of scientific and mathematical concepts.

4. *Teamwork* to include the ability to consider different points of view and to work effectively with others to support a shared purpose or goal.

5. *Social Responsibility* to include intercultural competency, civic knowledge, and the ability to engage effectively in regional, national, and global communities.

6. *Personal Responsibility* to include the ability to connect choices, actions, and consequences to ethical decision-making.

Components of the core curriculum can be transferred in a block from Tarrant County College District to another Texas public college or university to be substituted for the corresponding core curriculum of the receiving institution.

TCC designates core curriculum courses completed by a student on the official transcript. If a student satisfies all component areas, the statement "Texas Core Curriculum Completed (Month/Year)" will appear on the transcript. Students who transfer without completing the core curriculum receive academic credit for each of the courses they successfully completed in the TCC core curriculum.

The Associate of Arts, Associate of Arts in Teaching, and Associate of Science degrees include courses drawn from the core curriculum. A student concurrently enrolled at more than one institution of higher education shall follow the core curriculum requirements in effect for the institution at which the student is classified as degree-seeking.

Tarrant County College District has established a 46-semester credit-hour core curriculum listed below.

COMMUNICATION (CODE 010)
Composition – Two 3-credit hour courses 6
    ENGL 1301 English Composition I and
    ENGL 1302 English Composition II or
    ENGL 2311 Technical Writing

COMMUNICATION (CODE 011)
Speech and Communication Skills – One 3-credit hour course 3
    SPCH 1311 Fundamentals of Speech Communications
    SPCH 1315 Public Speaking
    SPCH 1321 Business and Professional Communication

MATHEMATICS (CODE 020)
College-level algebra, equivalent, or above – One 3-credit hour course 3
    MATH 1314 Functional Approach to College Algebra
    MATH 1316 Functional Approach to College Trigonometry
    MATH 1324 College Algebra with Business Applications
    MATH 1325 Mathematics of Business Analysis
    MATH 1332 Survey of Mathematics
    MATH 1342 Elementary Statistics
    MATH 2412 Precalculus
    MATH 2513 Calculus with Analytic Geometry I

NATURAL SCIENCES (CODE 030)
Two 4-credit hour laboratory science courses 8

BIOL 1406 Biology for Science Majors I
BIOL 1407 Biology for Science Majors II
BIOL 1408 General College Biology I
BIOL 1409 General College Biology II
BIOL 2401 Anatomy and Physiology I
BIOL 2402 Anatomy and Physiology II
BIOL 2420 Microbiology
BIOL 2421 General Microbiology
CHEM 1405 Fundamentals of Chemistry I
CHEM 1406 Essentials of General and Biological Chemistry
CHEM 1407 Fundamentals of Chemistry II
CHEM 1411 General Chemistry I
CHEM 1412 General Chemistry II
CHEM 2423 Organic Chemistry I
CHEM 2425 Organic Chemistry II
GEOL 1401 Introduction to Earth Science or
GEOL 1403 General Geology I
GEOL 1404 General Geology II
GEOL 1405 Environmental Geology
GEOL 1445 Introduction to Ocean Science
GEOL 2407 Geological Field Methods
PHYS 1401 College Physics I
PHYS 1402 College Physics II
PHYS 1403 Stars and Galaxies
PHYS 1404 Solar Systems
PHYS 1415 Physical Science I
PHYS 2425 University Physics I
PHYS 2426 University Physics II

VISUAL AND PERFORMING ARTS (CODE 050)
One 3-credit hour course 3
    ARTS 1301 Art Appreciation
    ARTS 1303 Art History Survey I
    ARTS 1311 Design I
    ARTS 1316 Drawing I
    ARTS 2316 Painting I
    ARTS 2346 Ceramics I
    ARTS 2347 Ceramics II
    ARTS 2356 Photography I
    COMM 2366 Film Appreciation
    DANC 1341 Ballet I
    DANC 1345 Modern Dance I
    DANC 2303 Dance Appreciation
    DRAM 1310 Theatre Appreciation
    DRAM 1351 Acting I
    DRAM 2366 Film Appreciation
    HUMA 1315 Fine Arts Appreciation
    MUSI 1301 Music Reading
    MUSI 1306 Music Appreciation
    MUSI 1308 Music Literature I

HUMANITIES (CODE 040)
One 3-credit hour course 3

ENGL 2307 Creative Writing I
ENGL 2322 British Literature to 1800
ENGL 2323 British Literature Since 1800
ENGL 2327 American Literature to 1865
ENGL 2328 American Literature Since 1865
ENGL 2332 World Literature to 1650
ENGL 2333 World Literature Since 1650
FREN 2311 Intermediate French I
FREN 2312 Intermediate French II
GERM 2311 Intermediate German I
GERM 2312 Intermediate German II
HIST 2311 Western Civilization to 1660
HIST 2312 Western Civilization Since 1660
HIST 2321 World Civilization I
HIST 2322 World Civilization II
HUMA 1301 Introduction to the Humanities
PHIL 1301 Introduction to Philosophy
PHIL 1304 Great Religions of The World
PHIL 2303 Logic
PHIL 2306 Ethics
PHIL 2316 History of Classical and Modern Philosophy
SPAN 2311 Intermediate Spanish I
SPAN 2312 Intermediate Spanish II

HISTORY (CODE 060)
Two 3-credit hour courses 6
HIST 1301 United States History to 1876
HIST 1302 United States History Since 1876
HIST 2301 History of Texas

POLITICAL SCIENCE (CODE 070)
U.S. and Texas – Two 3-credit hour courses 6
GOVT 2305 United States Government
GOVT 2306 Texas State and Local Government

SOCIAL AND BEHAVIORAL SCIENCE (CODE 080)
One 3-credit hour course 3
ANTH 2346 Introduction to Anthropology
ECON 2301 Principles of Macroeconomics
ECON 2302 Principles of Microeconomics
GEOG 1301 Elements of Physical Geography
GEOG 1302 Introduction to Human and Cultural Geography
GEOG 1303 World Geography
PSYC 2301 Introduction to Psychology
SOCI 1301 Introduction to Sociology

INSTITUTIONALLY DESIGNATED OPTION(CODE 090)
Computer Literacy - One 4-credit hour course 4
BCIS 1405 Business Computer Applications
COSC 1401 Introduction to Computing
Health and Wellness – One 1-credit hour course 1
PHED 1164 Concepts of Physical Activity

TOTAL SEMESTER HOURS: 46

The Associate of Arts Degree

While this suggested curricula will satisfy the requirements of most senior institutions, it is the students' responsibility to identify as early as possible the institution to which they will transfer and to ascertain the specific requirements of that institution for the freshman and sophomore year. Each student's curriculum should be planned by the student and a counselor or academic advisor with a specific four-year institution in mind.

Bachelor's degrees awarded by most senior colleges and universities require 120 semester hours, or approximately four years of study. The Associate of Arts degree certifies completion of the first two years of study, or a minimum of 64 semester hours.

Associate of Arts
AART.D001.UG • All Campuses

COMPOSITION (Two 3-credit hour course)...6
　　ENGL 1301 <u>and</u> ENGL 1302 or ENGL 2311

SPEECH AND COMMUNICATION SKILLS (One 3-credit hour course) 3
　　SPCH 1311　　SPCH 1315　　SPCH 1321

MATHEMATICS (One 3-credit hour course)..3

MATH 1314	MATH 1316	MATH 1324	MATH 1325
MATH 1332	MATH 1342	MATH 2412	MATH 2513

NATURAL SCIENCES (Two 4-credit hour laboratory science courses)..................8

BIOL 1406	BIOL 1407	BIOL 1408	BIOL 1409
BIOL 2401	BIOL 2402	BIOL 2420	BIOL 2421
CHEM 1405	CHEM 1406	CHEM 1407	CHEM 1411
CHEM 1412	CHEM 2423	CHEM 2425	GEOL 1401
GEOL 1403	GEOL 1404	GEOL 1405	GEOL 1445
GEOL 2407	PHYS 1401	PHYS 1402	PHYS 1403
PHYS 1404	PHYS 1415	PHYS 2425	PHYS 2426

VISUAL AND PERFORMING ARTS (One 3-credit hour course)....................................3

ARTS 1301	ARTS 1303	ARTS 1311	ARTS 1316
ARTS 2316	ARTS 2346	ARTS 2347	ARTS 2356
COMM 2366	DANC 1341	DANC 1345	DANC 2303
DRAM 1310	DRAM 1351	DRAM 2366	HUMA 1315
MUSI 1301	MUSI 1306	MUSI 1308	

HUMANITIES (One 3-credit hour course) 3

ENGL 2307	ENGL 2322	ENGL 2323	ENGL 2327
ENGL 2328	ENGL 2332	ENGL 2333	FREN 2311
FREN 2312	GERM 2311	GERM 2312	HIST 2311
HIST 2312	HIST 2321	HIST 2322	HUMA1301
PHIL 1301	PHIL 1304	PHIL 2303	PHIL 2306
PHIL 2316	SPAN 2311	SPAN 2312	

HISTORY (Two 3-credit hour courses) 6

HIST 1301	HIST 1302	HIST 2301

POLITICAL SCIENCE (Two 3-credit hour courses) 6
　　GOVT 2305　　GOVT 2306

SOCIAL OR BEHAVIORAL SCIENCE (One 3-credit hour course) 3

ANTH 2346	ECON 2301	ECON 2302	GEOG 1301
GEOG 1302	GEOG 1303	PSYC 2301	SOCI 1301

COMPUTER LITERACY (One 4-credit hour course) 4
　　BCIS 1405　　COSC 1401

HEALTH AND WELLNESS (One 1-credit hour course)...1
　　PHED 1164

ELECTIVES
  Additional courses to complete 64 credit hours…………………………………………18
    (Developmental courses cannot be used to fulfill a degree requirement.)
                                                        TOTAL SEMESTER HOURS 64

The Associate of Arts Degree – Cornerstone Honors Program#

The Cornerstone Honors Program provides honors courses and an honors degree for a wide range of students. This degree increases opportunities for scholarships at four-year institutions.

To take honors courses and/or to seek the honors degree, a student must qualify by one of these standards:

- Be a top 10% high school graduate,
- Have a cumulative high school GPA of 3.5 or higher on a 4-point scale,
- Have an ACT score of 25 (composite) or higher,
- Have an SAT score of 1100 (combined critical reading and math) or higher,
- Have a TCC GPA of 3.5 or higher over a minimum of 12 semester hours excluding developmental courses, or
- Provide evidence of outstanding leadership ability and/or community service.

To apply, qualified students must submit the following:
- An honors application and two teacher recommendations, forms for which can be obtained from any participating TCC campus or online.
- A 200- to 500-word essay about a personal, local or national issue or about a significant person, experience, achievement or goal.
- An official high school or college transcript.

In order to graduate with an Associate of Arts Cornerstone Honors Degree, students complete 22 honors level core curriculum hours designated below with a minimum grade point average of 3.0 (B average).

Associate of Arts – Cornerstone
AART.DN02.UG • Northeast Campus

AART.DW02.UG • Northwest Campus

COMPOSITION (Two 3-credit hour courses) 6
    ENGL 1301 and ENGL 1302 or ENGL 2311
SPEECH AND COMMUNICATION SKILLS (One 3-credit hour course) 3
    Taken on an honors level
    SPCH 1311
MATHEMATICS (One 3-credit hour course)…………….………………………….3

MATH 1314	MATH 1316	MATH 1324	MATH 1325
MATH 1332	MATH 1342	MATH 2412	MATH 2513

NATURAL SCIENCES (Two 4-credit hour laboratory science courses)……………….8

BIOL 1406	BIOL 1407	BIOL 1408	BIOL 1409
BIOL 2401	BIOL 2402	BIOL 2420	BIOL 2421
CHEM 1405	CHEM 1406	CHEM 1407	CHEM 1411
CHEM 1412	CHEM 2423	CHEM 2425	GEOL 1401
GEOL 1403	GEOL 1404	GEOL 1405	GEOL 1445
GEOL 2407	PHYS 1401	PHYS 1402	PHYS 1403
PHYS 1404	PHYS 1415	PHYS 2425	PHYS 2426

VISUAL AND PERFORMING ARTS (One 3-credit hour course)....................................3

Taken on an honors level
HUMA 1315
HUMANITIES (One 3-credit hour course) 3
Taken on an honors level
PHIL 2316
HISTORY (Two 3-credit hour courses) 6
Taken on an honors level
HIST 1301   HIST 1302
POLITICAL SCIENCE (Two 3-credit hour courses) 6
GOVT 2305   GOVT 2306
SOCIAL OR BEHAVIORAL SCIENCE (One 3-credit hour course) 3
Taken on an honors level
PSYC 2301
COMPUTER LITERACY (One 4-credit hour course) ………………………………4
Taken on an honors level
 BCIS 1405
HEALTH AND WELLNESS (One 1-credit hour course)................................1
PHED 1164
ELECTIVES
 Additional courses to complete 64 credit hours………………………………..18
 (Developmental courses cannot be used to fulfill a degree requirement.)
TOTAL SEMESTER HOURS 64

The Associate of Arts in Teaching Degree

TCC offers three Associate of Arts in Teaching (AAT) Degrees with specializations that are approved by the Texas Higher Education Coordinating Board. Each AAT requires a general education foundation and a specialization. Completion of the any AAT meets institution and state requirements for core curriculum.

A grade of C or better is required for all Education, Speech, and English courses. A grade point average of 2.75 is required for graduation.

Associate of Arts in Teaching
AATE.D003.UG • Early Childhood through Grade 6 •Northeast and South Campuses Only
AATE.D004.UG • Grades 4-8 and Early Childhood through Grade 12 Special Education •
    Northeast and South Campuses Only
AATE.D005.UG • Grades 8-12 and Early Childhood through Grade 12 Other than Special
    Education • Northeast and South Campuses Only

GENERAL EDUCATION FOUNDATION
(Required for each AAT degree)
COMPOSITION (Two 3-credit hour courses) 6
ENGL 1301 <u>and</u> ENGL 1302 or ENGL 2311
SPEECH AND COMMUNICATION SKILLS (One 3-credit hour course) 3
SPCH 1311   SPCH 1315   SPCH 1321
HISTORY (Two 3-credit hour courses) 6
HIST 1301   HIST 1302   HIST 2301
POLITICAL SCIENCE (Two 3-credit hour courses) 6
GOVT 2305   GOVT 2306

SOCIAL OR BEHAVIORAL SCIENCE (One 3-credit hour course) 3
    ANTH 2346   ECON 2301   ECON 2302   GEOG 1301
    GEOG 1302   GEOG 1303   PSYC 2301   SOCI 1301
HEALTH AND WELLNESS (One 1-credit hour course) ………………….………… 1
    PHED 1164
COMPUTER LITERACY (One 4-credit hour course) …..……………………….……4
    BCIS 1405   COSC 1401
SCIENCE
 (Two 4-credit hour Laboratory Science courses)…..…………………………..……..8
    BIOL 1406   BIOL 1407   BIOL 1408   BIOL 1409   BIOL 2401
    BIOL 2402   BIOL 2420   BIOL 2421   CHEM 1405   CHEM 1406
    CHEM 1407   CHEM 1411   CHEM 1412   CHEM 2423   CHEM 2425
    GEOL 1401   GEOL 1403   GEOL 1404   GEOL 1405   GEOL 1445
    GEOL 2407   PHYS 1401   PHYS 1402   PHYS 1403   PHYS 1404
    PHYS 1415   PHYS 2425   PHYS 2426
VISUAL AND PERFORMING ARTS (One 3-credit hour course)...................................3
    ARTS 1301   ARTS 1303   ARTS 1311   ARTS 1316   ARTS 2316
    ARTS 2346   ARTS 2347   ARTS 2356   COMM 2366   DANC 1341
    DANC 1345   DANC 2303   DRAM 1310   DRAM 1351   DRAM 2366
    HUMA 1315   MUSI 1301   MUSI 1306   MUSI 1308
HUMANITIES (One 3-credit hour course) 3
    ENGL 2307   ENGL 2322   ENGL 2323   ENGL 2327   ENGL 2328
    ENGL 2332   ENGL 2333   FREN 2311   FREN 2312   GERM 2311
    GERM 2312   HIST 2311   HIST 2312   HIST 2321   HIST 2322
    HUMA 1301   PHIL 1301   PHIL 1304   PHIL 2303   PHIL 2306
    PHIL 2316   SPAN 2311   SPAN 2312

<div align="right">

TOTAL FOUNDATION HOURS: 43

</div>

SPECIALIZATIONS

EARLY CHILDHOOD THROUGH GRADE 6
EDUCATION (Two 3-credit hour courses) …………………………………………... 6
    EDUC 1301   EDUC 2301
MATHEMATICS (Three 3-credit hour courses)…………………………….…………9
    MATH 1314   MATH 1350   MATH 1351
SCIENCE (One additional 3-credit hour or 4-credit hour course)………….…….…… 3
    BIOL, CHEM, GEOL or PHYS

<div align="right">

TOTAL DEGREE HOURS: 61

</div>

GRADES 4 - 8 AND EARLY CHILDHOOD THROUGH GRADE 12 SPECIAL EDUCATION
EDUCATION (Two 3-credit hour courses) …………………………………………... 6
    EDUC 1301   EDUC 2301
MATHEMATICS (Three 3-credit hour courses)…………………………….…………9
    MATH 1314   MATH 1350   MATH 1351
SCIENCE (One additional 3-credit hour or 4-credit hour course)………….…….…..3
    BIOL, CHEM, GEOL or PHYS

<div align="right">

TOTAL DEGREE HOURS: 61

</div>

GRADES 8-12 AND EARLY CHILDHOOD THROUGH GRADE 12 OTHER THAN SPECIAL EDUCATION

EDUCATION (Two 3-credit hour courses) …………………………………………….. 6
    EDUC 1301   EDUC 2301

MATHEMATICS (One 3-credit hour course) …………………………………………3
    MATH 1314   MATH 1316   MATH 1324   MATH 1325   MATH 1332
    MATH 1342   MATH 2412   MATH 2315   MATH 2414 MATH 2513

ACADEMIC ELECTIVES
Electives should be selected to coordinate with content area teaching field...............9
    (Developmental courses may not be used to fulfill a degree requirement.)

<div align="right">TOTAL DEGREE HOURS: 61</div>

The Associate of Science Degree

While this suggested course satisfies the requirements of most senior institutions, it is the student's responsibility to identify his or her transfer institution to determine specific requirements for the freshman and sophomore years.

Associate of Science
ASCI.D001.UG • All Campuses

COMPOSITION (Two 3-credit hour courses) 6
    ENGL 1301 <u>and</u> ENGL 1302 or ENGL 2311

SPEECH AND COMMUNICATION SKILLS (One 3-credit hour course) 3
    SPCH 1311   SPCH 1315   SPCH 1321

MATHEMATICS (One 3-credit hour course) …………………………………………… 3
    MATH 1314   MATH 1316   MATH 2412   MATH 2513

NATURAL SCIENCES (Two 4-credit hour laboratory science courses) ……………… 8
    BIOL 1406   BIOL 1407   BIOL 1411
    CHEM 1411   CHEM 1412   CHEM 2423   CHEM 2425
    GEOL 1403   GEOL 1404
    PHYS 1401   PHYS 1402   PHYS 2425   PHYS 2426
    [Note: Any science can be taken but the two courses must be of the same series.]

VISUAL AND PERFORMING ARTS (One 3-credit hour course) 3
    ARTS 1301   ARTS 1303   ARTS 1311   ARTS 1316
    ARTS 2316   ARTS 2346   ARTS 2347   ARTS 2356
    COMM 2366   DANC 1341   DANC 1345   DANC 2303
    DRAM 1310   DRAM 1351   DRAM 2366   HUMA 1315
    MUSI 1301   MUSI 1306   MUSI 1308

HUMANITIES (One 3-credit hour course) 3
    ENGL 2307   ENGL 2322   ENGL 2323   ENGL 2327
    ENGL 2328   ENGL 2332   ENGL 2333   FREN 2311
    FREN 2312   GERM 2311   GERM 2312   HIST 2311
    HIST 2321   HIST 2322   HIST 2312   HUMA1301
    PHIL 1301   PHIL 1304   PHIL 2303   PHIL 2306
    PHIL 2316   SPAN 2311   SPAN 2312

HISTORY (Two 3-credit hour courses) 6
    HIST 1301   HIST 1302   HIST 2301

POLITICAL SCIENCE (Two 3-credit hour courses) 6
    GOVT 2305   GOVT 2306

SOCIAL OR BEHAVIORAL SCIENCE (One 3-credit hour course) 3
    ANTH 2346   ECON 2301   ECON 2302   GEOG 1301
    GEOG 1302   GEOG 1303   PSYC 2301   SOCI 1301

COMPUTER LITERACY (One 4-credit hour course) ………………………………… 4
    COSC 1401

HEALTH AND WELLNESS (One 1-credit hour course) 1
    PHED 1164

ELECTIVES

 Additional courses to complete 64 credit hours 18
  (Developmental courses cannot be used to fulfill a degree requirement.)

 Elective courses must be selected from the following if not taken as part of the preceding core. Science courses must be taken as two courses in a sequence:

Biology
BIOL 1406 and BIOL 1407
BIOL 1411 and BIOL 2421
BIOL 2316
Computer Science
COSC 1420
COSC 1436
COSC 1437
COSC 2425
COSC 2436
Geology
GEOL-1403
GEOL-1404
Physics
PHYS 1401 and PHYS 1402
PHYS 2425 and PHYS 2426

Chemistry
CHEM 1411 and CHEM 1412
CHEM 2423 and CHEM 2425

Engineering
ENGR 1201
ENGR 1304
ENGR 1307
ENGR 2301
ENGR 2302
ENGR 2305
ENGR 2432
Mathematics
MATH 2315
MATH 2318
MATH 2320
MATH 2414
MATH 2421
MATH 2513

TOTAL SEMESTER HOURS: 64

Fields of Study

Senate Bill 148 of the 75th Texas Legislature (1997) mandated Field of Study curricula. The Field of Study curricula, along with core curricula, are intended to facilitate transferability of courses among Texas public colleges and universities. All public four-year institutions are required to accept Coordinating Board approved Field of Study courses in fulfillment of lower-division requirements for bachelor's degrees in majors that correspond to the Field of Study.

Business

Core Curriculum plus Field of Study for Business is designed for students seeking a bachelor's degree with a major in business or a related discipline.

The following set of courses is the Tarrant County College implementation of the Business Field of Study. These courses are fully transferable to other Texas public colleges and universities and are applicable to bachelor's degrees with majors in business, including all business specializations. Fields of Study are valid only when no course substitutions are made.

Students should consult an advisor regarding transfer to a specific college or university.

CORE CURRICULUM COURSES
Select courses from the Core Curriculum   Semester Credit Hours: 39-45

BUSINESS FIELD OF STUDY

Accounting	ACCT 2301	Principles of Financial Accounting
	ACCT 2302	Principles of Managerial Accounting
Economics	ECON 2301	Principles of Macroeconomics*
	ECON 2302	Principles of Microeconomics*
Mathematics	MATH 1325	Mathematics of Business Analysis*
Computer Skills	BCIS 1405	Business Computer Applications*
Speech	SPCH 1321	Business and Professional Communication*

Semester Credit Hours: 22

ELECTIVE CREDIT
Required additional hours for Associate of Arts Degree: 0-3
(Developmental courses may not be used to fulfill this requirement.)
TOTAL SEMESTER HOURS: 64-67

* Fulfills a TCC Core Curriculum requirement.

Computer Science

Core Curriculum plus Field of Study for Computer Science is designed for students seeking a bachelor's degree with a major in computer science.

The Computer Science Field of Study Curriculum is designed to apply to the bachelor's degree of computer science but may also be applied to the Bachelor of Arts or other baccalaureate-level computer science degrees as deemed appropriate by the awarding institution. The Field of Study curriculum is furthermore intended to serve as a guide for community and technical colleges in structuring a transfer curriculum in computer science. Fields of Study are valid only when no course substitutions are made.

Students should consult an advisor regarding transfer to a specific college or university.

CORE CURRICULUM COURSES
Select courses from the Core Curriculum   Semester Credit Hours: 34

COMPUTER SCIENCE FIELD OF STUDY*

Computer Science	COSC 1436	Programming Fundamentals I**
	COSC 1437	Programming Fundamentals II**
	COSC 2425	Computer Organization and Machine Language***
	COSC 2436	Programming Fundamentals III
Mathematics	MATH 2513	Calculus with Analytic Geometry I****
	MATH 2414	Calculus with Analytic Geometry II
Physics	PHYS 2425	University Physics I****
	PHYS 2426	University Physics II****

Semester Credit Hours: 33

TOTAL SEMESTER HOURS: 67

* It is recommended that students complete the math sequence, physics sequence, and computer science sequence at the same institution to reduce the likelihood of potential gaps in curriculum.

** COSC 1436 and COSC 1437 are preparatory and sequential in nature. Not all courses are required for the Computer Science major at all universities, but may apply to general degree requirements.
1. COSC 1436 is not part of the Computer Science major requirements at The University of Texas at Austin, The University of Texas at Arlington, The University of Texas at Dallas, or Texas A&M University.
2. COSC 1437 is not part of the Computer Science major requirements at The University of Texas at Austin.

Preparatory courses such as COSC 1436 and COSC 1437 will assist students who need additional background but do not apply toward the Computer Science major requirements.

*** COSC 2425 is not part of the Computer Science major requirements at The University of Texas at Austin or Texas A&M University but may be applied to general degree requirements.

**** *Fulfills a TCC Core Curriculum requirement.*

Engineering

The Engineering Field of Study Curriculum is designed to apply to the bachelor's degree of Engineering. The Field of Study curriculum is furthermore intended to serve as a guide for community and technical colleges in structuring a transfer curriculum in Engineering. Fields of Study are valid only when no course substitutions are made.

Students should consult an advisor regarding transfer to a specific college or university.

CORE CURRICULUM COURSES
    Select courses from the Core Curriculum   Semester Credit Hours: 35

ENGINEERING FIELD OF STUDY
    Required Mathematics
                    MATH 2513   Calculus with Analytical Geometry II*

    Engineering   ENGR 1201   Introduction to Engineering
                    ENGR 1304   Engineering Graphics
                    ENGR 2301   Mechanics I
                    ENGR 2302   Mechanics II
                    ENGR 2305   Circuit Analysis
                    ENGR 2432   Mechanics of Materials

    Mathematics   MATH 2414   Calculus with Analytical Geometry II
                    MATH 2315   Calculus with Analytical Geometry III
                    MATH 2320   Introduction to Differential Equations
                    MATH 2318   Linear Algebra
                    MATH 2421   Differential Equations and Linear Algebra

    Physics   PHYS 2425   University Physics I*
                    PHYS 2426   University Physics II*

                            TOTAL SEMESTER HOURS: 64

Fulfills a TCC Core Curriculum requirement.

Journalism and Mass Communication

Core Curriculum plus Field of Study for Journalism/Mass Communication is designed for students seeking a bachelor's degree with a major in Journalism/Mass Communication.

The following set of courses is designed to apply to the bachelor's degree of Journalism/Mass Communication but may also be applied to the Bachelor of Arts or other baccalaureate-level Journalism/Mass Communication degrees as deemed appropriate by the awarding institution. The Field of Study curriculum is furthermore intended to serve as a guide for community and technical colleges in structuring a transfer curriculum in Journalism/Mass Communication. Fields of Study are valid only when no course substitutions are made.

Students should consult an advisor regarding transfer to a specific college or university.

Core Curriculum Courses
 Select courses from the Core Curriculum   Semester Credit Hours: 39-46

Historical/Theoretical/Analytical
 Communication   COMM 1307 Introduction to Mass Communication
                   COMM 2311 Reporting I
                   COMM 1335 Survey of Radio and Television
                                      Semester Credit Hours: 6-9
Writing/Performance/Production
 Communication   COMM 2305 Editing and Layout
                   COMM 2311 Reporting I
                   COMM 2315 Reporting II
                   COMM 1316 Studies in Contemporary Photography
                   COMM 2332 Radio and Television News
                   COMM 2339 Writing for Radio, Television and Film
                                      Semester Credit Hours: 3-9
Elective Credit Courses
                                      Semester Credit Hours: 1

                                      Total Semester Hours: 64

Music

Core Curriculum plus Field of Study for Music designed for students seeking a bachelor's degree with a major in music.

The Field of Study Curriculum is designed to apply to the bachelor's degree of music but may also be applied to the Bachelor of Arts or other baccalaureate-level music degrees as deemed appropriate by the awarding institution. The Field of Study curriculum is furthermore intended to serve as a guide for community and technical colleges in structuring a transfer curriculum in music. Fields of Study are valid only when no course substitutions are made.

Students should consult an advisor regarding transfer to a specific college or university.

CORE CURRICULUM COURSES
Select courses from the Core Curriculum   Semester Credit Hours: 46

MUSIC FIELD OF STUDY

Ensemble	MUEN 12xx	Ensemble
	MUEN 22xx	Ensemble
Applied Music	MUAP 1291	Applied Music I
	MUAP 1292	Applied Music II
	MUAP 2291	Applied Music III
Theory	MUSI 1211	Music Theory I
	MUSI 1212	Music Theory II
	MUSI 1216	Ear Training I
	MUSI 1217	Ear Training II
	MUSI 2216	Ear Training II
	MUSI 2217	Ear Training IV
	MUSI 2211	Music Theory III
	MUSI 2212	Music Theory IV
Music Literature	MUSI 1308	Music Literature I*

Semester Credit Hours: 26-29

Total Semester Hours: 71-72

Fulfills a TCC Core Curriculum requirement.

Radio and Television Broadcasting and Broadcast Journalism

Core Curriculum plus Field of Study for Radio and Television Broadcasting and Broadcast Journalism is designed for students seeking a bachelor's degree with a major in Radio and Television Broadcasting and Broadcast Journalism.

The following set of courses is designed to apply to the bachelor's degree of Radio and Television Broadcasting and Broadcast Journalism but may also be applied to the Bachelor of Arts or other baccalaureate-level Radio and Television Broadcasting and Broadcast Journalism degrees as deemed appropriate by the awarding institution. The Field of Study curriculum is furthermore intended to serve as a guide for community and technical colleges in structuring a transfer curriculum in Radio and Television Broadcasting and Broadcast Journalism. Fields of Study are valid only when no course substitutions are made.

Students should consult an advisor regarding transfer to a specific college or university.

CORE CURRICULUM COURSES
Select courses from the Core Curriculum   Semester Credit Hours: 39-46

HISTORICAL/THEORETICAL/ANALYTICAL
Communication   COMM 1307 Introduction to Mass Communication
                   COMM 1335 Survey of Radio and Television
                                        Semester Credit Hours: 6-9
WRITING/PERFORMANCE/PRODUCTION
Communication   COMM 1337 Television Production II
                   COMM 2303 Audio/Radio Production
                   COMM 2311 Reporting I
                   COMM 2315 Reporting II
                   COMM 2331 Television Production II
                   COMM 2332 Radio and Television News
                   COMM 2339 Writing for Radio, Television and Film

ELECTIVE CREDIT COURSES
                                        Semester Credit Hours: 1

                                        Total Semester Credit Hours: 64

General Speech and Communication

The following set of courses is designed to apply to the bachelor's degree of General Communication, Communication Studies, Speech Communication, Speech and Rhetorical Studies, and/or Organizational Communication but may also be applied to the Bachelor of Arts or other baccalaureate-level General Communication and Communication Studies, Speech Communication, Speech and Rhetorical Studies, and/or Organizational Communication degrees as deemed appropriate by the awarding institution. The Field of Study curriculum is furthermore intended to serve as a guide for community and technical colleges in structuring a transfer curriculum in General Communication, Communication Studies, Speech Communication, Speech and Rhetorical Studies, and/or Organizational Communication. Fields of Study are valid only when no course substitutions are made.

Students should consult an advisor regarding transfer to a specific college or university.

CORE CURRICULUM COURSES
Select courses from the Core Curriculum   Semester Credit Hours: 39-46

HISTORICAL/THEORETICAL/ANALYTICAL
Communication	SPCH 2333	Discussion and Small Group Communication
	SPCH 1318	Interpersonal Communication
	SPCH 1311	Fundamentals of Speech Communication*

Semester Credit Hours: 6-9

WRITING/PERFORMANCE/PRODUCTION
Communication	SPCH 1321	Business and Professional Communication*
	SPCH 2341	Oral Interpretation
	SPCH 1315	Public Speaking
	SPCH 1342	Voice and Diction

Semester Credit Hours: 12

ELECTIVE CREDIT COURSES

Semester Credit Hours: 1

Total Semester Credit Hours: 64

Fulfills a TCC Core Curriculum Requirement

The Associate of Applied Science Degree

The Associate of Applied Science Degree Program offers many unique curricula designed for students majoring in such fields as business administration and management, horticulture, industrial education, technical education, public services, health occupations, and human services. These curricula are designed to enable the graduate to enter an occupation with a marketable skill, an acceptable level of competency, and the ability to communicate intelligently. The curricula provide highly specialized courses to develop technical skill and general education courses to enable students to be effective members of society. Several AAS degree programs provide a foundation for transfer to a four-year institution offering Bachelor of Science degrees in occupational programs.

The Associate of Applied Science Degree is awarded for the completion of each of the following degree programs:

Accounting — Information Management (SO)
Airframe Maintenance and Electronics Technology (NW)
Architectural Technology (SE)
Automotive Collision Repair (SO)
Automotive Service Technology (SO)
Aviation Maintenance Technology (NW)
Business Administration
- Accounting Assistant (NE NW SE)
- Administrative Professional (SO)
- Business (NE NW SO SE TR)
- Fashion Merchandising (NE)
- Management (NE SO SE)
- Marketing (TR)
- Postal Service Administration (NW)
- Railroad Dispatcher (NW)
- Small Business Management (NW)
- Software Applications (SO)
Child Development (NE)
Computer-Aided Drafting and Design Technology
- Building Technology (SO)
- Civil Technology (SO)
- Manufacturing Technology (SO)
Construction Management (SE)
Criminal Justice (NW)
Culinary Arts (SE)
Dental Hygiene (NE)#
Dietetic Technician (SE)
Electronics Technology
- Computer Hardware (SO)
- Electronics and Telecommunications (SO)
- Engineering Technology (SO)
- Oil and Gas Production (SO)
- Renewable Energy (SO)
- Robotics and Automation (SO)
Emergency Medical Services (NE)#
Fire Investigation Technology (NW)
Fire Protection Technology (NW)

Geographic Information Systems (SE)
Graphic Communication (NE)
Health Information Technology (TR)#
Heating, Air Conditioning, and Refrigeration Technology (SO)
Horticulture (NW)
Hotel and Restaurant Administration (SE)
Information Technology
- Convergence Technologies (NE)
- Game and Simulation Programming (SO)
- Network Support (NE NW SO SE)
- Programming (NE NW SO SE TR)
- Security (NE NW SO SE)
- Web and Internet Services (NE SE TR)
Library Technician (TR)
Mental Health - Clinical and Counseling Psychology (NE)
Nursing (TR)#
Occupational Health and Safety Technology (NW)
Occupational Safety and Environmental Technology (NW)
Paralegal Studies (NE)
Physical Therapist Assistant (TR)#
Radio and Television Broadcasting (NE)
Radiologic Technology (TR)#
Real Estate (NE)
Respiratory Care (TR)#
Sign Language Interpreting (TR)
Welding Technology (SO)

Certificates of Completion

In addition to the associate degree programs, TCC offers certificate programs designed to meet specific needs of the community. These programs are normally one year in length. Upon completion of the prescribed courses, the student receives a Certificate of Completion.

A certificate is awarded for the completion of each of the following programs:
Architectural Technology
- Architectural Paraprofessional (SE)
- Advanced Architectural Technical Skills Enhancement – Green Building Performance (SE)
- Architectural CAD Operator (SE)
Automotive Collision Repair
- Automotive Metal Repair (SO)
- Automotive Refinishing (SO)
Automotive Service Technology
- Engine Analysis Technician (SO)
- Heavy Line Technician (SO)
Aviation Maintenance
- Airframe (NW)*
- Powerplant (NW)*
- Aircraft Electronics Line Maintenance (NW)
Business Administration
- Accounting Assistant I (NE NW SO SE)

- Accounting Assistant II (NE NW SO SE)
- Administrative Professional (SO)
- Business (NE NW SO SE TR)
- Fashion Merchandising (NE)
- Management (NE SO SE)
- Marketing (TR)
- Postal Service Administration (NW)
- Railroad Dispatcher (NW)
- Small Business Management (NW)
- Software Applications (SO)

Child Development
- Child Care Administration (NE)*
- Preschool Child Care Provider (NE)
- School Age Provider (NE)
- CDA Certificate (NE)

Computer-Aided Drafting and Design Technology
- Building Technology (SO)
- Civil Technology (SO)
- Manufacturing Technology (SO)

Construction Management (SE)
- Construction Inspection Technician (SE)
- Construction Management (SE)
- Construction Technology (SE)
- Interior Construction Design (SE)

Criminal Justice
- Basic Peace Officer Certification (NW)#
- Security Management (NW)

Culinary Arts
- Food Service Supervision (SE)
- Culinary Nutrition (SE)

Dietetics Technician
- Dietetics I (SE)*
- Child Nutrition Systems (SE)
- Dietary Manager (SE)

Electronics Technology
- Computer Maintenance (SO)
- Electronics Technology (SO)
- Electronics Engineering Technology (SO)
- Mechatronics Technician (SO)
- Oil and Gas Production Technology (SO)
- Renewable Energy Technology (SO)

Emergency Medical Services
- Emergency Medical Technician (NE)#
- Paramedic Program (NE)#

Fire Protection Technology
- Basic Fire Fighter Certification (NW)#

Geographic Information Systems
- Geographic Information Systems (SE)
- Geographic Information Systems Programmer (SE)
- Geographic Information Systems Skills Enhancement (SE)

Graphic Communication
- Computer Graphics (NE)

Heating, Air Conditioning, and Refrigeration Technology
- Installation Technician (SO)
- Service Technician (SO)

Horticulture
- Horticulture (NW)

Hotel and Restaurant Administration
- Event Management (SE)
- Restaurant Operations (SE)*
- Restaurant Practitioner (SE)

Information Technology
- Advanced Convergence Technologies (NE)*
- Convergence Technologies (NE)
- Cisco Support (NE SO SE)
- Advanced Cisco Support (NE SO)
- Home Technology Integration (NE)
- Game and Simulation Programming (SO)
- Information Technology Support (NE NW SO SE)
- Programming (NE NW SO SE TR)
- Security (NE NW SO SE)

Library Technician
- Library Technician (TR)

Long Term Care Administration (TR)

Mental Health
- Chemical Dependency Counselor Intern (NE)
- Mental Health Social Work Certificate (NE)

Occupational Health and Safety Technology
- Environmental Lab Technician (NW)
- Occupational Health and Safety Technician (NW)

Paralegal Studies (NE)

Radio and Television Broadcasting
- Audio Production (NE)
- Video Production (NE)

Real Estate (NE)

Sign Language
- Basic American Sign Language Acquisition (TR)
- Sign Language Communicator (TR)

Surgical Technology (TR)#

Teacher Assistant
- Bilingual Teacher Assistant (NE)
- Teacher Assistant (NE)

Welding Technology
- Welding – Basic (SO)
- Welding – Advanced (SO)

* Students must meet requirements of the Texas Success Initiative (TSI), including assessment prior to enrollment in any college level coursework and any indicated developmental education or other strategy for achieving college readiness.

#Special admissions criteria applies

ACCOUNTING - INFORMATION MANAGEMENT

Associate of Applied Science Degree Program
ACCO.D002.UG • South Campus Only

First Year

First Semester   *Semester Hours*

ACCT	2301	Principles of Financial Accounting	3
ACNT	1311	Introduction to Computerized Accounting	3
BCIS	1405	Business Computer Applications; or COSC 1401	4
ENGL	1301	English Composition I 3	
	*	Mathematics or Science Elective	3

Second Semester

ACCT	2302	Principles of Managerial Accounting	3
ACNT	1313	Computerized Accounting Applications	3
ITSW	1407	Introduction to Database 4	
POFT	2312	Business Correspondence and Communications; or ENGL 1302	3
GOVT	2305	United States Government; or GOVT 2306	3

Second Year

First Semester

SPCH	1321	Business and Professional Communication; or SPCH 1311 or SPCH 1315	3
	**	Accounting Electives 9	
	***	Approved Business Electives	4

Second Semester

BUSI	2301	Business Law I; or BMGT 1341	3
BNKG	1356	Analyzing Financial Statements (Capstone)	3
	****	Humanities/Visual or Performing Arts Elective	3
	*****	Elective 3	

TOTAL DEGREE HOURS 60

*Mathematics/Science Elective must be chosen from the corresponding section of the Core Curriculum.

**Suggested accounting electives include:
ACNT 1329, ACNT 1331, ACNT 1391, ACNT 2303, or ACNT 2309

***Approved Business Electives include courses offered in ACNT BMGT BUSG BUSI COSC ECON HECO ITCC ITNW ITSC ITSE ITSW ITSY MRKG POFI POFT or RELE. COSC-1401 cannot be used to fulfill this requirement.

****Humanities/Visual or Performing Arts Elective must be chosen from the corresponding section of the Core Curriculum.

*****Developmental coursework cannot be used to fulfill this requirement.

AIRFRAME MAINTENANCE AND ELECTRONICS TECHNOLOGY

Associate of Applied Science Degree Program
AIRF.D001.UG • Northwest Campus Only

First Year

First Semester			*Semester Hours*
AERM	1101	Introduction to Aviation	1
AERM	1205	Weight and Balance	2
AERM	1208	Federal Aviation Regulations	2
AERM	1303	Shop Practices	3
AERM	1310	Ground Operations	3
AERM	1314	Basic Electricity	3
AERM	1315	Aviation Science	3

Second Semester			
AERM	1243	Instruments and Navigation/Communication	2
AERM	1254	Aircraft Composites	2
AERM	1345	Airframe Electrical Systems	3
AERM	1347	Airframe Auxiliary Systems	3
AERM	1349	Hydraulic, Pneumatic, and Fuel Systems	3
AERM	1350	Landing Gear Systems	3

Summer Session			
AERM	1253	Aircraft Welding	2
AERM	1241	Wood, Fabric, and Finishes	2
AERM	1452	Aircraft Sheet Metal	4
AERM	2233	Assembly and Rigging	2
AERM	2231	Airframe Inspection	2

Second Year

First Semester				
AVNC	1303		Introduction to Aviation Electronics Systems; or CETT 1441	3
AVNC	1370		Aircraft Communications Systems Line Maintenance	3
AERM	2171	*	Oral and Practical Exams, General	1
AERM	2172	*	Oral and Practical Exams, Airframe	1
ENGL	1301		English Composition I	3
PSYC	2301		Introduction to Psychology;	3
			or PSYC 2315 or SOCI 1301 or SOCI 1306	

Second Semester				
AVNC	1371		Aircraft Navigation Systems Line Maintenance	3
AVNC	1443	**	Aircraft Electrical and Electronic Systems Installation (Capstone)	4
MATH	1314		Functional Approach to College Algebra; or PHYS 1401 or PHYS 1405	3
SPCH	1321		Business and Professional Communication; or SPCH 1311 or SPCH 1315 or SPCH 1318	3
			Humanities/Visual or Performing Arts Elective	3
			TOTAL DEGREE HOURS	75

* *AERM 2171 MUST be taken as a co-requisite with AERM 2172.*

** *Enhanced Skills Course*

Admission and Program Information:

NOTE: To begin the Aviation Maintenance training, students must demonstrate competency in fundamental reading skills by one of the following or have approval of the Division Dean:
    1. Pass the reading section of ACCUPLACER or an appropriate alternative test, or
    2. Achieve the 11th-grade level (combined vocabulary and comprehension) score on the Nelson-Denny post test after completing RDNG 0361, or
    3. Pass RDNG 0361 and RDNG 0363 and then earning the grade of C or higher in any of the reading restricted courses designated by the Coordinating Board.

NOTE: Satisfaction of the mathematical competency for this program may be met by completion of MATH-0304 (Beginning Algebra) with a grade of C or higher, by achieving a placement test score that qualifies the student for MATH-0350 (Intermediate Algebra), or by completing a college-level mathematics course (1300 level or above).

In order to meet Federal Aviation Administration regulation certificate requirements, a student must have successfully completed first semester-first year courses prior to enrollment in other AERM courses. A grade of 70 must be earned in all AERM courses in order to qualify for FAA certification.

Students must furnish their own hand tools.

AIRCRAFT ELECTRONICS LINE MAINTENANCE
Certificate of Completion Program
AIRF.T001.UG • Northwest Campus Only

First Semester			*Semester Hours*
AERM	1205	Weight and Balance	2
AERM	1208	Federal Aviation Regulations	2
AERM	1314	Basic Electricity	3
AERM	1315	Aviation Science	3
Second Semester			
AERM	1243	Instruments and Navigation/Communication	2
AERM	1345	Airframe Electrical Systems	3
AVNC	1303	Introduction to Aircraft Electronic Systems	3
AVNC	1370	Aircraft Communication Systems Line Maintenance	3
Summer Session			
AVNC	1371	Aircraft Navigation Systems Line Maintenance	3
AVNC	1443	Aircraft Electrical and Electronic Systems Installation (Capstone)	4
		TOTAL CERTIFICATE HOURS	28

ARCHITECTURAL TECHNOLOGY
Associate of Applied Science Degree Program
ARCH.D001.UG • Southeast Campus Only

Summer Term			Semester Hours
ARCH	1311	Introduction to Architecture	3
ENGR	1304	Engineering Graphics	3

First Year
First Semester

ARCH	1315	Architectural Computer Graphics	3
ARCH	2312	Architectural Technology I	3
ARCT	1371	Professional Office Practices	3
CNBT	1344	Construction Materials Testing	3
MATH	1314	Functional Approach to College Algebra; or MATH 1316 or MATH 2513	3

Second Semester

ARCE	1342	Codes, Specifications and Contract Documents	3
ARCH	2313	Architectural Technology II	3
ENGL	1301	English Composition I	3
ENGR	1307	Plane Surveying	3

Second Year
First Semester

ARCH	1303	Architectural Design I-Residential	3
ARCH	1307	Architectural Graphics I	3
CNBT	2342	Construction Management I	3
GOVT	2306	Texas State and Local Government; or GOVT 2305	3
		Humanities/Visual or Performing Arts Elective	3
SPCH	1321	Business and Professional Communication; or SPCH 1311 or SPCH 1315 or SPCH 1318	3

Second Semester

ARCH	1301	Architectural History I	3
ARCH	1304	Architectural Design II - Commercial	3
ARCH	1308	Architectural Graphics II	3
ARCT	2367	Practicum (Capstone)	3
CNBT	1372	Special Topics in Soils and Foundations	3
		TOTAL DEGREE HOURS	66

ARCHITECTURAL CAD OPERATOR

Certificate of Completion Program
ARCH.T001.UG • Southeast Campus Only

First Semester			Semester Hours
ARCH	1315	Architectural Computer Graphics	3
ARCH	2312	Architectural Technology I	3
ENGR	1304	Engineering Graphics	3
Second Semester			
ARCH	1303	Architectural Design I - Residential	3
ARCH	1304	Architectural Design II - Commercial	3
ARCT	2367	Practicum	3
		TOTAL CERTIFICATE HOURS	18

ADVANCED ARCHITECTURAL TECHNOLOGY SKILLS ENHANCEMENT - GREEN BUILDING PERFORMANCE

Certificate of Completion Program
ARCH.T004.UG • Southeast Campus Only

First Semester			Semester Hours
ARCT	1373	Building System Design and the Green Advantage	3
ARCT	1374	Energy Conservation Codes in Mechanical and Electrical Design	3
ARCT	1375	Architectural Retrofit Strategies	3
Second Semester			
ARCT	1376	Sustainable Urbanism Design and Development Planning	3
ARCH	1308	Architectural Graphics II	3
		TOTAL CERTIFICATE HOURS	15

ARCHITECTURAL PARAPROFESSIONAL

Certificate of Completion Program
ARCH.T005.UG • Southeast Campus Only

First Semester			Semester Hours
ENGR	1304	Engineering Graphics	3
ARCH	1311	Introduction to Architecture	3
Second Semester			
ARCH	1301	Architectural History I	3
ARCH	1303	Architectural Design I – Residential; or ARCH 1304	3
ARCH	2312	Architectural Technology I	3

Second Year

ARCH	2313	Architectural Technology II	3
ARCH	2301	Architectural Freehand Drawing	3
ARCH	1302	Architectural History II	3
ARCT	2367	Practicum	3
		TOTAL CERTIFICATE HOURS	27

AUTOMOTIVE COLLISION REPAIR

Associate of Applied Science Degree Program
AUTC.D001.UG • South Campus Only

First Year

First Semester			*Semester Hours*
ABDR	1207	Collision Repair Welding	2
ABDR	1419	Basic Metal Repair	4
ABDR	1555	Non-Structural Metal Repair	5
ENGL	1301	English Composition I	3

Second Semester			
ABDR	2502	Auto Body Mechanical and Electrical Service	5
ABDR	2537	Structural Analysis and Damage Repair V	5
GOVT	2305	United States Government; or GOVT 2306	3
		Humanities/Visual or Performing Arts Elective	3

Summer Session			
COSC	1401	Microcomputer Applications	4
	*	Elective	3

Second Year

First Semester			
ABDR	1291	Special Topics in Automotive Body Repair	2
ABDR	1431	Basic Refinishing	4
ABDR	1558	Intermediate Refinishing	5
MATH	1332	Survey of Mathematics; or MATH 1314 or MATH 1324	3

Second Semester			
ABDR	2549	Advanced Refinishing	5
ABDR	2551	Specialized Refinishing Techniques (Capstone)	5
SPCH	1321	Business and Professional Communication; or SPCH 1311 or SPCH 1315 or SPCH 1318	3

TOTAL DEGREE HOURS 64

* The elective must be other than an Automotive Collision Repair (ABDR) course. A developmental course cannot be used to fulfill this requirement.

AUTOMOTIVE METAL REPAIR

Certificate of Completion Program
AUTC.T001.UG • South Campus Only

First Semester			*Semester Hours*
ABDR	1207	Collision Repair Welding	2
ABDR	1419	Basic Metal Repair	4
ABDR	1555	Non-Structural Metal Repair	5
Second Semester			
ABDR	2502	Auto Body Mechanical and Electrical Service (Capstone)	5
ABDR	2537	Structural Analysis and Damage Repair V	5
		TOTAL CERTIFICATE HOURS	21

AUTOMOTIVE REFINISHING

Certificate of Completion Program
AUTC.T002.UG • South Campus Only

First Semester			*Semester Hours*
ABDR	1291	Special Topics in Automotive Body Repair	2
ABDR	1431	Basic Refinishing	4
ABDR	1558	Intermediate Refinishing	5
Second Semester			
ABDR	2549	Advanced Refinishing	5
ABDR	2551	Specialized Refinishing Techniques (Capstone)	5
		TOTAL CERTIFICATE HOURS	21

AUTOMOTIVE SERVICE TECHNOLOGY
Associate of Applied Science Degree Program
AUTS.D001.UG • South Campus Only

First Year

First Semester			*Semester Hours*
AUMT	1253	Automotive Electrical Systems Theory	2
AUMT	1257	Automotive Brake Systems Theory	2
AUMT	1307	Automotive Electrical Systems	3
AUMT	1310	Automotive Brake Systems	3
MATH	1332	Survey of Mathematics; or MATH 1314 or MATH 1324	3
SPCH	1321	Business and Professional Communication; or SPCH 1311 or SPCH 1315 or SPCH 1318	3

Second Semester			
AUMT	2215	Automotive Engine Performance Analysis Theory I	2
AUMT	2231	Automotive Engine Performance Analysis Theory II	2
AUMT	2317	Automotive Engine Performance Analysis I	3
AUMT	2334	Automotive Engine Performance Analysis II	3
ENGL	1301	English Composition I	3

Summer Session			
AUMT	2457	Automotive Alternative Fuels	4

Second Year

First Semester			
AUMT	2209	Automotive Drive Train and Axle Theory	2
AUMT	2223	Automotive Automatic Transmission and Transaxle Theory	2
AUMT	2313	Automotive Drive Train and Axles	3
AUMT	2325	Automotive Automatic Transmission and Transaxle	3
GOVT	2305	United States Government; or GOVT 2306	3

Second Semester			
AUMT	1241	Automotive Climate Control Systems	2
AUMT	1319	Automotive Engine Repair	3
AUMT	1345	Automotive Climate Control Systems (Capstone)	3
AUMT	2205	Automotive Engine Theory	2
COSC	1401	Microcomputer Applications	4

Summer Session			
AUMT	1416	Automotive Suspension and Steering Systems	4
		Humanities/Visual or Performing Arts Elective	3
		TOTAL DEGREE HOURS	67

Students enrolled in the Automotive Service Technology Programs are required to furnish their own hand tools for use in laboratory classes.

ENGINE ANALYSIS TECHNICIAN

Certificate of Completion Program
AUTS.T001.UG • South Campus Only

First Semester			*Semester Hours*
AUMT	1257	Automotive Brake Systems Theory	2
AUMT	1310	Automotive Brake Systems	3
AUMT	1253	Automotive Electrical Systems Theory	2
AUMT	1307	Automotive Electrical Systems	3

Second Semester			
AUMT	2215	Automotive Engine Performance Analysis Theory I	2
AUMT	2317	Automotive Engine Performance Analysis I	3
AUMT	2231	Automotive Engine Performance Analysis Theory II	2
AUMT	2334	Automotive Engine Performance Analysis II (Capstone)	3

Summer Session			
AUMT	2457	Automotive Alternative Fuels	4
		TOTAL CERTIFICATE HOURS	24

HEAVY LINE TECHNICIAN

Certificate of Completion Program
AUTS.T002.UG • South Campus Only

First Semester			*Semester Hours*
AUMT	2209	Automotive Drive Train and Axle Theory	2
AUMT	2313	Automotive Drive Train and Axles	3
AUMT	2223	Automotive Automatic Transmission and Transaxle Theory	2
AUMT	2325	Automotive Automatic Transmission and Transaxle	3

Second Semester			
AUMT	2205	Automotive Engine Theory	2
AUMT	1319	Automotive Engine Repair	3
AUMT	1241	Automotive Heating and Air Conditioning Theory	2
AUMT	1345	Automotive Climate Control Systems (Capstone)	3

Summer Session			
AUMT	1416	Automotive Suspension and Steering Systems	4
		TOTAL CERTIFICATE HOURS	24

Students enrolled in the Automotive Service Technology Programs are required to furnish their own hand tools for use in laboratory classes.

AVIATION MAINTENANCE TECHNOLOGY

Associate of Applied Science Degree Program
AVIA.D001.UG • Northwest Campus Only

First Year

First Semester		Semester Hours
AERM 1101	Introduction to Aviation	1
AERM 1205	Weight and Balance	2
AERM 1208	Federal Aviation Regulations	2
AERM 1303	Shop Practices	3
AERM 1310	Ground Operations	3
AERM 1314	Basic Electricity	3
AERM 1315	Aviation Science	3

Second Semester

AERM 1243	Instruments and Navigation/Communication	2
AERM 1345	Airframe Electrical Systems	3
AERM 1254	Aircraft Composites	2
AERM 1347	Airframe Auxiliary Systems	3
AERM 1349	Hydraulic, Pneumatic, and Fuel Systems	3
AERM 1350	Landing Gear Systems	3

Summer Session

AERM 1241	Wood, Fabric, and Finishes	2
AERM 1253	Aircraft Welding	2
AERM 1452	Aircraft Sheet Metal	4
AERM 2231 #	Airframe Inspection	2
AERM 2233 #	Assembly and Rigging	2

Second Year

First Semester

AERM 2171 # *	Oral and Practical Exams, General	1
AERM 2172 #*	Oral and Practical Exams, Airframe	1
AERM 1240	Aircraft Propellers	2
AERM 1344	Aircraft Reciprocating Engines	3
AERM 1351	Aircraft Turbine Engine Theory	3
AERM 1456	Aircraft Powerplant Electrical	4

Second Semester

AERM 2173 #*	Oral and Practical Exams, Powerplant	1
AERM 1357	Fuel Metering and Induction Systems	3
AERM 2252 #	Aircraft Powerplant Inspection (Capstone)	2
AERM 2351 #	Aircraft Turbine Engine Overhaul	3
AERM 2447 #	Aircraft Reciprocating Engine Overhaul	4

Summer Session

ENGL 1301	English Composition I	3
MATH 1314	Functional Approach to College Algebra; or PHYS 1401 or PHYS 1405	3
PSYC 2301	Introduction to Psychology; or PSYC-2315 or SOCI 1301 or SOCI 1306	3
SPCH 1311	Fundamentals of Speech Communications; or SPCH 1315 or SPCH 1318 or SPCH 1321	3
	Humanities/Visual or Performing Arts Elective	3

TOTAL DEGREE HOURS 87

 # Enhanced Skills Courses

* AERM 2171 MUST be taken as a co-requisite with either AERM 2172 or AERM 2173

AVIATION MAINTENANCE TECHNOLOGY – AIRFRAME CERTIFICATE*
Certificate of Completion Program
AVIA.T001.UG • Northwest Campus Only

First Year
First Semester   *Semester Hours*
AERM 1101   Introduction to Aviation   1
AERM 1205   Weight and Balance   2
AERM 1208   Federal Aviation Regulations   2
AERM 1303   Shop Practices   3
AERM 1310   Ground Operations   3
AERM 1314   Basic Electricity   3
AERM 1315   Aviation Science   3
Second Semester
AERM 1243   Instruments and Navigation/Communication   2
AERM 1254   Aircraft Composites   2
AERM 1345   Airframe Electrical Systems   3
AERM 1347   Airframe Auxiliary Systems   3
AERM 1349   Hydraulic, Pneumatic, and Fuel Systems   3
AERM 1350   Landing Gear Systems   3
Summer Session
AERM 1241   Wood, Fabric, and Finishes   2
AERM 1253   Aircraft Welding   2
AERM 1452   Aircraft Sheet Metal   4
AERM 2231   Airframe Inspection (Capstone)   2
AERM 2233   Assembly and Rigging   2
Second Year
First Semester
AERM 2171   **   Oral and Practical Exams, General   1
AERM 2172   **   Oral and Practical Exams, Airframe   1
                                    TOTAL CERTIFICATE HOURS: 47

* *Students must meet requirements of the Texas Success Initiative (TSI), including assessment prior to enrollment in any college-level coursework and any indicated developmental education or other strategy for achieving college readiness.*

** *AERM 2171 MUST be taken as a co-requisite with AERM 2172.*

AVIATION MAINTENANCE TECHNOLOGY – POWERPLANT CERTIFICATE*
Powerplant Certificate of Completion Program
AVIA.T002.UG • Northwest Campus Only

First Year

First Semester		*Semester Hours*
AERM 1101	Introduction to Aviation	1
AERM 1205	Weight and Balance	2
AERM 1208	Federal Aviation Regulations	2
AERM 1303	Shop Practices	3
AERM 1310	Ground Operations	3
AERM 1314	Basic Electricity	3
AERM 1315	Aviation Science	3
Second Semester		
AERM 1240	Aircraft Propellers	2
AERM 1344	Aircraft Reciprocating Engines	3
AERM 1351	Aircraft Turbine Engine Theory	3
AERM 1456	Aircraft Powerplant Electrical	4

Second Year

First Semester			
AERM 2171	**	Oral and Practical Exams, General	1
AERM 2173	**	Oral and Practical Exams, Powerplant	1
AERM 1357		Fuel Metering and Induction Systems	3
AERM 2252		Aircraft Powerplant Inspection (Capstone)	2
AERM 2351		Aircraft Turbine Engine Overhaul	3
AERM 2447		Aircraft Reciprocating Engine Overhaul	4

TOTAL CERTIFICATE HOURS 43

* Students must meet requirements of the Texas Success Initiative (TSI), including assessment prior to enrollment in any college-level coursework and any indicated developmental education or other strategy for achieving college readiness.
** AERM 2171 MUST be taken as a co-requisite with AERM 2173.

Admission and Program Information for Aviation Maintenance Degree and Certificates:
To begin the Aviation Maintenance training students must demonstrate competency in fundamental reading skills by one of the following or have approval of the Division Dean:
1. *Pass the reading section of ACCUPLACER or an appropriate alternative test: or*
2. *Achieve the 11th- grade level (combined vocabulary and comprehension) score on the Nelson-Denny post test after completing RDNG 0361; or*
3. *Pass RDNG 0361 and RDNG 0363 and then earning the grade of C or higher in any of the reading restricted courses designated by the Coordinating Board.*
Satisfaction of the mathematical competency for these programs may be met by completing MATH-0304 (Beginning Algebra) with a grade of C or higher, by achieving a placement test score that qualifies the student for MATH-0350 (Intermediate Algebra), or by completing a college-level mathematics course (1300 level or above).
In order to meet Federal Aviation Administration regulation certificate requirements, a student must have successfully completed first semester-first year courses prior to enrollment in other AERM courses. A grade of 70 must be earned in all AERM courses in order to qualify for FAA certification.

Students must furnish their own hand tools.

BUSINESS ADMINISTRATION

Associate of Applied Science Degree Programs
BUAD.D001.UG • Accounting Assistant • Northeast, Northwest, Southeast Campuses Only
BUAD.D002.UG • Administrative Professional • South Campus Only
BUAD.D003.UG • Business • All Campuses
BUAD.D004.UG • Fashion Merchandising • Northeast Campus Only
BUAD.D005.UG • Management • Northeast, South, Southeast Campuses Only
BUAD.D006.UG • Marketing • Trinity River Campus Only
BUAD.D007.UG • Postal Service Administration • Northwest Campus Only
BUAD.D008.UG • Railroad Dispatcher • Northwest Campus Only
BUAD.D009.UG • Small Business Management • Northwest Campus Only
BUAD.D010.UG • Software Applications • South Campus Only

Academic Foundation (Required for Each Program)			*Semester Hours*
BCIS	1405	Business Computer Applications	4
ENGL	1301	English Composition I	3
ENGL	1302	English Composition II; or ENGL 2311	3
GOVT	2305	United States Government; or GOVT 2306	3
SPCH	1321	Business and Professional Communication; or SPCH 1311	3
		Humanities/Visual or Performing Arts Elective	3
	*	Mathematics or Science Elective	3
		TOTAL ACADEMIC FOUNDATION HOURS	22

* May be any MATH 1300 level or above or a science course.

NOTE: Satisfaction of the mathematical competency for these programs may be met by completing MATH-0304 (Beginning Algebra) with a grade of C or higher, by achieving a placement test score that qualifies the student for MATH-0350 (Intermediate Algebra), or by completing a college-level mathematics course (1300 level or above).

Technical Foundation (Required for Each Program)			*Semester Hours*
ACCT	2301	Principles of Financial Accounting	3
ACCT	2302	Principles of Managerial Accounting	3
BMGT	1327	Principles of Management	3
BMGT	1341	Business Ethics	3
BUSI	1301	Business Principles	3
BMGT	1305	Communications in Management; or POFT 2312	3
		TOTAL TECHNICAL FOUNDATION HOURS	18

Specialization for Accounting Assistant			*Semester Hours*
ACNT	1311	Introduction to Computerized Accounting	3
ACNT	1313	Computerized Accounting Applications	3
	*	Approved Business Electives	12
BUSG	2300	Business Leadership Application (Capstone)	3
		TOTAL DEGREE SEMESTER HOURS	61

*Business Electives include courses offered in ACNT BMGT BNKG BUSG BUSI COSC ECON HECO ITCC ITNW ITSC ITSE ITSW ITSY MRKG POFI POFT and RELE COSC-1401 may not be used as an elective.
Suggested accounting courses include ACNT-1329, ACNT-1331, ACNT-1391, ACNT-2303, ACNT-2309, ACNT-2380 or BNKG-1356

Specialization for Administrative Professional

			Semester Hours
ACNT	1303	Introduction to Accounting	3
POFI	1449	Spreadsheets	4
POFI	2401	Word Processing	4
POFT	1309	Administrative Office Procedures	3
POFT	1319	Records and Information Management	3
POFT	1329	Beginning Keyboarding*; or POFT 2301	3
POFT	1331	Business Machine Applications	3
BUSG	2300	Business Leadership Application (Capstone)	3
		TOTAL DEGREE SEMESTER HOURS	66

Credit for this course may be obtained through credit-by-examination.

Specialization for Business

			Semester Hours
BUSI	2301	Business Law I	3
ECON	2301	Principles of Macroeconomics	3
ECON	2302	Principles of Microeconomics	3
MRKG	1311	Principles of Marketing	3
MRKG	2333	Principles of Selling	3
BUSG	2300	Business Leadership Application (Capstone)	3
	*	Approved Business Electives	6
		TOTAL DEGREE SEMESTER HOURS	64

Business Electives must be chosen from subjects ACNT BMGT BNKG BUSG BUSI COSC FSHN HECO HRPO ITSC ITSW MRKG PBAD POFI POFT or RELE.
COSC-1401 may not be used as an elective.

Specialization for Fashion Merchandising

			Semester Hours
FSHN	2305	Fashion Retailing	3
FSHN	2309	Fashion Image	3
HECO	1320	Textiles	3
HECO	2311	Fashion Merchandising	3
BUSG	2300	Business Leadership Application (Capstone)	3
	*	Approved Business Electives	6
		TOTAL DEGREE SEMESTER HOURS	61

Business Electives must be chosen from subjects ACNT BMGT BNKG BUSG BUSI COSC ECON FSHN HECO HRPO ITSC ITSW MRKG PBAD POFI POFT or RELE.
COSC-1401 may not be used as an elective.

Specialization for Management   *Semester Hours*

BMGT	1301	Supervision	3
HRPO	1311	Human Relations	3
HRPO	2301	Human Resources Management	3
BUSG	2300	Business Leadership Application (Capstone)	3
	*	Management Electives	3
	**	Approved Business Electives	9
		TOTAL DEGREE SEMESTER HOURS	64

*Management Elective must be chosen from BMGT 1341, BMGT-1382 or BMGT-2382. Enrollment in BMGT-1382 requires Department approval.

**Business Electives must be chosen from subjects ACNT BMGT BNKG BUSG BUSI COSC ECON FSHN HECO HRPO ITSC ITSW MRKG PBAD POFI POFT or RELE. COSC-1401 may not be used as an elective.

Specialization for Marketing   *Semester Hours*

MRKG	1302	Principles of Retailing	3
MRKG	1311	Principles of Marketing	3
MRKG	2333	Principles of Selling	3
MRKG	2349	Advertising and Sales Promotion	3
BUSG	2300	Business Leadership Application (Capstone)	3
	*	Approved Business Electives	6
		TOTAL DEGREE SEMESTER HOURS	61

*Business Electives must be chosen from subjects ACNT BMGT BNKG BUSG BUSI COSC ECON FSHN HECO HRPO ITSC ITSW MRKG PBAD POFI POFT or RELE. COSC-1401 may not be used as an elective.

Specialization for Postal Service Administration   *Semester Hours*

HRPO	1311	Human Relations	3
PBAD	1315	Postal Organization, Development, and Management	3
PBAD	1345	Postal Customer Services, Processing, and Distribution	3
PBAD	1370	Mail Processing, Distribution, and Transportation	3
PBAD	1391	Special Topics in Public Administration and Services	3
PBAD	2341	Legal Aspects of Public Management	3
BUSG	2300	Business Leadership Application (Capstone)	3
	*	Approved Business Electives	3
		TOTAL DEGREE SEMESTER HOURS	64

*Business Electives must be chosen from subjects ACNT BMGT BNKG BUSG BUSI COSC ECON FSHN HECO HRPO ITSC ITSW MRKG PBAD POFI POFT or RELE. COSC-1401 may not be used as an elective.

Specialization for Railroad Dispatcher *Semester Hours*

BMGT	1268		Practicum – Railroad Dispatcher; or BMGT 1301 or BMGT 2309	2
BMGT	1270		Introduction to Railroading	2
BMGT	2172		Rules Simulation	1
BMGT	2288		Internship; or BMGT 1301 or BMGT 2309	2
BMGT	2473		Traffic Control	4
BMGT	2574		Rules, Regulations, and Safety	5
BUSG	2300		Business Leadership Application (Capstone)	3
		*	Approved Business Electives	3
			TOTAL DEGREE SEMESTER HOURS	62

Business Electives must be chosen from subjects ACNT BMGT BNKG BUSG BUSI COSC ECON FSHN HECO HRPO ITSC ITSW MRKG PBAD POFI POFT or RELE.
COSC-1401 may not be used as an elective.

Specialization for Small Business Management *Semester Hours*

BUSG	1315		Small Business Operations	3
BUSG	1341		Small Business Financing	3
BUSG	2309		Small Business Management	3
MRKG	1311		Principles of Marketing	3
MRKG	2349		Advertising and Sales Promotion	3
BUSG	2300		Business Leadership Application (Capstone)	3
		*	Approved Business Electives	3
			TOTAL DEGREE SEMESTER HOURS	61

Business Electives must be chosen from subjects ACNT BMGT BNKG BUSG BUSI COSC ECON FSHN HECO HRPO ITSC ITSW MRKG PBAD POFI POFT or RELE.
COSC-1401 may not be used as an elective.

Specialization for Software Applications *Semester Hours*

ITSW	1407		Introduction to Database	4
ITSW	1410		Introduction to Presentation Graphics	4
POFI	1449		Spreadsheets	4
POFI	2401		Word Processing	4
POFI	2431		Desktop Publishing	4
POFT	1329	*	Beginning Keyboarding; or POFT 2301	3
BUSG	2300		Business Leadership Application (Capstone)	3
			TOTAL DEGREE SEMESTER HOURS	66

* Credit for POFT-1329 may be obtained through credit-by-examination.

BUSINESS ADMINISTRATION CERTIFICATES

ACCOUNTING ASSISTANT I
Certificate of Completion Program
BUAD.TA01.UG • Northeast, Northwest, South, Southeast Campuses Only

First Semester				*Semester Hours*
ACCT	2301		Principles of Financial Accounting	3
BCIS	1405		Business Computer Applications; or COSC 1401	4
ENGL	1301		English Composition I; or POFT 2312; or	3
		*	Mathematics Elective	
ACNT	1311		Introduction to Computerized Accounting (Capstone)	3
		**	Approved Business Elective	3
			TOTAL CERTIFICATE HOURS	16

*Mathematics elective must be chosen from the corresponding section of the Core Curriculum.

**Business Electives must be chosen from subjects ACNT BMGT BNKG BUSG BUSI COSC ECON HECO ITCC ITNW ITSC ITSE ITSW ITSY MRKG POFI POFT and RELE.
COSC-1401 may not be used as an elective.
Suggested accounting electives include ACNT-1313, ACNT-1329, ACNT-1331 or ACNT-1391

ACCOUNTING ASSISTANT II
Certificate of Completion Program
BUAD.TA02.UG • Northeast, Northwest, South, Southeast Campuses Only

First Semester				*Semester Hours*
ACCT	2301		Principles of Financial Accounting	3
ACNT	1311		Introduction to Computerized Accounting	3
BCIS	1405		Business Computer Applications; or COSC 1401	4
ENGL	1301		English Composition I; or POFT 2312; or	3
		*	Mathematics Elective	

Second Semester				
ACCT	2302		Principles of Managerial Accounting	3
ACNT	1313		Computerized Accounting Applications (Capstone)	3
		**	Approved Business Elective	6
			TOTAL CERTIFICATE HOURS	25

*Mathematics elective must be chosen from the corresponding section of the Core Curriculum.

**Business electives must be chosen from subjects ACNT BMGT BNKG BUSG BUSI COSC ECON HECO ITCC ITNW ITSC ITSE ITSW ITSY MRKG POFI POFT and RELE.
COSC-1401 may not be used as an elective.
Suggested accounting courses include ACNT-1329, ACNT-1331, ACNT-1391, ACNT-2303, ACNT-2309, ACNT-2380 or BNKG-1356

The Accounting Assistant II Certificate may be used as a foundation for either the AAS.Accounting-Information Management Degree or the AAS.Business Administration-Accounting Assistant Degree.

ADMINISTRATIVE PROFESSIONAL

Certificate of Completion Program
BUAD.T002.UG • South Campus Only

First Semester			Semester Hours
BCIS	1405	Business Computer Applications; or COSC 1401	4
POFT	1329 *	Beginning Keyboarding; or POFT 2301	3
ACNT	1303	Introduction to Accounting	3
POFT	1331	Business Machine Applications	3

Second Semester			
POFI	2401	Word Processing	4
POFI	1449	Spreadsheets	4
POFT	1319	Records and Information Management	3
POFT	2312	Business Correspondence and Communication	3
POFT	1309	Administrative Office Procedures (Capstone)	3
		TOTAL CERTIFICATE HOURS	30

* Credit for POFT-1329 course may be obtained through credit-by-examination.

BUSINESS

Certificate of Completion Program
BUAD.T003.UG • All Campuses

First Semester			Semester Hours
ACCT	2301	Principles of Financial Accounting	3
BUSI	1301	Business Principles	3
ECON	2301	Principles of Macroeconomics	3
POFT	1321	Business Mathematics; or MATH 1324	3

Second Semester			
ACCT	2302	Principles of Managerial Accounting	3
BUSG	2170 *	Portfolio Development (Capstone)	1
BUSI	2301	Business Law I	3
ECON	2302	Principles of Microeconomics	3
	**	Business Electives	3
		TOTAL CERTIFICATE HOURS	25

*Capstone is taken in the last semester of the certificate degree plan.

**Business Electives must be chosen from subjects ACNT BMGT BNKG BUSG BUSI COSC ECON FSHN HECO HRPO ITSC ITSW MRKG PBAD POFI POFT or RELE.
COSC-1401 may not be used as an elective.

FASHION MERCHANDISING
Certificate of Completion Program
BUAD.T004.UG • Northeast Campus Only

First Semester

HECO	2311		Fashion Merchandising	3
HECO	1320		Textiles	3
BCIS	1405		Business Computer Applications; or COSC 1401	4
SPCH	1321		Business and Professional Communication; or SPCH 1311	3
FSHN	2305		Fashion Retailing	3
FSHN	2309		Fashion Image	3
BUSG	2170	*	Portfolio Development (Capstone)	1
			TOTAL CERRTIFICATE HOURS	20

*Capstone is taken in the last semester of the certificate degree plan.

MANAGEMENT
Certificate of Completion Program
BUAD.T005.UG • Northeast, South, Southeast Campuses Only

First Semester				*Semester Hours*
HRPO	1311		Human Relations	3
BMGT	1301		Supervision	3
BMGT	1327		Principles of Management	3
BMGT	1305		Communications in Management	3

Second Semester				
BCIS	1405		Business Computer Applications; or COSC 1401	4
HRPO	2301		Human Resource Management	3
BMGT	2309	*	Leadership (Capstone)	3
		**	Management Elective	3
			TOTAL CERTIFICATE HOURS	25

*Capstone is taken in the last semester of the certificate degree plan.

** Management Elective must be chosen from BMGT-1382, BUSI-1301, BUSG-1302, HECO-1307, or ITSC-1415. Note that BMGT-1382 is a special admission course; students must consult a Program Coordinator prior to enrollment.

MARKETING

Certificate of Completion Program
BUAD.T006.UG • Trinity River Campus Only

First Semester			Semester Hours
POFT	1321	Business Mathematics	3
MRKG	1311	Principles of Marketing	3
MRKG	2333	Principles of Selling	3

Second Semester			
MRKG	2349	Advertising and Sales Promotion	3
BCIS	1405	Business Computer Applications; or COSC 1401	4
MRKG	2348 *	Marketing Research and Strategies (Capstone)	3
	**	Elective	3
		TOTAL CERTIFICATE HOURS	22

*Capstone is taken in the last semester of the certificate degree plan.

** Elective must be chosen from BMGT-1327, HECO-1307, MRKG-1302, PSYC-2301 or SOCI-1301.

POSTAL SERVICE ADMINISTRATION

Certificate of Completion Program
BUAD.T007.UG • Northwest Campus Only

First Semester			Semester Hours
ENGL	1301	English Composition I	3
PBAD	1315	Postal Organization, Development, and Management	3
PBAD	1345	Postal Customer Services, Processing, and Distribution	3
HRPO	1311	Human Relations	3

Second Semester			
PBAD	1370	Mail Processing, Distribution, and Transportation	3
PBAD	2341	Legal Aspects of Public Management	3
PBAD	1391	Special Topics in Public Administration and Services	3
SPCH	1321	Business and Professional Communication; or SPCH 1311	3
PBAD	2345	Postal Finance and Labor Relations (Capstone)	3
		TOTAL CERTIFICATE HOURS	27

RAILROAD DISPATCHER

Certificate of Completion Program
BUAD.T008.UG • Northwest Campus Only

				Semester Hours
BMGT	1270		Introduction to Railroad	2
BMGT	2574		Rules, Regulations, and Safety	5
BMGT	2172		Rules Simulation	1
BMGT	2473		Traffic Control	4
BMGT	2288	*	Internship; or BMGT 1301 or BMGT 2309	2
BMGT	1268	*	Railroad Dispatcher Practicum (Capstone); or BMGT 1301 or BMGT 2309	2

TOTAL CERTIFICATE HOURS   16

*A student must be currently working for a railroad to receive credit by experience for BMGT-1268 and BMGT 2288. If not currently working for a railroad, a student may take BMGT-1301 or BMGT-2309 to complete certificate requirements.

SMALL BUSINESS MANAGEMENT

Certificate of Completion Program
BUAD.T009.UG • Northwest Campus Only

First Semester				*Semester Hours*
BUSG	1341		Small Business Financing	3
MRKG	1311		Principles of Marketing	3
BCIS	1405		Business Computer Applications; or COSC 1401	4

Second Semester				
BUSG	1315		Small Business Operations	3
MRKG	2349		Advertising and Sales Promotion	3
BUSG	2309	*	Small Business Management (Capstone)	3
		**	Business Electives	3

TOTAL CERTIFICATE HOURS   22

*Capstone is taken in the last semester of the certificate degree plan.

**Business Electives must be chosen from subjects ACNT BMGT BNKG BUSG BUSI COSC ECON FSHN HECO HRPO ITSC ITSW MRKG PBAD POFI POFT or RELE.
COSC-1401 may not be used as an elective.

SOFTWARE USER
Certificate of Completion Program
BUAD.T010.UG • South Campus Only

First Semester				*Semester Hours*
POFT	1329	*	Beginning Keyboarding; or POFT 2301	3
POFT	2312		Business Correspondence and Communication	3
BCIS	1405		Business Computer Applications; or COSC 1401	4
POFI	2401		Word Processing	4

Second Semester				
POFI	1449		Spreadsheets	4
POFI	2431	**	Desktop Publishing (Capstone)	4
ITSW	1410		Introduction to Presentation Graphics Software	4
ITSW	1407		Introduction to Database	4

TOTAL CERTIFICATE HOURS 30

* Credit for POFT-1329 may be obtained through credit-by-examination.

**Capstone is taken in the last semester of the certificate degree plan.

CHILD DEVELOPMENT

Associate of Applied Science Degree Program
CHIL.D001.UG • Northeast Campus Only

First Year

First Semester   *Semester Hours*

ENGL	1301	English Composition I	3
PHED	1164	Concepts of Physical Activity	1
SOCI	1301	Introduction to Sociology	3
TECA	1303	Family, School, and Community	3
TECA	1318	Wellness of the Young Child	3
TECA	1354	Child Growth and Development	3

Second Semester

CDEC	1321	The Infant and Toddler	3
CDEC	1419	Child Guidance	4
ENGL	1302	English Composition II	3
TECA	1311	Educating Young Children	3
		Physical Education Activity	1

Summer Session

| BCIS | 1405 | Business Computer Applications; or COSC 1401 | 4 |
| GOVT | 2305 | United States Government; or GOVT 2306 | 3 |

Second Year

First Semester

CDEC	1356	Emergent Literacy for Early Childhood	3
CDEC	1413	Curriculum Resources for Early Childhood Programs	4
CDEC	1323	Observation and Assessment	3
		Science or Mathematics Elective	3
		Humanities/Visual or Performing Arts Elective	3

Second Semester

CDEC	1358	Creative Arts for Early Childhood	3
CDEC	1359	Children with Special Needs	3
CDEC	2386	Internship-Child Care Provider/Assistant (Capstone)	3
	*	Child Development Elective	3
SPCH	1311	Fundamentals of Speech Communication; or SPCH 1315 or SPCH 1318 or SPCH 1321	3

TOTAL DEGREE HOURS   68

*Child Development Elective must be chosen from CDEC-2307, CDEC-2326 or CDEC-2328.

NOTE: Satisfaction of the mathematical competency for this program may be met by completing MATH-0304 (Beginning Algebra) with a grade of C or higher, by achieving a placement test score that qualifies the student for MATH-0350 (Intermediate Algebra), or by completing a college-level mathematics course (1300 level or above).

CHILD CARE ADMINISTRATION*

Certificate of Completion Program
CHIL.T002.UG • Northeast Campus Only

First Year

First Semester			*Semester Hours*
ENGL	1301	English Composition I	3
TECA	1303	Family, School, and Community	3
TECA	1318	Wellness of the Young Child	3
TECA	1354	Child Growth and Development	3

Second Semester			
CDEC	1321	The Infant and Toddler	3
CDEC	1419	Child Guidance	4
ENGL	1302	English Composition II	3
TECA	1311	Educating Young Children	3

Second Year

First Semester			
CDEC	1359	Children with Special Needs	3
CDEC	1413	Curriculum Resources for Early Childhood Programs	4
CDEC	2326	Administration of Programs for Children I	3

Second Semester			
BCIS	1405	Business Computer Applications; or COSC 1401	4
CDEC	2328	Administration of Programs for Children II	3
PHED	1164	Concepts of Physical Activity	1
	**	Child Development Elective	3
		TOTAL CERTIFICATE HOURS	46

* Students must meet requirements of the Texas Success Initiative (TSI), including assessment prior to enrollment in any college-level coursework and any indicated developmental education or other strategy for achieving college readiness.

**Child Development Elective must be chosen from CDEC-1356, CDEC-1394, or CDEC-2341.

NOTE: Satisfaction of the mathematical competency for this program may be met by completing MATH-0304 (Beginning Algebra) with a grade of C or higher, by achieving a placement test score that qualifies the student for MATH-0350 (Intermediate Algebra), or by completing a college-level mathematics course (1300 level or above).

PRESCHOOL CHILD CARE PROVIDER
Certificate of Completion Program
CHIL.T003.UG • Northeast Campus Only

First Semester			*Semester Hours*
CDEC	1419	Child Guidance	4
ENGL	1301	English Composition I	3
TECA	1311	Educating Young Children	3
TECA	1318	Wellness of the Young Child	3
TECA	1354	Child Growth and Development	3
Second Semester			
BCIS	1405	Business Computer Applications; or COSC 1401	4
CDEC	1321	The Infant and Toddler	3
CDEC	1359	Children with Special Needs	3
CDEC	1413	Curriculum Resources for Early Childhood Programs	4
PHED	1164	Concepts of Physical Activity	1
		TOTAL CERTIFICATE HOURS	31

SCHOOL AGE PROVIDER
Certificate of Completion Program
CHIL.T004.UG • Northeast Campus Only

First Semester			*Semester Hours*
CDEC	2341	The School Age Child	3
ENGL	1301	English Composition I	3
TECA	1303	Family, School, and Community	3
TECA	1318	Wellness of the Young Child	3
TECA	1354	Child Growth and Development	3
Second Semester			
BCIS	1405	Business Computer Applications; or COSC 1401	4
CDEC	1419	Child Guidance	4
EDUC	1301	Introduction to the Teaching Profession	3
ENGL	1302	English Composition II	3
PHED	1164	Concepts of Physical Activity	1
	*	Child Development Elective	3
		TOTAL CERTIFICATE HOURS	33

*Child Development Elective must be chosen from CDEC-1359, CDEC-2326, CDEC-2328, or TECA-1311

CDA CERTIFICATE#
Certificate of Completion Program
CHIL.T001.UG • Northeast Campus Only

CDEC	1317	Child Development Associate Training I	3
CDEC	2322	Child Development Associate Training II	3
CDEC	2324	Child Development Associate Training III	3
TECA	1318	Wellness of the Young Child	3
TECA	1354	Child Growth and Development	3
		TOTAL CERTIFICATE HOURS	15

#Child Development Associate National Credential (CDA)

COMPUTER-AIDED DRAFTING AND DESIGN TECHNOLOGY

Associate of Applied Science Degree Programs
CADD.D002.UG • Building Technology • South Campus Only
CADD.D003.UG • Civil Technology • South Campus Only
CADD.D004.UG • Manufacturing Technology • South Campus Only

Academic Foundation (Required for Each Program) — *Semester Hours*

ENGL	1301	English Composition I	3
GOVT	2305	United States Government; or GOVT 2306	3
MATH	1314	Functional Approach to College Algebra; or MATH 1324 or MATH 1332	3
SPCH	1321	Business and Professional Communication; or SPCH 1311	3
		Humanities/Visual or Performing Arts Elective	3
		TOTAL ACADEMIC FOUNDATION HOURS	15

Technical Foundation (Required for Each Program) — *Semester Hours*

DFTG	1405	Technical Drafting	4
DFTG	1409	Basic Computer-Aided Drafting (CAD)	4
DFTG	1425	Blueprint Reading and Sketching	4
DFTG	2419	Intermediate Computer-Aided Drafting (CAD)	4
DFTG	2438	Final Project in Advanced Drafting (Capstone)	4
		TOTAL TECHNICAL FOUNDATION HOURS	20

Specialization for Building Technology — *Semester Hours*

DFTG	1417	Architectural Drafting – Residential	4
DFTG	2428	Architectural Drafting – Commercial	4
DFTG	2431	Advanced Technologies in Architectural Design and Drafting	4
*		Architectural/Structure/Commercial Drafting Electives	16
		TOTAL DEGREE SEMESTER HOURS	63

*Drafting Electives must be chosen from DFTG-2406, DFTG-2407, DFTG-2408, DFTG-2436, DFTG-2445, DFTG-2458 or INMT-1445.

Specialization for Civil Technology — *Semester Hours*

DFTG	1493	Special Topics in Civil Drafting and Civil Engineering	4
DFTG	2421	Topographical Drafting	4
DFTG	2427	Landscape Drafting	4
DFTG	2430	Civil Drafting	4
*		Drafting Electives	16
		TOTAL DEGREE SEMESTER HOURS	67

*Drafting Electives must be chosen from DFTG-2406, DFTG-2407, DFTG-2408, DFTG-2436, DFTG-2445, DFTG-2458 or INMT-1445.

Specialization for Manufacturing Technology   *Semester Hours*

DFTG	1445	Parametric Modeling and Design	4
DFTG	1458	Electrical and Electronics Drafting	4
DFTG	2402	Machine Drafting	4
DFTG	2423	Pipe Drafting	4
DFTG	2440	Solid Modeling and Design	4
DFTG	2442	Aeronautical Drafting	4
	*	Drafting Electives	8

TOTAL DEGREE SEMESTER HOURS   67

*Drafting Electives must be chosen from DFTG-2406, DFTG-2407, DFTG-2408, DFTG-2436, DFTG-2445, DFTG-2458, INMT-1445, MCHN-2403, MCHN-2431, MCHN-2434 or MCHN-2444.

COMPUTER-AIDED DRAFTING AND DESIGN CERTIFICATES

BUILDING TECHNOLOGY
Certificate of Completion Program
CADD.T008.UG • South Campus Only

First Semester   *Semester Hours*

DFTG	1405	Technical Drafting	4
DFTG	1425	Blueprint Reading and Sketching	4
DFTG	1409	Basic Computer-Aided Drafting	4
ENGL	1301	English Composition I	3

Second Semester

DFTG	1417	Architectural Drafting - Residential	4
DFTG	2428	Architectural Drafting - Commercial	4
DFTG	2431	Advanced Technologies in Architectural Design and Drafting	4
DTFG	2438	Final Project - Advanced Drafting (Capstone)	4

TOTAL CERTIFICATE HOURS   31

CIVIL TECHNOLOGY

Certificate of Completion Program
CADD.T009.UG • South Campus Only

First Semester			*Semester Hours*
DFTG	1405	Technical Drafting	4
DFTG	1425	Blueprint Reading and Sketching	4
DFTG	1409	Basic Computer-Aided Drafting	4
ENGL	1301	English Composition I	3

Second Semester			
DFTG	2421	Topographical Drafting	4
DFTG	2430	Civil Drafting	4
DFTG	2427	Landscape Drafting	4
DFTG	2438	Final Project - Advanced Drafting (Capstone)	4

Summer Session			
DFTG	1493	Special Topics in Civil Drafting and Civil Engineering	4
		TOTAL CERTIFICATE HOURS	35

MANUFACTURING TECHNOLOGY

Certificate of Completion Program
CADD.T010.UG • South Campus Only

First Semester			*Semester Hours*
DFTG	1405	Technical Drafting	4
DFTG	1425	Blueprint Reading and Sketching	4
DFTG	1409	Basic Computer-Aided Drafting	4
ENGL	1301	English Composition I	3
Second Semester			
DFTG	1458	Electrical/Electronic Drafting	4
DFTG	2402	Machine Drafting	4
DFTG	2423	Pipe Drafting	4
DFTG	2440	Solid Modeling and Design	4
Summer Session			
	*	Drafting Elective	4
		TOTAL SEMESTER HOURS	35

*Drafting Elective must be chosen from DFTG-2406, DFTG-2407, DFTG-2408, DFTG-2436, DFTG-2445, DFTG-2458, INMT-1445, MCHN-2403, MCHN-2431, MCHN-2434 or MCHN-2444.

CONSTRUCTION MANAGEMENT

Associate of Applied Science Degree Program
CONS.D002 UG • Southeast Campus Only

First Year

First Semester   *Semester Hours*

CNBT	1300	Residential and Light Commercial Blueprint Reading	3
ENGR	1304	Engineering Graphics	3
MATH	1314	Functional Approach to College Algebra	3
ENGL	1301	English Composition I	3
		Humanities/Visual or Performing Arts Elective	3

Second Semester

CNBT	1311	Construction Methods and Materials	3
CNBT	1344	Construction Materials Testing	3
GOVT	2305	United States Government; or GOVT 2306	3
BMGT	1327	Principles of Management	3
COSC	1401	Introduction to Computing	4

First Summer Session

GEOL	1305	Environmental Geology	3
SPCH	1311	Fundamentals of Speech Communication; or SPCH 1315 or SPCH 1318 or SPCH 1321	3

Second Summer Session

SPAN	1100	Beginning Spanish Conversation I	1
SRVY	1301	Introduction to Surveying; or ENGR 1307	3

Second Year

First Semester

CNBT	1346	Construction Estimating I	3
CNBT	1372	Soils and Foundations	3
CNBT	2342	Construction Management I	3
ARCH	2313	Architectural Technology II	3
CNBT	1342	Building Codes and Inspections	3

Second Semester

CNBT	2266	Practicum (Capstone)	2
CNBT	2344	Construction Management II	3
CNBT	2317	Green Building	3
CNBT	2337	Construction Estimating II	3
	*	Approved Elective	3

TOTAL DEGREE HOURS   **70**

*Approved Elective must be chosen from BMGT-1301, BUSI-2301 or ECON-2301.

CONSTRUCTION INSPECTION TECHNICIAN

Certificate of Completion Program
CONS.T004.UG • Southeast Campus Only

First Semester			*Semester Hours*
CNBT	1300	Residential and Light Commercial Blueprint Reading	3
CNBT	1342	Building Codes and Inspections	3
CNBT	1346	Construction Estimating I	3
CNBT	1344	Construction Materials Testing	3
Second Semester			
SRVY	1301	Introduction to Surveying	3
CNBT	1372	Soils and Foundations	3
		TOTAL CERTIFICATE HOURS	18

CONSTRUCTION MANAGEMENT

Certificate of Completion Program
CONS.T002.UG • Southeast Campus Only

First Semester			*Semester Hours*
CNBT	1300	Residential and Light Commercial Blueprint Reading	3
CNBT	1311	Construction Methods and Materials	3
CNBT	2342	Construction Management I	3
CNBT	2317	Green Building	
CNBT	1346	Construction Estimating I	3
Second Semester			
CNBT	2344	Construction Management II	3
CNBT	1342	Building Codes and Inspection	
SRVY	1301	Introduction to Surveying	3
CNBT	2337	Construction Estimating II	3
CNBT	2266	Practicum (Capstone)	2
		TOTAL CERTIFICATE HOURS	29

CONSTRUCTION TECHNOLOGY

Certificate of Completion Program
CONS.T007.UG • Southeast Campus Only

First Semester			*Semester Hours*
CNBT	1300	Residential and Light Commercial Blueprint Reading	3
CNBT	1311	Construction Methods and Materials	3
CNBT	1316	Construction Technology I	3
CNBT	1342	Building Codes and Inspection	3
CNBT	1346	Construction Estimating I	3
Second Semester			
CNBT	1344	Construction Materials Testing	3
CNBT	1372	Soils and Foundations	3
SRVY	1301	Introduction to Surveying	3
CNBT	1350	Construction Technology II	3
CNBT	2266	Practicum (Capstone)	2
		TOTAL CERTIFICATE HOURS	29

INTERIOR CONSTRUCTION DESIGN

Certificate of Completion Program
CONS.T006.UG • Southeast Campus Only

First Year

First Semester			*Semester Hours*
ARTS	1320	Interior Design I	3
ENGR	1304	Engineering Graphics	3
CNBT	1300	Residential and Light Commercial Blueprint Reading	3
CNBT	1311	Construction Methods and Materials	3
INDS	1341	Color Theory and Application	3

Second Semester			
SPCH	1311	Fundamentals of Speech Communication; or SPCH 1315 or SPCH 1318 or SPCH 1321	3
INDS	1449	Fundamentals of Space Planning	4
ARTS	1321	Interior Design II	3

Second Year

First Semester			
CNBT	1391	Special Topics in Construction and Building Technology/ Technician	3
CNBT	2342	Construction Management I	3
ARCH	1311	Introduction to Architecture	3
CNBT	1346	Construction Estimating I	3
CNBT	2266	Practicum (Capstone)	2
		TOTAL CERTIFICATE HOURS	39

NOTE: Satisfaction of the mathematical competency for this program may be met by completing MATH-0304 (Beginning Algebra) with a grade of C or higher, by achieving a placement test score that qualifies the student for MATH-0350 (Intermediate Algebra), or by completing a college-level mathematics course (1300 level or above).

CRIMINAL JUSTICE

Associate of Applied Science Degree Program
CRIM.D001.UG • Northwest Campus Only

First Year

First Semester   *Semester Hours*

CRIJ	1301	Introduction to Criminal Justice	3
CRIJ	1310	Fundamentals of Criminal Law	3
ENGL	1301	English Composition I	3
SOCI	1301	Introduction to Sociology	3
		Mathematics or Science Elective	3

Second Semester

CRIJ	1307	Crime in America	3
CRIJ	2328	Police Systems and Practices	3
		Humanities/Visual or Performing Arts Elective	3
CRIJ	2313	Correctional Systems and Practices	3
SPCH	1321	Business and Professional Communication; or SPCH 1311 or SPCH 1315 or SPCH 1318	3
PHED	1164	Concepts of Physical Activity	1

Summer Session

GOVT	2306	Texas State and Local Government	3

Second Year

First Semester

CRIJ	2323	Legal Aspects of Law Enforcement	3
COSC	1401	Introduction to Computing; or BCIS 1405	4
GOVT	2305	United States Government	3
*		Approved Electives	6

Second Semester

CRIJ	2314	Criminal Investigation	3
CRIJ	1306	Court Systems and Practices	3
CJSA	2388	Internship - Criminal Justice Studies (Capstone); or CJSA 2334	3
*		Approved Electives	9
		TOTAL DEGREE HOURS	68

*All electives must have prior approval of the Program Coordinator. Suggested electives include: CJSA-1347, CJSA-1348, CJSA-2331, CRIJ-1313, CJLE-1111, CJLE-1345, CJLE-1371, CJLE-1394, CJLE-1506, CJLE-1512, CJLE-1518, CJLE-2247, SLPS-2288, SLPS-1371, SLPS-1391, or SLPS-2371

NOTE: Satisfaction of the mathematical competency for this program may be met by completing MATH-0304 (Beginning Algebra) with a grade of C or higher, by achieving a placement test score that qualifies the student for MATH-0350 (Intermediate Algebra), or by completing a college-level mathematics course (1300 level or above).

BASIC PEACE OFFICER CERTIFICATION#

Certificate of Completion Program
CRIM.T003.UG • Northwest Campus Only

First Semester			Semester Hours
CJLE	1506	Basic Peace Officer I	5
CJLE	1512	Basic Peace Officer II	5
CJLE	1518	Basic Peace Officer III	5
CJLE	2247	Tactical Skills for Police	2
CJLE	1111	Basic Firearms	1
		TOTAL CERTIFICATE HOURS	18

Admissions and Program Information for Basic Peace Officer:

The courses listed above are taught in an academy format (Monday through Friday from 8 a.m. - 5 p.m.) and have specialized admission requirements. Consent of the Academy Coordinator is required for enrollment. Once admitted to the program, students must complete and earn a minimum grade of C in each course. The endorsement of eligibility for the State Peace Officer Licensing Exam will only be issued to a student who has completed each course with a minimum grade of C during that specific academy.

Enrollment is based on space availability for those who meet admission criteria. Admission Criteria:

1. *Students must provide evidence of completion of the ACCUPLACER Test or approved alternative test. (This requirement may be waived by the Division Dean.)*
2. *Students must demonstrate competency in fundamental reading skills by a placement score of a minimum performance level. For those students who do not meet the minimum performance level, remediation followed by further testing may qualify them for a future academy.*
3. *Students must have a personal interview with an academy coordinator.*
4. *Students must complete the police academy application (available at the Criminal Justice Training Center).*
5. *Students must meet minimum licensing requirements as established by TCLEOSE.*

SECURITY MANAGEMENT

Certificate of Completion Program
CRIM.T004.UG • Northwest Campus Only

First Semester			Semester Hours
SLPS	1371	Introduction to Security Management	3
BMGT	1327	Principles of Management	3
PSYC	2301	Introduction to Psychology	3
ITSY	1400	Fundamentals of Information Security	4
SLPS	1391	Special Topics in Security and Loss Prevention Services	3
Second Semester			
SLPS	2371	Fundamentals of Physical Security	3
CRIJ	2314	Criminal Investigation	3
CRIJ	2323	Legal Aspects of Law Enforcement	3
SLPS	2288 *	Internship - Security and Loss Prevention Services	2
		TOTAL CERTIFICATE HOURS	27

* Enrollment in the Capstone Course requires approval of Department Chairperson.
  Students must have completed 16 semester hours in the program prior to enrolling.

CULINARY ARTS
Associate of Applied Science Degree Program
CULI.D003.UG • Southeast Campus Only

First Year
First Semester   *Semester Hours*
HECO   1315   Food Preparation and Meal Management   3
CHEF   1205   Sanitation and Safety   2
CHEF   1301   Basic Food Preparation   3
ENGL   1301   English Composition I   3
RSTO   1325   Purchasing for Hospitality Operations   3

Second Semester
HECO   1322   Nutrition and Diet Therapy   3
PSTR   1401   Fundamentals of Baking   4
CHEF   2301   Intermediate Food Preparation   3
HAMG   2301   Principles of Food and Beverage Operations   3
RSTO   1204   Dining Room Service   2

Summer Session
COSC   1401   Introduction to Computing; or BCIS 1405   4
SPCH   1311   Fundamentals of Speech Communication;   3
                or SPCH 1315 or SPCH 1318 or SPCH 1321

Second Year
First Semester
RSTO   1306   Facilities Layout and Design   3
CHEF   1345   International Cuisine   3
CHEF   1310   Garde Manger   3
HAMG   1340   Hospitality Legal Issues   3
                Humanities/Visual or Performing Arts Elective 3

Second Semester
IFWA   2446   Quantity Procedures   4
PSTR   2331   Advanced Pastry Shop   3
HAMG   1324   Hospitality Human Resources Management   3
CHEF   1264   Practicum (Capstone)   2
                Behavioral or Social Science Elective   3
                Science Elective   3
                              TOTAL DEGREE HOURS   69

NOTE: Satisfaction of the mathematical competency for this program may be met by completing MATH-0304 (Beginning Algebra) with a grade of C or higher, by achieving a placement test score that qualifies the student for MATH-0350 (Intermediate Algebra), or by completing a college-level mathematics course (1300 level or above).

FOOD SERVICE SUPERVISION

Certificate of Completion Program
CULI.T002.UG • Southeast Campus Only

First Semester			*Semester Hours*
HAMG	1321	Introduction to Hospitality Industry	3
CHEF	1205	Sanitation and Safety	2
CHEF	1301	Basic Food Preparation	3
HECO	1315	Food Preparation and Meal Management	3
HAMG	1324	Hospitality Human Resources Management	3

Second Semester			
CHEF	2301	Intermediate Food Preparation	3
CHEF	1345	International Cuisine	3
COSC	1401	Introduction to Computing; or BCIS 1405	4
HAMG	1340	Hospitality Legal Issues	3
CHEF	1264	Practicum (Capstone)	2
		TOTAL CERTIFICATE HOURS	29

CULINARY NUTRITION

Certificate of Completion Program
CULI.T005.UG • Southeast Campus Only

First Semester			*Semester Hours*
HECO	1322	Nutrition and Diet Therapy	3
CHEF	1301	Basic Food Preparation	3
CHEF	1205	Sanitation and Safety	2

Second Semester			
CHEF	2301	Intermediate Food Preparation	3
FDNS	1341	Nutrition in the Life Cycle	3
FDNS	1345	Medical Nutrition Therapy I	3
PSTR	1401	Fundamentals of Baking	4
		TOTAL CERTIFICATE HOURS	21

DENTAL HYGIENE#

Associate of Applied Science Degree Program
DENH.D001.UG • Northeast Campus Only

First Summer Session			*Semester Hours*
BIOL	2401	Anatomy and Physiology I	4

Second Summer Session			
BIOL	2402	Anatomy and Physiology II	4

First Year
First Semester

CHEM	1406	Essentials of General and Biological Chemistry	4
DHYG	1207	General and Dental Nutrition	2
DHYG	1301	Orofacial Anatomy, Histology, and Embryology	3
DHYG	1327	Preventive Dental Hygiene Care	3
DHYG	1431	Preclinical Dental Hygiene	4

Second Semester

BIOL	2420	Microbiology	4
DHYG	1260	Clinical - Dental Hygienist	2
DHYG	1304	Dental Radiology	3
DHYG	1319	Dental Materials	3
DHYG	2301	Contemporary Dental Hygiene Care I	3

First Summer Session

ENGL	1301	English Composition I	3

Second Summer Session

DHYG	2331	Contemporary Dental Hygiene Care II	3

Second Year
First Semester

DHYG	1215	Community Dentistry	2
DHYG	1235	Pharmacology for the Dental Hygienist	2
DHYG	1239	General and Oral Pathology	2
DHYG	1311	Periodontology	3
DHYG	2360	Clinical - Dental Hygienist	3

Second Semester

DHYG	1191	Special Topics in Dental Hygienist	1
DHYG	1223	Dental Hygiene Practice	2
DHYG	2361	Clinical - Dental Hygienist	3
PSYC	2315	Psychology of Adjustment and Human Relations; or PSYC 2301	3
		Sociology Elective	3
		Humanities/Visual or Performing Arts Elective	3
		TOTAL DEGREE HOURS	72

Admission and Program Information for Dental Hygiene:

A selection committee reviews applications and selects those applicants who best meet the following criteria (listed in random order):

- *Students must demonstrate competency in mathematics, reading, and writing by*
    - *completion of previous applicable coursework, or*
    - *passing each of those sections of ACCUPLACER or an appropriate alternative test, or*
    - *earning a grade of C or higher in MATH 0350, RDNG 0363, and ENGL 0325.*
- *Grade point average (GPA) of all high school or undergraduate college classes or GED scores if high school/college are not applicable.*
- *Bonus points for college-level general education and science courses required for the program for which a grade of C or higher was made. **NOTE**: Science courses must have been completed within five years of the semester containing the program deadline date.*
- *Bonus points proportionate to the number of semester hours from a regionally accredited college or university for which a grade of C or higher was made up to a maximum of 120 semester hours.*
- *Bonus point for bachelor's degree from a regionally accredited college or university*
- *Bonus points for observation experience in dental care setting or for employment experience as dental assistant.*

Students who are selected for admission must undergo screening for substances of abuse and a criminal background check. All offers for admission to the Dental Hygiene Program are provisional until satisfactory results are received for these two evaluations.

International students must contact the International Admission Office 817-515-5232 and also the Health Science Office 817-515-6435.

Only the criteria listed are evaluated and considered for the purpose of selection and admission to this program. No specific minimum grade point average or test score, or a set minimum number of courses must be completed for admission. Selection is based on how each applicant compares with others in the applicant pool. In general, the higher the grades, the more competitive the applicant will be for the positions available.

Once admitted to the program, students must complete and earn a minimum grade of C in each specialized course.

Most/all of the specialized courses are taught only during the daytime.

After successful completion of the above curriculum, the student is eligible to take the necessary examinations to become a registered dental hygienist through the Registry of Dental Examiners of the American Dental Association.

DIETETIC TECHNICIAN

Associate of Applied Science Degree Program
DIET.D001.UG • Southeast Campus Only

First Year

First Semester   *Semester Hours*

HECO	1315	Food Preparation and Meal Management	3
HECO	1322	Nutrition and Diet Therapy	3
FDNS	1103	Introduction to Dietetics	1
FDNS	2400	Food Management Systems	4
ENGL	1301	English Composition I	3
CHEF	1205	Sanitation and Safety; or BIOL 2420	2

Second Semester

IFWA	2446	Quantity Procedures	4
FDNS	1164	Practicum in Food Management	1
FDNS	1341	Nutrition in the Life Cycle	3
FDNS	1345	Medical Nutrition Therapy I	3
BIOL	2401 *	Anatomy and Physiology I	4

First Summer Session

FDNS	1346	Medical Nutrition Therapy II	3

Second Summer Session

SPCH	1311	Fundamentals of Speech Communication; or SPCH 1315 or SPCH 1318 or SPCH 1321	3

Second Year

First Semester

FDNS	1309	Nutrition in the Community	3
FDNS	1447	Medical Nutrition Therapy III	4
BIOL	2402	Anatomy and Physiology II	4
COSC	1401	Introduction to Computing; or BCIS 1405	4
FDNS	2164	Practicum in Community Nutrition	1

Second Semester

FDNS	1371	Child Nutrition Care	3
BMGT	1301	Supervision	3
PSYC	2301	Introduction to Psychology; or PSYC 2302 or SOCI 1301	3
PHED	1164	Concepts of Physical Activity	1
FDNS	2165	Practicum (Capstone)	1
		Humanities/Visual or Performing Arts Elective	3
		TOTAL DEGREE HOURS	67

* Student must demonstrate mathematical competency with a grade of C or higher in MATH-0350 or equivalent prior to enrolling in BIOL-2401.

After successful completion of the above curriculum and verification by the program director, the student is eligible to take the national examination to become a Dietetic Technician Registered (DTR) through the American Dietetic Association Commission on Dietetic Registration.

CHILD NUTRITION SYSTEMS

Certificate of Completion Program
DIET.T003.UG • Southeast Campus Only

First Semester			*Semester Hours*
HECO	1322	Nutrition and Diet Therapy	3
HECO	1315	Food Preparation and Meal Management	3
FDNS	2400	Food Management Systems	4
FDNS	1371	Child Nutrition Care	3

Second Semester			
IFWA	2446	Quantity Procedures	4
FDNS	1164	Practicum in Food Management (Capstone)	1
FDNS	1341	Nutrition in the Life Cycle	3
		TOTAL CERTIFICATE HOURS	21

NOTE: Satisfaction of the mathematical competency for this program may be met by completing MATH-0304 (Beginning Algebra) with a grade of C or higher, by achieving a placement test score that qualifies the student for MATH-0350 (Intermediate Algebra), or by completing a college-level mathematics course (1300 level or above).

DIETARY MANAGER

Certificate of Completion Program
DIET.T004.UG • Southeast Campus Only

First Semester			*Semester Hours*
HECO	1322	Nutrition and Diet Therapy	3
FDNS	2400	Food Management Systems	4
FDNS	1345	Medical Nutrition Therapy I	3
CHEF	1301	Basic Food Preparation	3

Second Semester			
CHEF	1205	Sanitation and Safety; or BIOL 2420	2
IFWA	2446	Quantity Procedures	4
FDNS	1341	Nutrition in the Life Cycle	3
BMGT	1301	Supervision	3
FDNS	1164	Practicum in Food Management (Capstone)	1
		TOTAL CERTIFICATE HOURS	26

NOTE: Satisfaction of the mathematical competency for this program may be met by completing MATH-0304 (Beginning Algebra) with a grade of C or higher, by achieving a placement test score that qualifies the student for MATH-0350 (Intermediate Algebra), or by completing a college-level mathematics course (1300 level or above).

DIETETICS I*

Certificate of Completion Program
DIET.T002.UG • Southeast Campus Only

First Year

First Semester			*Semester Hours*
HECO	1315	Food Preparation and Meal Management	3
HECO	1322	Nutrition and Diet Therapy	3
FDNS	2400	Food Management Systems	4
ENGL	1301	English Composition I	3

Second Semester			
IFWA	2446	Quantity Procedures	4
CHEM	1411	General Chemistry I	4
MATH	1314	Functional Approach to College Algebra	3
PHED	1164	Concepts of Physical Activity	1

First Summer Session			
		Humanities/Visual or Performing Arts Elective	3

Second Summer Session			
SPCH	1311	Fundamentals of Speech Communications; or	3
		SPCH 1315 or SPCH 1321	

Second Year

First Semester			
FDNS	1309	Nutrition in the Community (Capstone)	3
COSC	1401	Introduction to Computing; or BCIS 1405	4
PSYC	2301	Introduction to Psychology	3
CHEM	1412	General Chemistry II	4
		TOTAL CERTIFICATE HOURS	45

* Students must meet requirements of the Texas Success Initiative (TSI), including assessment prior to enrollment in any college-level coursework and any indicated developmental education or other strategy for achieving college readiness.

After successful completion of the above curriculum, the student is eligible to apply to programs designed to train Registered Dietitians (RD) and accredited by the American Dietetic Association. Completion of this program does not, however, ensure the student's acceptance into an RD program.

ELECTRONICS TECHNOLOGY

Associate of Applied Science Degree Programs
ELEC.D003.UG • Computer Hardware • South Campus Only
ELEC.D004.UG • Electronics and Telecommunication • South Campus Only
ELEC.D005.UG • Electronics Engineering Technology • South Campus Only
ELEC.D006.UG • Robotics and Automation • South Campus Only
ELEC.D007.UG • Oil and Gas Production • South Campus Only
ELEC.D008.UG • Renewable Energy • South Campus Only

Academic Foundation (Required for Each Program)			*Semester Hours*
ENGL	1301	English Composition I	3
GOVT	2306	Texas State and Local Government; or GOVT 2305	3
MATH	1314	Functional Approach to College Algebra; or MATH 1316 or MATH 1324 or MATH 1332 or MATH 2412 or MATH 2513	3
SPCH	1321	Business and Professional Communication; or SPCH 1311 or SPCH 1315 or SPCH 1318	3
		Humanities/Visual or Performing Arts Elective	3
		TOTAL ACADEMIC FOUNDATION HOURS	15

Technical Foundation (Required for Each Program)			*Semester Hours*
CETT	1409	DC-AC Circuits	4
CETT	1449	Digital Systems	4
RBTC	1401	Programmable Logic Controllers	4
CETT	1441	Solid State Circuits	4
CETT	1445	Microprocessor	4
CETT	2435	Advanced Microprocessors	4
CETT	1431	Programming for Discrete Electronic Devices	4
ENGR	1304	Engineering Graphics	3
		TOTAL TECHNICAL FOUNDATION HOURS	31

Specialization for Computer Hardware			*Semester Hours*
CPMT	1411	Introduction to Computer Maintenance	4
CPMT	1445	Computer Systems Maintenance	4
CPMT	1449	Computer Networking Technology	4
CSIR	1459	Digital Data Communication	4
CPMT	1491	A+ Certification Training (Capstone)	4
		TOTAL DEGREE HOURS	66

Specialization for Electronics and Telecommunications			*Semester Hours*
CETT	1457	Linear Integrated Circuits	4
EECT	2439	Communication Circuits	4
EECT	2435	Telecommunications	4
CSIR	1459	Digital Data Communication	4
CETT	2449	Research and Project Design (Capstone)	4
		TOTAL DEGREE HOURS	66

Specialization for Electronics Engineering Technology   *Semester Hours*

ENGR	1201	Introduction to Engineering	2
PHYS	2425	University Physics I	4
PHYS	2426	University Physics II	4
ENGR	2301	Mechanics I (Statics)	3
ENGR	2302	Mechanics II (Dynamics)	3
ENGR	2432	Mechanics of Materials	4
ENGR	2305	Circuit Analysis (Capstone)	3
		TOTAL DEGREE HOURS	69

Specialization for Robotics and Automation   *Semester Hours*

HYDR	1345	Hydraulics and Pneumatics	3
ELPT	2455	Programmable Logic Control II	4
RBTC	1447	Electro-Mechanical Devices	4
RBTC	1351	Robotic Mechanisms	3
CETT	2449	Research and Design Project	4
RBTC	2445	Robot Application, Set-Up and Testing (Capstone)	4
		TOTAL DEGREE HOURS	68

Specialization for Oil and Gas Production   *Semester Hours*

PTRT	1313	Industrial Safety	3
PTRT	1307	Recovery and Production Methods	3
PTRT	1317	Natural Gas Processing I	3
PTRT	2323	Natural Gas Production	3
PTRT	1324	Petroleum Instrumentation	3
HYDR	1345	Hydraulics and Pneumatics	3
INMT	2345	Industrial Troubleshooting (Capstone)	3
		TOTAL DEGREE HOURS	67

Specialization for Renewable Energy   *Semester Hours*

PTRT	1313	Industrial Safety	3
HART	1411	Solar Fundamentals	4
ELMT	2437	Electronic Troubleshooting, Service, and Repair	4
CSIR	1459	Digital Data Communications	4
WIND	2459	Wind Power Delivery System	4
RBTC	1351	Robotic Mechanisms	3
INTC	2359	Distributive Control Systems (Capstone)	3
		TOTAL DEGREE HOURS	71

ELECTRONICS TECHNOLOGY CERTIFICATES

COMPUTER MAINTENANCE
Certificate of Completion Program
ELEC.T004.UG • South Campus Only

First Semester			Semester Hours
CETT	1449	Digital Systems	4
CPMT	1411	Introduction to Computer Maintenance	4
CPMT	1449	Computer Networking Technology	4
Second Semester			
CETT	1409	DC-AC Circuits	4
CPMT	1445	Computer Systems Maintenance	4
CPMT	1491	A+ Certification Training (Capstone)	4
		TOTAL CERTIFICATE HOURS	24

ELECTRONICS TECHNOLOGY
Certificate of Completion Program
ELEC.T001.UG • South Campus Only

First Semester			Semester Hours
MATH	1314	Functional Approach to College Algebra; or	3
		MATH 1316 or MATH 1324 or MATH 1332 or MATH 2513	
CETT	1409	DC-AC Circuits	4
CETT	1449	Digital Systems	4
RBTC	1401	Programmable Logic Controllers	4
Second Semester			
CETT	1441	Solid State Circuits	4
CETT	1445	Microprocessors (Capstone)	4
		TOTAL CERTIFICATE HOURS	23

ELECTRONICS ENGINEERING TECHNOLOGY
Certificate of Completion Program
ELEC T002.UG • South Campus Only

First Semester			Semester Hours
ENGR	1201	Introduction to Engineering	2
ENGR	1304	Engineering Graphics	3
CETT	1449	Digital Systems	4
CETT	1431	Programming for Discrete Electronic Devices	4
CETT	1409	DC-AC Circuits; or ENGR 2305	4
Second Semester			
RBTC	1351	Robotic Mechanisms; or ENGR 2301	3
RBTC	1401	Programmable Logic Controllers; or ENGR 2302	4
CETT	2449	Research and Project Design	4
CETT	1445	Microprocessors	4
PHYS	1401	College Physics I; or PHYS 2425	4
Summer Term			
PHYS	1402	College Physics II; or PHYS 2426	4
		TOTAL CERTIFICATE HOURS	40

MECHATRONICS TECHNICIAN
Certificate of Completion Program
ELEC.T003.UG • South Campus Only

First Semester			Semester Hours
MATH	1314	Functional Approach to College Algebra; or MATH 1316 or MATH 1332	3
CETT	1409	DC-AC Circuits	4
CETT	1449	Digital Systems	4
RBTC	1401	Programmable Logic Controllers	4
Second Semester			
RBTC	1351	Robotic Mechanisms	3
CETT	1441	Solid State Circuits	4
CETT	1445	Microprocessors	4
RBTC	2445	Robot Applications, Set-Up and Testing (Capstone)	4
		TOTAL CERTIFICATE HOURS	30

OIL AND GAS PRODUCTION TECHNOLOGY
Certificate of Completion Program
ELEC.T005.UG • South Campus Only

First Semester			Semester Hours
CETT	1409	DC-AC Circuits	4
CETT	1449	Digital Systems	4
RBTC	1401	Programmable Logic Controllers	4
MATH	1314	Functional Approach to College Algebra; or MATH 1316 or MATH 1324 or MATH 1332 or MATH 2412 or MATH 2513	3
Second Semester			
PTRT	1313	Industrial Safety	3
PTRT	1317	Natural Gas Processing I	3
PTRT	1324	Petroleum Instrumentation	3
PTRT	2323	Natural Gas Production	3
INMT	2345	Industrial Troubleshooting (Capstone)	3
		TOTAL CERTIFICATE HOURS	30

RENEWABLE ENERGY TECHNOLOGY
Certificate of Completion Program
ELEC.T006.UG • South Campus Only

First Semester			Semester Hours
CETT	1409	DC-AC Circuits	4
CETT	1449	Digital Systems	4
HART	1411	Solar Fundamentals	4
MATH	1314	Functional Approach to College Algebra; or MATH 1316 or MATH 1324 or MATH 1332 or MATH 2412 or MATH 2513	3
Second Semester			
PTRT	1313	Industrial Safety	3
WIND	2459	Wind Power Delivery System	4
RBTC	1401	Programmable Logic Controllers	4
INTC	2359	Distributed Control Systems (Capstone)	3
		TOTAL CERTIFICATE HOURS	29

EMERGENCY MEDICAL SERVICES#
Associate of Applied Science Degree Program
EMER.D002.UG • Northeast Campus Only

General Education Courses (To be Completed Before First Semester)

				Semester Hours
BIOL	2401	*	Anatomy and Physiology I	4
BIOL	2402		Anatomy and Physiology II	4
COSC	1401		Introduction to Computing	4
ENGL	1301		English Composition I	3
EMSP	1160	**	Clinical - Emergency Medical Technology/Technician	1
EMSP	1501	**	Emergency Medical Technician - Basic	5
HPRS	2200		Pharmacology for Health Professions	2
PSYC	2315		Psychology of Adjustment and Human Relations; or PSYC 2301	3
			Speech Elective	3
			Humanities/Visual or Performing Arts Elective	3
		***	Approved Elective	3

First Year
First Semester   *Semester Hours*

EMSP	1356	Patient Assessment and Airway Management	3
EMSP	1438	Introduction to Advanced Practice	4
EMSP	2160	Clinical - Emergency Medical EMT Paramedic	1

Second Semester

EMSP	1355	Trauma Management	3
EMSP	2161	Clinical - Emergency Medical EMT Paramedic	1
EMSP	2444	Cardiology	4

Summer Session

EMSP	2534	Medical Emergencies	5

Second Year
First Semester

EMSP	2162	Clinical - Emergency Medical EMT Paramedic	1
EMSP	2338	EMS Operations	3
EMSP	2430	Special Populations	4

Second Semester

EMSP	2243	Assessment Based Management	2
EMSP	2267	Practicum or Field Experience - Emergency Medical Technology/Technician	2
		TOTAL DEGREE HOURS	68

* Student must demonstrate mathematical competency with a grade of C or higher in MATH 0350 or equivalent prior to enrolling in BIOL-2401.

**Reading competency through RDNG-0363 or equivalent, mathematical competency through MATH 0304 or equivalent, and writing competency through ENGL-0325 or equivalent are required for enrollment in EMSP-1501 and EMSP-1160. The completion of EMSP-1501 and EMSP-1160 does not assure admission into the AAS.Emergency Medical Services or the CRT.Paramedic Program.

***Approved Elective may be chosen from BIOL-2420, BIOL- 2421, EMSP-2458, PSYC-2301, PSYC-2302, PSYC-2308, PSYC-2314, PSYC-2315, SOCI-1301, SOCI-1306, SOCI-2301 or SOCI-2326. (NOTE: EMSP-2163 must be taken concurrently with EMSP-2458.)

PARAMEDIC PROGRAM#

Certificate of Completion Program
EMER.T002.UG • Northeast Campus Only

Prerequisite: Current Texas Department of State Health Services EMT-Basic Certification may be earned by taking EMSP 1160 and EMSP 1501.*

First Year

First Semester			*Semester Hours*
EMSP	1356	Patient Assessment and Airway Management	3
EMSP	1438	Introduction to Advanced Practice	4
EMSP	2160	Clinical - Emergency Medical Technology/Technician	1
Second Semester			
EMSP	1355	Trauma Management	3
EMSP	2161	Clinical - Emergency Medical Technology/Technician	1
EMSP	2444	Cardiology	4
Summer Session (12 Weeks)			
EMSP	2534	Medical Emergencies	5

Second Year

First Semester			
EMSP	2162	Clinical - Emergency Medical Technology	1
EMSP	2338	EMS Operations	3
EMSP	2430	Special Populations	4
Second Semester (12 Weeks)			
EMSP	2243	Assessment Based Management	2
EMSP	2267	Practicum or Field Experience - Emergency Medical Technology/Technician	2
		TOTAL CERTIFICATE HOURS	33

*The completion of EMSP 1501 and EMSP 1160 does not assure admission into the AAS.Emergency Medical Services or the CRT.Paramedic Program.

Admission and Program Information for the AAS.Emergency Medical Services and the CRT.Paramedic Program

A selection committee reviews the applications and selects those applicants who best meet the following criteria (listed in random order):
- *Grade point average (GPA) of all high school/college classes.*
- *GED scores if high school/college is not applicable.*
- *Bonus points for college general education courses required for the program for which a grade of C or better was made.*
- *Bonus points for college science courses required for the program and the GPA of those courses.*
- *Priority preference will be given to applicants who have completed Anatomy and Physiology I and II.*
- *Mathematical competency through MATH 0350 or equivalent is required for admission.*

Applicants must hold a current Texas EMT certificate.

Only the criteria listed are evaluated and considered for the purpose of selection and admission to this program. No specific minimum grade point average or test score, or a set minimum number of courses must be completed for admission. Selection is based on how each applicant compares with others in the applicant pool. In general, the higher the grades, the more competitive the applicant will be for the positions available.

Student must complete and earn a grade of C or better in each specialized course.

The Tarrant County College Emergency Medical Services Program is accredited by the **Commission on Accreditation of Allied Health Education Programs (CAAHEP), 1361 Park Street, Clearwater, FL 33756. Phone 727-210-2350**

After successful completion of this program, the student will be eligible to take the examination for certification as an Emergency Medical Technician - Paramedic by the Texas Department of Health.

EMERGENCY MEDICAL TECHNICIAN
Certificate of Completion Program
EMER.T003.UG • Northeast Campus Only

First Year

First Semester			Semester Hours
EMSP	1501	Emergency Medical Technician – Basic	5
EMSP	1160	Clinical in Emergency Medical Technology	1
		TOTAL CERTIFICATE HOURS	6

*The completion of EMSP 1501 and EMSP 1160 does not assure admission into the AAS.Emergency Medical Services or the CRT.Paramedic Program.

Admission and Program Information for the CRT.Emergency Medical Technician

In order to register for these classes, students must demonstrate competency in mathematics, reading, and writing by
- *Completion of previous applicable coursework,*
- *Passing each of the sections of ACCUPLACER or an appropriate alternative test, or*
- *Earning a grade of C or higher in MATH 0304, RDNG 0363, and ENGL 0325.*

Students must undergo screening for substances of abuse and a criminal background check in order to remain enrolled in this program. Details are provided at an orientation meeting prior to the beginning of classes.

Students must earn a grade of C or higher in both courses to receive an EMT certificate in this program.

After satisfactory completion of the above curriculum, the student is eligible to take the National Registry EMT examination.

FIRE INVESTIGATION TECHNOLOGY

Associate of Applied Science Degree Program
FIRI.D001.UG • Northwest Campus Only

First Year

First Semester *Semester Hours*

FIRT	1338	Fire Protection Systems	3
FIRT	1329	Building Codes and Construction	3
ENGL	1301	English Composition I	3
COSC	1401	Introduction to Computing; or BCIS 1405	4
PHED	1164	Concepts of Physical Activity	1

Second Semester

FIRT	1303	Fire and Arson Investigation I	3
FIRT	1307	Fire Prevention Codes and Inspections	3
CRIJ	1301	Introduction to Criminal Justice	3
CHEM	1406	Essentials of General and Biological Chemistry	4
		Humanities/Visual or Performing Arts Elective	3
	*	Fire Elective	3

Second Year

First Semester

CRIJ	2323	Legal Aspects of Law Enforcement	3
FIRT	1305	Public Education Programs	3
FIRT	1309	Fire Administration I	3
FIRT	2333	Fire and Arson Investigation II	3
FIRT	1333	Fire Chemistry I	3
SPCH	1321	Business and Professional Communication; or SPCH 1311 or SPCH 1315 or SPCH 1318	3

Second Semester

GOVT	2306	Texas State and Local Government	3
CRIJ	2314	Criminal Investigation	3
CRIJ	1306	Court Systems and Practices	3
FIRT	1315	Hazardous Materials I	3
PSYC	2301	Introduction to Psychology	3
FIRT	2388	Internship - Fire Protection and Safety Technology/ Technician (Capstone); or FIRT 2331	3

TOTAL DEGREE HOURS   69

*Electives must have prior approval of the department chairperson. Suggested electives include FIRS-1301, FIRS-1313, FIRS-1319, FIRS-1323, FIRS-1329, FIRT-1301, FIRT-1311, FIRT-1349, FIRT-1391 or FIRT-2309

NOTE: Satisfaction of the mathematical competency for this program may be met by completing MATH-0304 (Beginning Algebra) with a grade of C or higher, by achieving a placement test score that qualifies the student for MATH-0350 (Intermediate Algebra), or by completing a college-level mathematics course (1300 level or above).

FIRE PROTECTION TECHNOLOGY
Associate of Applied Science Degree Program
FIRP.D001.UG • Northwest Campus Only

First Year

First Semester   *Semester Hours*

COSC	1401	Introduction to Computing; or BCIS 1405	4
FIRT	1301	Fundamentals of Fire Protection	3
ENGL	1301	English Composition I	3
GOVT	2306	Texas State and Local Government	3
SPCH	1321	Business and Professional Communication; or SPCH 1311 or SPCH 1315 or SPCH 1318	3
SOCI	1301	Introduction to Sociology; or any Psychology course	3

Second Semester

FIRT	1338	Fire Protection Systems	3
FIRT	1307	Fire Prevention Codes and Inspection	3
FIRT	1329	Building Codes and Construction	3
CHEM	1406	Essentials of General and Biological Chemistry	4
		Humanities/Visual or Performing Arts Elective	3
PHED	1164	Concepts of Physical Activity	1

Second Year

First Semester

FIRT	1333	Fire Chemistry I	3
FIRT	1311	Fire Service Hydraulics	3
FIRT	1309	Fire Administration I	3
	*	Fire Technology Electives	3

Second Semester

FIRT	1349	Fire Administration II	3
FIRT	1315	Hazardous Materials I	3
FIRT	2388	Internship: Fire Protection and Safety Technology/ Technician (Capstone); or FIRT 2331	3
	**	Fire Technology Electives	9
		TOTAL DEGREE HOURS	66

* Electives must have prior approval of the department chairperson. Suggested electives include FIRS-1301, FIRS-1313, FIRS-1319, FIRS-1323, FIRS-1329 or FIRT-1391

**Suggested electives include: FIRS-1301, FIRS-1313, FIRS-1319, FIRS-1323, FIRS-1329, FIRT-1303, FIRT-1305, FIRT-1345, FIRT-1391, FIRT-2309 or FIRT-2333

NOTE: Satisfaction of the mathematical competency for this program may be met by completing MATH-0304 (Beginning Algebra) with a grade of C or higher, by achieving a placement test score that qualifies the student for MATH-0350 (Intermediate Algebra), or by completing a college-level mathematics course (1300 level or above).

BASIC FIREFIGHTER CERTIFICATION#
Certificate of Completion
FIRP.T002.UG • Northwest Campus Only

First Semester			Semester Hours
FIRS	1301	Firefighter Certification I	3
FIRT	1338	Fire Protection Systems	3
FIRS	1313	Firefighter Certification III	3
FIRS	1319	Firefighter Certification IV	3
FIRS	1323	Firefighter Certification V	3
FIRS	1329	Firefighter Certification VI	3
		TOTAL CERTIFICATE HOURS	18

Admission and Program Information for Basic Firefighter

The courses listed above are taught in an academy format (daytime - Monday through Friday from 8 a.m. - 5 p.m. and nighttime - Monday and Thursday from 6 p.m. - 10 p.m., and Saturday 8 a.m. - 5 p.m.) and have specialized admission requirements. Consent of the academy coordinator required for enrollment. Once admitted to the program, students must complete and earn a minimum grade of C in each course. Final endorsement of eligibility for the State Firefighter Licensing Exam will only be issued to a student who has completed each course (with a minimum grade of C) during that specific academy.

Enrollment is based on space availability for those who meet admission criteria.
Admission Criteria:
   1. *Students must contact the Fire Academy for academy dates and application deadlines.*
   2. *Prior to enrolling, students must provide evidence of EMT Certification.*
   3. *Students must provide evidence of completion of the ACCUPLACER Test or approved alternative test.**
   4. *Students must take the physical abilities test.*
   5. *Student must complete the Fire Academy application (available at the Fire Academy).*
   6. *Students must have a personal interview with the Academy Coordinator.*

* This requirement may be waived by the Division Dean.

GEOGRAPHIC INFORMATION SYSTEMS

Associate of Applied Science Degree Program
GINS.D001.UG • Southeast Campus Only

First Year

First Semester			Semester Hours
ENGL	1301	English Composition I	3
BCIS	1405	Business Computer Applications; or COSC 1401	4
GISC	1402	Understanding Geographic Information Systems (GIS)	4
MATH	1314	Functional Approach to College Algebra	3
ARCH	1315	Architectural Computer Graphics; or ENGR 1304	3

Second Semester			
ENGL	1302	English Composition II	3
GISC	2404	Geographic Information Systems (GIS) Design with Vector Analysis	4
COSC	1436	Programming Fundamentals I	4
MATH	1342	Elementary Statistics	3
GOVT	2305	United States Government; or GOVT 2306	3

Second Year

First Semester			
GISC	2402	Geographic Information Systems (GIS) Design with Raster Analysis	4
ITSW	1407	Introduction to Database	4
GISC	2420	Intermediate Geographic Information Systems (GIS)	4
SPCH	1311	Fundamentals of Speech Communication; or SPCH 1315 or SPCH 1318 or SPCH 1321	3
		Humanities/Visual or Performing Arts Elective	3

Second Semester			
GISC	2411	Geographic Information Systems (GIS) Applications	4
ITSE	2405	Windows Programming	4
GISC	2401	Data Acquisition and Analysis in Geographic Information Systems (GIS)	4
GISC	2264	Practicum: Cartography (Capstone)	2
		TOTAL DEGREE HOURS	66

GEOGRAPHIC INFORMATION SYSTEMS (GIS) SKILLS ENHANCEMENT

Certificate of Completion Program
GINS.T002.UG • Southeast Campus Only

First Semester			Semester Hours
GISC	1402	Understanding Geographic Information Systems (GIS)	4
GISC	2402	Geographic Information Systems (GIS) Design with Raster Analysis	4
GISC	2404	Geographic Information Systems (GIS) Design with Vector Analysis	4
GISC	2411	Geographic Information Systems (GIS) Applications	4
GISC	2420	Intermediate Geographic Information Systems (GIS)	4
		TOTAL CERTIFICATE HOURS	20

GEOGRAPHIC INFORMATION SYSTEMS

Certificate of Completion Program
GINS.T001.UG • Southeast Campus Only

First Semester			*Semester Hours*
GISC	1402	Understanding Geographic Information Systems (GIS)	4
BCIS	1405	Business Computer Applications; or COSC 1401	4
GISC	2402	Geographic Information Systems (GIS) Design with Raster Analysis	4
ARCH 1315		Architectural Computer Graphics; or ENGR 1304	3

Second Semester			
GISC	2404	Geographic Information Systems (GIS) Design with Vector Analysis	4
GISC	2411	Geographic Information Systems (GIS) Applications	4
GISC	2401	Data Acquisition and Analysis in GIS/GPS	4

Summer Term			
ITSE	2405	Windows Programming	4
ITSW	1407	Introduction to Database	4
GISC	2420	Intermediate Geographic Information Systems (GIS)	4
		TOTAL CERTIFICATE HOURS	39

GEOGRAPHIC INFORMATION SYSTEMS (GIS) PROGRAMMER

Certificate of Completion Program
GINS.T003.UG • Southeast Campus Only

First Semester			*Semester Hours*
GISC	1402	Understanding Geographic Information Systems (GIS)	4
COSC	1401	Introduction to Computing	4
GISC	2402	Geographic Information Systems (GIS) Design with Raster Analysis	4
ITSE	1411	Beginning Web Programming	4

Second Semester			
GISC	2401	Data Acquisition and Analysis	4
GISC	2404	Geographic Information Systems (GIS) Design with Vector Analysis	4
COSC	1436	Programming Fundamentals I	4
GISC	2420	Intermediate Geographic Information Systems (GIS)	4

Summer Term			
COSC	1437	Programming Fundamentals II	4
GISC	2435	Programming for Geographic Information Systems (GIS) (Capstone)	4
		TOTAL CERTIFICATE HOURS	40

GRAPHIC COMMUNICATION

Associate of Applied Science Degree Program
GRPH.D001.UG • Northeast Campus Only

First Year

First Semester			*Semester Hours*
ARTC	1305	Basic Graphic Design	3
SPCH	1321	Business and Professional Communication;	3
		or SPCH 1311 or SPCH 1315 or SPCH 1318	
ARTS	1311	Design I	3
ARTS	1316	Drawing I	3
ARTC	1313	Digital Publishing I	3

Second Semester			
ARTC	1402	Digital Imaging I	4
ARTC	1453	Computer Illustration I	4
ARTC	2313	Digital Publishing II	3
ARTS	2356	Photography I	3

First Summer Session			
ENGL	1301	English Composition I	3
PSYC	2315	Psychology of Adjustment and Human Relations;	3
		or PSYC 2301	

Second Summer Session			
	*	Approved Elective	3

Second Year

First Semester			
ARTC	2305	Digital Imaging II	3
IMED	1416	Web Design I	4
ARTV	1403	Basic Animation	4
ARTC	2440	Computer Illustration II	4

Second Semester			
ARTC	2335 **	Portfolio Development for Graphic Design (Capstone)	3
IMED	2415	Web Design II	4
MATH	1332	Survey of Mathematics; or MATH 1314 or MATH 1342	3
ARTS	2313	Design Communication I	3
		TOTAL DEGREE HOURS	66

All students are required to take 3 hours of electives which must be courses other than Graphic Communication. Suggested electives include:
ACCT-2301, ACNT-1303, ARTS-1312, ARTS-1317, ARTS-2314, ARTS-2323, ARTS-2333, ARTS-2357, ENGL-2311, FLMC-1431, PHTC-1300, PHTC-1343, PHTC-1353, PHTC-2331, PHTC-2343 or PHTC-2349

**Capstone is taken during the graduating semester.*

COMPUTER GRAPHICS
Certificate of Completion Program
GRPH.T004.UG • Northeast Campus Only

First Year

First Semester			*Semester Hours*
ARTC	1305	Basic Graphic Design	3
ARTC	1313	Digital Publishing I	3
ARTC	1453	Computer Illustration I	4
ARTS	1316	Drawing I	3

Second Semester			
ARTC	1402	Digital Imaging I	4
ENGL	1301	English Composition I	3
ARTS	1311	Design I	3
ARTV	1403	Basic Animation	4

Second Year

First Semester				
IMED	1416		Web Design I	4
ARTC	2305		Digital Imaging II	3
ARTS	2313		Design Communication I	3
ARTC	2335	*	Portfolio Development for Graphic Design (Capstone)	3
			TOTAL CERTIFICATE HOURS	40

*Capstone is taken during the graduating semester.

HEALTH INFORMATION TECHNOLOGY#

Associate of Applied Science Degree Program
HITT.D001.UG • Trinity River Campus Only

First Year

First Semester			*Semester Hours*
HITT	1401	Health Data Content and Structure	4
HITT	1445	Health Care Delivery Systems	4
HPRS	1206	Essentials of Medical Terminology	2
BIOL	2401	Anatomy and Physiology I	4
POFI	1449	Spreadsheet	4

Second Semester			
HITT	2331	Medical Terminology - Advanced	3
HITT	1441	Coding and Classification Systems	4
HITT	1442	Ambulatory Coding	4
HPRS	2200	Pharmacology for Health Professions	2
BIOL	2402	Anatomy and Physiology II	4

Summer Session			
HITT	2335	Coding and Reimbursement Methodologies	3
HITT	2346	Advanced Medical Coding	3

Second Year

First Semester			
HITT	1253	Legal and Ethical Aspects of Health Information	2
HITT	2260	Clinical - Health Information and Medical Records Technology/Technician	2
HITT	2443	Quality Assessment and Performance Improvement	4
ITSW	1407	Introduction to Database	4
		Humanities/Visual or Performing Arts Elective	3

Second Semester			
HITT	2261	Clinical - Health Information and Medical Records Technology/Technician	2
BMGT	1327	Principles of Management	3
ENGL	1301	English Composition I	3
PSYC	2301	Introduction to Psychology or PSYC 2316	3
SPCH	1321	Business and Professional Communication; or SPCH 1311 or SPCH 1315 or SPCH 1318 or SPCH 1342 or SPCH 2341	3
		TOTAL DEGREE HOURS	70

Admission and Program Information for Health Information Technology:

A selection committee reviews applications and selects those applicants who best meet the following criteria (listed in random order):

- *Students must demonstrate competency in mathematics, reading, and writing by*
  - *completion of previous applicable coursework, or*
  - *passing each of those sections of ACCUPLACER or an appropriate alternative test, or*
  - *earning a grade of C or higher in MATH-0350, RDNG-0363, and ENGL-0325.*
- *Grade point average (GPA) of all high school or undergraduate college classes or GED scores if high school/college are not applicable.*
- *Bonus points for college-level general education and science courses required for the program for which a grade of C or higher was made.* **NOTE**: *Science courses must have been completed within five years of the semester containing the program deadline date.*
- *Bonus points proportionate to the number of semester hours from a regionally accredited college or university for which a grade of C or higher was made up to a maximum of 120 semester hours.*
- *Bonus points for bachelor's degree from a regionally accredited college or university.*

Only the criteria listed are evaluated and considered for the purpose of selection and admission to this program. No specific minimum grade point average or test score, or a set minimum number of courses must be completed for admission. Selection is based on how each applicant compares with others in the applicant pool. In general, the higher the grades, the more competitive the applicant will be for the positions available.

Students who are selected for admission must undergo screening for substances of abuse and a criminal background check. All offers for admission to the Health Information Technology Program are provisional until satisfactory results are received for these two evaluations.

International students must contact the International Admission Office 817-515-5232 and also the Health Science Office 817-515-6691.

Once admitted to the program students must complete and earn a minimum grade of C in each specialized course.

Most/all of the specialized courses are taught only during the daytime.

After satisfactory completion of the above curriculum, the student is eligible to take the national examination to become certified as a Registered Health Information Technologist (RHIT). Graduates may also choose to sit for several medical coding certification exams.

HEATING, AIR CONDITIONING, AND REFRIGERATION TECHNOLOGY
Associate of Applied Science Degree Program
HEAT.D001.UG • South Campus Only

First Year

First Semester   *Semester Hours*

HART	1401	Basic Electricity for Heating, Ventilation and Air Conditioning (HVAC)	4
HART	1407	Refrigeration Principles	4
HART	2438	Air Conditioning Installation and Startup	4
MATH	1332	Survey of Mathematics; or MATH 1314 or MATH 1324	3

Second Semester

MAIR	1449	Refrigerators, Freezers, Window Air Conditioners	4
HART	2445	Residential Air Conditioning Systems Design	4
SPCH	1321	Business and Professional Communication; or SPCH 1311 or SPCH 1315 or SPCH 1318	3
ENGL	1301	English Composition I	3
PHED	1164	Concepts of Physical Activity	1

Summer Session

| DFTG | 1405 | Technical Drafting; or COSC 1401 | 4 |

Second Year

First Semester

HART	2431	Advanced Electricity for Heating, Ventilation and Air Conditioning (HVAC)	4
HART	1445	Gas and Electric Heating	4
HART	1403	Air Conditioning Control Principles	4
		Humanities/Visual or Performing Arts Elective	3

Second Semester

HART	2442		Commercial Refrigeration	4
HART	2436	*	Air Conditioning Troubleshooting (Capstone)	4
HART	2449	*	Heat Pumps	4
GOVT	2305		United States Government; or GOVT 2306	3

TOTAL DEGREE HOURS   64

*All other courses must be successfully completed before enrolling in these courses.

Students enrolled in the Heating, Air Conditioning and Refrigeration Technology Program are required to furnish their own hand tools for use in laboratory classes.

INSTALLATION TECHNICIAN
Certificate of Completion Program
HEAT.T001.UG • South Campus Only

First Semester			Semester Hours
HART	1401	Basic Electricity for Heating, Ventilation and Air Conditioning	4
HART	1407	Refrigeration Principles	4
HART	2445	Residential Air Conditioning Systems Design	4
Second Semester			
MAIR	1449	Refrigerators, Freezers, Window Air Conditioners	4
HART	2438	Air Conditioning Installation and Startup (Capstone)	4
		TOTAL CERTIFICATE HOURS	20

Students enrolled in the Heating, Air Conditioning and Refrigeration Technology Program are required to furnish their own hand tools for use in laboratory classes.

SERVICE TECHNICIAN
Certificate of Completion Program
HEAT.T002.UG • South Campus Only

First Semester			
HART	2431	Advanced Electricity for Heating, Ventilation and Air Conditioning	4
HART	1445	Gas and Electric Heating	4
HART	1403	Air Conditioning Control Principles	4
Second Semester			
HART	2442	Commercial Refrigeration	4
HART	2436 *	Air Conditioning Troubleshooting (Capstone)	4
HART	2449 *	Heat Pumps	4
		TOTAL CERTIFICATE HOURS	24

*All other courses must be successfully completed before enrolling in these courses.

Students enrolled in the Heating, Air Conditioning and Refrigeration Technology Program are required to furnish their own hand tools for use in laboratory classes.

HORTICULTURE

Associate of Applied Science Degree Program
HORT.D001.UG • Northwest Campus Only

First Year

First Semester   *Semester Hours*

HALT	1301	Principles of Horticulture	3
HALT	1313	Economic Entomology	3
CHEM	1406	Essentials of General and Biological Chemistry; or CHEM 1411	4
	*	Horticulture Electives	6

Second Semester

HALT	1307	Plant Diseases	3
AGCR	2418	Soil Science	4
HALT	2314	Plant Propagation	3
ENGL	1301	Composition I	3
	*	Horticulture Elective	3

Second Year

First Semester

HALT	2318	Soil Fertility and Fertilizers	3
GOVT	2305	U.S. Government; or GOVT 2306 or HIST 1301 or HIST 1302	3
		Humanities/Visual or Performing Arts Elective	3
	*	Horticulture Electives	9

Second Semester

HALT	2323	Horticultural Pest Control	3
HALT	1303	Herbaceous Plants (Capstone)	3
SPCH	1321	Business and Professional Communication; or SPCH 1311 or SPCH 1315 or SPCH 1318	3
	**	Approved Electives	6
		TOTAL DEGREE HOURS	65

*Suggested Horticulture Electives include:
HALT-1309, HALT-1311, HALT-1317, HALT-1353, HALT-1422, HALT-2301, HALT-2302, HALT-2308, HALT-2315 and HALT-2320

**Electives must have prior approval of program advisor. Suggested general electives include courses from subjects ACCT, ACNT, BMGT, BUSG, BUSI, COSC, DFTG, ECON, MRKG, SMER, SPAN, or PSYC 2301.

NOTE: Satisfaction of the mathematical competency for this program may be met by completing MATH-0304 (Beginning Algebra) with a grade of C or higher, by achieving a placement test score that qualifies the student for MATH-0350 (Intermediate Algebra), or by completing a college-level mathematics course (1300 level or above).

HORTICULTURE
Certificate of Completion Program
HORT.T001.UG • Northwest Campus Only

First Year

First Semester			*Semester Hours*
HALT	1301	Principles of Horticulture	3
HALT	1313	Economic Entomology	3
	*	Horticulture Electives	6

Second Semester			
HALT	1307	Plant Diseases	3
AGCR	2418	Soil Science	4
HALT	2314	Plant Propagation	3
	*	Horticulture Elective	3

Second Year

First Semester			
HALT	2318	Soil Fertility and Fertilizers	3
HALT	2323	Horticultural Pest Control	3
HALT	1303	Herbaceous Plants (Capstone)	3
	*	Horticulture Electives	6
		TOTAL CERTIFICATE HOURS	40

*Suggested Horticulture Electives include:
HALT-1309, HALT-1311, HALT-1317, HALT-1353, HALT-1422, HALT-2301, HALT-2302, HALT-2308, HALT-2315 and HALT-2320

HOTEL AND RESTAURANT ADMINISTRATION

Associate of Applied Science Degree Program
HRAD.D001.UG • Southeast Campus Only

First Year

First Semester			*Semester Hours*
HAMG	1321	Introduction to the Hospitality Industry	3
RSTO	1306	Facilities Layout and Design	3
RSTO	1204	Dining Room Service	2
HAMG	2301	Principles of Food and Beverage Operations	3
CHEF	1205	Sanitation and Safety	2

Second Semester			
TRVM	1201	Customer Sales and Service	2
CHEF	1301	Basic Food Preparation	3
HAMG	1324	Hospitality Human Resources Management	3
RSTO	1325	Purchasing for Hospitality Operations	3
HAMG	2305	Hospitality Management and Leadership	3

First Summer Session			
COSC	1401	Introduction to Computing; or BCIS 1405	4
SPCH	1311	Fundamentals of Speech Communication; or SPCH 1315 or SPCH 1318 or SPCH 1321	3

Second Summer Session			
SPAN	1100	Beginning Spanish Conversation I; or SPAN 1411 or FREN 1411	1
ENGL	1301	English Composition I	3

Second Year

First Semester			
HAMG	2302	Hospitality Security and Loss Prevention	3
HAMG	2307	Hospitality Marketing and Sales	3
CHEF	2301	Intermediate Food Preparation	3
HAMG	1340	Hospitality Legal Issues	3
HAMG	2330	Convention and Group Management and Services	3

Second Semester			
TRVM	1327	Special Events Design	3
HAMG	1213	Front Office Procedures	2
HAMG	2167	Practicum (Capstone)	1
		Behavioral or Social Science Elective	3
		Mathematics or Science Elective	3
		Humanities/Visual or Performing Arts Elective	3
		TOTAL DEGREE HOURS	68

NOTE: Satisfaction of the mathematical competency for this program may be met by completing MATH-0304 (Beginning Algebra) with a grade of C or higher, by achieving a placement test score that qualifies the student for MATH-0350 (Intermediate Algebra), or by completing a college-level mathematics course (1300 level or above).

EVENT MANAGEMENT
Certificate of Completion Program
HRAD.T001.UG • Southeast Campus Only

First Year

First Semester			*Semester Hours*
HAMG	1321	Introduction to the Hospitality Industry	3
RSTO	1306	Facilities Layout and Design	3
HAMG	2301	Principles of Food and Beverage Operations	3
HAMG	2330	Convention and Group Management and Services	3
RSTO	1204	Dining Room Service	2

First Summer Session			
COSC	1401	Introduction to Computing; or BCIS 1405	4

Second Summer Session			
SPCH	1311	Fundamentals of Speech Communication; or SPCH 1315 or SPCH 1318 SPCH 1321	3

Second Semester			
TRVM	1327	Special Event Design	3
TRVM	1201	Customer Sales and Service	2
HAMG	1324	Hospitality Human Resources Management	3
HAMG	1340	Hospitality Legal Issues	3

TOTAL CERTIFICATE HOURS 32

RESTAURANT PRACTITIONER
Certificate of Completion Program
HRAD.T003.UG • Southeast Campus Only

First Year

First Semester			*Semester Hours*
HAMG	1321	Introduction to the Hospitality Industry	3
RSTO	1306	Facilities Layout and Design	3
RSTO	1204	Dining Room Service	2
HAMG	2301	Principles of Food and Beverage Operations	3
CHEF	1205	Sanitation and Safety	2

First Summer Session			
COSC	1401	Introduction to Computing; or BCIS 1405	4

Second Summer Session			
SPCH	1311	Fundamentals of Speech Communication; or SPCH 1315 or SPCH 1318 SPCH 1321	3

Second Semester			
TRVM	1201	Customer Sales and Service	2
HAMG	1324	Hospitality Human Resources Management	3
CHEF	1301	Basic Food Preparation	3

TOTAL CERTIFICATE HOURS 28

RESTAURANT OPERATIONS*

Certificate of Completion Program
HRAD.T002.UG • Southeast Campus Only

First Year

First Semester			*Semester Hours*
HAMG	1321	Introduction to the Hospitality Industry	3
RSTO	1306	Facilities Layout and Design	3
RSTO	1204	Dining Room Service	2
HAMG	2301	Principles of Food and Beverage Operations	3
CHEF	1205	Sanitation and Safety	2

Second Semester			
TRVM	1201	Customer Sales and Service	2
CHEF	1301	Basic Food Preparation	3
HAMG	1324	Hospitality Human Resources Management	3
TRVM	1327	Special Events Design	3
HAMG	2305	Hospitality Management and Leadership	3

First Summer Session			
COSC	1401	Introduction to Computing; or BCIS 1405	4

Second Summer Session			
SPCH	1311	Fundamentals of Speech Communication; or SPCH 1315 or SPCH 1318 or SPCH 1321	3

Second Year

First Semester			
CHEF	2301	Intermediate Food Preparation	3
RSTO	1325	Purchasing for Hospitality Operations	3
HAMG	2307	Hospitality Marketing and Sales	3
HAMG	2167	Practicum (Capstone)	1

TOTAL CERTIFICATE HOURS   44

* Students must meet requirements of the Texas Success Initiative (TSI), including assessment prior to enrollment in any college-level coursework and any indicated developmental education or other strategy for achieving college readiness.

NOTE: Satisfaction of the mathematical competency for this program may be met by completing MATH-0304 (Beginning Algebra) with a grade of C or higher, by achieving a placement test score that qualifies the student for MATH-0350 (Intermediate Algebra), or by completing a college-level mathematics course (1300 level or above).

INFORMATION TECHNOLOGY
Associate of Applied Science Degree Programs
ITCS.D001.UG • Game and Simulation Programming • South Campuses Only
ITCS.D002.UG • Network Support • Northeast, Northwest, South, Southeast
    Campuses Only
ITCS.D003.UG • Programming • All Campuses
ITCS.D004.UG • Security • Northeast, Northwest, South, Southeast Campuses Only
ITCS.D005.UG • Web and Internet Services • Northeast, Southeast, Trinity River
    Campuses Only

Academic Foundation (Required for Each Program)			*Semester Hours*
COSC	1401	Introduction to Computing; or BCIS 1405	4
ENGL	1301	English Composition I	3
MATH	1314	Functional Approach to College Algebra; or	3
		MATH 1316 or MATH 2412 or MATH 2513	
SPCH	1321	Business and Professional Communication; or	3
		SPCH 1311 or SPCH 1315 or SPCH 1318	
	*	Social or Behavioral Science Elective	3
	**	Humanities/Visual or Performing Arts Elective	3
		TOTAL ACADEMIC FOUNDATION HOURS	19

*Social or Behavioral Science Elective must be chosen from the corresponding section of the Core Curriculum.
**Humanities/Visual or Performing Arts Elective must be chosen from the corresponding section of the Core Curriculum.

Technical Foundation (Required for Each Program)			*Semester Hours*
COSC	1436	Fundamentals of Programming I	4
ITSC	1405	Introduction to PC Operating Systems	4
ITSC	1425	Personal Computer Hardware	4
ITCC	1401	Cisco Exploration 1: Network Fundamentals;	4
		or ITNW 1425	
ITSY	1400	Fundamentals of Information Security	4
		TOTAL TECHNICAL FOUNDATION HOURS	19

Specialization for Game and Simulation Programming			*Semester Hours*
GAME	1304	Level Design	3
GAME	1403	Introduction to Game Design and Development	4
COSC	1437	Programming Fundamentals II	4
GAME	1443	Game and Simulation Programming I	4
GAME	2402	Mathematical Applications for Game Development	4
GAME	1459	Game and Simulation Programming II (Capstone)	4
		TOTAL DEGREE HOURS	62

Specialization for Network Support			*Semester Hours*
ITNW	1408	Implementing and Supporting Client Operating Systems	4
ITNW	1454	Implementing and Supporting Servers	4
ITSC	1407	UNIX Operating Systems I	4
ITCC	1404	Cisco Exploration 2: Routing Protocols and Concepts	4
ITCC	2408	Cisco Exploration 3: LAN Switching and Wireless	4
ITCC	2410	Cisco Exploration 4: Accessing the WAN (Capstone)	4
		TOTAL DEGREE HOURS	63

Specialization for Programming

			Semester Hours
COSC	1437	Programming Fundamentals II	4
COSC	1420	C Programming; or ITSE 2417	4
ITSE	2405	Windows Programming; or ITSE-1430	4
COSC	2436	Fundamentals of Programming III	4
ITSE	2409	Database Programming	4
ITSE	1450	Systems Analysis and Design (Capstone)	4
		TOTAL DEGREE HOURS	63

Specialization for Security

			Semester Hours
ITNW	1408	Implementing and Supporting Client Servers; or ITNW 1454	4
ITSC	1407	UNIX Operating System I	4
ITSY	2400	Operating System Security	4
ITSY	2401	Firewalls and Network Security	4
ITSY	2443	Computer System Forensics	4
ITSY	2459	Security Assessment and Auditing (Capstone)	4
		TOTAL DEGREE HOURS	63

Specialization for Web and Internet Services

			Semester Hours
COSC	1437	Programming Fundamentals II	4
ITSE	1411	Beginning Web Programming	4
ITSW	1407	Introduction to Database	4
ITSE	2409	Database Programming	4
ITSE	2402	Intermediate Web Programming	4
INEW	2434	Advanced Web Programming (Capstone)	4
		TOTAL DEGREE HOURS	63

INFORMATION TECHNOLOGY CERTIFICATES

CISCO SUPPORT

Certificate of Completion Program
ITCS.T001.UG • Northeast, South, Southeast Campuses Only

			Semester Hours
ITCC	1401	Cisco Exploration 1 - Network Fundamentals	4
ITCC	1404	Cisco Exploration 2 - Routing Protocols and Concepts	4
ITCC	2408	Cisco Exploration 3 - LAN Switching and Wireless	4
ITCC	2410	Cisco Exploration 4 - Accessing the WAN	4
		TOTAL CERTIFICATE HOURS	16

The capstone experience for this program will be the Cisco CCNA examinations. The above curriculum is designed to assist the student in preparing for the examinations required to become a Cisco Certified Network Associate (CCNA).

ADVANCED CISCO SUPPORT

Certificate of Completion Program
ITCS.T002.UG • Northeast and South Campuses Only

			Semester Hours
ITCC	2432	CCNP 1: Advanced Routing	4
ITCC	2440	CCNP 3: Multilayer Switching	4
ITCC	2444	CCNP 4: Internetwork Troubleshooting	4
		TOTAL CERTIFICATE HOURS	12

The Capstone experience for this program will be the Cisco CCNP examinations. The above curriculum is designed to assist the student in preparing for the examinations required to become a Cisco Certified Network Professional (CCNP).

GAME AND SIMULATION PROGRAMMING

Certificate of Completion Program
ITCS.T003.UG • South Campus Only

			Semester Hours
ARTC	1305	Basic Graphic Design	3
ARTC	1402	Digital Imaging I	4
COSC	1436	Programming Fundamentals I	4
GAME	1304	Level Design	3
COSC	1437	Programming Fundamentals II	4
GAME	1403	Introduction to Game Design and Development	4
GAME	1443	Game and Simulation Programming I	4
GAME	2402	Mathematical Applications for Game Development	4
GAME	1459	Game and Simulation Programming II	4
		TOTAL CERTIFICATE HOURS	34

INFORMATION TECHNOLOGY SUPPORT

Certificate of Completion Program
ITCS.T004.UG • All Campuses

			Semester Hours
ITSC	1405	Introduction to PC Operating Systems	4
ITSC	1425	Personal Computer Hardware	4
ITCC	1401	Cisco Exploration 1: Network Fundamentals; or ITNW 1425	4
ITSY	1400	Fundamentals of Information Security	4
ITNW	1408	Implementing and Supporting Client Operating Systems	4
		TOTAL CERTIFICATE HOURS	20

PROGRAMMING

Certificate of Completion Program
ITCS.T005.UG • All Campuses

COSC	1436	Fundamentals of Programming I	4
COSC	1437	Fundamentals of Programming II	4
COSC	1420	C Programming; or ITSE 2417	4
ITSE	2405	Windows Programming; or ITSE 1430	4
		TOTAL CERTIFICATE HOURS	16

SECURITY

Certificate of Completion Program
ITCS.T006.UG • Northeast, Northwest, South, Southeast Campuses Only

ITSC	1405	Introduction to PCF Operating Systems	4
ITCC	1401	Cisco Exploration 1: Network Fundamentals; or ITNW 1425	4
ITSY	1400	Fundamentals of Information Security	4
ITSY	2400	Operating System Security	4
ITSY	2443	Computer System Forensics	4
		TOTAL CERTIFICATE HOURS	20

INFORMATION TECHNOLOGY
CONVERGENCE TECHNOLOGY

Associate of Applied Science Degree Program
ITCT.D001.UG • Northeast Campus Only

First Year
First Semester   *Semester Hours*

CPMT	1405		IT Essentials I: PC Hardware and Software	4
ITCC	1401	*	Cisco Exploration 1 - Network Fundamentals	4
ITCC	1404	*	Cisco Exploration 2 - Routing Protocols and Concepts	4
ENGL	1301		English Composition I	3

Second Semester

EECT	1407		Convergent Technologies	4
ITCC	2408	*	Cisco Exploration 3 - LAN Switching and Wireless	4
ITCC	2410	*	Cisco Exploration 4 - Accessing the WAN	4
SPCH	1321		Business and Professional Communication; or SPCH 1311 or SPCH 1315 or ENGL 2311	3

First Summer Session

ITNW	1408		Implementing and Supporting Client Operating Systems	4
ITNW	1454		Implementing and Supporting Servers	4

Second Summer Session

			Humanities/Visual or Performing Arts Elective	3

Second Year
First Semester

ITNW	1451		Fundamentals of Wireless LANs	4
CPMT	2402		Home Technology Integration	4
ITSY	1400		Fundamentals of Information Security	4
GOVT	2305		United States Government; or GOVT 2306	3

Second Semester

ITSC	1407		UNIX Operating Systems I	4
ITNW	1471		Voice-Over-Internet Protocol (VOIP)	4
ITSY	2441		Security Management Practices (Capstone)	4
BUSG	2170		Portfolio Development	1
		**	Mathematics Elective	3
			TOTAL DEGREE HOURS	72

*ITCC 1401 is a prerequisite for ITCC 1404.
ITCC 1404 is a prerequisite for ITCC 2408.
ITCC 2408 is a prerequisite for ITCC 2410.

**Does not include developmental mathematics courses or MATH 1332.

HOME TECHNOLOGY INTEGRATION

Certificate of Completion Program
ITCT.T001.UG • Northeast Campus Only

First Semester				Semester Hours
EECT	1407		Convergent Technologies	4
CPMT	1405		IT Essentials I: PC Hardware and Software	4
ITCC	1401		Cisco Exploration 1 - Network Fundamentals	4
ITCC	1404	*	Cisco Exploration 2 - Routing Protocols and Concepts	4

Second Semester				
CPMT	2402		Home Technology Integration	4
ITNW	1408		Implementing and Supporting Client Operating Systems	4
ITNW	1454		Implementing and Supporting Servers	4
			Humanities/Visual or Performing Arts Elective	3

Summer Session				
ITNW	1451		Fundamentals of Wireless LANs	4
ITSY	1400		Fundamentals of Information Security (Capstone)	4
			TOTAL CERTIFICATE HOURS	39

*ITCC 1401 is a prerequisite for ITCC 1404.

CONVERGENCE TECHNOLOGIES

Certificate of Completion Program
ITCT.T002.UG • Northeast Campus Only

First Semester				Semester Hours
EECT	1407		Convergent Technologies	4
CPMT	1405		IT Essentials I: PC Hardware and Software	4
ITCC	1401	*	Cisco Exploration 1 - Network Fundamentals	4
ITCC	1404	*	Cisco Exploration 2 - Routing Protocols and Concepts	4

Second Semester				
ITCC	2408	*	Cisco Exploration 3 - LAN Switching and Wireless	4
ITCC	2410	*	Cisco Exploration 4 - Accessing the WAN	4
ITNW	1408		Implementing and Supporting Client Operating Systems	4
ITNW	1454		Implementing and Supporting Servers (Capstone)	4

Summer Session				
ITSY	1400		Fundamentals of Information Security	4
			Humanities/Visual or Performing Arts Elective	3
			TOTAL CERTIFICATE HOURS	39

*ITCC 1401 is a prerequisite for ITCC 1404.
 ITCC 1404 is a prerequisite for ITCC 2408.
 ITCC 2408 is a prerequisite for ITCC 2410.

ADVANCED CONVERGENCE TECHNOLOGIES*
Certificate of Completion Program
ITCT.T003.UG • Northeast Campus Only

First Year

First Semester			*Semester Hours*
ITNW	1451	Fundamentals of Wireless LANs	4
CPMT	2402	Home Technology Integration	4
ITNW	1453	Supporting Network Server Infrastructure	4
ITCC	1409	Cisco Voice and Data Cabling	4

Second Semester			
ITSC	1407	UNIX Operating Systems I	4
ITNW	1471	Voice-Over-Internet Protocol (VOIP)	4
ITNW	1449	Cisco Fundamentals of Network Security	4

Second Year

ITNW	2474	Advanced Voice-Over-Internet Protocol (VOIP)	4
ITSY	2417	Wireless Security Development	4
ITNW	2450	Enterprise Network	4
ITNW	2473	Advanced Convergence Technology (Capstone)	4
		TOTAL CERTIFICATE HOURS	44

* Students must meet requirements of the Texas Success Initiative (TSI), including assessment prior to enrollment in any college-level coursework and any indicated developmental education or other strategy for achieving college readiness.

NOTE: Satisfaction of the mathematical competency for this program may be met by completing MATH-0304 (Beginning Algebra) with a grade of C or higher, by achieving a placement test score that qualifies the student for MATH-0350 (Intermediate Algebra), or by completing a college-level mathematics course (1300 level or above).

LIBRARY TECHNICIAN

Associate of Applied Science Degree Program
LIBR.D001.UG • Trinity River Campus Only

First Year

First Semester			*Semester Hours*
ENGL	1301	English Composition I	3
LBRA	1371	Introduction to Library Technology	3
SPCH	1311	Fundamentals of Speech Communication; or SPCH 1315 or SPCH 1321	3
HIST	1301	United States History to 1876	3
COSC	1401	Introduction to Computing; or BCIS 1405	4
Second Semester			
ENGL	1302	English Composition II; or ENGL 2311	3
HIST	1302	United States History Since 1876	3
LBRA	1372	Organization of Information	3
PSYC	2301	Introduction to Psychology	3
*		Visual and Performing Arts Elective	3

Second Year

First Semester			
GOVT	2305	United States Government	3
LBRA	1373	Public Services	3
PHED	1164	Concepts of Physical Activity	1
ENGL	2328	American Literature Since 1865	3
*		Mathematics Elective	3
*		Social or Behavioral Science Elective	3
Second Semester			
GOVT	2306	Texas State and Local Government	3
LBRA	1375	Information Sources and Services	3
POFT	1319	Records and Information Management; or POFT 2312	3
LBRA	1174	Practicum in Library Technology (Capstone)	1
*		Science Elective	4
		TOTAL DEGREE HOURS	61

*Visual and Performing Arts, Mathematics, Social or Behavioral Science, and Science Electives must be chosen from the corresponding section of the Core Curriculum.

LIBRARY TECHNICIAN

Certificate of Completion Program
LIBR.T001.UG • Trinity River Campus Only

First Semester			*Semester Hours*
LBRA	1371	Introduction to Library Technology	3
SPCH	1311	Fundamentals of Speech Communication; or SPCH 1315 or SPCH 1321	3
COSC	1401	Introduction to Computing; or BCIS 1405	4
Second Semester			
LBRA	1375	Information Sources and Services	3
LBRA	1373	Public Services	3
LB RA	1372	Organization of Information	3
LBRA	1174	Practicum in Library Technology	1
		TOTAL CERTIFICATE HOURS	20

LONG TERM CARE ADMINISTRATION
Certificate of Completion Program
LONG.T001.UG • Trinity River Campus Only

First Semester			*Semester Hours*
LTCA	1311	Introduction to Long Term Care Administration	3
LTCA	1312	Resident Care in the Long Term Care Facility	3
LTCA	1313	Organization and Management of Long Term Care Facilities	3
LTCA	2314	Long Term Care Law	3
LTCA	2315	Financial Management of Long Term Facilities	3
LTCA	2660	Clinical - Hospital and Health Facilities Administration/ Management	6
LTCA	2661	Clinical - Hospital and Health Facilities Administration/ Management	6
		TOTAL CERTIFICATE HOURS	27

Admission and Program Information for Long Term Care Administration

The Nursing Home Administration course is offered in five, three-semester hour credit courses and is designed to provide the didactic requirements of the Texas Department of Aging and Disability Services (DADS). It is also intended to assist the participant in preparing for the state licensure examination. DADS requirements for individuals to sit for the licensure exam are:

(1) Bachelor's degree
(2) Completion of 15 academic credit hours in long term care administration
(3) Completion of a 1,000-hour internship in an approved facility

Internship courses are for those individuals unable to obtain their own required internship experiences in an approved facility.

Classes are usually taught on Friday evenings and all day Saturdays.

MENTAL HEALTH CLINICAL AND COUNSELING PSYCHOLOGY
Associate of Applied Science Degree Program
MENT.D002.UG • Northeast Campus Only

First Year
First Semester   *Semester Hours*
PSYC	2315	Psychology of Adjustment and Human Relations	3
PSYT	2345	Principles of Behavior Management and Modification	3
DAAC	1304	Pharmacology of Addiction	3
ENGL	1301	English Composition I	3
PSYC	2301	Introduction to Psychology	3

Second Semester
PSYT	2321	Crisis Intervention	3
PSYT	2339	Counseling Theories	3
SOCW	2361	Introduction to Social Work	3
ENGL	1302	English Composition II	3
SPCH	1311	Fundamentals of Speech Communication; or SPCH 1315 or SPCH 1318 or SPCH 1321	3
		Mathematics or Science Elective	3

Second Year
First Semester
PSYT	2370	Laws and Standards Affecting Mental Health	3
DAAC	2307	Addicted Family Intervention	3
DAAC	2341	Counseling Alcohol and Other Drug Addictions	3
SCWK	2305	The Special Problems of Youth	3
PSYC	2314	Life Span Growth and Development; or PSYC 2308	3
PHED	1164	Concepts of Physical Activity	1

Second Semester
DAAC	2343	Current Issues	3
PSYT	2165 *	Practicum: Clinical Psychology; or DAAC 2166 or DAAC 2167 or DAAC 2266	1
PSYT	2301	Psychology of Group Dynamics	3
PSYT	2331	Abnormal Psychology	3
GOVT	2305	United States Government; or GOVT 2306	3
		Humanities/Visual or Performing Arts Elective	3
		TOTAL DEGREE HOURS	65

* Enrollment in the Practicum requires Departmental Approval. Choose one course from: PSYT 2165, DAAC 2266, DAAC 2166, or DAAC 2167

Students seeking a Licensed Chemical Dependency Counselor license must meet all requirements set forth by legislation: 1) minimum of associate degree, 2) 300 clock hours of practicum, 3) 4,000 clock hours of work experience in a Clinical Training Institute agency approved by Texas Department of State Health Services, 4) pass a criminal background history. This degree meets all educational requirements for preparation for state license examination for LCDC.

NOTE: Satisfaction of the mathematical competency for this program may be met by completing MATH-0304 (Beginning Algebra) with a grade of C or higher, by achieving a placement test score that qualifies the student for MATH-0350 (Intermediate Algebra), or by completing a college-level mathematics course (1300 level or above).

CHEMICAL DEPENDENCY COUNSELOR INTERN

Certificate of Completion Program
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First Semester			Semester Hours
PSYT	2339	Counseling Theories	3
DAAC	1304	Pharmacology of Addiction	3
DAAC	2341	Counseling Alcohol and Other Drug Addictions	3
Second Semester			
PSYT	2301	Psychology of Group Dynamics	3
DAAC	2307	Addicted Family Intervention	3
PSYT	2331	Abnormal Psychology	3
Third Semester			
DAAC	2343	Current Issues	3
DAAC	2266 *	Practicum in Alcohol and Drug Abuse Counseling; or DAAC 2166 and DAAC 2167	2
		TOTAL CERTIFICATE HOURS	23

* These courses provide the 300-hour practicum required to apply for Registered Counselor Intern seeking LCDC status through the Texas Department of State Health Services.

After successful completion of the above curriculum, a student is eligible to apply for a Registered Counselor Intern designation through the Texas Department of State Health Services. Other licensing requirements must be met as set forth by legislation, including passing a criminal background history, a minimum of an associate degree in Mental Health, or equivalency degree as determined by the Texas Department of State Health Services.

MENTAL HEALTH SOCIAL WORK CERTIFICATE

Certificate of Completion Program
MENT.T002.UG • Northeast Campus Only

First Semester			Semester Hours
SOCW	2361	Introduction to Social Work	3
ENGL	1301	English Composition I	3
PSYC	2301	Introduction to Psychology	3
Second Semester			
PSYC	2315	Psychology of Adjustment and Human Relations; or SOCW 2362	3
ENGL	1302	English Composition II	3
SOCI	1301	Introduction to Sociology; or SOCI 1306	3
		TOTAL CERTIFICATE HOURS	18

This certificate program is designed for students completing an AAS in Mental Health, seeking Social Work Associate designation, and fulfilling all additional requirements set forth by legislation, and seeking transfer into a four-year program offering a baccalaureate degree in social work.

NURSING#
Associate of Applied Science Degree Program
NURS.D003.UG • Trinity River Campus Only

General Education and Related Courses
The following science courses must be completed prior to applying for admission to the Nursing Program.

			Semester Hours
CHEM	1406	Essentials of General and Biological Chemistry	4
BIOL	2401	Anatomy and Physiology I	4
BIOL	2402	Anatomy and Physiology II	4
BIOL	2420	Microbiology	4

The following general education courses must be completed prior to the graduating semester.

			Semester Hours
ENGL	1301	English Composition I	3
PSYC	2301	Introduction to Psychology	3
PHED	1164	Concepts of Physical Activity	1
One of the following:			3
		ENGL 1302 English Composition II	
		PSYC 2314 Life Span Growth and Development	
One of the following:			3
		SPCH 1311 Fundamentals of Speech Communication	
		SPCH 1315 Public Speaking	
		SPCH 1321 Business and Professional Speaking	
	*	Humanities/Visual or Performing Arts Elective	3

First Year
First Semester

				Semester Hours
RNSG	1413	**#	Foundations for Nursing Practice	4
RNSG	1460	**#	Clinical - Foundations for Nursing Practice	4
RNSG	1105	**#	Nursing Skills	1

Second Semester

RNSG	1441	Common Concepts of Adult Health	4
RNSG	1461	Clinical - Common Concepts of Adult Health	4
RNSG	1193	Special Topics in Nursing A	1

Summer Session

RNSG	2213	Mental Health Nursing	2
RNSG	2263	Clinical - Mental Health Nursing	2

Second Year
First Semester

RNSG	2208	Maternal and Newborn Nursing and Women's Health	2
RNSG	2260	Clinical - Maternal and Newborn Nursing and Women's Health	2
RNSG	2201	Care of Children and Families	2
RNSG	2261	Clinical - Care of Children and Families	2

Second Semester

RNSG	1443	Complex Concepts of Adult Health	4
RNSG	2461	Clinical - Complex Concepts of Adult Health	4
RNSG	1293	Special Topics in Nursing B	2
		TOTAL DEGREE HOURS	72

The Humanities/Visual or Performing Arts Elective must be chosen from the corresponding section of the Core Curriculum.

Students are strongly urged to complete all general education requirements prior to entering the program.

**Mathematicsl competency is a prerequisite for this course.

 # Credit-By-Examination may be earned for this course by LVNs and paramedics. Complete details of the Fast Track Option are provided at www.tccd.edu/nursing.

Testing fees are assessed for all nursing theory courses.

Satisfaction of mathematical competency may be met by completion of Math-0350 (Intermediate Algebra) with a grade of C or better, a placement test score of a minimum level of intermediate algebra, or completion of a college-level math course.

Admission and Program Information for Nursing

Requirements forApplicants:

- *All biology courses (BIOL-2401, BIOL-2402 and BIOL-2420) must have been completed within five years prior to application to the Nursing Program.*
- *Completion of all courses required for the program with a grade of C or better.*

Admission Criteria:
- *Science GPA based on the four required courses: CHEM-1406, BIOL-2401, BIOL-2402, BIOL-2420.**
- *Score on a standardized admissions test***

*Only the highest grade earned in the first two (2) attempts of any repeated course will be used for admission purposes.

**Each applicant is assigned a score based on science GPA (50%) and the standardized admissions test results (50%).

Complete details of the nursing admissions process can be found at www.tccd.edu/nursing.

Additional Requirements for Transfer Student Applicants:
- *Admission to Tarrant County College*
- *Letter of good standing from Dean or Director of previously attended nursing program*
- *Copy of official transcript(s)*
- *Completion of tests for clinical component of program (DFWHC Orientation, HIPAA, TCC Nursing Student Handbook Examination, Dosage Calculation Examination) with passing scores*

Some transfer students may be required to audit RNSG-1105 Nursing Skills.

Requirements for Students Admitted to the Nursing Program:

- *Negative drug screen*
- *Background check*
- *Proof of medical insurance*
- *Current healthcare provider CPR course (approved by either the American Heart Association or the American Red Cross) completion card*
- *Social Security card*
- *Participation in a one-day Nursing Program Orientation*
- *Current immunizations for the duration of the program*
- *Completion of all courses required for the program with a grade of C or better*

Applicants with a history of criminal convictions, mental illness, or chemical dependency must request a Declaratory Order from the Texas Board of Nursing to determine eligibility for licensure prior to admission to the Nursing Program.

Any student admitted to the Nursing Program must meet the legal requirements for licensure by the National League for Nursing Accrediting Commission. Upon successful completion of the program, the student is eligible to take the National Council Licensing Examination (NCLEX) for registered nurses.

The TCC Nursing Program is accredited by the National League for Nursing Accrediting Commission, Inc., 61 Broadway, 33rd Floor, New York, NY 10006.

OCCUPATIONAL HEALTH AND SAFETY TECHNOLOGY
Associate of Applied Science Degree Program
ENVI.D002.UG • Northwest Campus Only

First Year

First Semester   *Semester Hours*

ENGL	1301	English Composition I	3
GOVT	2305	United States Government; or GOVT 2306	3
MATH	1314	Functional Approach to College Algebra	3
EPCT	1313	Contingency Planning	3
OSHT	1321	Fire Protection Systems; or FIRT 1338	3

Second Semester

CHEM	1405	Fundamentals of Chemistry I; or CHEM 1406	4
ENGL	2311	Technical Writing	3
PHED	1164	Concepts of Physical Activity	1
EPCT	1401	Hazardous Waste Operations and Emergency Response (HAZWOPER) Training and Related Topics	4
		Humanities/Visual or Performing Arts Elective	3

Summer Session

COSC	1401	Introduction to Computing; or BCIS 1405	4
SPCH	1311	Fundamentals of Speech Communication; or SPCH 1315 or SPCH 1318 or SPCH 1321	3

Second Year

First Semester

OSHT	1305	OSHA Regulations – Construction Industry	3
EPCT	1307	Introduction to Environmental Safety and Health	3
OSHT	1313	Accident Prevention, Inspection, and Investigation	3
EPCT	2333	Environmental Toxicology	3
EPCT	1341	Principles of Industrial Hygiene; or OSHT 2405	3

Second Semester

OSHT	2401	OSHA Regulations – General Industry	4
OSHT	2309	Safety Program Management	3
OSHT	2288	Internship: Occupational Safety and Health Technology/ Technician; or EPCT 2267	2
	*	Approved Electives	3
		TOTAL DEGREE HOURS	64

*Approved Electives include EPCT-1205, EPCT-1243, EPCT-1247, EPCT-1249, EPCT-1391, EPCT-2300, OSHT-1391or OSHT-2320

OCCUPATIONAL HEALTH AND SAFETY TECHNICIAN
Certificate of Completion Program
ENVI.T003.UG • Northwest Campus Only

First Year
First Semester			*Semester Hours*
OSHT	1305	OSHA Regulations – Construction Industry	3
EPCT	2333	Environmental Toxicology	3
EPCT	1307	Introduction to Environmental Health and Safety	3
OSHT	1313	Accident Prevention, Inspection, and Investigation	3

Second Year
Second Semester
OSHT	2401		OSHA Regulations - General Industry	4
OSHT	2309		Safety Program Management (Capstone)	3
		*	Approved Electives	3

TOTAL CERTIFICATE HOURS 22

*Approved Electives include EPCT-1205, EPCT-1243, EPCT-1247, EPCT-1249, EPCT-1311, EPCT-1391, EPCT-1440, EPCT-2300, OSHT-1391 or OSHT-2320

OCCUPATIONAL SAFETY AND ENVIRONMENTAL TECHNOLOGY
Associate of Applied Science Degree Program
ENVI.D003.UG • Northwest Campus Only

First Year
First Semester			*Semester Hours*
ENGL	1301	English Composition I	3
GOVT	2305	United States Government; or GOVT 2306	3
MATH	1314	Functional Approach to College Algebra	3
EPCT	1313	Contingency Planning	3
OSHT	1321	Fire Protection Systems; or FIRT 1338	3

Second Semester			
CHEM	1405	Fundamentals of Chemistry I; or CHEM 1406	4
ENGL	2311	Technical Writing	3
PHED	1164	Concepts of Physical Activity	1
EPCT	1401	Hazardous Waste Operations and Emergency Response (HAZWOPER) Training and Related Topics	4
	*	Approved Electives	3

Summer Session One			
COSC	1401	Introduction to Computing; or BCIS 1405	4
SPCH	1311	Fundamentals of Speech Communication; or SPCH 1315 or SPCH 1318 or SPCH 1321	3

Second Year
First Semester			
EPCT	1311	Introduction to Environmental Science	3
	*	Approved Elective	3
EPCT	1344	Environmental Sampling and Analysis	3
EPCT	1341	Principles of Industrial Hygiene	3
OSHT	2405	Ergonomic and Human Factors in Safety	4

Second Semester			
EPCT	1440	Industrial Chemical Processes	4
EPCT	2333	Environmental Toxicology	3
OSHT	2288	Internship: Occupational Safety and Health Technology/ Technician; or EPCT 2267	2
		Humanities/Visual or Performing Arts Elective	3

		TOTAL DEGREE HOURS	65

**Approved Electives include EPCT-1205, EPCT-1243, EPCT-1247, EPCT-1249, EPCT-1391, EPCT-2300, OSHT-1391 or OSHT-2320*

ENVIRONMENTAL LAB TECHNICIAN
Certificate of Completion Program
ENVI.T001.UG • Northwest Campus Only

First Semester			Semester Hours
EPCT	1311	Introduction to Environmental Science	3
EPCT	1341	Principles of Industrial Hygiene	3
EPCT	1344	Environmental Sampling and Analysis	3
Second Semester			
EPCT	1440	Industrial Chemical Processes	4
EPCT	2333	Environmental Toxicology	3
EPCT	2267	Practicum (Capstone)	2
	*	Approved Elective	3

TOTAL CERTIFICATE HOURS   21

Approved Electives include EPCT-1205, EPCT-1243, EPCT-1247, EPCT-1249, EPCT-1307, EPCT-1391, EPCT-2300, OSHT-1305, OSHT-1313, OSHT-1391, OSHT-2309, OSHT-2320 or OSHT-2401

PARALEGAL STUDIES

Associate of Applied Science Degree Program
LEGA.D002.UG • Northeast Campus Only

First Year
First Semester   *Semester Hours*
LGLA	1307	Introduction to Law and the Legal Professions	3
LGLA	1303	Legal Research	3
ACCT	2301	Principles of Financial Accounting	3
ENGL	1301	English Composition I	3
PSYC	2315	Psychology of Adjustment and Human Relations	3

Second Semester
LGLA	1305	Legal Writing	3
LGLA	1345	Civil Litigation	3
BCIS	1405	Business Computer Applications; or COSC 1401	4
ENGL	1302	English Composition II	3
PHED	1164	Concepts of Physical Activity	1
		Mathematics or Science Elective	3

Second Year
First Semester
LGLA	1353		Wills, Trusts, and Probate Administration	3
LGLA	2303		Torts and Personal Injury Law	3
LGLA	2380	*	Cooperative Education - Legal Assistant/Paralegal; or LGLA 2281 and LGLA 2288	3
BUSI	2301		Business Law I	3
SPCH	1321		Business and Professional Communication	3
		**	Approved Elective	3

Second Semester
LGLA	1355	Family Law	3
LGLA	2311	Business Organizations	3
CRIJ	1306	Court Systems and Practices	3
GOVT	2306	Texas State and Local Government	3
		Humanities/Visual or Performing Arts Elective	3
		TOTAL DEGREE HOURS	65

* LGLA-2281 and LGLA-2288 taken in consecutive semesters may be substituted for LGLA-2380 in order to fulfill the Cooperative Education requirement of this program. LGLA-2380 may be taken in the student's final semester. All Cooperative Education and Internship classes require consent of the program coordinator.

**Approved Electives include CJSA-1318, CRIJ-1310, GOVT-2305, LGLA-1341, LGLA-1391, PHIL-2306, PSYT-2370, RELE-1303, RELE-1311, RELE-1315, RELE-1319 and RELE-2301

NOTE: Satisfaction of the mathematical competency for this program may be met by completing MATH-0304 (Beginning Algebra) with a grade of C or higher, by achieving a placement test score that qualifies the student for MATH-0350 (Intermediate Algebra), or by completing a college-level mathematics course (1300 level or above).

PARALEGAL STUDIES

Certificate of Completion Program
LEGA.T002.UG • Northeast Campus Only

First Semester			*Semester Hours*
LGLA	1307	Introduction to Law and the Legal Professions	3
LGLA	1303	Legal Research	3
LGLA	1305	Legal Writing	3
LGLA	1345	Civil Litigation	3
Second Semester			
LGLA	1353	Wills, Trusts, and Probate Administration	3
LGLA	2303	Torts and Personal Injury Law	3
LGLA	2380 *	Cooperative Education - Legal Assistant/Paralegal; or LGLA 2281 and LGLA 2288	3
BUSI	2301	Business Law I	3
Third Semester			
LGLA	1355	Family Law	3
LGLA	2311	Business Organizations	3
CRIJ	1306	Court Systems and Practices	3
		TOTAL CERTIFICATE HOURS	33

* LGLA-2281 and LGLA-2288 taken in consecutive semesters may be substituted for LGLA-2380 in order to fulfill the Cooperative Education requirement of this program. LGLA 2380 may be taken in the student's final semester. All Cooperative Education and Internship classes require consent of the program coordinator.

The Certificate of Completion will be awarded only to students who have earned a baccalaureate degree prior to beginning the certificate program and who wish to complete the requirements to take the Certified Legal Assistant (CLA) examination given by the National Association of Legal Assistants, Inc. (NALA).

PHYSICAL THERAPIST ASSISTANT#

Associate of Applied Science Degree Program
PTHA.D001.UG • Trinity River Campus Only

First Year

First Semester   *Semester Hours*

BIOL	2401	Anatomy and Physiology I	4
ENGL	1301	English Composition I	3
HPRS	1206	Essentials of Medical Terminology	2
PTHA	1201	The Profession of Physical Therapy	2
PTHA	1321	Pathophysiology for Physical Therapist Assistant	3
PTHA	1431	Physical Agents	4

Second Semester

BIOL	2402	Anatomy and Physiology II	4
HPRS	2201	Pathophysiology	2
HPRS	2200	Pharmacology for Health Professions	2
PSYC	2308	Child Growth and Development; or PSYC 2314	3
PTHA	1405	Basic Patient Care Skills	4
PTHA	1413	Functional Anatomy	4

First Summer Session

PTHA	1325	Communication in Health Care	3
PTHA	2201	Essentials of Data Collection	2

Second Summer Session

PSYC	2301	Introduction to Psychology	3
PTHA	1260	Clinical: Physical Therapist Assistant	2

Second Year

First Semester

PTHA	2260	Clinical - Physical Therapist Assistant	2
PTHA	2261	Clinical - Physical Therapist Assistant	2
PTHA	2409	Therapeutic Exercise	4
PTHA	2431	Management of Neurological Disorders	4

Second Semester

PTHA	2239	Professional Issues	2
PTHA	2363	Clinical - Physical Therapist Assistant	3
PTHA	2435	Rehabilitation Techniques	4
		Humanities/Visual or Performing Arts Elective	3
		TOTAL DEGREE HOURS	71

Admissions and Program Information for Physical Therapist Assistant

A selection committee reviews applications and selects those applicants who best meet the following criteria (listed in random order):

- *Students must demonstrate competency in mathematics, reading, and writing by*
  - *completion of previous applicable coursework, or*
  - *passing each of those sections of ACCUPLACER or an appropriate alternative test, or*
  - *earning a grade of C or higher in MATH 0350, RDNG 0363, and ENGL 0325.*
- *Grade point average (GPA) of all high school or undergraduate college classes or GED scores if high school/college are not applicable.*
- *Students must submit a research paper about the field of physical therapy and career as a physical therapist assistant. For details, go to www.tccd.edu/pta.*
- *Bonus points for college-level general education and science courses required for the program for which a grade of C or higher was made.* **NOTE**: *Science courses must have been completed within five years of the semester containing the program deadline date.*
- *Bonus points proportionate to the number of semester hours from a regionally accredited college or university for which a grade of C or higher was made up to a maximum of 120 semester hours.*
- *Bonus point for bachelor's degree from a regionally accredited college or university.*
- *Bonus points proportionate to the amount of documented work experience as a tech/aide or volunteer/observation in a physical therapy clinic (must be within the past five years). For details, go to www.tccd.edu/pta.*

Prior to application, students with international college credits must contact the International Admission Office 817-515-5232 and also the Health Science Office 817-515-6691.

Only the criteria listed are evaluated and considered for the purpose of selection and admission to this program. No specific minimum grade point average or test score, or a set minimum number of courses must be completed for admission. Selection is based on how each applicant compares with others in the applicant pool. In general, the higher the grades, the more competitive the applicant will be for the positions available.

Students who are selected for admission must undergo screening for substances of abuse and a criminal background check. All offers for admission to the Physical Therapist Assistant Program are provisional until satisfactory results are received for these two evaluations.

Once admitted to the program, students must complete and earn a minimum grade of C in each specialized course.

Most/all of the specialized courses are taught only during the daytime.

Successful completion of the above curriculum satisfies the academic requirement for applying for state licensure as a physical therapist assistant.

RADIO AND TELEVISION BROADCASTING

Associate of Applied Science Degree Program
RTVB.D002.UG • Northeast Campus Only

First Year

First Semester			*Semester Hours*
RTVB	1425	TV Studio Production	4
RTVB	1402	Computer Applications for Media Production	4
RTVB	1409	Audio/Radio Production I	4
ENGL	1301	English Composition I	3
PHED	1164	Concepts of Physical Activity	1

Second Semester			
RTVB	1421	TV Field Production	4
RTVB	1355	Radio and Television Announcing	3
ENGL	1302	English Composition II	3
COMM	2366	Film Appreciation; or FLMC 1311 or DRAM 2366	3
RTVB	1447	Audio/Radio Production II; or RTVB 1405	4

Second Year

First Semester			
RTVB	2347	Management and Operations of Electronic Media Facilities	3
SPCH	1311	Fundamentals of Speech Communication; or SPCH 1321	3
COMM	2339	Writing for Radio, Television and Film	3
COMM	1335	Survey of Radio and Television	3
FLMC	2434	Directing for Film or Video; or FLMC 1404	4

Second Semester			
COMM	2332		Radio and Television News	3
RTVB	2430		Film and Video Editing	4
RTVB	2487	*	Internship - Radio and Television	4
GOVT	2305		United States Government; or GOVT 2306	3
			Science or Mathematics Elective	3
			TOTAL DEGREE HOURS	66

* Requires approval of Program Coordinator.

NOTE: Satisfaction of the mathematical competency for this program may be met by completing MATH-0304 (Beginning Algebra) with a grade of C or higher, by achieving a placement test score that qualifies the student for MATH-0350 (Intermediate Algebra), or by completing a college-level mathematics course (1300 level or above).

AUDIO PRODUCTION

Certificate of Completion Program
RTVB.T003.UG • Northeast Campus Only

First Year

First Semester			*Semester Hours*
RTVB	1425	TV Studio Production	4
RTVB	1409	Audio/Radio Production I	4
RTVB	1402	Computer Applications for Media Production	4
ENGL	1301	English Composition I	3
RTVB	1150	Radio Experience I	1

Second Semester			
RTVB	1355	Radio and Television Announcing or MUSI 1391	3
RTVB	2250	Radio Experience II	2
RTVB	1447	Audio/Radio Production II	4
RBTV	1405	Introduction to Television Technology	4

Second Year

First Semester				
RTVB	2347		Management and Operation of Electronic Media Facilities	3
RTVB	2265	*	Practicum: Radio and Television	2
			TOTAL CERTIFICATE HOURS	34

*Requires approval of Program Coordinator.

VIDEO PRODUCTION

Certificate of Completion Program
RTVB.T002.UG • Northeast Campus Only

First Year

First Semester			*Semester Hours*
RTVB	1402	Computer Applications for Media Production	4
COMM	2339	Writing for Radio, Television and Film	3
COMM	1335	Survey of Radio and Television; or RTVB 1405	3
RTVB	1425	TV Studio Production	4

Second Semester			
RTVB	1421	TV Field Production	4
RTVB	2430	Film and Video Editing	4
ENGL	1301	English Composition I	3
FLMC	1404	Lighting for Film or Video	4

Second Year

First Semester			
RTVB	2347	Management and Operations of Electronic Media Facilities	3
RTVB	2265	Practicum - Radio and Television	2
		TOTAL CERTIFICATE HOURS	34

RADIOLOGIC TECHNOLOGY#

Associate of Applied Science Degree Program
RADT.D001.UG • Trinity River Campus Only

The following courses are prerequisites for admission to the Radiologic Technology Program. A grade of C or better is required for all science courses.

			Semester Hours
BIOL	2401	Anatomy and Physiology I	4
BIOL	2402	Anatomy and Physiology II	4

			Semester Hours
First Summer Session			
RADR	1201	Introduction to Radiography	2
RADR	1203	Patient Care	2
Second Summer Session			
RADR	1311	Basic Radiographic Procedures	3
HPRS	1206	Essentials of Medical Terminology	2

First Year
First Semester

RADR	1266	Practicum - Radiologic Technology	2
RADR	1313	Principles of Radiographic Imaging I	3
RADR	2301	Intermediate Radiographic Procedures	3
ENGL	1301	English Composition I	3

Second Semester

RADR	1267	Practicum - Radiologic Technology	2
RADR	2305	Principles of Radiographic Imaging II	3
RADR	2331	Advanced Radiographic Procedures	3
		Computer or Information Technology Elective	4

Summer Session (12 Weeks)

RADR	1366	Practicum - Radiologic Technology	3

Second Year
First Semester

RADR	2309	Radiographic Imaging Equipment	3
RADR	2333	Advanced Medical Imaging	3
RADR	2366	Practicum - Radiologic Technology	3
HPRS	2201	Pathophysiology	2
		Speech Elective	3
		Humanities/Visual or Performing Arts Elective	3

Second Semester

RADR	2213	Radiation Biology and Protection	2
RADR	2217	Radiographic Pathology	2
RADR	2235	Radiologic Technology Seminar	2
RADR	2367	Practicum - Radiologic Technology	3
PSYC	2301	Introduction to Psychology or PSYC 2315	3
		TOTAL DEGREE HOURS	72

Admission and Program Information for Radiologic Technology

MISSION STATEMENT
Our mission is to provide ARRT(R) registry eligible radiographers who demonstrate competency, professionalism, and quality patient care skills.

PROGRAM GOALS
Successful completion of the two-year program should allow the graduate to meet program goals:
> *1. Successful student completion of the ARRT radiography examination*
> *2. Demonstration of competency in the skills necessary to function as an RT(R)*
> *3. Demonstration of professional behaviors consistent with ARRT standards and ethics and the ASRT Code of Ethic*

A selection committee reviews applications and selects those applicants who best meet the following criteria (listed in random order):

- *Students must demonstrate competency in mathematics, reading, and writing by*
  - *completion of previous applicable coursework, or*
  - *passing each of those sections of ACCUPLACER or an appropriate alternative test, or*
  - *earning a grade of C or higher in MATH 0350, RDNG 0363, and ENGL 0325.*
- *Grade point average (GPA) of all high school or undergraduate college classes or GED scores if high school/college are not applicable.*
- *Bonus points for college-level general education and science courses required for the program for which a grade of C or higher was made. NOTE: Science courses must have been completed within five years of the semester containing the program deadline date.*
- *Bonus points proportionate to the number of semester hours from a regionally accredited college or university for which a grade of C or higher was made up to a maximum of 120 semester hours.*
- *Bonus point for bachelor's degree from a regionally accredited college or university.*

Only the criteria listed are evaluated and considered for the purpose of selection and admission to this program. No specific minimum grade point average or test score, or a set minimum number of courses must be completed for admission. Selection is based on how each applicant compares with others in the applicant pool. In general, the higher the grades, the more competitive the applicant will be for the positions available.

Successful completion of this program requires a grade of C or better in all science, general education and specialized (RADR) courses. A student admitted to the program with a grade of less than C in a general education course in the curriculum must repeat the course and earn a grade of C or better in order to complete this program.

Students who are selected for admission must undergo screening for substances of abuse and a criminal background check. All offers for admission to the Radiologic Technology Program are provisional until satisfactory results are received.

International students contact the International Admission Office 817-515-5232 and the Health Science Office 817-515-6691.

Most/all of the specialized courses are taught only during the daytime.

After satisfactory completion of the above curriculum and additional clinical hours the student meets the academic requirements to take the registry examination for certification as a Registered Radiologic Technologist by the American Registry of Radiologic Technologists.

REAL ESTATE
Associate of Applied Science Degree Program
REAL.D001.UG • Northeast Campus Only

First Year

First Semester			*Semester Hours*
RELE	1406	Real Estate Principles	4
RELE	1319	Real Estate Finance	3
BUSI	1301	Business Principles	3
ENGL	1301	English Composition I	3
GOVT	2305	United States Government	3

Second Semester			
RELE	1325	Real Estate Mathematics	3
RELE	1307	Real Estate Investments	3
BUSI	2301	Business Law I	3
BMGT	1327	Principles of Management	3
GOVT	2306	Texas State and Local Government	3
PHED	1164	Concepts of Physical Activity	1

Summer Session			
BCIS	1405	Business Computer Applications; or COSC 1401	4
SPCH	1321	Business and Professional Communication; or SPCH 1311 or SPCH 1315 or SPCH 1318	3

Second Year

First Semester			
RELE	2301	Law of Agency	3
RELE	1315	Property Management	3
ECON	2301	Principles of Macroeconomics	3
MRKG	1311	Principles of Marketing	3
		Science Elective	3

Second Semester			
RELE	1303	Real Estate Appraisal	3
RELE	1311	Law of Contracts	3
ACCT	2301	Principles of Financial Accounting	3
PHIL	2306	Ethics	3
		TOTAL DEGREE HOURS	66

NOTE: Satisfaction of the mathematical competency for this program may be met by completing MATH-0304 (Beginning Algebra) with a grade of C or higher, by achieving a placement test score that qualifies the student for MATH-0350 (Intermediate Algebra), or by completing a college-level mathematics course (1300 level or above).

REAL ESTATE
Certificate of Completion Program
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First Semester			*Semester Hours*
RELE	1406	Real Estate Principles	4
RELE	1311	Law of Contracts	3
RELE	2301	Law of Agency	3
		RELE Elective	3
		Elective	3
		TOTAL CERTIFICATE HOURS	16

The curriculum for this program is specifically designed to satisfy the state of Texas education requirements to obtain a Texas Real Estate License and prepare the student to complete successfully the state examination for licensure.

A minimum of 9 semester hours of RELE courses must be completed in residence at TCC.

RESPIRATORY CARE#

Associate of Applied Science Degree Program
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The following science courses are prerequisites for selection to the Respiratory Care Program. A grade of C or better is required.

			Semester Hours
BIOL	2401	Anatomy and Physiology I	4
BIOL	2402	Anatomy and Physiology II	4
BIOL	2420	Microbiology	4
CHEM	1406	Essentials of General and Biological Chemistry	4

First Year

First Semester   *Semester Hours*

RSPT	1101	Introduction to Respiratory Care	1
RSPT	1166	Practicum - Respiratory Care Therapy/Therapist	1
RSPT	1429	Respiratory Care Fundamentals I	4
HPRS	1206	Essentials of Medical Terminology	2
HPRS	2200	Pharmacology for Health Professions	2
		Humanities/Visual or Performing Arts Elective	3

Second Semester

HPRS	2201	Pathophysiology	2
RSPT	1207	Cardiopulmonary Anatomy and Physiology	2
RSPT	1266	Practicum - Respiratory Care Therapy/Therapist	2
RSPT	1331	Respiratory Care Fundamentals II	3

Summer Session (12 Weeks)

RSPT	1267	Practicum - Respiratory Care Therapy/Therapist	2
RSPT	2139	Advanced Cardiac Life Support	1
RSPT	2414	Mechanical Ventilation	4

Second Year

First Semester

RSPT	2133	Respiratory Care Case Management	1
RSPT	2210	Cardiopulmonary Disease	2
RSPT	2266	Practicum - Respiratory Care Therapy/Therapist	2
RSPT	2405	Pulmonary Diagnostics	4
		Speech Elective	3

Second Semester

RSPT	1141	Respiratory Home Care and Rehabilitation	1
RSPT	2131	Simulations in Respiratory Care	1
RSPT	2133	Respiratory Care Case Management	1
RSPT	2147	Specialties in Respiratory Care	1
RSPT	2267	Practicum - Respiratory Care Therapy/Therapist	2
RSPT	2353	Neonatal and Pediatric Cardiopulmonary Care	3
ENGL	1301	English Composition I	3
		Psychology Elective	3
		TOTAL DEGREE HOURS	72

Admission and Program Information for Respiratory Care

A selection committee reviews applications and selects those applicants who best meet the following criteria (listed in random order):
- *Students must demonstrate competency in mathematics, reading, and writing by*
  - *completion of previous applicable coursework, or*
  - *passing each of those sections of ACCUPLACER or an appropriate alternative test, or*
  - *earning a grade of C or higher in MATH-0350, RDNG-0363, and ENGL-0325.*
- *Grade point average (GPA) of all high school or undergraduate college classes or GED scores if high school/college are not applicable.*
- *Bonus points for college-level general education and science courses required for the program for which a grade of C or higher was made. **NOTE**: Science courses must have been completed within five years of the semester containing the program deadline date.*
- *Bonus points proportionate to the number of semester hours from a regionally accredited college or university for which a grade of C or higher was made up to a maximum of 120 semester hours.*
- *Bonus point for bachelor's degree from a regionally accredited college or university.*

Only the criteria listed are evaluated and considered for the purpose of selection and admission to this program. No specific minimum grade point average or test score or a set minimum number of courses must be completed for admission. Selection is based on how each applicant compares with others in the applicant pool. In general, the higher the grades, the more competitive the applicant will be for the positions available.

Prior to application students with international college credits must contact the International Admission Office 817-515-5232 and also the Health Science Office 817-515-6691.

Students who are selected for admission must undergo screening for substances of abuse and a criminal background check. All offers for admission to the Respiratory Care Program are provisional until satisfactory results are received.

Successful completion of this program requires a grade of C or better in all science, general education, and specialized (RSPT) courses. A student admitted to the program with a grade of less than C in a general education course in the program curriculum must repeat the course and earn a grade of C or better in order to complete the program.

Most/all of the specialized courses are taught only during the daytime.

After successful completion of the above curriculum, the student meets the academic requirements to take the necessary examinations to become a registered respiratory therapist through the National Board for Respiratory Care and the Texas Department of State Health Services.

SIGN LANGUAGE INTERPRETING

Associate of Applied Science Degree Program
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First Year *Semester Hours*
First Summer Session
SLNG 1404 American Sign Language (ASL) I 4

Second Summer Session
SLNG 1405 American Sign Language (ASL) II 4

First Semester
SLNG 1347 Deaf Culture 3
SLNG 1215 Visual/Gestural Communication 2
SLNG 1444 American Sign Language (ASL) III 4
ENGL 1301 English Composition I 3
SOCI 1301 Introduction to Sociology 3

Second Semester
SLNG 1211 Fingerspelling and Numbers 2
SLNG 1321 Introduction to the Interpreting Profession 3
SLNG 1445 American Sign Language (ASL) IV 4
ENGL 1302 English Composition II 3
GOVT 2306 Texas State and Local Government 3

Second Year
First Summer Session
SLNG 2401 Interpreting I 4

First Semester
SLNG 2402 Interpreting II 4
SLNG 2166 Practicum I - Sign Language Interpretation and Translation 1
SLNG 1350 Sign To Voice 3
PSYC 2301 Introduction to Psychology; or PSYC 2302 3
SPCH 1311 Fundamentals of Speech Communication; or 3
SPCH 1315 or SPCH 1318 or SPCH 1321 or SPCH 1342
Humanities/Visual or Performing Arts Elective 3

Second Semester
SLNG 2431 Interpreting III (Capstone) 4
SLNG 2167 Practicum II - Sign Language Interpretation and Translation 1
SLNG 2303 Transliterating 3
PHED 1164 Concepts of Physical Activity 1
* Mathematics or Science Elective 3
TOTAL DEGREE HOURS 71

*Mathematics or Science Elective must be chosen from the corresponding section of the Core Curriculum.

SIGN LANGUAGE COMMUNICATOR

Certificate of Completion Program
SIGN.T001.UG • Trinity River Campus Only

First Summer Session			*Semester Hours*
SLNG	1404	American Sign Language (ASL) I	4
Second Summer Session			
SLNG	1405	American Sign Language (ASL) II	4

First Year

First Semester			
SLNG	1444	American Sign Language (ASL) III	4
SLNG	1215	Visual/Gestural Communication	2
SLNG	1347	Deaf Culture	3
ENGL	1301	English Composition I	3
Second Semester			
SLNG	1211	Fingerspelling and Numbers	2
SLNG	1445	American Sign Language (ASL) IV (Capstone)	4
SLNG	1321	Introduction to the Interpreting Profession	3
ENGL	1302	English Composition II	3
		TOTAL CERTIFICATE HOURS	32

BASIC AMERICAN SIGN LANGUAGE ACQUISITION

Certificate of Completion Program
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First Summer Session			*Semester Hours*
SLNG	1404	American Sign Language (ASL) I	4
Second Summer Session			
SLNG	1405	American Sign Language (ASL) II	4

First Year

First Semester			
SLNG	1444	American Sign Language (ASL) III	4
ENGL	1301	English Composition I	3
		TOTAL CERTIFICATE HOURS	15

SURGICAL TECHNOLOGY#
Certificate of Completion Program
SURG.T001.UG • Trinity River Campus Only

First Semester			Semester Hours
SRGT	1266	Practicum - Surgical Technology/Technologist	2
SRGT	1405	Introduction to Surgical Technology	4
SRGT	1409	Fundamentals of Perioperative Concepts and Techniques	4
BIOL	2401	Anatomy and Physiology I	4
HPRS	1206	Essentials of Medical Terminology	2
Second Semester			
SRGT	1267	Practicum - Surgical Technology/Technologist	2
SRGT	1441	Surgical Procedures I	4
SRGT	1442	Surgical Procedures II	4
BIOL	2402	Anatomy and Physiology II	4
BIOL	2420	Microbiology	4
HPRS	2200	Pharmacology for Health Professions	2
Summer Session (8 Weeks)			
SRGT	2130	Professional Readiness	1
SRGT	2266	Practicum - Surgical Technology/Technologist	2
		TOTAL CERTIFICATE HOURS	39

Admission and Program Information for Surgical Technology

A selection committee reviews applications and selects those applicants who best meet the following criteria (listed in random order):

- *Grade point average (GPA) of all high school or undergraduate college classes or GED scores if high school/college are not applicable.*
- *Bonus points for HPRS and science courses required for the program for which a grade of C or higher was made. NOTE: Science courses must have been completed within five years of the semester containing the program deadline date.*
- *Bonus points proportionate to the number of semester hours from a regionally accredited college or university for which a grade of C or higher was made up to a maximum of 120 semester hours.*
- *Bonus point for bachelor's degree from a regionally accredited college or university.*

Only the criteria listed are evaluated and considered for the purpose of selection and admission to this program. No specific minimum grade point average or test score, or a set minimum number of courses must be completed for admission. Selection is based on how each applicant compares with others in the applicant pool. In general, the higher the grades, the more competitive the applicant will be for the positions available.

Students who are selected for admission must undergo screening for substances of abuse and a criminal background check. All offers for admission to the Surgical Technology Program are provisional until satisfactory results are received.

International students must contact the International Admission Office 817-515-5232 and also the Health SciencesOffice 817-515-6691.

Once admitted to the program students must complete and earn a minimum grade of C in each specialized course.

Most/all of the specialized courses are taught only during the day.

After successful completion of the above curriculum, the student is eligible to take the certification examination to become a certified Surgical Technologist through the Association of Surgical Technologists.

The Tarrant County College Surgical Technology Program is accredited by the **Commission on Accreditation of Allied Health Education Programs (CAAHEP), 1361 Park Street, Clearwater, FL 33756. Phone 727-210-2350.**

TEACHER ASSISTANT

Certificate of Completion Program
EDUC.T001.UG • Northeast Campus Only

First Semester			*Semester Hours*
TECA	1354	Child Growth and Development	3
ENGL	1301	English Composition	3
CDEC	1359	Children with Special Needs	3
EDUC	1301	Introduction to the Teaching Profession	3
CDEC	1419	Child Guidance	4

Second Semester			
CDEC	1356	Emergent Literacy for Early Childhood	3
EDUC	2301	Introduction to Special Populations	3
EDTC	1313	Educational Software and Technology	3
SPCH	1311	Fundamentals of Speech Communication;	3
		or SPCH 1315 or SPCH 1318 or SPCH 1321	
CDEC	1413	Curriculum Resources for Early Childhood Programs	4
PHED	1164	Concepts of Physical Activity	1
		TOTAL CERTIFICATE HOURS	33

BILINGUAL TEACHING ASSISTANT

Certificate of Completion Program
EDUC.T002.UG • Northeast Campus Only

First Semester			*Semester Hours*
CDEC	1356	Emergent Literacy for Early Childhood	3
ENGL	1301	English Composition I	3
SPAN	1411	Elementary Spanish I	4
EDUC	1301	Introduction to the Teaching Profession	3
EDTC	1321	Bilingual Education	3

Second Semester			
EDUC	1325	Principles of Multicultural Education	3
EDTC	1313	Educational Software and Technology	3
SPCH	1311	Fundamentals of Speech Communication;	3
		or SPCH 1315 or SPCH 1318 or SPCH 1321	
SPAN	1412	Elementary Spanish II	4
PHED	1164	Concepts of Physical Activity	1

First Summer Session			
SPAN	2311	Intermediate Spanish I	3
TECA	1354	Child Growth and Development	3
		TOTAL CERTIFICATE HOURS	36

WELDING TECHNOLOGY

Associate of Applied Science Degree Program
WELD.D001.UG • South Campus Only

First Year

First Semester   *Semester Hours*

WLDG	1428	Introduction to Shielded Metal Arc Welding (SMAW)	4
WLDG	1430	Introduction to Gas Metal Arc Welding (GMAW)	4
MATH	1332	Survey of Mathematics; or MATH 1314 or MATH 1324	3
ENTC	2331	Manufacturing Materials	3
ENGL	1301	English Composition I	3

Second Semester

WLDG	1412	Introduction to Flux Cored Arc Welding (FCAW)	4
WLDG	1435	Introduction to Pipe Welding	4
DFTG	1425	Blueprint Reading and Sketching	4
		Humanities/Visual or Performing Arts Elective	3

Second Year

First Semester

WLDG	1434	Introduction to Gas Tungsten Arc Welding (GTAW)	4
DFTG	1409	Basic Computer-Aided Drafting (CAD)	4
PSYC	2315	Psychology of Adjustment and Human Relations	3
WLDG	1417	Introduction to Layout and Fabrication	4

Second Semester

GOVT	2305	United States Government; or GOVT 2306	3
SPCH	1321	Business and Professional Communication; or SPCH 1311 or SPCH 1315 or SPCH 1318	3
WLDG	2451	Advanced Gas Tungsten Arc Welding (GTAW)	4
WLDG	2453	Advanced Pipe Welding (Capstone)	4
		TOTAL DEGREE HOURS	61

WELDING - BASIC

Certificate of Completion Program • South Campus
WELD.T002.UG • South Campus Only

First Semester			*Semester Hours*
WLDG	1428	Introduction to Shielded Metal Arc Welding (SMAW)	4
WLDG	1430	Introduction to Gas Metal Arc Welding (GMAW)	4

Second Semester			
WLDG	1417	Introduction to Layout and Fabrication	4
DFTG	1425	Blueprint Reading and Sketching	4
WLDG	1434	Introduction to Gas Tungsten Arc Welding (GTAW)	4
		TOTAL CERTIFICATE HOURS	20

WELDING - ADVANCED

Certificate of Completion Program • South Campus
WELD.T003.UG • South Campus Only

First Semester			*Semester Hours*
WLDG	1435	Introduction to Pipe Welding	4
WLDG	1417	Introduction to Layout and Fabrication	4

Second Semester			
WLDG	2453	Advanced Pipe Welding	4
WLDG	2451	Advanced Gas Tungsten Arc Welding (GTAW)	4
		TOTAL CERTIFICATE HOURS	16

COURSE DESCRIPTIONS

Course Numbering System

During past years Tarrant County College changed all course numbers to comply with a statewide plan to identify most courses with common numbers. The numbers are assigned in three ways:

1. The **Texas Common Course Numbering System (TCCNS)** was adopted by most Texas public and private colleges and universities in the early 1980s. It is designed to facilitate maximum transferability of academic courses among Texas institutions. TCCNS courses must be accepted in transfer by any Texas public college or university that offers the same course. **TITLES IN BOLD MARKED WITH '+' ARE COURSES COVERED BY THE TRANSFER GUARANTEE.**

2. The **Texas Workforce Education Numbering System (WECM)** was mandated by the Texas Higher Education Coordinating Board. It is designed to identify equivalent occupational courses, to facilitate their transfer between occupational degree programs, and to assure the recognition by business and industry.

3. Courses not identified by TCCNS or WECM numbers are assigned a local Tarrant County College course number. All developmental courses have an assigned number.

NUMBERING OF COURSES:

Common Course Number System

All have four-letter department abbreviations.

Each course has a four-digit number.
- The first digit indicates the level at which a course is taught, as follows:
    - 1= Freshman or introductory level.
    - 2= Sophomore or intermediate or advanced.
- The second digit indicates the semester credit hour value of the course.
- The third and fourth digits establish type of instruction and course sequence.

Courses with TCCN numbers are highlighted with '+' following the course title. Three figures in parentheses follow each course title indicating the number of semester hours credit, the number of lecture hours per week, and the number of laboratory hours per week. In addition, many course descriptions also include notations to indicate the following special instructions or considerations:

* Waiver of a prerequisite or co-requisite may be authorized by the department chairperson.
# Specialized admission requirements; consent of the Department Chairperson required.

(ABDR) AUTOMOTIVE BODY REPAIR

ABDR-1207 Collision Repair Welding
(2-1-3) A study of collision repair welding and cutting procedures.
Required Co-Requisite: ABDR-1419

ABDR-1291 Special Topics in Automotive Body Repair
(2-2-0) Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. *Required Co-Requisite:* ABDR-1431

ABDR-1419 Basic Metal Repair
(4-3-3) Covers basic metal principles and working techniques including proper tool usage and product application. *Required Co-Requisite:* ABDR-1207

ABDR-1431 Basic Refinishing
(4-3-4) An introduction to current refinishing products, shop safety, and equipment used in the automotive refinishing industry. Emphasis on surface preparation, masking techniques, and refinishing of replacement parts. *Required Co-Requisite:* ABDR-1291

ABDR-1555 Non-Structural Metal Repair
(5-3-6) A course in sheet metal repair principles using mechanical and hydraulic equipment. Emphasis on attachment devices used to straighten and align exterior body panels. *Required Prerequisite:* ABDR-1419

ABDR-1558 Intermediate Refinishing
(5-3-6) Expanded training in mixing and spraying of automotive topcoats. Emphasis on formula ingredient, reducing, thinning, and special spraying techniques. Introduction to partial panel refinishing techniques and current industry paint removal techniques.
Recommended Prerequisite: ABDR-1431

ABDR-2502 Auto Body Mechanical and Electrical Service
(5-3-6) A course in the repair, replacement, and/or service of collision damaged mechanical or electrical systems. Topics include drive train removal, reinstallation and service; cooling system service and repair; exhaust system service; and emission control systems. Additional topics include wire and connector repair, reading wiring diagrams, and troubleshooting. *Recommended Prerequisite:* ABDR-1419

ABDR-2537 Structural Analysis and Damage Repair
(5-3-6) Operation of equipment and the procedures involved in the repair of body structures. Special emphasis on conducting a thorough damage analysis as well as demonstrating proper pulling and anchoring techniques.
Required Prerequisite: ABDR-1419

ABDR-2549 Advanced Refinishing
(5-3-6) Application of multistage refinishing techniques. Further development in analysis of problems and solutions in color matching and partial panel refinishing.
Recommended Prerequisite: ABDR-1431

ABDR-2551 Specialized Refinishing Techniques
(5-3-6) Advanced topics in specialty automotive refinishing. Emphasis on refinishing plastics, fiberglass, aluminum, and galvanized panels as well as custom graphics and current industry innovations.
Recommended Prerequisite: ABDR-1431

(ACCT) ACCOUNTING

ACCT-2301 Principles of Financial Accounting +
(3-3-0) Accounting concepts and applications in transaction analysis and financial statement preparation, analysis of financial statements, and asset and equity accounting in proprietorships, partnerships, and corporations.
Required Prerequisite: MATH-0302 with a grade of C or satisfactory score on approved placement test
This course may be taken for honors credit. Consult the department for information.

ACCT-2302 Principles of Managerial Accounting +
(3-3-0) Continuation of ACCT-2301. Introduction to cost behavior, budgeting, responsibility accounting, cost control, and product costing.
Required Prerequisites: ACCT-2301

(ACNT) ACCOUNTING TECHNICIAN

ACNT-1303 Introduction to Accounting
(3-3-0) The 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. For non-accounting majors.

ACNT-1311 Introduction to Computerized Accounting
(3-3-0) Introduction to utilizing the computer in maintaining accounting records with primary emphasis on a general ledger package.
Recommended Prerequisite/Co-Requisite: ACCT-2301

ACNT-1313 Computerized Accounting Applications
(3-3-0) Use of the computer to develop and maintain accounting records and to process common business applications for managerial decision-making.
Recommended Prerequisite: ACCT-2301

ACNT-1329 Payroll and Business Tax Accounting
(3-3-0) The study of payroll procedures, taxing entities, and reporting requirements of local, state, and federal taxing authorities in a manual and a computerized environment.
Recommended Prerequisite: ACCT-2301

ACNT-1331 Federal Income Tax: Individual
(3-3-0) A study of the federal tax law for preparation of individual income tax returns.
Recommended Prerequisite: ACCT-2301

ACNT-1391 Special Topics in Accounting
(3-3-0) Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student This course was designed to be repeated multiple times to improve student proficiency.

ACNT-2303 Intermediate Accounting I
(3-3-0) Analysis of generally accepted accounting principles, concepts, and theory underlying the preparation of financial statements. *Required Prerequisite:* ACCT-2302

ACNT-2309 Cost Accounting
(3-3-0) A study of budgeting, cost analysis, and cost control systems using traditional and contemporary costing methods and theories in decision making.
Required Prerequisite: ACCT-2302

ACNT-2380 Cooperative Education in Accounting
(3-1-19) Career-related activities encountered in the student's area of specialization are offered through an individualized agreement among the College, employer and student. Under supervision of the College and the employer, the student combines classroom learning with work experience. Includes a lecture component.
Prerequisite: Consent of instructor based on the preparation of a co-op application, employer approval, prior completion of a minimum of 15 credit hours including 9 hours of accounting with an overall 2.5 or higher GPA. Student must have formally declared an accounting major.

(AERM) AIRCRAFT MECHANIC/TECHNICAN

AERM-1101 Introduction to Aviation
(1-1-0) An overview of aviation maintenance including the history of aviation, the mechanic's roles and duties, and nomenclature of aircraft and safety.

AERM-1205 Weight and Balance
(2-1-2) An in-depth study of the Federal Aviation Administration (FAA) required subjects relating to the weighing of aircraft, the performance of weight and balance calculations, and appropriate maintenance record entries. Research is done via computer.
Required Prerequisite/Co-Requisite: AERM-1208

AERM-1208 Federal Aviation Regulations
(2-1-3) A course in the use and understanding of the Federal Aviation Administration and aircraft manufacturers' publications, forms, and records and the exercise of mechanic privileges within prescribed limitations. Regulations and research via CD-ROM.

AERM-1240 Aircraft Propellers
(2-1-3) Fundamentals of propeller design, function, and construction. Skill development in inspection, servicing, and repair of fixed-pitch, constant-speed, and feathering propellers and governing systems. Instruction in removal, balancing, and installation of propellers and fundamentals of safety are also addressed.

AERM-1241 Wood, Fabric, and Finishes
(2-1-2) A course in the use and care of various covering materials, finishes and wood structures including approved methods and procedures.

AERM-1243 Instruments and Navigation/Communication
(2-1-2) A study of aircraft instruments and electronic flight instrument systems including testing and installing instruments; inspecting, checking, and troubleshooting navigation and communication systems; and inspecting and repairing antennas and electronics equipment installations. Computer applications.

AERM-1253 Aircraft Welding
(2-1-2) Skill development in repair procedures for steel, magnesium, brass, and aluminum materials used in aircraft assembly and selection and application of appropriate methods of welding, brazing and soldering steel, magnesium, brass, and aluminum. Fundamentals of safety procedures are also addressed.

AERM-1254 Aircraft Composites
(2-1-2) Comprehensive concepts of the inspection and repair of composite, fiberglass, honeycomb and laminated structural materials including doors, windows, bonded structures, and interior furnishings. Safety procedures will also be addressed.

AERM-1303 Shop Practices
(3-2-3) An introduction to shop safety, the correct use of hand tools, equipment and precision measurement, identification of aircraft hardware, and the fabrication of fluid lines and tubing. Emphasis on procedures for testing, heat treating, and inspection of aircraft structures.

AERM-1310 Ground Operations
(3-2-3) An introductory course in fuels, servicing methods, safety procedures, aircraft movement, securing and operations of aircraft, external power equipment, aircraft cleaning, and corrosion control.

AERM-1314 Basic Electricity
(3-2-4) A study of aircraft electrical systems and their requirements including the use of the ammeter, voltmeter, and ohmmeter; series and parallel circuits; inductance and capacitance; magnetism; converting alternating current (AC) to direct current (DC); controlling devices; maintenance and servicing of aircraft batteries; and reading and interpreting aircraft electrical diagrams to include solid state devices and logic functions. Fundamentals of electrical safety also addressed.

AERM-1315 Aviation Science
(3-2-2) Fundamentals of mathematics, physics, and drawing as they apply to aircraft principles and operations as required by the Federal Aviation Administration for airframe and powerplant mechanics.

AERM-1344 Aircraft Reciprocating Engines
(3-2-3) Reciprocating engines, their development, operating principles, and theory. Includes engine instruments, lubrication, and exhaust systems. Also addresses fundamentals of safety.

AERM-1345 Airframe Electrical Systems
(3-2-4) A study of airframe electrical systems including installation, removal, disassembly, and repair of electrical components and related wiring. Fundamentals of electrical safety also addressed. *Recommended Prerequisite:* AERM-1314

AERM-1347 Airframe Auxiliary Systems
(3-2-3) A comprehensive study of airframe auxiliary systems including cabin atmospheric control systems, ice and rain control systems for aircraft and engines, and fire detection and protection systems. Fundamentals of safety procedures also addressed.

AERM-1349 Hydraulic, Pneumatic, and Fuel Systems
(3-2-4) Skill development in inspecting, servicing and maintaining aircraft fluid systems including hydraulics, pneumatics, and fuel. Application of basic concepts through detailed maintenance procedures. Fundamentals of safety procedures also addressed.

AERM-1350 Landing Gear Systems
(3-2-3) General principles of inspection, servicing, overhaul and repair of fixed and retractable landing gear systems and the operation, and repair of position and warning systems. Includes coverage of systems, components, operation and fundamentals of safety procedures.

AERM-1351 Aircraft Turbine Engine Theory
(3-2-3) General principles of theory, history, and servicing of turbine engines to include lubrication, instrumentation, auxiliary power units, and exhaust systems. Fundamentals of safety procedures are also addressed.

AERM-1357 Fuel Metering and Induction Systems
(3-2-4) Skill development in fuel metering and induction systems used on reciprocating and turbine engines including fuel metering systems, carburetors, induction systems, heat exchangers and cooling systems. Fundamentals of safety procedures will also be addressed.

AERM-1391 Special Topics in Aircraft Mechanic/Technician Airframe
(3-3-0) Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student.

AERM-1452 Aircraft Sheet Metal
(4-2-7) Skill development in inspection and repair of sheet metal structures including forming, lay out, and bending of sheet metal and identification, selection, and installation of rivets and fasteners. Fundamentals of safety procedures also addressed.

AERM-1456 Aircraft Powerplant Electrical
(4-2-6) General principles of theory, operation, and maintenance of powerplant electrical systems including ignition, starting, and fire protection systems. Fundamentals of safety procedures will also be addressed.

AERM-2171 Oral and Practical Exams, General
(1-0-3) The Oral and Practical exams are required for the FAA Mechanic certificate. The exams are scheduled individually with a Designated Mechanic Examiner to meet the requirements for the General portion of the Airframe and/or Powerplant rating.

AERM-2172 Oral and Practical Exams, Airframe
(1-0-3) The Oral and Practical exams are required for the FAA Mechanic certificate. The exams are scheduled individually with a Designated Mechanic Examiner to meet the requirements for the Airframe portion of the Airframe and/or Powerplant rating.

AERM-2173 Oral and Practical Exams, Powerplant
(1-0-3) The Oral and Practical exams are required for the FAA Mechanic certificate. The exams are scheduled individually with a Designated Mechanic Examiner to meet the requirements for the Powerplant portion of the Airframe and/or Powerplant rating.

AERM-2231 Airframe Inspection
(2-1-2) In-depth coverage of methods and procedures to perform airframe conformity and airworthiness inspections (including 100-hour Inspections) in accordance with Federal Aviation Regulations and manufacturer's service information. Safety procedures will also be addressed.

AERM-2233 Assembly and Rigging
(2-1-2) A comprehensive study of the assembly and rigging of fixed and rotary-wing aircraft including structural alignment, balancing and rigging of control systems and assembly of aircraft components. Fundamentals of safety procedures are also addressed.

AERM-2252 Aircraft Powerplant Inspection
(2-1-2) In-depth coverage of methods and procedures to perform powerplant conformity and airworthiness inspections (including 100-hundred Hour Inspections) in accordance with Federal Aviation Regulations and manufacturer's information. Safety procedures will also be addressed. All materials and procedures are computer based.
Prerequisite/Co-Requisite: Consult Department Chairperson

AERM-2351 Aircraft Turbine Engine Overhaul
(3-2-4) A comprehensive study in inspection, disassembly, reassembly, and replacement of gas turbine engines, sections and components including operational troubleshooting, analysis, and safety. *Recommended Prerequisite:* AERM-1351

AERM-2447 Aircraft Reciprocating Engine Overhaul
(4-2-8) A comprehensive study of reciprocating engine overhaul including measurement and inspection procedures. Instruction in removal and installation, inspections, checks, servicing, and repair of engines. Safety procedures will be addressed. *Recommended Prerequisite:* AERM-1344

(AGCR) AGRONOMY

AGCR-2418 Soil Science
(4-3-2) Introduction to the physical, chemical, and biological properties of soils. Topics include the relationship between crops and soils, conservation of soil and water resources, and the economic use of fertilizers.

(ANTH) ANTHROPOLOGY

ANTH-2346 Introduction to Anthropology +
(3-3-0) A social/behavioral science exploration of past and present human variation of both a physical and cultural nature. Includes the study of human ancestry, archaeology, linguistics, and cultural diversity and change.

(ARCE) ARCHITECTURAL DESIGN – ALSO SEE DRAFTING (DFTG)

ARCE-1342 Codes, Specifications, and Contract Documents
(3-3-0) Study of ordinances, codes and legal documents as they relate to specifications and drawings. Discussion of owner-architect-contractor responsibilities, duties, and legal relationships.

(ARCH) ARCHITECTURE

ARCH-1301 Architectural History I +
(3-3-0) Study of the history of architecture from ancient civilizations to present. Emphasis on the relationship of culture, geography, climate, natural resources and materials to the methods of construction. Includes an analytical review of the art of architecture and design with physical, religious, social, economic and political factors that impact ancient civilizations through the Middle Ages.

ARCH-1302 Architectural History II +
(3-3-0) Study of the history of architecture from the ancient civilizations to the present. Emphasis on relationship of culture, geography, climate, natural resources, and materials to the method of construction. Includes an analytical review of the art of architecture and design physical, religion, social, economic and political factors that impact the Middle Ages through the present.

ARCH-1303 Architectural Design I-Residential +
(3-2-4) Introduction to architectural concepts. The visual characteristics of two- and three-dimensional forms and spaces. Architectural drawing procedures and practices for residential and/or light frame construction. Construction practices and techniques with emphasis on residential construction methods. Office procedures for coordinating CAD drawings in the office. *Recommended Prerequisite:* ENGR-1304

ARCH-1304 Architectural Design II-Commercial +
(3-2-4) A continuation of architectural concepts introduced in Architectural Design I. The visual characteristics of two- and three-dimensional forms and spaces. Architectural drafting procedures, practices and symbols including the preparation of detailed working drawings for a commercial building, with emphasis on commercial construction methods. *Recommended Prerequisite:* ENGR-1304

ARCH-1307 Architectural Graphics I +
(3-2-4) Architectural drafting techniques including orthographic and axonometric studies. Principles of shade and shadow, and perspective drawing. Presentation of advance architectural topics with applications in computer-aided environment utilizing three-dimensional objects or spaces. *Recommended Prerequisite:* ARCH-1303 or ARCH-1304

ARCH-1308 Architectural Graphics II +
(3-2-4) Architectural drafting techniques including orthographic and axonometric studies. Principles of shades and shadows, and perspective drawing. These techniques will be implemented through the use and instruction of Building Information Management System software.

ARCH-1311 Introduction to Architecture +
(3-3-0) An introduction to the elements of the architectural profession. Examination of the interrelationships of societal, cultural and environmental contexts in the building environment.

ARCH-1315 Architectural Computer Graphics +
(3-2-4) Introduction to computer graphics systems with emphasis on architectural applications. *Required Prerequisite:* ENGR-1304

ARCH-2301 Architectural Freehand Drawing +
3-2-4) Representational drawing using various media. Emphasis on principles of light, shade, scale, proportion, line and tonal quality.

ARCH-2312 Architectural Technology I +
(3-3-0) Properties, specifications, vendor references, and uses of materials as related to architectural systems of structures.

ARCH-2313 Architectural Technology II +
(3-3-0) A continuation of Architectural Technology I and a continuation of the properties, specifications, and application of materials related to architectural structures. Emphasis of the methods of construction and the effect of design. Included is the study of codes, vendor references and uses of mechanical, plumbing, conveying, and electrical systems as related to architecture for residential and commercial construction.
Recommended Prerequisite: ARCH-2312

(ARCT) ARCHITECTURAL ENGINEERING TECHNOLOGY/TECHNICIAN – ALSO SEE DRAFTING (DFTG)

ARCT-1371 Professional Office Practices
(3-3-0) The roles of architects and contractors in the construction industry. The building enterprise, general conditions of construction contracts, architect/contractor business management, office procedures, and types of business operation.
Prerequisite: Consent of Department Chairperson.

ARCT-1373 Building System Design and The Green Advantage
(3-3-0) A study of the architectural design of structures as a complex interrelated system of people, building technologies, and the environment. Course includes a study of energy efficient and environmentally responsible design; and the Green Advantage.

ARCT-1374 Energy Conservation Codes in Mechanical and Electrical Design
(3-0-0) A study the use of lighting, electrical, mechanical requirements, and techniques to lower energy and water consumption in the architectural structures. Includes a study in the application of architectural onsite power generation with an emphasis on renewable energy. Includes a survey of energy conservation codes.

ARCT-1375 Architectural Retrofit Strategies
(3-3-0) Evaluation of existing architectural structures yielding to redesign and retrofitting strategies in order to improve energy efficiency and environment quality.

ARCT-1376 Sustainable Urbanism Design and Development Planning
(3-3-0) Immersion in building green, sustainable urbanism practices, theories, metrics, thresholds, and implementation strategies; including hands-on exercises using LEED-ND

and local case studies. Environmental development planning topics including information and hands-on tools to establish realistic carbon reduction goals and implementation strategies to reach them. Survey of methods and materials used for the design of architectural structures that conserve energy, water and human resources. Includes USGBC rating system and a preparation course for the LEED (Leadership in Energy and Environmental Design) examinations.

ARCT-1391 Special Topics in Architectural Engineering Technology/Technician
(3-3-1) 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 the proficiency of the student.

ARCT-2367 Practicum in Architectural Engineering Technology/Technician
(3-0-21) Practical, general workplace training supported by an individualized learning plan developed by the employer, College and student. This experience may be paid or non-paid.
Required Prerequisite: Department Chair approval

(ARTC) GRAPHIC DESIGN, COMMERCIAL ART AND ILLUSTRATION

ARTC-1305 Basic Graphic Design
(3-2-2) Graphic design with emphasis on the visual communication process. Topics include basic terminology and graphic design principles.

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

ARTC-1402 Digital Imaging I
(4-3-3) Digital imaging using raster image editing and/or image creation software: scanning, resolution, file formats, output devices, color systems, and image-acquisitions.

ARTC-1453 Computer Illustration I
(4-3-3) Use of the tools and transformation options of an industry-standard vector drawing program to create complex illustrations or drawings.

ARTC-2305 Digital Imaging II
(3-2-4) 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 or fine art applications.
Recommended Prerequisite: ARTC-1402

ARTC-2313 Digital Publishing II
(3-2-4) Includes layout procedures from thumbnails and roughs to final comprehensive and print output. Emphasis on design principles for the creation of advertising and publishing materials, and techniques for efficient planning and documenting projects.
Recommended Prerequisite: ARTC-1313

ARTC-2335 Portfolio Development for Graphic Design
(3-2-2) Preparation of a portfolio comprised of completed graphic design class projects. Evaluation and demonstration of portfolio presentation methods based on the student's specific area of study. *Required Prerequisite:* Consent of Program Coordinator

ARTC-2440 Computer Illustration II
(4-3-3) Advanced use of software applications and/or various media with emphasis on output procedures, the resolution of complex design issues, and concept development.

(ARTS) ART

ARTS-1301 Art Appreciation +
(3-3-0) General education course open to all; design principles from the layman's point of view. Critical evaluation of selected works of painting, sculpture, architecture and industrial design related to everyday life.

ARTS-1303 Art History Survey I +
(3-3-0) Painting, sculpture, architecture and the minor arts from prehistoric times to 1000 A.D. Freshman studio core.

ARTS-1304 Art History Survey II +
(3-3-0) Survey of painting, sculpture, architecture and the minor arts from 1000 A.D. to the present. Freshman studio core.

ARTS-1311 Design I +
(3-2-4) Emphasis on two-dimensional design; fundamentals of line, color, form, texture, shape, space and arrangement. Freshman studio core.

ARTS-1312 Design II +
(3-2-4) Continuation of ARTS-1311 with emphasis on three-dimensional concept. Freshman studio core. *Recommended Prerequisite:* ARTS-1311

ARTS-1316 Drawing I +
(3-2-4) Variety of media, techniques, and subjects, exploring perceptual and descriptive possibilities with consideration of drawing as a developmental process, as well as an end in itself. Freshman studio core.

ARTS-1317 Drawing II +
(3-2-4) A further investigation of media, techniques, descriptive and expressive possibilities. Freshman studio core.
Recommended Prerequisites: ARTS-1311 and ARTS-1316

ARTS-1320 Interior Design I +
(3-2-4) Studio course in Interior Design. Includes instruction in professional techniques of designing the interiors of homes, offices and industrial buildings.

ARTS-1321 Interior Design II +
(3-2-4) Continuation of ARTS-1320 with emphasis on advanced design techniques.

ARTS-2313 Design Communication I +
(3-2-4) Basic processes and techniques of graphic design.
Recommended Prerequisites: ARTS-1311and ARTS-1316 and basic computer literacy

ARTS-2314 Design Communication II +
(3-2-4) Continuation of ARTS-2313. Advanced study of graphic design techniques.
Recommended Prerequisite: ARTS-2313

ARTS-2316 Painting I +
(3-2-4) Painting media with emphasis on color and composition.
Recommended Prerequisites: ARTS-1311 or ARTS-1316

ARTS-2317 Painting II +
(3-2-4) Continuation of ARTS-2316 with emphasis on individual expression.
Recommended Prerequisite: ARTS-2316

ARTS-2323 Life Drawing I +
(3-2-4) A studio course emphasizing structures and action of the human figure.
Recommended Prerequisite: ARTS-1317

ARTS-2326 Sculpture I +
(3-2-4) Basic sculpture approaches in a variety of media, including additive and subtractive techniques. *Recommended Prerequisite:* ARTS-1312

ARTS-2327 Sculpture II +
(3-2-4) A continuation of ARTS-2326 with emphasis on individual expression.
Recommended Prerequisite: ARTS-2326

ARTS-2333 Printmaking I +
(3-2-4) Basic printmaking processes, including planographic, intaglio, stencil and relief.
Recommended Prerequisite: ARTS-1311 or ARTS-1316

ARTS-2334 Printmaking II +
(3-2-4) Advanced printmaking processes for planographic, intaglio, stencil and relief.
Recommended Prerequisite: ARTS-2333

ARTS-2336 Fiber Arts I +
(3-2-4) A studio course that explores structure and design of woven and non-woven fiber forms.

ARTS-2337 Fiber Art II +
(3-2-4) A studio course that further investigates structure and design of woven and non-woven fiber forms.

ARTS-2341 Art Metals I +
(3-2-4) Basic techniques in working with non-ferrous metals.
Recommended Prerequisite: ARTS-1312

ARTS-2346 Ceramics I +
(3-2-4) Basic ceramic processes.

ARTS-2347 Ceramics II +
(3-2-4) A continuation of ARTS-2346 with opportunities for specialization in ceramic processes.

ARTS-2348 Digital Art I +
(3-2-4) A studio art course that explores the potential of computer hardware and software medium for visual, conceptual and practical uses in the visual arts.
Recommended Prerequisites: Basic computer literacy and ARTS-1311 or ARTS-1316

ARTS-2349 Digital Art II +
(3-2-4) A studio art course that uses computer hardware and software as a medium for visual and conceptual expression in the visual arts.
Recommended Prerequisite: ARTS-2348

ARTS-2356 Photography I +
(3-2-4) Basic photographic processes and techniques used as an art medium utilizing film and traditional darkroom laboratories.
Prerequisite: Freshman studio core. (Prerequisite applies to art majors only.)

ARTS-2357 Photography II +
(3-2-4) Continuation of ARTS-2356. Advanced study of photography as an art medium.

ARTS-2366 Watercolor I +
(3-2-4) Exploration of ideas using water-based painting media and techniques.

ARTS-2367 Watercolor II +
(3-2-4) Conceptual development through water-based painting media; work in non-transparent aqua-based media on paper surfaces; historical survey of watercolor.

(ARTV) ANIMATION

ARTV-1403 Basic Animation
(4-3-3) Examination of animation concepts, principles, and storyboard for basic production. Emphasizes creating movement and expression utilizing traditionally or digitally generated image sequences.

(AUMT) AUTOMOTIVE MECHANIC/TECHNICIAN

AUMT-1241 Automotive Climate Control Systems
(2-2-1) Theory of automotive climate control systems. Emphasis on the basic refrigeration cycle and system malfunctions. Includes manual and electronic climate control systems.
Required Co-Requisite: AUMT-1345

AUMT-1253 Automotive Electrical Systems Theory
(2-1-2) A course in automotive electrical systems including operational theory, testing and diagnosis of batteries, charging and starting systems, and electrical accessories. Use of electrical schematic diagrams and service.
Required Co-Requisite: AUMT-1307

AUMT-1257 Automotive Brake Systems Theory
2-1-2) Theory and principles related to the design, operation, and servicing of automotive braking systems. Includes disc and drum-type brakes, hydraulic systems, power assist components, anti-lock brake systems, and diagnosis and reconditioning procedures.
Required Co-Requisite: AUMT-1310

AUMT-1307 Automotive Electrical Systems
(3-1-5) An overview of automotive electrical systems including topics in operational theory, testing, diagnosis and repair of charging and starting systems, and electrical accessories. Emphasis on electrical principles, schematic diagrams, and service manuals. May be taught manufacturer specific. *Required Co-Requisite:* AUMT-1253

AUMT-1310 Automotive Brake Systems
(3-1-5) Operation and repair of drum/disc type brake systems. Topics include brake theory, diagnosis and repair of power, manual, anti-lock brake systems, and parking brakes. May be taught with manufacturer specific instructions.

AUMT-1319 Automotive Engine Repair
(3-1-5) Fundamentals of engine operation, diagnosis and repair. Emphasis on identification, inspection, measurements, disassembly, repair, and reassembly of the engine. May be taught manufacturer specific. *Required Co-Requisite:* AUMT-2205

AUMT-1345 Automotive Climate Control Systems
(3-1-5) Diagnosis and repair of manual and electronic climate control systems; includes the refrigeration cycle and EPA guidelines for refrigerant handling. May be taught manufacturer specific. *Required Co-Requisite:* AUMT-1241

AUMT-1416 Automotive Suspension and Steering Systems
(4-3-4) Diagnosis and repair of automotive suspension and steering systems including electronically controlled systems. Includes component repair, alignment procedures and tire and wheel service. May be taught manufacturer specific.

AUMT-2205 Automotive Engine Theory
(2-1-2) Fundamentals of engine operation and diagnosis including lubrication and cooling systems. Emphasis on identification of components, measurements, inspections and repair methods. *Required Co-Requisite:* AUMT-1319

AUMT-2209 Automotive Drive Train and Axle Theory
(2-1-2) A study of automotive clutches, clutch operation devices, manual transmissions and transaxles, and differentials. Emphasis on theory of transmission and transaxle and drive line components. *Required Co-Requisite:* AUMT-2313

AUMT-2215 Automotive Engine Performance Analysis Theory I
(2-2-0) Operation and diagnosis of basic engine dynamics including the study of the ignition system, fuel delivery systems, and the use of engine performance diagnostic equipment. *Required Prerequisites:* AUMT-1253 and AUMT-1307
Required Co-Requisite: AUMT-2317

AUMT-2223 Automotive Automatic Transmission and Transaxle Theory
(2-1-2) Theory of operation, hydraulic principles, and electronic circuits of modern automatic transmissions and transaxles. Discussion of diagnosing and repair techniques. *Required Prerequisite:* AUMT-2209 *Required Co-Requisite:* AUMT-2325

AUMT-2231 Automotive Engine Performance Analysis Theory II
(2-1-2) A study of emission systems, computerized engine performance, and advanced ignition and fuel systems, including advanced engine performance diagnostic equipment. *Required Prerequisite:* AUMT-2215 *Required Co-Requisite:* AUMT-2334

AUMT-2313 Automotive Drive Train and Axles
(3-1-5) A study of automotive clutches, clutch operation devices, manual transmissions and transaxles, and differentials with emphasis on diagnosis and repair. May be taught with manufacturer specific instructions.

AUMT-2317 Automotive Engine Performance Analysis I
(3-1-5) Theory, operation, diagnosis of drivability concerns, and repair of ignition, and fuel delivery systems. Use of current engine performance diagnostic equipment. May be taught with manufacturer specific instructions. *Required Co-Requisite: AUMT-2215*

AUMT-2325 Automotive Automatic Transmission and Transaxle
(3-1-5) A study of the operation, hydraulic circuits and electronic controls of modern automatic transmissions and transaxles. Diagnosis, disassembly, and assembly procedures with emphasis on the use of special tools and repair techniques. May be taught manufacturer specific. *Required Co-Requisite:* AUMT-2223

AUMT-2334 Automotive Engine Performance Analysis II
(3-1-5) Diagnosis and repair of emission systems, computerized engine performance systems, and advanced ignition and fuel systems. Includes use of advanced engine performance diagnostic equipment. May be taught manufacturer specific.
Required Co-Requisite: AUMT-2231

AUMT-2457 Automotive Alternative Fuels
(4-3-4) A study of the composition and use of various alternative automobile fuels including retrofit procedures and applications, emission standards, availability, and cost effectiveness. Overview of federal and state regulations concerning fuels.
Required Prerequisite: AUMT-2231

(AVNC) AVIATION ELECTRONIC SYSTEMS AND MAINTENANCE TECHNOLOGY/TECHNICIAN

AVNC-1303 Introduction to Aircraft Electronics Systems
(3-2-3) An introduction to the relationship between aircraft electronic systems and aircraft flight and navigational systems with emphasis on the operation and function of the systems.

AVNC-1370 Aircraft Communication Systems Line Maintenance
(3-2-3) A course in the theory, operation, testing and troubleshooting of common aircraft communications systems to include aircraft audio distribution systems, VHF communication systems, UHF communication systems, satellite communication systems, telephone systems, public address systems, and intercom systems. The student will receive training on the setup and use of common and peculiar test equipment associated with the testing of aircraft communication systems. Furthermore, the student will receive training in aircraft communication systems troubleshooting and repair practices/procedures using the correct materials and processes.

AVNC-1371 Aircraft Navigation Systems Line Maintenance
(3-2-3) A course (aircraft line maintenance) in the theory, operation, testing and troubleshooting of common aircraft navigation systems, to include VOR/LOC navigation systems, instrument landing systems, global positioning systems, Distance Measurement Equipment, and Air Traffic Control Radar Beacon Systems. The student will receive training on the setup and use of common and peculiar test equipment associated

with the testing of aircraft navigation systems. Furthermore, the student will receive training in aircraft navigation systems troubleshooting and repair practices/procedures.

AVNC-1443 Aviation Electrical and Electronic Systems Installation
(4-3-3) A comprehensive study of and practical experience in the installation of avionic systems in aircraft, mounting electronic equipment, construction and installation of electrical wiring and cables, proper use of tools, selection of materials, and safety.

(BCIS) BUSINESS COMPUTER INFORMATION SYSTEMS

BCIS-1405 Business Computer Applications +
(4-3-2) Computer terminology, hardware, software, operating systems, and information systems relating to the business environment. The main focus of this course is on building hands-on capabilities with business applications of software, including word processing, spreadsheets, databases, presentation graphics, and business-oriented utilization of the Internet.
 This course may be taken for honors credit. Consult the department for information.

(BIOL) BIOLOGY

BIOL-1406 Biology for Science Majors I +
(4-3-3) Scientific method, concepts of chemistry, cell structure and function, bioenergetics, and survey of the protista and animal kingdoms from a taxonomic, morphological, and physiological standpoint.
Required Co-Requisite: Laboratory BIOL-1406L
This course may be taken for honors credit. Consult the department for information.

BIOL-1407 Biology for Science Majors II +
(4-3-3) Reproduction and development, classical and molecular genetics, ecology, evolution, and a survey of the monera, fungi, and plant kingdoms from a taxonomic, morphological, and physiological standpoint.
Required Prerequisite: BIOL-1406
Required Co-Requisite: Laboratory BIOL-1407L
This course may be taken for honors credit. Consult the department for information.

BIOL-1408 General College Biology I +
(4-3-2) Introductory biology for the non-science major considering the nature of science, cells, chemistry, structures, and processes; tissues and the integumentary, biomechanic, circulatory, respiratory, digestive, excretory, nervous, and endocrine systems.
Required Co-Requisite: Laboratory BIOL-1408L
This course may be taken for honors credit. Consult the department for information.

BIOL-1409 General College Biology II +
(4-3-2) Introductory biology for the nonscience major considering reproduction, development, classical, and molecular genetics; a survey of kingdoms, ecology, behavior, and evolution. *Required Co-Requisite:* Laboratory BIOL-1409L
This course may be taken for honors credit. Consult the department for information.

BIOL-1411 General Botany +
(4-3-3) A study of the taxonomy, anatomy, morphology, physiology, genetics, ecology, and evolution of plants.
Required Prerequisite: BIOL-1407 *Required Co-Requisite:* Laboratory BIOL-1411L

BIOL-2306 Environmental Biology +
(3-3-0) Human interaction with and effect upon plant and animal communities. Conservation, pollution, energy and other contemporary ecological problems.

BIOL-2316 Genetics +
(3-3-0) Study of the principles of molecular and classical genetics and the function and transmission of heredity material. May include population genetics, genetic engineering and human genetics.

BIOL-2401 Anatomy and Physiology I +
(4-3-2) Functional anatomy with emphasis on basic principles and physiological activities of different systems of the body. Laboratory experiments in vertebrate physiology and the dissection of a mammal.
Required Prerequisite: MATH-0350 with a grade of C or satisfactory score on approved placement test *Required Co-Requisite:* BIOL-2401L

BIOL-2402 Anatomy and Physiology II +
(4-3-2) Continuation of BIOL-2401.
Required Prerequisite: BIOL-2401 *Required Co-Requisite:* Laboratory BIOL-2402L

BIOL-2406 Environmental Biology +
(4-3-3) Human interaction with and effect upon plant and animal communities. Conservation, pollution, energy and other contemporary ecological problems.
Required Co-Requisite: BIOL-2406L

BIOL-2420 Microbiology +
(4-3-4) Microorganisms, their morphological, physiological, and biochemical characteristics; response to environment; and influence on their surroundings. The relationship to the oral and intestinal cavities, aspects of parasitism, infection, body defenses, and methods of prevention and controlling infection. Effects and control of microorganisms in food, water, milk and sanitation.
Required Co-Requisite: BIOL-2420L

BIOL-2421 General Microbiology +
(4-3-4) Microscopic and chemical basis of microbial life; the macromolecules, enzymes, bioenergetics, and nutrition requirements of bacteria. Survey of the eucaryotes, procaryotes, viruses, and 10 orders of bacteria. Principles of disinfection, sterilization, antibiotics, infection, immunology and serology.
Recommended Prerequisite: One year of biology
Required Co-Requisite: Laboratory BIOL-2421L

(BMGT) BUSINESS ADMINISTRATION AND MANAGEMENT, GENERAL

BMGT-1268 Railroad Dispatcher Practicum
(2-0-14) A field experience that allows students to participate in the dispatching operations area to identify the major job responsibilities of railroad dispatchers and other railroad employees.

BMGT-1270 Introduction to Railroad
(2-2-0) An overview of railroad organization and general operations, policies, and practices that ensure railroad safety, and basic dispatching functions.

BMGT-1301 Supervision
(3-3-0) The role of the supervisor. Includes managerial functions as applied to leadership, counseling, motivation, and human relations skills.

BMGT-1305 Communications in Management
(3-3-0) Basic theory and processes of communication skills necessary for the management of an organization's workforce.

BMGT-1327 Principles of Management
(3-3-0) Concepts, terminology, principles, theories, and issues in the field of management.

BMGT-1341 Business Ethics
(3-3-0) Discussion of ethical issues, the development of a moral frame of reference and the need for an awareness of social responsibility in management practices and business activities. Includes ethical corporate responsibility.

BMGT-1382 Cooperative Education - Business Administration and Management, General
(3-1-20) Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the College, employer, and student. Under the supervision of the College and the employer, the student combines classroom learning with work experience. Includes a lecture component.
Recommended Prerequisites: Completion of 12 hours of college coursework and 3 hours of management coursework

BMGT-1409 Information and Project Management
(4-3-2) Critical path methods for planning and controlling projects. Includes time and cost tradeoffs, resource utilization, stochastic considerations, task determination, time management, scheduling management, status reports, budget management, customer service, professional attitude, and project supervision.

BMGT-2172 Rules Simulation
(1-0-2) A practical application of the rules and regulations in a computer-aided environment.

BMGT-2288 Internship – Business Administration and Management, General
(2-0-6) 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.

BMGT-2309 Leadership
(3-3-0) Concepts of leadership and its relationship to management. Prepares the student with leadership and communication skills needed to motivate, influence and identify leadership styles.

BMGT-2382 Cooperative Education - Business Administration and Management, General
(3-1-20) Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the College, employer, and student. Under the supervision of the College and the employer, the student combines classroom learning with work experience. Includes a lecture component.

BMGT-2473 Traffic Control
(4-3-4) Course covers centralized traffic control equipment, computerized track warrant equipment and management information systems. Includes identification and resolution of authority.

BMGT-2574 Rules, Regulations, and Safety
(5-4-4) A study of the general code of operating rules, maintenance of way operating rules, and the train dispatchers manual of policies and practices for safe and effective train movement and maintenance operations. This prepares the student for observation of actual dispatching operations.

(BNKG) BANKING AND FINANCIAL SUPPORT SERVICES

BNKG-1356 Analyzing Financial Statements
(3-3-0) A study of the process of evaluating financial statements, cash flow, and ratio analysis of individuals and businesses. Emphasis on the relationship of comparative analysis and industry standards. *Required Prerequisite:* ACCT-2302

(BUSG) BUSINESS, GENERAL

BUSG-1191 Special Topics in Business, General
(1-1-0) Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student.

BUSG-1302 E-Business Management
(3-3-0) Introduction to business. Includes the Internet, infrastructure for electronic commerce, markup languages, web-based tools and software, security issues, and electronic payment systems. Also covers strategies for marketing, sales, and purchasing; legal, ethical, and tax issues; and management functions.

BUSG-1315 Small Business Operations
(3-3-0) Operating a small business. Emphasizes management functions including planning, leading, organizing, staffing, and controlling operations.

BUSG-1341 Small Business Financing
(3-3-0) Financial structure of a small business. Includes business financing, budgeting, record keeping, taxation, insurance, and banking.

BUSG-1391 Special Topics in Business, General
(3-3-0) Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student.

BUSG-2170 Portfolio Development
(1-1-0)   A capstone course in preparing and presenting a professional portfolio based on the student's specific area of study. Includes resume preparation, employment seeking skills and interviewing techniques, and career goal setting. Must be taken in last semester of certificate degree plan.

BUSG-2300 Business Leadership Application
(3-3-0) Application of leadership skills that address social, political, economic, environmental, and legal issues.

BUSG-2309 Small Business Management and Entrepreneurship
(3-3-0) 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.

(BUSI) BUSINESS

BUSI-1301 Business Principles +
(3-3-0) Introduction to the role of business in modern society. Includes overview of business operations, analysis of the specialized fields within the business organization, and development of a business vocabulary.

BUSI-2301 Business Law I +
(3-3-0) Principles of law which form the legal framework for business activity. Topics include nature and source of law, courts and court procedures, law of contracts, agency, and negotiable instruments.

(CDEC) CHILD DEVELOPMENT

CDEC-1317 Child Development Associate Training I
(3-3-0) Based on the requirements for the Child Development Associate (CDA) credential. Topics include CDA overview, observation skills, and child growth and development. The four functional areas of study are creative, cognitive, physical and communication.

CDEC-1321 The Infant and Toddler
(3-3-0) A study of appropriate infant and toddler programs (birth to age 3), including an overview of development, quality routines, learning environments, materials and activities, and teaching and guidance techniques.

CDEC-1323 Observation and Assessment
(3-3-0) A study of observation skills, assessment techniques, and documentation of children's development.

CDEC-1356 Emergent Literacy for Early Childhood
(3-3-0) An exploration of principles, methods, and materials for teaching young children language and literacy through a play-based integrated curriculum.

CDEC-1358 Creative Arts for Early Childhood
(3-3-0) An exploration of principles, methods, and materials for teaching young children music, movement, visual arts, and dramatic play through process-oriented experiences to support divergent thinking.

CDEC-1359 Children with Special Needs
(3-3-0) A survey of information regarding children with special needs including possible causes and characteristics of exceptionalities, educational intervention, available resources, referral processes, and the advocacy role and legislative issues.

CDEC-1394 Special Topics in Child Care Provider/Assistant
(3-3-0). Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. This course was designed to be repeated multiple times to improve student proficiency.

CDEC-1413 Curriculum Resources Early Childhood Programs
(4-3-4) A study of the fundamentals of developmentally appropriate curriculum design and implementation in early care and education programs for children.
Required Prerequisite: CDEC-1419

CDEC-1419 Child Guidance
(4-3-2) An exploration of guidance strategies for promoting prosocial behaviors with individual and groups of children. Emphasis on positive guidance principles and techniques, family involvement, and cultural influences. Practical application through direct participation with children in a laboratory setting.

CDEC-2307 Math and Science for Early Childhood
(3-3-0) An exploration of principles, methods, and materials for teaching children math and science concepts and process skills through discovery and play.

CDEC-2322 Child Development Associate Training II
(3-3-0) A continuation of the study of the requirements for the Child Development Associate (CDA) credential. The six functional areas of study include safe, healthy, learning environment, self, social and guidance.

CDEC-2324 Child Development Associate Training III
(3-2-2) Continuation of the requirements for the Child Development Associate (CDA) credential. The three functional areas of study include family, program management and professionalism. *Required Prerequisites:* CDEC-1317 and CDEC-2322

CDEC-2326 Administration of Programs for Children I
(3-3-0) Application of management procedures for early care and education programs. Includes planning, operating, supervising, and evaluating programs. Topics cover philosophy, types of programs, policies, fiscal management, regulations, staffing, evaluation, and communication.

CDEC-2328 Administration of Programs for Children II
(3-3-0) An in-depth study of the skills and techniques in managing early care and education programs, including legal and ethical issues, personnel management, team building, leadership, conflict resolution, stress management, advocacy, professionalism, fiscal analysis and planning parent education/partnerships.

CDEC-2341 The School Age Child
(3-3-0) A study of programs for the school age child (5 to 13 years), including an overview of development, learning environments, materials, and activities and teaching/guidance techniques.

CDEC-2386 Internship – Child Care Provider/Assistant
(3-0-9) Application of early childhood principles, methods, materials, and appropriate guidance techniques for teaching young children in a developmentally appropriateframework which

utilizes active learning. Supervised direct application in a laboratory setting. This course serves as the capstone experience for Child Development majors.
Required Prerequisites: CDEC-1419 and CDEC-1413

(CETT) ELECTRONICS TECHNOLOGY/TECHNICIAN

CETT-1409 DC-AC Circuits
(4-3-3) Fundamentals of DC circuits and AC circuits operation including Ohm's law, Kirchhoff's laws, networks, transformers, resonance, phasors, capacitive and inductive and circuit analysis techniques. Emphasis on circuit simulation using PSpice. Course includes soldering techniques, hand tools, circuit fabrication techniques, troubleshooting techniques and circuit analysis using Mathcad. For majors in Electronics and Telecommunications Technology, computer Hardware Technology, and Robotics and automation Technology.
Required Prerequisite: MATH-0304 or satisfactory score on approved placement test

CETT-1431 Programming for Discrete Electronic Devices
(4-3-3) Introduction to a high level programming language. Includes structured programming and problem solving applicable to discrete electronic devices.
Recommended Prerequisite: CETT-1409 *Recommended Co-Requisite:* CETT-1449

CETT-1441 Solid State Circuits
(4-3-3) A study of various semiconductor devices incorporated in circuits and their applications. Emphasis on circuit construction, measurements, and analysis.
Recommended Prerequisites: CETT-1409 *and* MATH-0350

CETT-1445 Microprocessors
(4-3-3) An introductory course in microprocessor software and hardware; its architecture, timing sequence, operation, and programming; and discussion of appropriate software diagnostic language and tools. *Recommended Prerequisite:* CETT-1449

CETT-1449 Digital Systems
(4-3-3) A course in electronics covering digital systems. Emphasis on application and troubleshooting digital systems using counters, registers, code converters, multiplexers, analog-to-digital-to-analog circuits, and large-scale integrated circuits.
Required Prerequisite: MATH-0304 or satisfactory score on approved placement test

CETT-1457 Linear Integrated Circuits
(4-3-3) Characteristics, operations, stabilization, testing, and feedback techniques of linear integrated circuits. Applications of computation, measurements, instrumentation, and active filtering. *Recommended Prerequisites:* MATH-1314 *and* CETT-1409

CETT-2435 Advanced Microprocessors
(4-3-3) An advanced course utilizing the microprocessor in control systems and interfacing. Emphasis on microprocessor hardware and implementation of peripheral interfacing. *Recommended Prerequisite:* CETT-1445

CETT-2449 Research and Project Design
(4-3-3) Principles of electrical/electronic design encompassing schematics wiring diagrams, materials lists, operating characteristics, completion schedules, and cost estimates.
Recommended Prerequisites: MATH-1314 CETT-1409 CETT-1445 *and* CETT-1431

(CHEF) CULINARY ARTS AND CHEF TRAINING

CHEF-1191 Special Topics in Culinary Arts and Chef Training
(1-1-0) Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. This course was designed to be repeated multiple times to improve student proficiency.

CHEF-1205 Sanitation and Safety
(2-2-0) A study of personal cleanliness; sanitary practices in food preparation; causes, investigation, and control of illnesses caused by food contamination (Hazard Analysis Critical Control Points); and workplace safety standards.

CHEF-1264 Practicum in Culinary Arts and Chef Training
(2-0-14) Practical general workplace training supported by an individualized learning plan developed by the employer, the College, and the student.
Required Prerequisites: CHEF-1301 CHEF-1205 CHEF-2301 CHEF-1345 HECO-1315 HAMG-1324 and HAMG-1340

CHEF-1291 Special Topics in Culinary Arts and Chef Training
(2-2-0) Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. This course was designed to be repeated multiple times to improve student proficiency.

CHEF-1301 Basic Food Preparation
(3-2-3) A study of the fundamental principles of food preparation and cookery to include Brigade System, cooking techniques, material handling, heat transfer, sanitation, safety, nutrition, and professionalism. *Recommended Prerequisite or Co-Requisite:* CHEF-1205

CHEF-1310 Garde Manger
(3-2-3) A study of specialty foods and garnishes. Emphasis on design, techniques, and display of fine foods. *Required Prerequisites:* CHEF-1301 and CHEF-1205

CHEF-1345 International Cuisine
(3-2-3) The study of classical cooking skills associated with the preparation and service of international and ethnic cuisines. Topics include similarities between food production systems used in the United States and other regions of the world.
Required Prerequisites: CHEF-1301 and CHEF-1205

CHEF-2301 Intermediate Food Preparation
(3-2-3) Continuation of previous food preparation course. Topics include the concept of pre-cooked food items, as well as scratch preparation. Covers full range of food preparation techniques. Licensure/Certification Agency: American Culinary Federation Educational Institute. *Required Prerequisite:* CHEF-1301

(CHEM) CHEMISTRY

CHEM-1405 Fundamentals of Chemistry I +
(4-3-3) Basic chemistry for non-science majors. Topics include chemical and physical properties of matter, atomic structure, chemical bonding, molecular structure, and stereochemistry. *Required Co-Requisite:* Laboratory CHEM-1405L

CHEM-1406 Essentials General and Biological Chemistry +
(4-3-3) Importance of chemical concepts to living organisms - including humans.
Required Co-Requisite: Laboratory CHEM-1406L

CHEM-1407 Fundamentals of Chemistry II +
(4-3-3) Continuation of CHEM-1405. Topics may include basic chemistry of reactions, energy of reactions, organic chemistry, biological chemistry, and applications to environmental problems.
Required Prerequisite: CHEM-1406 CHEM-1405 or CHEM-1411
Required Co-Requisite: Laboratory CHEM-1407L

CHEM-1411 General Chemistry I +
(4-3-4) Inorganic chemistry necessary for further work in science-related subjects. Atomic structure, chemical bonding, molecular structure, and chemical and physical properties of matter. *Required Co-Requisite:* Laboratory CHEM-1411L
This course may be taken for honors credit. Consult the department for information.

CHEM-1412 General Chemistry II +
(4-3-4) Additional study of inorganic chemistry, including qualitative analysis.
Required Prerequisite: CHEM-1411 *Required Co-Requisite:* Laboratory CHEM-1412L
This course may be taken for honors credit. Consult the department for information.

CHEM-2423 Organic Chemistry I +
(4-3-4) Chemistry of carbon compounds. Integration of aromatic and aliphatic compounds, treating the principal classes of each. Emphasis on molecular structure theory, stereochemistry, structure and reactivity, and reaction mechanisms.
Required Prerequisite: CHEM-1412
Required Co-Requisite: Laboratory CHEM-2423L

CHEM-2425 Organic Chemistry II +
(4-3-4) Continuation of CHEM-2423. Emphasis on the classes of aliphatic and aromatic compounds not previously discussed; spectroscopy; and the use of instrumentation in organic chemistry. Qualitative analysis will be included in the laboratory work.
Required Prerequisite: CHEM-2423
Required Co-Requisite: Laboratory CHEM-2425L

(CJLE) LAW ENFORCEMENT AND POLICE SCIENCE

CJLE-1111 Basic Firearms
(1-0-3) Firearm safety, cleaning and care techniques, proper shooting principles, and firearms proficiency.
Required Co-Requisites: CJLE-1506 CJLE-1512 CJLE-1518 *and* CJLE-2247

CJLE-1345 Intermediate Crime Scene Investigation
(3-3-0) Topics include objectives, preparations, procedures, and methods of crime scene search; value of crime scene sketches and their relationship to crime scene photographs; fingerprints as physical evidence, fingerprint identification and classification, types of impressions and techniques for locating and developing impressions.

CJLE-1371 Global Terrorism and Local Public Safety
(3-3-0) Terrorism, as a global threat in modern society, is explored from a historical perspective. The effects of terrorism and the threat of terrorism impact all government

agencies, including public safety. The course surveys the roles of federal and state agencies, including military, but concentrates on the role of public safety agencies in planning and response.

CJLE-1394 Special Topics in Law Enforcement and Police Science
(3-3-0) Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student.

CJLE-1506 Basic Peace Officer I
(5-3-8) Basic preparation for a new peace officer. Should be taken in conjunction with Basic Peace Officer II, III and IV to satisfy the Texas Commission on Law Enforcement (TCLEOSE) approved Basic Peace Officer Training Academy. *This course may only be offered by institutions licensed as a police academy by TCLEOSE.*

CJLE-1512 Basic Peace Officer II
(5-3-8) Basic preparation for a new peace officer. Should be taken in conjunction with Basic Peace Officer I, III and IV to satisfy the Texas Commission on Law Enforcement (TCLEOSE) approved Basic Peace Officer Academy. *This course may only be offered by institutions licensed as a Police Academy by TCLEOSE.*

CJLE-1518 Basic Peace Officer III
(5-3-8) Basic preparation for a new peace officer. Should be taken in conjunction with Basic Peace Officer I, II and IV to satisfy the Texas Commission on Law Enforcement (TCLEOSE) approved Basic Peace Officer Academy. *This course may only be offered by institutions licensed as a Police Academy by TCLEOSE.*

CJLE-2247 Tactical Skills for Police
(2-1-4) Development of proficiency with a range of impact weapons and/or chemical agents and defensive techniques necessary to control a violent person.
Required Co-Requisites: CJLE-1506 CJLE-1512 CJLE-1518 *and* CJLE-1111

(CJSA) CRIMINAL JUSTICE AND LAW ENFORCEMENT ADMINISTRATION

CJSA-1347 Police Organization and Administration
(3-3-0) Study of the principles of or organizational structure and administration. Topics include theories or management, motivation, and leadership. Focus on a quality approach toward police community interaction.

CJSA-1348 Ethics in Criminal Justice
(3-3-0) Ethical philosophies and issues pertaining to the various professions in the criminal justice system. Includes ethical issues emanating from constitutional conflict with public protection and individual rights, civil liberties and correctional policies.

CJSA-1393 Special Topics in Criminal Justice Studies
(3-3-0) Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. The content of this course may vary and may address the capstone experience through a technical writing curriculum.

CJSA-2331 Child Abuse: Prevention and Investigation
(3-3-0) Forms of child abuse and neglect and the traits of typical abusers. Includes strategies to investigate abuse, interview victims and witnesses, document evidence in accordance with state law, and conduct case studies.

CJSA-2334 Contemporary Issues in Criminal Justice
(3-3-0) A series of lectures and class participation exercises presenting selected topics currently confronting criminal justice personnel and the public they serve. As a course involving simulation of the workplace, competencies acquired throughout the program will be applied to case studies, employment scenarios, and projects related to firefighting.
This is the Capstone Course and must be taken during the last semester of the program.

CJSA-2388 Internship in Criminal Justice and Safety Studies
(3-0-9) 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.

(CNBT) CONSTRUCTION AND BUILDING TECHNOLOGY/ TECHNICIAN

CNBT-1300 Residential and Light Commercial Blueprint Reading
(3-2-3) Introductory blueprint reading for residential and light commercial construction.

CNBT-1311 Construction Methods and Materials
(3-3-0) Introduction to construction materials and methods and their applications.

CNBT-1316 Construction Technology I
(3-2-3) Introduction to site preparation, foundations, form work, safety, tools, and equipment.

CNBT-1342 Building Codes and Inspections
(3-3-0) Building codes and standards applicable to building construction and inspection processes.

CNBT-1344 Construction Materials Testing
(3-2-3) Laboratory testing and field inspection procedures associated with construction materials.

CNBT-1346 Construction Estimating I
(3-2-3) Fundamentals of estimating materials and labor costs in construction.
Required Prerequisite: CNBT-1300

CNBT-1350 Construction Technology II
(3-2-3) Framing in residential and light commercial construction. Includes safety, tools, and equipment used in floor, wall, ceiling, and roof framing methods and systems.

CNBT-1372 Soils and Foundations
(3-2-3) An introductory course in soils and foundations. This course is focused on the study of the nature of soils and how various soil materials may influence certain construction operations. Topics include formation of soil deposits, engineering properties of soils, soil exploration, soil compaction and stabilization, and types of foundations.

CNBT-1391 Special Topics in Construction and Building Technology/Technician
(3-3-0) 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.

CNBT-2266 Practicum in Construction Engineering Technology/Technician
(2-0-14) Practical, general workplace training supported by an individualized learning plan developed by employer, College, and student. This is a Capstone course.
Required Prerequisite: Approval of Department Chair

CNBT-2317 Green Building
(3-2-2) Methods and materials used for buildings that conserve energy, water, and human resources.

CNBT-2337 Construction Estimating II
(3-2-3) Advanced estimating concepts using computer software for construction and crafts.
Required Prerequisite: CNBT-1346

CNBT-2342 Construction Management I
(3-3-0) Human relations management skills on the job site. Topics include written and oral communications, leadership and motivation, problem solving, and decision making.
Required Prerequisite: CNBT-1300

CNBT-2344 Construction Management II
(3-2-3) A management course in contract documents, safety, planning, scheduling, production control, law and labor issues. Topics include contracts, planning, cost and production, peripheral documents, and cost and work analysis.
Recommended Prerequisite: CNBT-2342

(COMM) COMMUNICATION

COMM-1307 Introduction to Mass Communication +
(3-3-0) Communication theory; history, operation, and structure of the American communication system; and interrelationship of the mass media and society.

COMM-1316 News Photography +
(3-2-4) Basic photographic processes and techniques used by newspapers.

COMM-1335 Survey of Radio and Television +
(3-3-0) Study of the development, regulation, economics, social impact, and industry practices in broadcasting and cable communication. Includes non-broadcast television, new technologies, and other communication systems.

COMM-2305 Editing and Layout +
(4-3-3) Editing and layout processes, with emphasis on accuracy and fairness, including the principles and techniques of design. Laboratory provides practical experience editing and designing for the student newspaper.
Required Prerequisites: COMM-2311 and COMM-2315

COMM-2311 Reporting I +
(3-3-2) Skills, techniques and practices of newsgathering and newswriting. Laboratory provides practical experience in reporting for student newspaper.
Recommended Prerequisite: Average keyboarding skills

COMM-2315 Reporting II +
(3-3-2) Continuation of COMM-2311.
Recommended Prerequisite: Average keyboarding skills

COMM-2332 Radio/Television News +
(3-3-3) Preparation and analysis of news styles for the electronic media.

COMM-2339 Writing for Radio, Television & Film +
(3-3-0) Introduction to basic script formats, terminology, and writing techniques, including the writing of commercials, public service announcements, promotions, news, documentary, and fictional materials.

COMM-2366 Film Appreciation +
(3-2-2) Emphasis on the analysis of the visual and aural aspects of selected motion pictures, dramatic aspects of narrative films, and historical growth and sociological effect of film as an art.

(COSC) COMPUTER SCIENCE

COSC-1401 Introduction to Computing +
(4-3-2) Overview of computer systems - hardware, operating systems, and microcomputer application software, including the Internet, word processing, spreadsheets, presentation graphics, and databases. Current issues such as the effect of computers on society, and the history and use of computers in business, educational, and other modern settings are also studied.
 This course may be taken for honors credit. Consult the department for information.

COSC-1420 C Programming +
(4-3-2) Structured programming techniques using the C language.
Recommended Prerequisite: COSC-1436

COSC-1436 Programming Fundamentals I +
(4-3-2) Introduces the fundamental concepts of structured programming. Topics include software development methodology, data types, control structures, functions, arrays, and the mechanics of running, testing, and debugging. This course assumes computer literacy.
Recommended Prerequisite: COSC-1401

COSC-1437 Programming Fundamentals II +
(4-3-2). Review of control structures and data types with emphasis on structured data types. Applies the object-oriented programming paradigm, focusing on the definition and use of classes along with the fundamentals of object-oriented design. Includes basic analysis of algorithms, searching and sorting techniques, and an introduction to software engineering. *Recommended Prerequisite:* COSC-1436

COSC-2425 Computer Organization and Machine Language +
(4-3-2) Syntax and semantics of a typical assembly language; macros and macroprocessors; design, construction and execution of assembly language programs; data representation; and addressing techniques.
Recommended Prerequisite: COSC-1436

COSC-2436 Programming Fundamentals III +
(4-3-2) Further applications of programming techniques, introducing the fundamental concepts of data structures and algorithms. Topics include recursion, fundamental data structures (including stacks, queues, linked lists, hash tables, trees and graphs), and algorithmic analysis. *Recommended Prerequisite:* COSC-1437

(CPMT) COMPUTER INSTALLATION AND REPAIR TECHNOLOGY/TECHNICIAN

CPMT-1405 IT Essentials I: PC Hardware and Software
(4-3-3) Provides comprehensive overview of computer hardware and software and an introduction to advanced concepts. *Recommended Prerequisite:* COSC-1401

CPMT-1411 Introduction to Computer Maintenance
(4-3-3) Introduction to the installation, configuration, and maintenance of a microcomputer system.

CPMT-1445 Computer Systems Maintenance
(4-3-3) Functions of the components within a computer system. Development of skills in the use of test equipment and maintenance aids.

CPMT-1449 Computer Networking Technology
(4-3-3) Networking fundamentals, terminology, hardware, software, and network architecture. Includes local and wide area networking concepts and networking installations and operations.

CPMT-1491 A+ Certification Training (Special Topics)
(4-3-3) 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.
Recommended Prerequisite: CPMT-1411 and CPMT-1449

CPMT-2402 Home Technology Integration
(4-3-3) Integration and maintenance of various home technology subsystems. Includes home automation, security and surveillance, home networks, video and audio networks, and structured wiring. *Recommended Co-Requisite:* CPMT-1405 or equivalent knowledge

CPMT-2433 Computer Integration
(4-3-3) Integration of hardware, software, and applications. Customization of computer systems for specific applications such as engineering, multimedia, or data acquisition.
Recommended Prerequisites: CPMT-1411 and CETT-1415

CPMT-2437 Microcomputer Interfacing
(4-3-3) Concepts and terminology involved in interfacing the internal architecture of the microcomputer with commonly used external devices.
Recommended Prerequisites: CPMT-1411 and CETT-1415

(CRIJ) CRIMINAL JUSTICE

CRIJ-1301 Introduction to Criminal Justice +
(3-3-0) History, philosophy and ethical considerations of criminal justice; the nature and impact of crime; and an overview of the criminal justice system, including law enforcement and court procedures.

CRIJ-1306 Court Systems and Practices +
(3-3-0) The judiciary in the criminal justice system, structure of American court system, prosecution, right to counsel, pre-trial release, grand juries, adjudication process, types and rules of evidence, sentencing. *Recommended Prerequisite:* CRIJ-1310

CRIJ-1307 Crime in America +
(3-3-0) The study of American crime problems in historical perspective, social and public policy factors affecting crime, impact and crime trends, social characteristics of specific crimes, and crime prevention. *Recommended Prerequisite:* SOCI-1301

CRIJ-1310 Fundamentals of Criminal Law +
(3-3-0) Study of criminal law, its philosophical and historical development, major definitions and concepts, classifications and elements of crime, penalties using Texas statutes as illustrations and criminal responsibility.

CRIJ-1313 Juvenile Justice System +
(3-3-0) A study of the juvenile justice process to include specialized juvenile law, role of the juvenile law, role of the juvenile courts, role of police agencies, role of correctional agencies, and theories concerning delinquency.

CRIJ-2313 Correctional Systems and Practices +
(3-3-0) Corrections in the criminal justice system, organization of correctional systems, correctional role, institutional operations, alternatives to institutionalization, treatment and rehabilitation, current and future issues.

CRIJ-2314 Criminal Investigation +
(3-3-0) Investigative theory, collection and preservation of evidence, sources of information, interview and interrogation, uses of forensic sciences, case and trial preparation. *Recommended Prerequisite:* CRIJ-1310

CRIJ-2323 Legal Aspects of Law Enforcement +
(3-3-0) Police authority, responsibilities, constitutional constraints, laws of arrest, search and seizure, police liability.

CRIJ-2328 Police Systems and Practices +
(3-3-0) The police profession, organization of law enforcement systems, the police role, police discretion, ethics, police-community interaction, current and future issues.

(CSIR) COMMUNICATIONS SYSTEM INSTALLER AND REPAIRER

CSIR-1459 Digital Data Communication
(4-3-3) Introduction to the theory and troubleshooting skills needed in the digital data communication field. This course covers the principles of communications involving

digital data and analog signals. Pulse modulation, multiplexing, and microwave communications are introduced. Emphasis on measurements and diagnostic troubleshooting techniques. *Recommended Prerequisite:* CETT-1403 and CETT-1445

(DAAC) SUBSTANCE ABUSE AND ADDICTION COUNSELING

DAAC-1304 Pharmacology of Addiction
(3-3-0) Describes the psychological, physiological, and sociological effects of mood altering substances and behaviors. Emphasizes pharmacological effects of tolerance, dependency/withdrawal, cross addiction, and drug interaction.

DAAC-2166 Practicum in Substance Abuse and Addiction Counseling
(1-0-10) Practical, general workplace training supported by an individualized learning plan developed by the employer, the College, and the student. The guided external experiences may be paid or unpaid. As legislated, a student must complete six courses related to chemical dependency counseling prior to enrolling in the practicum class in order to receive credit toward LCDC practicum hours. DAAC-2166 and DAAC-2167 fulfill required 300 hours. *Recommended Co-Requisite:* DAAC-2343

DAAC-2167 Practicum in Substance Abuse and Addiction Counseling
(1-0-10) Practical, general workplace training supported by an individualized learning plan developed by the employer, the College, and the student. The guided external experiences may be paid or unpaid. As legislated, a student must complete six courses related to chemical dependency counseling prior to enrolling in the practicum class in order to receive credit toward LCDC practicum hours. *Recommended Co-Requisite:* DAAC-2166

DAAC-2266 Practicum in Substance Abuse and Addiction Counseling
(2-0-20) Practical, general workplace training supported by an individualized learning plan developed by the employer, the College, and the student. The guided external experiences may be paid or unpaid. As legislated, a student must complete six courses related to chemical dependency counseling prior to enrolling in the practicum class in order to receive credit toward LCDC practicum hours. This course fulfills required 300 hours practicum for LCDC. *Required Co-Requisite*: DAAC-2343

DAAC-2307 Addicted Family Intervention
(3-3-0) Present family as a dynamic system focusing on the effects of addiction on family roles, rules, and behavior patterns. Includes the effects of mood altering substances, behaviors, and therapeutic alternatives as they relate to the family from a multicultural and transgenerational perspective.

DAAC-2341 Counseling Alcohol and Other Drug Addictions
(3-3-0) Special skills and techniques in the application of counseling skills for the Alcohol and Other Drug (AOD) client. Development and utilization of advanced treatment planning and management. Includes review of confidentiality and ethical issues.

DAAC-2343 Current Issues
(3-3-0) Current issues in addiction counseling. Includes special populations, dual diagnosis, ethics, gambling, and infectious diseases associated with addiction counseling.

(DANC) DANCE

DANC-1110 Tap I +
(1-0-3) This course will explore "the who, what, when, where and why" of Tap. The goal is to experience the freedom, find the beat within and understand the cultural diversity of this art form.

DANC-1111 Tap II +
(1-0-3) This course will explore "the who, what, when, where and why" of Tap. The goal is to experience the freedom, find the beat within and understand the cultural diversity of this art form.

DANC-1112 Dance Practicum I +
(1-0-3) A practicum in dance as a performing art.

DANC-1113 Dance Practicum II +
(1-0-3) A practicum in dance as a performing art.

DANC-1128 Ballroom Dance I +
(1-0-3) Instruction and participation in ballroom dance technique.

DANC-1129 Ballroom Dance II +
(1-0-3) Instruction and participation in ballroom dance technique.

DANC-1141 Ballet +
(1-0-3) Instruction and participation in ballet technique.

DANC-1142 Ballet +
(1-0-3) Instruction and participation in ballet technique.

DANC-1145 Modern Dance +
(1-0-3) Instruction and participation in modern dance technique.

DANC-1146 Modern Dance +
(1-0-3) Instruction and participation in modern dance technique.

DANC-1147 Jazz Dance +
(1-0-3) Instruction and participation in jazz technique.

DANC-1148 Jazz Dance +
(1-0-3) Instruction and participation in jazz technique.

DANC-1149 Ballet Folklorico I +
(1-0-3) Instruction and participation in folk dance technique.

DANC-1150 Ballet Folklorico II +
(1-0-3) Instruction and participation in folk dance technique.

DANC-1151 Dance Performance +
(1-0-3) Instruction and participation in ballet, jazz dance, and modern dance.

DANC-1152 Dance Performance +
(1-0-3) Instruction and participation in ballet, jazz dance, and modern dance.

DANC-1210 Tap I +
(2-1-2) This course will explore "the who, what, when, where and why" of Tap. The goal is to experience the freedom, find the beat within and understand the cultural diversity of this art form.

DANC-1211 Tap II +
(2-1-2) This course will explore "the who, what, when, where and why" of Tap. The goal is to experience the freedom, find the beat within and understand the cultural diversity of this art form.

DANC-1301 Dance Composition +
(3-3-0) Development of basic principles and theories involved in composition. Emphasis is placed on movement principles, group and structural forms. Improvisation is introduced as a choreographic tool.

DANC-1305 World Dance I +
(3-3-0) Instruction in dance forms from at least three major cultures from three continents, with an emphasis on rhythmic awareness and movement development. The cultural origins, significance, and motivation, as well as the use of costumes and music will be explored in lecture and research. Instruction will include experiential and written assignments, live performances, guest artists, and multimedia resources.

DANC-1341 Ballet I +
(3-3-0) Theory and technique of creative movement through ballet idiom.

DANC-1342 Ballet II +
(3-3-0) Continuation of DANC-1341.

DANC-1345 Modern Dance I +
(3-3-0) Instruction and participation in modern dance technique.

DANC-1346 Modern Dance II +
(3-3-0) Instruction and participation in modern dance technique.

DANC-1347 Jazz I +
(3-3-0) Theory and techniques of creative movement through jazz dance idiom.

DANC-1348 Jazz II +
(3-3-0) Continuation of DANC-1347. *Recommended Prerequisite:* DANC-1347

DANC-2110 Tap III +
(1-0-3) This course will explore "the who, what, when, where and why" of Tap. The goal is to experience the freedom, find the beat within and understand the cultural diversity of this art form.

DANC-2111 Tap IV +
(1-0-3) This course will explore ''the who, what, when, where and why" of Tap. The goal is to experience the freedom, find the beat within and understand the cultural diversity of this art form.

DANC-2112 Dance Practicum III +
(1-0-3) A practicum in dance as a performing art.

DANC-2113 Dance Practicum IV +
(1-0-3) A practicum in dance as a performing art.

DANC-2141 Ballet +
(1-0-3) Instruction and participation in ballet technique.

DANC-2142 Ballet +
(1-0-3) Instruction and participation in ballet technique.

DANC-2145 Modern Dance +
(1-0-3) Instruction and participation in modern dance technique.

DANC-2146 Modern Dance +
(1-0-3) Instruction and participation in modern dance technique.

DANC-2151 Dance Performance +
(1-0-3) Instruction and participation in ballet, jazz dance, and modern dance.

DANC-2152 Dance Performance +
(1-0-3) Instruction and participation in ballet, jazz dance, and modern dance.

DANC-2208 Tap III +
(2-1-2) This course will explore "the who, what, when, where and why" of Tap. The goal is to experience the freedom, find the beat within and understand the cultural diversity of this art form.

DANC-2209 Tap IV +
(2-1-2) This course will explore "the who, what, when, where and why" of Tap. The goal is to experience the freedom, find the beat within and understand the cultural diversity of this art form.

DANC-2303 Dance Appreciation +
(3-3-0) Various styles of dance. Increases awareness and appreciation of dance.

DANC-2325 Anatomy & Kinesiology for Dance +
(3-3-0) An introductory course in principles of kinesiology for dance. Students study concepts and principles of anatomy, physiology and movement analysis. Through lectures, readings, and laboratory experiences, students will evaluate skeletal and muscular systems, individual differences, common dance injuries, and proper conditioning for dancers.

(DFTG) DRAFTING AND DESIGN TECHNOLOGY/TECHNICIAN

DFTG-1405 Technical Drafting
(4-3-3) Introduction to the principles of drafting to include terminology and fundamentals, including size and shape descriptions, projection methods, geometric construction, sections, and auxiliary views.

DFTG-1409 Basic Computer-Aided Drafting
(4-3-3) An introduction to computer-aided drafting. Emphasis is placed on setup; creating and modifying geometry; storing and retrieving predefined shapes; placing, rotating, and scaling objects; adding text and dimensions; using layers, coordinate systems, and plot/print to scale. *Recommended Prerequisite:* DFTG-1405

DFTG-1410 Specialized Basic Computer-Aided Drafting
(4-3-3) A supplemental course to Basic Computer-Aided Drafting using an alternative computer-aided drafting (CAD) software to create detail and working drawings.

DFTG-1417 Architectural Drafting-Residential
(4-3-3) Architectural drafting procedures, practices, terms, and symbols. Preparation of detailed working drawings for residential structures. Emphasis on light frame construction methods. *Recommended Prerequisite:* DFTG-1409.

DFTG-1425 Blueprint Reading and Sketching
(4-3-3). An introduction to reading and interpreting working drawings for fabrication processes and associated trades. Use of sketching techniques to create pictorial and multiple-view drawings.
Recommended Prerequisite: DFTG 1409.

DFTG-1433 Mechanical Drafting
(4-3-3). Study of mechanical drawings using dimensioning and tolerances, sectioning techniques, orthographic projection, and pictorial drawings.

DFTG-1445 Parametric Modeling and Design
(4-3-3). Parametric-based design software 3D design and drafting.

DFTG-1458 Electrical and Electronics Drafting
(4-3-3). Electrical and electronic drawings stressing modern representation used for block diagrams, schematic diagrams, logic diagrams, wiring/assembly drawings, printed circuit board layouts, motor control diagrams, power distribution diagrams, and electrical one-line diagrams.
Recommended Prerequisite: DFTG 1405

DFTG-1491 Special Topics in Drafting and Design Technology/Technician
(4-3-3) Topics address recently identified current events, skills, knowledge, and/or attitudes and behavior pertinent to the technology or occupation and relevant to the professional development of the student.

DFTG-1493 Special Topics in Civil Drafting and Civil Engineering CAD/CADD
(4-3-3) 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.

DFTG-2170 Certification Exam Preparation
(1-1-0) A Capstone experience to prepare for taking the National Certification Examinations in various applications.

DFTG-2402 Machine Drafting
(4-3-3) Production of detail and assembly drawings of machines, threads, and gears, utilizing tolerances, limit dimensioning, and surface finishes.
Recommended Prerequisite: DFTG-1405

DFTG-2406 Machine Design
(4-3-3) Theory and practice of design. Projects in problem-solving, including press fit, bolted and welded joints, and transmission components.

DFTG-2407 Electrical Drafting
(4-3-3) A study of area lighting, control systems and power layouts, electrical and safety codes, load factors and distribution requirements.

DFTG-2408 Instrumentation Drafting
(4-3-3) Principles of instrumentation applicable to industrial applications; fundamentals of measurement and control devices; currently used ISA (Instrument Society of America) symbology; basic flow sheet layout and drafting practices.

DFTG-2419 Intermediate Computer-Aided Drafting
(4-3-3) A continuation of practices and techniques used in basic computer-aided drafting including the development and use of prototype drawings, construction of pictorial drawings, extracting date, and basics of 3D.

DFTG-2421 Topographical Drafting
(4-3-3) Plotting of surveyor's field notes. Includes drawing elevations, contour lines, plan and profiles, and laying out traverses.
Recommended Prerequisite: DFTG-1405

DFTG-2423 Pipe Drafting
(4-3-3) A study of pipe fittings, symbols, specifications and their applications to a piping process system. Creation of symbols and their usage in flow diagrams, plans, elevations, and isometrics. *Recommended Prerequisite:* DFTG-1409

DFTG-2427 Landscape Drafting
(4-3-3) A study of site planning and landscape design.

DFTG-2428 Architectural Drafting - Commercial
(4-3-3) Architectural drafting procedures, practices, governing codes, terms and symbols including the preparation of detailed working drawings for a commercial building, with emphasis on commercial construction methods.

DFTG-2430 Civil Drafting
(4-3-3) An in-depth study of drafting methods and principles used in civil engineering.

DFTG-2431 Advanced Technologies in Architectural Design and Drafting
(4-3-3) Use of architectural specific software to execute the elements required in designing standard architectural exhibits utilizing custom features to create walls, windows and specific design requirements for construction in residential/commercial and industrial architecture.

DFTG-2436 Computer-Aided Drafting (CAD) Programming
(4-3-3) Use of programming language to enhance CAD software.

DFTG-2438 Final Project in Advanced Drafting
(4-3-3) A drafting course in which students participate in a comprehensive project from conception to conclusion.

DFTG-2440 Solid Modeling and Design
(4-3-3) 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. *Recommended Prerequisite:* DFTG-1409*

DFTG-2442 Aeronautical Drafting
(4-3-3) A study of aeronautical drawings required in the aircraft and aerospace industries.

DFTG-2445 Advanced Pipe Drafting
(4-3-3) A continuation of pipe drafting concepts building on the basic principles acquired in pipe drafting.

DFTG-2447 Advanced Technical Animation and Rendering
(4-3-3) Advanced three-dimensional (3D) modeling, rendering, and animation techniques using industry standard software. Emphasizes advanced use of camera settings, lighting, and surface to create detailed environments.

DFTG-2450 Geometric Dimensioning and Tolerancing
(4-3-3) Geometric dimensioning and tolerancing, according standards, application of various geometric dimensions and tolerances to production drawings.
Recommended Prerequisite: DFTG-1409

DFTG-2458 Advanced Machine Design
(4-3-3) Design process skills for the production of complete design package, which includes jig and fixture design, extrusion dies, and injection mold design.

(DHYG) DENTAL HYGIENE/HYGIENIST

DHYG-1191 Special Topics in Dental Hygienist
(1-0-3) Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. This course was designed to be repeated multiple times to improve student proficiency.

DHYG-1207 General and Dental Nutrition
(2-2-0) General nutrition and nutritional biochemistry with emphasis on the effects of nutrition, dental health, diet, and application of counseling strategies.

DHYG-1215 Community Dentistry
(2-1-3) The principles and concepts of community public health and dental health education emphasizing community assessment, educational planning, implementation, and evaluation including methods and materials used in teaching dental health education in various community settings.

DHYG-1223 Dental Hygiene Practice
(2-2-0) Emphasis on the laws governing the practice of dentistry and dental hygiene, moral standards, and the ethical standards established by the dental hygiene profession. Practice settings for the dental hygienist, office operations, and preparation for employment.

DHYG-1235 Pharmacology for The Dental Hygienist
(2-2-1) Classes of drugs and their uses, actions, interactions, side effects, contraindications, and systemic and oral manifestations with emphasis on dental applications.

DHYG-1239 General and Oral Pathology
(2-2-0) Disturbances in human body development, diseases of the body, and disease prevention measures with emphasis on the oral cavity and associated structures.

DHYG-1260 Clinical-Dental Hygiene/Hygienist
(2-0-8) A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional.

DHYG-1301 Orofacial Anatomy, Histology, Embryology
(3-2-2) The histology and embryology of oral tissues, gross anatomy of the head and neck, tooth morphology, and individual tooth identification.

DHYG-1304 Dental Radiology
(3-2-3) Radiation physics, biology, hygiene, and safety theories with an emphasis on the fundamentals of oral radiographic techniques and interpretation of radiographs. Includes exposure of intra-oral radiographs, quality assurance, radiographic interpretation, patient selection criteria, and other ancillary radiographic techniques.

DHYG-1311 Periodontology
(3-3-0) Normal and diseased periodontium including the structural, functional, and environmental factors. Emphasis on etiology, pathology, treatment modalities, and therapeutic and preventive periodontics.

DHYG-1319 Dental Materials
(3-2-3) Physical and chemical properties of dental materials including the application and manipulation of the various materials used in dentistry.

DHYG-1327 Preventive Dental Hygiene Care
(3-2-3) The dental hygienist in the dental health-care system emphasizing the basic concepts of disease prevention and health promotion. Communication and behavior-modification skills are utilized to facilitate the role of the dental hygienist as an educator.

DHYG-1431 Preclinical Dental Hygiene
(4-2-6) Foundational knowledge for performing clinical skills on patients with emphasis on procedures and rationale for performing dental hygiene care.

DHYG-2301 Contemporary Dental Hygiene Care I
(3-3-0) Dental hygiene care for the medically or dentally compromised patient including supplemental instrumentation techniques.

DHYG-2331 Contemporary Dental Hygiene Care II
(3-2-3) A continuation of Contemporary Dental Hygiene Care I. Dental hygiene care for the medically or dentally compromised patient including advanced instrumentation techniques.

DHYG-2360 Clinical-Dental Hygiene/Hygienist
(3-0-16) A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional.

DHYG-2361 Clinical-Dental Hygiene/Hygienist
(3-0-16) A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional.

(DRAM) DRAMA

DRAM-1120 Theatre Practicum I +
(1-0-3) Rehearsal and performance experiences for students.

DRAM-1121 Theater Practicum II +
(1-0-3) Rehearsal and performance experiences for students.

DRAM-1161 Musical Theatre I +
(1-0-3) Training in all facets of music theatre production. Production of a musical or a musical review.

DRAM-1310 Theatre Appreciation +
(3-3-0) Various styles of theatrical production and present tactics in the theatre. Increases awareness and appreciation of the theatre.

DRAM-1320 Music Theatre Workshop +
(3-3-3) Training in all facets of music theatre production. Production of a musical or a musical review.

DRAM-1330 Stagecraft I +
(3-2-4) A study of the methods and materials used in modern stagecraft.

DRAM-1351 Acting I +
(3-3-3) Basic skills and techniques of acting; vocal and physical aspects of characterization.

DRAM-1352 Acting II +
(3-3-3) Continuation of DRAM-1351.
Recommended Prerequisite: DRAM-1351 or consent of Department Chairperson

DRAM-2120 Theatre Practicum III +
(1-0-3) Special skill areas in drama.

DRAM-2121 Theater Practicum IV +
(1-0-3) Special skill areas in drama.

DRAM-2331 Stagecraft II +
(3-2-4) A continuation of DRAM-1330. Topics will alternate with DRAM-1330.

DRAM-2336 Voice for The Theater +
(3-3-0) Introduces student to proper vocal technique for theatrical performance.

DRAM-2351 Acting III +
(3-3-3) Continuation of DRAM-1352. Explores techniques involved in building a character and scene study. Prepares students for auditioning for professional employment.

DRAM-2366 Film Appreciation +
(3-2-2) Emphasis on the analysis of the visual and aural aspects of selected motion pictures, dramatic aspects of narrative films, and historical growth and sociological effect of film as an art.

(ECON) ECONOMICS

ECON-2301 Principles of Macroeconomics +
(3-3-0) Emphasis on the U.S. economy, the economizing problem, demand-supply theory, national income accounting, business fluctuations, fiscal policy, and monetary policy. Required for business and economics majors.
This course may be taken for honors credit. Consult the department for information.

ECON-2302 Principles of Microeconomics +
(3-3-0) The economics of the firm, market models, pricing and allocation of resources, international economics, and current economic problems. Required for business and economics majors. *Recommended Prerequisite:* ECON-2301*
This course may be taken for honors credit. Consult the department for information.

(EDTC) TEACHER ASSISTANT/AIDE

EDTC-1301 Educational Systems
(3-2-2) A study of the role and responsibilities of the instructional teacher assistant with emphasis on development of professional and effective communication strategies with adults. Topics include the various codes of ethics governing the educational field, the issue of confidentiality, learners' rights and responsibilities, and challenges facing schools.

EDTC-1313 Education Software and Technology
(3-2-2) Introduction to the use of educational software, instructional applications, and technology in the educational setting. Evaluate the use of technology for guided practice and self-paced student remediation.

EDTC-1321 Bilingual Education
(3-3-0) An overview of bilingual education. Topics include awareness of cultural diversity, assessment strategies, teaching techniques, instructional activity development, and historical/philosophical concepts of bilingual/bicultural education.

(EDUC) EDUCATION

EDUC-1301 Introduction to The Teaching Profession +
(3-2-2) An introductory course for students interested in initial Texas Teacher Certification. Provides information and analysis of the culture of schooling and classrooms. This course requires 32 hours of field observation; 16 hours must be in P-12 schools. Criminal background check required prior to enrolling. Field experience required.

EDUC-1325 Principles and Practices of Multicultural Education +
(3-3-0) An examination of cultural diversity found in society and reflected in the classroom. Topics include the study of major cultures and their influence on lifestyle, behavior, learning, intercultural communication and teaching, as well as psychosocial stressors encountered by diverse cultural groups.

EDUC-2301 Introduction to Special Populations +
(3-2-2) This course provides an overview of schooling and classrooms from the perspectives of language, gender, socioeconomic, ethic, and academic diversity and equity and emphasis on factors facilitate learning. This course requires 32 hours of field experience in P-12 classrooms with special populations. Criminal background check required prior to enrolling. *Recommended Prerequisite:* EDUC-1301

(EECT) ELECTRICAL, ELECTRONICS AND COMMUNICATIONS ENGINEERING TECHNOLOGY/ TECHNICIAN

EECT-1391 Special Topics in Electrical, Electronic and Communications Engineering Technology/Technician
(3-2-3) 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.

EECT-1407 Convergence Technologies
(4-3-3) A study of telecommunications convergent technologies including telephone, LAN, WAN, wireless, voice, video, and Internet protocol.

EECT-2435 Telecommunications
(4-3-3) A study of modern telecommunications systems incorporating microwave, satellite, optical, and wire/cable-based communications systems. Instruction in installation, testing, and maintenance of communications systems components.
Recommended Prerequisites: EECT-2439 and CETT-1457

EECT-2439 Communications Circuits
(4-3-3) A study of communications systems with emphasis on amplitude modulation, frequency modulation, phase modulation, and digital pulse modulation. Discussion of several types of modulators, demodulators, receivers, transmitters, and transceivers.
Recommended Prerequisites: CETT-1405 CETT-1441 and CETT-1457

(ELMT) ELECTROMECHANICAL TECHNOLOGY/ TECHNICIAN

ELMT-2435 Certified Electronics Technician Training
(4-3-3) Review of electronics concepts and principles in preparation for sitting for a certification examination administered by an outside organization or agency.
Recommended Prerequisite: CETT-1457

ELMT-2437 Electronic Troubleshooting, Service and Repair
(4-3-3) In-depth coverage of electronic systems, maintenance, troubleshooting, and repair. Topics include symptom identification, proper repair procedures, repair checkout, and

preventative maintenance. Emphasis on safety and use of test equipment. May be offered as a capstone course.

(ELPT) ELECTRICAL AND POWER TRANSMISSION INSTALLATION/INSTALLER, GENERAL

ELPT-2455 Programmable Logic Controllers II
(4-3-3) Advanced concepts in programmable logic controllers and their applications and interfacing to industrial controls.

(EMSP) EMERGENCY MEDICAL TECHNOLOGY/ TECHNICIAN

EMSP-1160 Clinical-Emergency Medical Technology/Technician
(1-0-5) A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional.
Required Prerequisite: RDNG-0363 with grade of C or satisfactory score on approved placement test *Required Co-Requisite:* EMSP-1501

EMSP-1355 Trauma Management
(3-2-2) A detailed study of the knowledge and skills in the assessment and management of patients with traumatic injuries.
Recommended Prerequisites: EMSP-1356 *and* EMSP-1438

EMSP-1356 Patient Assessment and Airway Management
(3-2-2) A detailed study of the knowledge and skills required to perform patient assessment and airway management.
Recommended Prerequisites: EMSP-1501 *and* EMSP-1160

EMSP-1438 Introduction to Advanced Practice
(4-3-2) An exploration of the foundations necessary for mastery of the advanced topics of clinical practice out of the hospital.
Recommended Prerequisites: BIOL-2401 *and* either EMSP-1160 and EMSP-1501 or Texas certification as an Emergency Medical Technician

EMSP-1501 Emergency Medical Technician - Basic
(5-4-4) Preparation for certification as an Emergency Medical Technician (EMT) - Basic. Includes all the skills necessary to provide emergency medical care at a basic life support level with an emergency service or other specialized services.
Required Prerequisite: MATH-0304 with a grade of C or satisfactory score on approved placement test *Required Co-Requisite:* EMSP-1160

EMSP-2160 Clinical - Emergency Medical EMT Paramedic
(1-0-5) A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. Clinical experiences are unpaid external learning experiences.
Recommended Prerequisites/Co- Requisites: EMSP-1356 and EMSP-1438

EMSP-2161 Clinical - Emergency Medical EMT Paramedic
(1-0-5) A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. Clinical experiences are unpaid external learning experiences.
Recommended Prerequisites/Co-Requisites: EMSP-1355 and EMSP-2338

EMSP-2162 Clinical - Emergency Medical EMT Paramedic
(1-0-6) A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. Clinical experiences are unpaid external learning experiences.
Recommended Prerequisites/Co-Requisites: EMSP-2430 and EMSP-2534

EMSP-2163 Clinical - Emergency Medical EMT Paramedic
(1-0-5) A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. Clinical experiences are unpaid external learning experiences.
Recommended Prerequisite/Co-Requisite: EMSP-2458

EMSP-2243 Assessment Based Management
(2-1-4) A Capstone course covering comprehensive, assessment-based patient care management. Includes specific care when dealing with pediatric, adult, geriatric, and special-needs patients.
Recommended Prerequisites: EMSP-2430 and EMSP-2534

EMSP-2267 Practicum – Emergency Medical Technology/Technician (EMT Paramedic)
(2-0-15) Practical, general workplace training supported by an individualized learning plan developed by the employer, College, and student. This may be paid or unpaid experience.
Recommended Prerequisites: EMSP-2160 EMSP-2430 and EMSP-2534

EMSP-2338 EMS Operations
(3-3-0) A detailed study of the knowledge and skills to safely manage the scene of an emergency. *Recommended Prerequisites:* EMSP-1356 and EMSP-1438

EMSP-2430 Special Populations
(4-3-2) A detailed study of the knowledge and skills necessary to assess and manage ill or injured patients in diverse populations. *Recommended Prerequisite:* EMSP-2444
EMSP-2444 Cardiology
(4-3-2) Assessment and management of patients with cardiac emergencies. Includes single and multi-lead ECG interpretation.
Recommended Prerequisites: EMSP-1356 and EMSP-1438

EMSP-2458 Critical Care Paramedic
(4-3-3) Prepares health-care personnel to function as members of a critical care transport team. *Required Prerequisite:* Two years' of experience as a paramedic or nurse, current certification in CPR, ACLS, BTLS/PHTLS/TNCC, and PALS/PEP

EMSP-2534 Medical Emergencies
(5-4-2) A detailed study of the knowledge and skills in the assessment and management of patients with medical emergencies. *Recommended Prerequisite:* EMSP-2444

(ENGL) ENGLISH

ENGL-0324 Writing Techniques I
(3-3-0) A basic writing course focusing on the fundamental writing skills such as grammar, usage, mechanics, sentence structure and the utilization of standard English. Students will generate ideas for and organize paragraphs and essays with an emphasis on revision. This course is also appropriate for anyone who wishes to enhance his or her real-life writing skills. Placement is based on writing scores on a TCC-approved placement test. A grade of C or higher shall constitute satisfactory completion of the course and eligibility to enroll in ENGL-0325. *This is a developmental course and cannot be used to fulfill degree requirements.*

ENGL-0325 Writing Techniques II
(3-3-0) A writing review course focusing on unity, organization, development, and appropriateness in the essay. Placement is based on scores on a TCC-approved placement test. A grade of C or higher shall constitute satisfactory completion of the course. *This is a developmental course and cannot be used to fulfill degree requirements.*

ENGL-1301 English Composition I +
(3-3-0) Principles of composition and rhetorical skills necessary for clear, logical writing. Emphasis is on writing as a process.
Required Prerequisite: ENGL-0325 with a grade of C or satisfactory score on approved placement test
This course may be taken for honors credit. Consult the department for information.

ENGL-1302 English Composition II +
(3-3-0) A continuation of ENGL-1301 and an introduction to literature and research.
Required Prerequisite: ENGL-1301
This course may be taken for honors credit. Consult the department for information.

ENGL-2307 Creative Writing I +
(3-3-0) Writing laboratory of literature genres. Includes lectures on recognition and use of literary devices. *Recommended Prerequisite:* ENGL-1301

ENGL-2308 Creative Writing II +
(3-3-0) A workshop course designed to increase the student's pleasure and skill in reading creative writing and in producing original creative works.
Recommended Prerequisite: ENGL-2307

ENGL-2311 Technical Writing +
(3-3-0) An advanced writing course designed to introduce students to business and professional writing. *Recommended Prerequisite*: ENGL-1301
This course may be taken for honors credit. Consult the department for information.

ENGL-2322 British Literature to 1800 +
(3-0-0) Selected significant works of British literature. May include study of movements, schools or periods. *Recommended Prerequisite:* ENGL-1302
Required Prerequisite: RDNG-0361 or RDNG-0363 with a grade of C plus achieve 11th grade level score on Nelson-Denny, or an approved alternative

ENGL-2323 British Literature Since 1800 +
(3-3-0) Selected significant works of British literature. May include study of movements, schools or periods. *Recommended Prerequisite:* ENGL-1302
Required Prerequisite: RDNG-0361 or RDNG-0363 with a grade of C plus achieve 11th grade level score on Nelson-Denny, or an approved alternative

ENGL-2327 American Literature to 1865 +
(3-3-0) Selected significant works of American literature. May include study of movements, schools or periods.
Recommended prerequisite: ENGL-1302
Required Prerequisite: RDNG-0361 or RDNG-0363 with a grade of C plus achieve 11th grade level score on Nelson-Denny, or an approved alternative

ENGL-2328 American Literature Since 1865 +
(3-3-0) Selected significant works of American literature. May include study of movements, schools or periods. *Recommended Prerequisite:* ENGL-1302
Required Prerequisite: RDNG-0361 or RDNG-0363 with a grade of C plus achieve 11th grade level score on Nelson-Denny, or an approved alternative

ENGL-2332 World Literature to 1650 +
(3-3-0) Selected significant works of world literature. May include study of movements, schools or periods. *Recommended Prerequisite:* ENGL-1302
Required Prerequisite: RDNG-0361 or RDNG-0363 with a grade of C plus achieve 11th grade level score on Nelson-Denny, or an approved alternative
This course may be taken for honors credit. Consult the department for information.

ENGL-2333 World Literature From 1650 +
(3-3-0) Selected significant works of world literature. May include study of movements, schools or periods. *Recommended Prerequisite:* ENGL-1302
Required Prerequisite: RDNG-0361 or RDNG-0363 with a grade of C plus achieve 11th grade level score on Nelson-Denny, or an approved alternative
This course may be taken for honors credit. Consult the department for information.

ENGL-2342 Forms of Literature I +
(3-3-0) The study of one or more literary genres including, but not limited to, poetry, fiction, drama and film.

ENGL-2343 Forms of Literature II +
(3-3-0) The study of one or more literary genres including, but not limited to, poetry, fiction, drama and film.

ENGL-2351 Mexican-American Literature +
(3-3-0) A survey of Mexican-American/Chicano literature including fiction, non-fiction, poetry and drama. *Required Prerequisite:* ENGL-1302

ENGL-2389 Academic Cooperative +
(3-2-4) An instructional program designed to integrate on-campus study of publishing the literary journal with practical hands-on work experience. The course will use the workshop style of cooperative learning and team evaluation. The end product is the formal publication of the literary journal.
Required Prerequisites: ENGL-2307 *and* either RDNG-0363 with a grade of C or satisfactory score on approved placement test

(ENGR) ENGINEERING

ENGR-1201 Introduction to Engineering +
(2-2-0) Introduction to engineering as a discipline and a profession. Includes instruction in the application of mathematical and scientific principles to the solution of practical problems for the benefit of society.

ENGR-1304 Engineering Graphics +
(3-2-4) Engineering drawing techniques and equipment, including geometrical construction, and the basic principles and practices of pictorial and multiview projection utilized for conveying shape and size descriptions in engineering design and industrial communication.

ENGR-1307 Plane Surveying +
(3-2-3) An introduction to research methods and organization skills. Emphasis on horizontal and vertical measurements, leveling methods and pencil manuscript mapping by coordinates. An overview of the survey industry with emphasis on the use of calculators and computers in computations.
Required Prerequisite: MATH-1314 or satisfactory score on approved placement test

ENGR-2301 Mechanics I (Statics) +
(3-3-0) Calculus-based study of composition and resolution of forces; equilibrium of force systems; friction; centroids, and moments of inertia.
Required Prerequisites: MATH-2513 and PHYS-2425

ENGR-2302 Mechanics II (Dynamics) +
(3-3-0) Calculus-based study of dynamics of rigid bodies, force-mass-acceleration, work-energy, impulse-momentum computations. *Required Prerequisite:* ENGR-2301

ENGR-2305 Circuit Analysis +
(3-3-0) Basic E-M principles as related to circuit concepts of R, L, and C. Kirchhoff's laws, power flow, resistive network analysis, loop and node equations, wye-delta conversions, topology, basic network theorems. Magnetic circuits. Computer-assisted solution of large-scale problems. Elementary transient analysis of R-L, R-C, and L-C circuits. *Required Prerequisite:* MATH-2513

ENGR-2432 Mechanics of Materials +
(4-4-0) Stresses, deformations, stress-strain relationships, torsions, beams, shafts, columns, elastic defections in beams, combined loading, and combined stresses.

(ENTC) ENGINEERING TECHNOLOGY, GENERAL

ENTC-2331 Manufacturing Materials
(3-2-3) Identification of various materials used in manufacturing including metals, plastics, composite materials, concrete, ceramics, and wood. Examination of the properties of these materials and standards for quality measurement.

(EPCT) ENVIROMMENTAL AND POLLUTION CONTROL TEHCNOLOGY/TECHNICIAN

EPCT-1205 Environmental Regulations Overview
(2-2-0) An introduction to the history of the environmental movement, including basic requirements for compliance with the environmental regulations.
Required Co-Requisite: EPCT-1249

EPCT-1243 Treatment, Remediation & Disposal Techniques
(2-2-0) A study of the skills required in treatment, remediation, and disposal processes of solid waste, hazardous materials, and hazardous waste. Emphasis on technologies applicable in the field. *Required Co-Requisite:* EPCT 1247

EPCT-1247 Waste Minimization and Pollution Prevention
(2-2-0) Exploration of the options available for source reduction, waste minimization, and pollution prevention including regulatory standards applicable to these activities.
Required Co-Requisite: EPCT-1243

EPCT-1249 Environmental Regulation Interpretation and Applications
(2-2-0) An in-depth study of the major federal and state environmental regulations.
Required Co-Requisite: EPCT-1205

EPCT-1307 Introduction to Environmental Safety and Health
(3-3-0) An historic overview of environmental safety and health. Emphasis on the use of occupational safety and health codes.

EPCT-1311 Introduction to Environmental Science
(3-3-0) An overview of environmental science and current global concerns, and a brief history of environmental ethics, resource use, and conservation. Discussion of fundamental principles of resource economics and environmental health.

EPCT-1313 Contingency Planning
(3-3-0) Introduction to the development of an emergency response contingency plan for a facility or community. Emphasis on analyzing the hazards, writing and implementing the contingency plans, and evaluating the effectiveness of the contingency plan.

EPCT-1341 Principles of Industrial Hygiene
(3-2-2) Concepts in threshold limits, dose response, and general recognition of occupational hazards, including sampling statistics, calibration, and equipment use. A study of the control of occupational hazards and sample collection and evaluation methods.

EPCT-1344 Environmental Sampling and Analysis
(3-2-2) Sampling protocol, procedures, quality control, preservation technology, and field analysis. Emphasis on analysis commonly performed by the field technician.

EPCT-1391 Special Topics in Environment and Pollution Control Technology/Technician
(3-3-0) Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student.

EPCT-1401 Hazardous Waste Operations and Emergency Response (HAZWOPER) Training and Related Topics
(4-3-2) Minimum certification requirements in the Code of Federal Regulations (CFR) for a hazardous waste site worker as found in 29 CFR-1910.120 and 40 CFR.264.16.

EPCT-1440 Industrial Chemical Processes
(4-3-2) An overview of chemical processes used in the chemical industry.
Recommended Prerequisite: CHEM-1405

EPCT-2267 Practicum in Environmental Engineering Technology/Environmental Technology
(2-0-14) Practical general training and experiences in the workplace. Practical, general workplace training supported by an individualized learning plan developed by the employer, the College, and the student. The guided external experiences may be for pay or no pay. *Recommended Co-Requisite:* EPCT-1313 or approval of Department Chair

EPCT-2300 Department of Transportation (DOT) Regulations
(3-3-0) A detailed study of the United States Department of Transportation regulations with emphasis on identifying applicable regulations recommending compliance strategies in the transport of dangerous and hazardous materials. Examination of the regulatory requirements for employees and employers involved in all modes of transportation, including road, rail, aircraft, and marine vessels.

EPCT-2333 Environmental Toxicology
(3-3-0) Review of the research determining the systematic health effects of exposures to chemicals. Discussion of risk factors, routes of entry, control measures, and acute and chronic effects. *Recommended Prerequisite:* CHEM-1405

(ESOL) ENGLISH FOR SPEAKERS OF OTHER LANGUAGES

ESOL-0301 Oral Communication I
(3-3-0) Practical applications of vocabulary, phonetics and grammar in comprehending and producing spoken English. Designed for speakers of other languages.
This is a developmental course and cannot be used to fulfill degree requirements.

ESOL-0302 Oral Communication II
(3-3-0) Practical applications of vocabulary, phonetics and grammar in comprehending and producing spoken English. Designed for speakers of other languages.
This is a developmental course and cannot be used to fulfill degree requirements.

ESOL-0303 Oral Communication III
(3-3-0) Practical applications of vocabulary, phonetics and grammar in comprehending and producing spoken English. Designed for speakers of other languages.
This is a developmental course and cannot be used to fulfill degree requirements.

ESOL-0304 Writing and Grammar I
(3-3-0) Practical applications of vocabulary, phonetics and grammar in comprehending and producing spoken English. Designed for speakers of other languages.
This is a developmental course and cannot be used to fulfill degree requirements.

ESOL-0305 Writing and Grammar II
(3-3-0) Practical applications of grammar and sentence syntax in written English. Designed for speakers of other languages.
This is a developmental course and cannot be used to fulfill degree requirements.

ESOL-0306 Writing and Grammar III
(3-3-0) Practical applications of grammar and sentence syntax in written English. Designed for speakers of other languages.
This is a developmental course and cannot be used to fulfill degree requirements.

ESOL-0307 Reading and Vocabulary I
(3-3-0) Development and improvement of reading skills through vocabulary, fluency and comprehension strategies. Designed for speakers of other languages.
This is a developmental course and cannot be used to fulfill degree requirements.

ESOL-0308 Reading and Vocabulary II
(3-3-0) Development and improvement of reading skills through vocabulary, fluency and comprehension strategies. Designed for speakers of other languages.
This is a developmental course and cannot be used to fulfill degree requirements.

ESOL-0309 Reading and Vocabulary III
(3-3-0) Development and improvement of reading skills through vocabulary, fluency and comprehension strategies. Designed for speakers of other languages.
This is a developmental course and cannot be used to fulfill degree requirements.

ESOL-0310 Composition I
(3-3-0) Development and improvement of reading skills through vocabulary, fluency and comprehension strategies. Designed for speakers of other languages.
This is a developmental course and cannot be used to fulfill degree requirements.

ESOL-0311 Composition II
(3-3-0) Practical applications of grammar, usage and sentence structure in paragraph and essay writing. Designed for speakers of other languages.
This is a developmental course and cannot be used to fulfill degree requirements.

ESOL-0312 Composition III
(3-3-0) Practical applications of grammar, usage and sentence structure in paragraph and essay writing. Designed for speakers of other languages.
This is a developmental course and cannot be used to fulfill degree requirements.

(FDNS) FOODS, NUTRITION, AND WELLNESS STUDIES

FDNS-1103 Introduction to Dietetics
(1-1-0) An introduction to the profession of dietetics in health-care delivery systems. Includes roles and responsibilities of dietetics team members, standards, and ethics in dietetic practice. Emphasis on effective professional communications.

FDNS-1164 Practicum – Foods, Nutrition, and Wellness Studies, General
(1-0-10) Practical general workplace training supported by an individualized learning plan developed by employer, College, and student. The plan relates the workplace training and experiences to the student's general and technical course of study. Application of food management techniques and principles in institutional food service.

Recommended Prerequisites: FDNS-2300 and IFWA-2446

FDNS-1192 Special Topics in Foods, Nutrition,& Wellness Studies
(1-1-0) Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. This course was designed to be taken multiple times to improve student proficiency.
Recommended Prerequisite: Consent of Program Coordinator

FDNS-1309 Nutrition in the Community
(3-3-0) Study of the nutritional status of populations at the national, state, and local community levels. Socioeconomic, cultural, and psychological influences on eating behavior, national, and state health objectives; marketing strategies for objective implementation; and community nutrition programs serving risk-group populations. Basic teaching/counseling methods for the nutrition education of small groups and individual clients/patients. *Recommended Prerequisite:* HECO-1322

FDNS-1341 Nutrition in the Life Cycle
(3-3-0) Analysis of nutrition assessment indicators for each age group. Social consideration to growth standards, maternal weight gains, eating behaviors of various age groups, and the physiology of aging as it relates to nutrient adequacy in the mature adult.
Recommended Prerequisite: HECO-1322

FDNS-1345 Medical Nutrition Therapy I
(3-3-0) Applications of nutrition principles and techniques of nutrition care for healthy individuals and patients/clients at low nutrition risk. Nutrition risk screening, interviewing/counseling methods, diet evaluation, basic diet calculations, documentation.
Required Prerequisite: HECO-1322

FDNS-1346 Medical Nutrition Therapy II
(3-3-0) Principles and techniques of nutrition care for clients/patients at low to moderate nutrition risk. Includes a study of the scientific basis of diets for individuals with diabetes mellitus, pulmonary and cardiovascular disease, and weight-control needs. Nutrition assessment parameters, nutrition care planning and evaluation, and menu-editing methods.
Required Prerequisite: FDNS-1345
Recommended Pre/Co-Requisite: BIOL-2401

FDNS-1371 Child Nutrition Care
(3-3-0) Child nutrition regulatory processes and the nutritional requirements for children ages 0-18. Includes federal child nutrition programs.
FDNS-1391 Special Topics in Foods and Nutrition Studies
(3-3-0) Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student.

FDNS-1447 Medical Nutrition Therapy III
(4-4-0) Advanced principles and techniques of nutrition care for clients/patients at low to moderate risk. Includes a study of the scientific basis of diets for individuals with cancer, gastrointestinal disease, and renal disease. Also includes nutrition assessment parameters, nutrition care planning and evaluation, and menu-editing methods.
Required Prerequisite: FDNS- 1346
Recommended Prerequisite/Co-Requisite: BIOL-2401

FDNS-2164 Practicum – Foods, Nutrition, and Wellness Studies
(1-0-10). Practical general workplace training supported by an individualized learning plan developed by the employer, College, and student. The plan relates the workplace training and experiences to the student's general and technical course of study. The guided external experiences may be paid or unpaid. Application of nutrition care principles and techniques in health-care environments serving risk-group populations in the community.
Recommended Co-Requisite: FDNS-1309

FDNS-2165 Practicum – Foods, Nutrition, and Wellness Studies
(1-0-10) Practical, general workplace training supported by an individualized learning plan developed by the employer, College, and student. The plan relates the workplace training and experiences to the student's general and technical course of study. Application of nutrition care techniques and principles in acute or long-term health care institutions.
Required Prerequisite: FDNS-1447

FDNS-2400 Food Management Systems
(4-4-0) Aspects of the organization and management of institutional food service systems. Includes menu planning and evaluation, purchasing, receiving and storage of food supplies, inventory control, sanitation and safety, and quality assurance.

(FDST) FOOD SCIENCE

FDST-1391 Special Topics in Food Science
(3-3-0) Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student.

(FIRS) FIRE SCIENCE/FIREFIGHTING

FIRS-1301 Firefighter Certification I
(3-2-4) One in a series of courses in basic preparation for a new firefighter. Should be taken in conjunction with Firefighter Certification III, IV, V, and VI to satisfy the Texas Commission on Fire Protection (TCFP) curriculum for Basic Structural Fire Suppression, Course #100. *This course may only be offered by institutions certified as a training facility by TCFP.*
Required Co-Requisites: FIRS-1313 FIRS-1319 FIRS-1323 FIRS-1329 *and* FIRT-1338

FIRS-1313 Firefighter Certification III
(3-2-4) One in a series of courses in basic preparation for a new firefighter. Should be taken in conjunction with Firefighter Certification I, IV, V, and VI to satisfy the Texas Commission on Fire Protection (TCFP) curriculum for Basic Structural Fire Suppression, Course #100. *This course may only be offered by institutions certified as a training facility by the Texas Commission on Fire Protection (TCFP).*
Required Co-Requisites: FIRS-1301 FIRS-1319 FIRS-1323 FIRS-1329 *and* FIRT-1338

FIRS-1319 Firefighter Certification IV
(3-2-4) One in a series of courses in basic preparation for a new firefighter. Should be taken in conjunction with Firefighter Certification I, III, V, and VI to satisfy the Texas Commission on Fire Protection (TCFP) curriculum for Basic Structural Fire Suppression, Course #100. *This course may only be offered by institutions certified as a training facility by the Texas Commission on Fire Protection (TCFP).*
Required Co-Requisites: FIRS-1301 FIRS-1313 FIRS-1323 FIRS-1329 and FIRT-1338

FIRS-1323 Firefighter Certification V
(3-1-5) One in a series of courses in basic preparation for a new firefighter. Should be taken in conjunction with Firefighter Certification I, III, IV, and VI to satisfy the Texas Commission on Fire Protection (TCFP) curriculum for Basic Structural Fire Suppression, Course #100. *This course may only be offered by institutions certified as a training facility by the Texas Commission on Fire Protection (TCFP).*
Required Co-Requisites: FIRS-1301 FIRS-1313 FIRS-1319 FIRS-1329 and FIRT-1338

FIRS-1329 Firefighter Certification VI
(3-2-4) One in a series of courses in basic preparation for a new firefighter. Should be taken in conjunction with Firefighter Certification I, III, IV, and V to satisfy the Texas Commission on Fire Protection (TCFP) curriculum for BasicStructural Fire Suppression, Course #100. *This course may only be offered by institutions certified as a training facility by the Texas Commission on Fire Protection (TCFP).*
Required Co-Requisites: FIRS-1301 FIRS-1313 FIRS-1319 FIRS 1323 and FIRT-1338

(FIRT) FIRE PROTECTION AND SAFETY TECHNOLOGY/ TECHNICIAN

FIRT-1301 Fundamentals of Fire Protection
(3-3-0) Orientation to the fire service, career opportunities, and related fields.

FIRT-1303 Fire and Arson Investigation I
(3-2-2) Basic fire and arson investigation practices. Emphasis on fire behavior principles related to fire cause and origin determination.

FIRT-1305 Public Education Programs
(3-3-0) Preparation of firefighters and fire officers to develop public fire safety awareness. Emphasis on implementation of fire and public safety programs in an effort to reduce the loss of life.

FIRT-1307 Fire Prevention Codes and Inspections
(3-3-0) Local building and fire prevention codes. Fire prevention inspections, practices, and procedures.

FIRT-1309 Fire Administration I
(3-3-0) Introduction to the organization and management of a fire department and the relationship of government agencies to the fire service. Emphasis on fire service leadership from the perspective of the company officer.

FIRT-1311 Fire Service Hydraulics
(3-3-0) Application of hydraulic principles to analyze and solve water supply problems related to fire protection.

FIRT-1315 Hazardous Materials I
(3-2-2) The chemical characteristics and behavior of various materials. Storage, transportation, handling hazardous emergency situations, and the most effective methods of hazard mitigation.

FIRT-1329 Building Codes and Construction
(3-3-0) Examination of building codes and requirements, construction types, and building materials. Includes walls, floorings, foundations, and various roof types and the associated dangers of each.

FIRT-1333 Fire Chemistry I
(3-2-2) Chemical nature and properties of compounds as related to the fire service. Fundamental laws of chemistry, states of matter, gas laws, chemical bonding, and thermodynamics.

FIRT-1338 Fire Protection Systems
(3-3-0) Design and operation of fire detection and alarm systems, heat and smoke control systems, special protection and sprinkler systems, water supply for fire protection, and portable fire extinguishers.

FIRT-1349 Fire Administration II
(3-3-0) In-depth study of fire service management as pertaining to budgetary requirements, administration, organization of divisions within the fire service, and relationships between the fire service and outside agencies. *Recommended Prerequisite:* FIRT-1309

FIRT-1391 Special Topics in Fire Protection and Safety Technology/Technician
(3-3-0) Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. This course may be repeated multiple times to improve student proficiency. *Required Prerequisite:* Consent of Department Chairperson

FIRT-2309 Firefighting Strategies and Tactics I
(3-3-0) Analysis of the nature of fire problems and selection of initial strategies and tactics including an in-depth study of efficient and effective use of staffing and equipment to mitigate the emergency.

FIRT-2331 Firefighting Strategies and Tactics II
(3-3-0) Emphasis on use of incident management in large-scale command problems and other specialized fire problems. *This is the Capstone Course and must be taken during the last semester of the program.*

FIRT-2333 Fire and Arson Investigation II
(3-2-2) Fire investigation techniques and defense of findings in a court room setting. *Required Prerequisite:* FIRT-1303

FIRT-2388 Internship – Fire Protection and Safety Technology/Technician
(3-0-9) A work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts. A learning plan is developed by the College and the employer. This may be a paid or unpaid experience.

(FLMC) FILM AND VIDEO MAKING/CINEMATOGRAPHY AND PRODUCTION

FLMC-1311 Survey of the Motion Picture
(3-2-2) Overview of the film history and techniques including introduction to cinematic elements and approaches to analysis and criticism.

FLMC-1404 Lighting for Film or Video
(4-3-3) Fundamentals of lighting techniques for film or video production employing filters, in-camera effects, and mood-setting techniques.

FLMC-1431 Video Graphics and Visual Effects I
(4-3-3) A course in applications of computers for video production. Design of computer graphic workstations and development of a rationale for selecting software, hardware, and peripherals.

FLMC-2431 Video Graphics and Visual Effects II
(4-3-3) Advanced concepts in designing vector and raster graphics, executing rendering techniques, designing and producing three-dimensional (3D) materials, and selecting hardware, software, and peripherals for video production.
Recommended Prerequisite: RTVB-1431

FLMC-2434 Directing for Film or Video
(4-3-3) Analysis of directing styles to formulate a personal directing style. Includes directing a film or video production.
Required Prerequisite: RTVB-1421 or consent of Program Coordinator

(FREN) FRENCH

FREN-1100 Conversational French I +
1-0-2) Consists of the following options for developing good conversational skills in French. A total of six courses under the numbers FREN-1100 and FREN-1110 may be taken for elective credit as the topic varies.

    A.   Oral Expression. Practice in oral expression, including comprehension, control of structure, vocabulary building, and pronunciation for production of the spoken language. One hour of scheduled classroom lab and one hour of arranged independent-study lab per week. May be taken three times as topic varies.

    B.   Listening Comprehension. Practice in comprehension of the spoken language. Independent-study lab course with practice developing listening skills from sources such as audio, video, radio, film, and Internet.

    C.   Grammar I. Review of novice-mid grammar for better control in production of the spoken language. Independent-study lab course with self-correcting format.

    D.   Grammar II. Review of novice-high grammar for better control in production of the spoken language. Independent-study lab course with self-correcting format.

    E.   Vocabulary Building I. Reading of novice-mid level French language texts for building vocabulary to be used in oral expression of ideas in French. Includes oral reading for fluency practice. Independent-study lab course.

    F.   Vocabulary Building II. Reading of novice-high level French language texts for building vocabulary to be used in oral expression of ideas in French. Includes oral reading for fluency practice. Independent-study lab course.

    G.   Culture Topics. Study of French culture topics through research and discussion, for the production of the spoken language in the expression and comparison of ideas.

FREN-1110 Conversational French II +
(1-0-2) Consists of the following options for developing good conversational skills in French. A total of six courses under the numbers FREN-1100 and FREN-1110 may be taken for elective credit as topic varies.

A. Oral Expression. Practice in oral expression, including comprehension, control of structure, vocabulary building, and pronunciation for production of the spoken language. One hour of scheduled classroom lab and one hour of arranged independent-study lab per week. May be taken three times as topic varies.+

B. Listening Comprehension. Practice in comprehension of the spoken language. Independent-study lab course with practice developing listening skills from sources such as audio, video, radio, film, and Internet.

C. Grammar III. Review of intermediate-mid grammar for better control in production of the spoken language. Independent-study lab course with self-correcting format.

D. Grammar IV. Review of intermediate-high grammar for better control in production of the spoken language. Independent-study lab course with self-correcting format.

E. Vocabulary Building III. Reading of intermediate-mid level French language texts for building vocabulary to be used in oral expression of ideas in French. Includes oral reading for fluency practice. Independent-study lab course.

F. Vocabulary Building IV. Reading of intermediate-high level French language texts for building vocabulary to be used in oral expression of ideas in French. Includes oral reading for fluency practice. Independent-study lab course.

G. Culture Topics. Study of French culture topics through research and discussion, for the production of the spoken language in the expression and comparison of ideas. May be taken three times as topic varies.+

FREN-1411 Elementary French I +
(4-3-2) Fundamentals of French. Acquisition of language functions, vocabulary, structures, and culture through contextualized presentations, interactive activities, and extensive laboratory practice.

FREN-1412 Elementary French II +
(4-3-2) Continuation of FREN-1411 with emphasis on conversation. Laboratory practice.
Recommended Prerequisite: FREN-1411

FREN-2311 Intermediate French I +
(3-3-0) Finer points of French grammar. Conversational practice based on selected readings and dialogues. Directed composition. Class conducted largely in French.
Recommended Prerequisite: FREN-1412

FREN-2312 Intermediate French II +
(3-3-0). Continuation of FREN-2311.
Recommended Prerequisite: FREN-2311

(FSHN) FASHION MERCHANDISING

FSHN-2305 Fashion Retailing
(3-3-0) An overview of fashion retailing procedures used in various types of retail fashion companies. A study of profit and loss, pricing, markup, inventory control, shortages, forecasting, store organization, and events. Examination of the wide variety of job opportunities available in the retail fashion industry.

FSHN-2309 Fashion Image
(3-3-0) Introduction in the techniques used to analyze the fashion image of individual clients. Emphasis on personal coloring, color harmonies, appropriate fabric textures, body proportion and silhouette, figure, facial and hair analysis, and wardrobe coordination. Study of fashion image consultant business practices and job qualifications.

(GAME) ANIMATION, INTERACTIVE TECHNOLOGY, VIDEO GRAPHICS, AND SPECIAL EFFECTS

GAME-1304 Level Design
(3-3-2) Introduction to the tools and concepts used to create levels for games and simulations. Incorporates level design, architecture theory, concepts of critical path and flow, balancing, play testing, and storytelling. Includes utilization of toolsets from industry titles.

GAME-1403 Introduction to Game Design and Development
(4-3-2) Introduction to electronic game development and game development careers. Includes examination of history and philosophy of games, the game production process, employee factors for success in the field, and current issues and practices in the game development industry.

GAME-1443 Game and Simulation Programming I
(4-3-2) Game and simulation programming. Includes advanced pointer manipulation techniques and pointer applications, points and vectors, sound, and graphics.
Recommended Prerequisites/Co-Requisites: COSC-1436 and COSC-1437

GAME-1459 Game/Simulation Programming II
(4-3-2) Design and development of 2D game and simulation programs including user interface design, mathematical elements, image and file structure, and software development techniques. Introduces the basics of 3D graphics related to game and simulation programming. *Recommended Prerequisite/Co-Requisite:* GAME-1443

GAME-2402 Mathematical Applications for Game Development
(4-3-2) Presents applications of mathematics and science in game and simulation programming. Includes the utilization of matrix and vector operations, kinematics, and Newtonian principles in games and simulations. Also covers code optimization.

(GEOG) GEOGRAPHY

GEOG-1301 Elements of Physical Geography +
(3-3-0) Basic physical elements of geography, maps, weather and climate, landforms, and natural resources.

GEOG-1302 Introduction to Human and Cultural Geography +
(3-3-0) A spatial exploration of human/cultural geography including: demographic changes, migration and settlement, cultural diffusion, ethnic patterns, and political and economic systems.

GEOG-1303 World Geography +
(3-3-0) Human geography of the world with emphasis on use of natural and human resources in selected regions and countries of the world.
This course may be taken for honors credit. Consult the department for information.

(GEOL) GEOLOGY

GEOL-1305 Environmental Geology +
(3-3-0) The earth as a habitat; interactions between humans and the environment; ecologic factors in urban and regional land use planning.

GEOL-1401 Introduction to Earth Science +
(4-3-3) A one-semester introduction to the Earth System Sciences (astronomy, chemistry, geology, meteorology and oceanography), with emphasis on the relationship between the geosphere, the atmosphere and the hydrosphere and their effect on man.
Required Co-Requisite: Laboratory GEOL-1401L
This course may be taken for honors credit. Consult the department for information.

GEOL-1403 General Geology I +
(4-3-3). Minerals, rocks, geological processes and structural geology.
Required Co-Requisite: Laboratory GEOL-1403L
This course may be taken for honors credit. Consult the department for information.

GEOL-1404 General Geology II +
(4-3-3) Geological history of the Earth with emphasis on fossils, origin and character of selected formations.
Required Prerequisite: GEOL-1403 *Required Co-Requisite:* Laboratory GEOL-1403L
This course may be taken for honors credit. Consult the department for information.

GEOL-1405 Environmental Geology +
(4-3-3) The earth as a habitat; interactions between humans and the environment; ecologic factors in urban and regional land use planning. Students may not take this course and GEOL-1305 for credit. *Required Co-Requisite:* Laboratory GEOL-1405L

GEOL-1445 Introduction to Ocean Science +
(4-3-3) A one-semester introduction to the physical, biological, and geological processes, which shape the world's oceans, with emphasis on man's impact on the oceans and the ocean's impact on man. *Required Co-Requisite:* Laboratory GEOL-1445L

GEOL-1447 Meteorology +
(4-3-3) A survey of meteorology and related sciences. May not be used as a prerequisite for GEOL-1404. *Required Co-Requisite:* Laboratory GEOL-1447L

GEOL-2407 Geological Field Methods +
(4-3-3) Collection of field data, interpretation and construction of geologic and topographic maps, and examination of petrologic systems in a field setting.
Required Prerequisite: Consent of instructor
Required Co-Requisite: Laboratory GEOL-2407L

(GERM) GERMAN

GERM-1411 Elementary German I +
(4-3-2) Fundamentals of German. Acquisition of language functions, vocabulary, structures, and culture through contextualized presentations, interactive activities, and extensive laboratory practice.

GERM-1412 Elementary German II +
(4-3-2) Continuation of GERM 1411 with emphasis on conversation.
Recommended Prerequisite: GERM-1411

GERM-2311 Intermediate German I +
I (3-3-0) Finer points of German grammar. Conversational practice based on selected readings and dialogues. Directed composition. Class conducted largely in German.
Recommended Prerequisite: GERM-1412

GERM-2312 Intermediate German II +
(3-3-0). Continuation of GERM-2163.
Recommended Prerequisite: GERM-2311

(GISC) GEOGRAPHIC INFORMATION SYSTEMS AND CARTOGRAPHY

GISC-1402 Understanding Geographic Information Systems
(4-3-2) Understanding Geographic Information Systems Theory and application of geographic information science (GIS). Includes an overview of the general principles of GIS and Practical experience in its use.

GISC-1491 Special Topics in Cartography
(4-3-2) 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.

GISC-2264 Practicum – Cartography
(2-0-14) Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

GISC-2401 Data Acquisition and Analysis in Geographic Information Systems (GIS)
(4-3-2) 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.

GISC-2402 Geographic Information Systems (GIS) Design with Raster Analysis
(4-3-2) Raster/remote sensing principles, technologies, and applications. Emphasizes processing raster imagery into useful information to be used in a GIS. Includes geo-referencing and image classification. Student final project will be demonstrating raster and remote sensing techniques.

GISC-2404 Geographic Information Systems (GIS) Design with Vector Analysis
(4-3-2) 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.

GISC-2411 Geographic Information Systems (GIS) Applications
(4-2-0) Application of GIS technology to real workplace applications from public and private sectors. Completion of Global Positioning Systems (GPS) fieldwork required for lab exercises.

GISC-2420 Intermediate Geographic Information Systems (GIS)
(4-3-2) This course focuses on the study of spatial data structures and the display, manipulation, and analysis of geographic information. Students will study the technical aspects involved in spatial data handling, analysis and modeling. Instruction will include theories and procedures associated with the implementation and management of GIS projects. A variety of GIS software packages will be used in the laboratory.

GISC-2435 Programming for Geographic Information Systems (GIS)
(4-3-2) Focuses on the use of programming languages to customize and expand the capability f GIS applications. Instruction will include object-oriented and component programming. Students will also design their own Graphical User Interface (GUI).
Required Prerequisite: COSC-1436

(GOVT) GOVERNMENT

GOVT-2305 United States Government
(3-3-0) United States constitutional and governmental systems.
Required Prerequisite: RDNG-0361 or RDNG-0363 with a grade of C plus achieve 11th grade level score on Nelson-Denny, or an approved alternative
This course may be taken for honors credit. Consult the department for information.

GOVT-2306 Texas State and Local Government
(3-3-0) United States and Texas constitutions, the organization and functions of state and local government within the context of the federal system.
Required Prerequisite: RDNG-0361 or RDNG-0363 with a grade of C plus achieve 11th grade level score on Nelson-Denny, or an approved alternative
This course may be taken for honors credit. Consult the department for information.

(HALT) HORTICULTURE AND HORTICULTURAL OPERATIONS, GENERAL

HALT-1301 Principles of Horticulture
(3-3-1) An overview of the horticulture industry, plant science, terminology, classification, propagation, environmental responses, and careers and opportunities in the field of horticulture.

HALT-1303 Herbaceous Plants
(3-2-2) A study of herbaceous plant material. Topics include practices and procedures used in the identification, growth, propagation, maintenance, and utilization of herbaceous plants in the horticulture industry. *Recommended Prerequisite:* HALT-1301

HALT-1307 Plant Diseases
(3-2-2) An overview of the factors causing plant diseases. Topics include physiological disorders, fungi, bacteria, viruses, mollicutes, nematodes, parasitic plants, non-pathogenic factors, and control methods. *Recommended Prerequisite:* HALT-1301

HALT-1309 Interior Plants
(3-2-2) Instruction in the identification and classification of the plants used in home and commercial interior landscapes. Topics include design characteristics for interiorscapes and environmental requirements of the plants. *Recommended Prerequisite:* HALT-1301

HALT-1311 Shrubs, Vines, and Groundcovers
(3-2-2) Coverage of the shrubs, vines, and groundcovers used in the horticulture industry. Topics include identification, characteristics, adaptation, cultural requirements, pest and disease problems, and use in the landscape. *Recommended Prerequisite:* HALT-1301

HALT-1313 Economic Entomology
(3-2-2) An overview of insects and related organisms with an emphasis on destructive, predaceous, parasitic, and beneficial species. Topics include insect taxonomy, anatomy, morphology, physiology, and the application of Integrated Pest Management (IPM), mechanical, biological, and chemical control measures.
Recommended Prerequisite: HALT-1301

HALT-1317 Trees
(3-2-2) A study of the trees used in the horticulture industry. Topics include the identification, characteristics, adaptation, cultural requirements, and pest and disease problems of trees in the landscape. *Recommended Prerequisite:* HALT-1301

HALT-1353 Landscape Computer Design
(3-2-2) A course in computer-aided landscape design. Emphasis on the application of design concepts and techniques using software. *Required Prerequisite:* HALT-1422

HALT-1422 Landscape Design
(4-3-3) A study of the principles and elements of landscape design. Topics include client interview, site analysis, plan view, scale, plant selection, basic drawing and drafting skills, and plan preparation. *Recommended Prerequisite:* HALT-1301

HALT-2301 Arboriculture
(3-2-2) Fundamentals of woody plant physiology and growth including techniques and procedures utilized in making sound tree-care decisions related to growth pest and disease control. Topics include design principles of planning and maintenance for city streets, parks, and commercial and residential properties.
Recommended Prerequisite: HALT-1301

HALT-2302 Greenhouse Crop Production
(3-2-2) Production of crops within the greenhouse environment. Topics include growing techniques, environmental control, crop rotation, scheduling, preparation for sale, and marketing. *Recommended Prerequisite:* HALT-1301

HALT-2308 Greenhouse Management
(3-2-2) Fundamentals of greenhouse construction and operation. Topics include architectural styles, construction materials, environmental systems and controls, growing media, fertilizers, post harvest handling, marketing, and business management. *Recommended Prerequisite:* HALT-1301

HALT-2314 Plant Propagation
(3-2-2) A study of the sexual and asexual propagation of plants used in horticulture. Topics include propagation by seeds, cuttings, grafting, budding, layering, division, separation, and tissue culture; and environmental factors of propagation. *Recommended Prerequisite:* HALT-1301

HALT-2315 Landscape Management
(3-2-2) A study of the procedures and practices used in the horticulture industry for proper landscape maintenance. Topics include landscape installation, lawn maintenance, shrub and tree care, and management practices. *Recommended Prerequisite:* HALT-1301

HALT-2318 Soil Fertility and Fertilizers
(3-3-0) An in-depth study of the chemistry, soil interaction, plant uptake and utilization of essential plant nutrients. Topics include deficiency and toxicity symptoms, and the selection, application, and characteristics of fertilizer materials. *Recommended Prerequisite:* HALT-1301

HALT-2320 Nursery Production and Management
(3-2-2) An overview of the procedures for establishing and operating a commercial nursery. Topics include site selection, structures, equipment, stock selection, production practices, harvesting, marketing, and management practices. *Recommended Prerequisite:* HALT-1301

HALT-2323 Horticultural Pest Control
(3-3-0) Examination of federal, state, and local laws and regulations governing the control of horticultural pests. Topics include procedures; methods; safety requirements; integrated pest management (IPM); and chemical, natural, and biological controls. *Recommended Prerequisite:* HALT-1301

(HAMG) HOSPITALITY ADMINISTRATION AND MANAGEMENT, GENERAL

HAMG-1191 Selected Topics in Hospitality Administration and Management, General
(1-1-0) Topics address recently identified current events, skills, knowledge and/or attitudes, and behaviors pertinent to the technology or occupation and relevant to the professional development of the student.
Prerequisite: Consent of Department Chairperson

HAMG-1213 Front Office Procedures
(2-2-0) Functions of front office operations as they relate to customer service. Includes a study of front office interactions with other departments in the lodging operation.

HAMG-1291 Special Topics in Hospitality Administration and Management
(2-2-0) Topics address recently identified current events, skills, knowledge and/or attitudes, and behaviors pertinent to the technology or occupation and relevant to the

professional development of the student. This course was designed to be repeated multiples times to improve student proficiency.
Prerequisite: Consent of Department Chairperson

HAMG-1321 Introduction to the Hospitality Industry
(3-3-0) Introduction to the elements of the hospitality industry.

HAMG-1324 Hospitality Human Resources Management
(3-3-0) Principles and procedures of human resource management in the hospitality industry.

HAMG-1340 Hospitality Legal Issues
(3-3-0) A course in legal and regulatory requirements that impact the hospitality industry. Topics include Occupational Safety and Health Administration (OSHA), labor regulations, tax laws, tip reporting, franchise regulations, and product liability laws.

HAMG-1391 Special Topics in Hospitality Administration and Management
(3-3-0) Topics address recently identified current events, skills, knowledge and/or attitudes, and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. This course was designed to be repeated multiple times to improve student proficiency.
Prerequisite: Consent of Department Chairperson

HAMG-2167 Practicum – Hospitality Administration and Management, General
(1-0-10) Practical, general workplace training supported by individual learning plan developed by the employer, College, and student.
Prerequisite: Consent of Department Chairperson

HAMG-2301 Principles of Food and Beverage Operations
(3-3-0) Introduction to food and beverage management in various hospitality environments. Emphasizes cost controls from procurement to marketing and sales. Examines forecasting, menu planning and pricing, logistical support, production, purchasing, and quality assurance.

HAMG-2302 Hospitality Security and Loss Prevention
(3-3-0) Overview of the issues surrounding the need for security and loss prevention in the hospitality industry.

HAMG-2305 Hospitality Management and Leadership
(3-3-0) Overview of management and leadership in the hospitality industry with an emphasis on management philosophy, policy formulation, communications, motivation, and team building.

HAMG-2307 Hospitality Marketing and Sales
(3-3-0) Identification of the core principles of marketing and sales and their impact on the hospitality industry.

HAMG-2330 Convention and Group Management and Services
(3-3-0) Application of the essential components of successful convention and meeting planning.

(HART) HEATING, AIR CONDITIONING AND REFRIGERATION TECHNOLOGY/ TECHNICIAN

HART-1401 Basic Electricity for Heating, Ventilation and Air Conditioning (HVAC)
(4-3-2) Principles of electricity as required by HVAC, including proper use of test equipment, electrical circuits, and component theory and operation.

HART-1403 Air Conditioning Control Principles
(4-3-2) A basic study of HVAC and refrigeration controls; troubleshooting of control components; emphasis on use of wiring diagrams to analyze high and low voltage circuits; a review of Ohm's law as applied to air conditioning controls and circuits.
Recommended Prerequisite: HART-1401 and HART-2431
HART-1407 Refrigeration Principles
(4-2-7) An introduction to the refrigeration cycle, heat transfer theory, temperature/ pressure relationship, refrigerant handling, refrigeration components, and safety.

HART-1411 Solar Fundamentals
(4-3-3) Study of heat transference, motors, pumps and other mechanical devices; solid state switches; photovoltaic plates and energy conversion; thermal dynamics; and solar energy.

HART-1445 Gas and Electric Heating
(4-2-7) Study of the procedures and principles used in servicing heating systems including gas-fired furnaces and electric heating systems.
Required Prerequisite: HART-1401 *Required Co-Requisite:* HART-2431

HART-1491 Special Topics in Heating, Air Conditioning and Refrigeration Technology/ Technician
(4-3-2) 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.

HART-2431 Advanced Electricity for Heating, Ventilation and Air Conditioning (HVAC)
(4-3-2) Advanced electrical instruction and skill building in installation and distribution, motors, motor controls, and application of solid-state devices.
Required Prerequisite: HART-1401

HART-2436 Air Conditioning Troubleshooting
(4-3-2) 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.
Required Prerequisites: HART-1401 HART-1403 HART-1407 HART-1445 HART-2431 HART-2445 and MAIR-1449

HART-2438 Air Conditioning Installation and Startup
(4-3-2) A study of air conditioning system installation, refrigerant piping, condensate disposal, and air cleaning equipment with emphasis on startup and performance testing.

HART-2442 Commercial Refrigeration
(4-2-8) Theory and practical application in the maintenance of commercial refrigeration; medium and low temperature applications and ice machines.
Required Prerequisites: HART-1401 HART-1407 HART-2431 and MAIR-1449

HART-2445 Air Conditioning Systems Design
(4-3-2) Study of the properties of air and results of cooling, heating, humidifying or dehumidifying; heat gain and heat loss calculations including equipment selection and balancing the air system.

HART-2449 Heat Pumps
(4-3-2) A study of heat pumps, heat pump control circuits, defrost controls, auxiliary heat, air flow, and other topics related to heat pump systems.
Required Prerequisites: HART-1401 HART-1403 HART-1407 HART-1445 HART-2431 HART-2445 and MAIR-1449

(HECO) HOME ECONOMICS

HECO-1307 Personal Finance +
(3-3-0) Guide to personal and family accounts, budgets and budgetary control, bank accounts, charge accounts, borrowing, investing, insurance, standards of living, renting or home ownership, and wills and trust plans.

HECO-1315 Food Preparation and Meal Management +
(3-2-4) A study of the composition of food and the chemical and biological changes that occur in storage and processing. Includes preparation techniques and selection principles.

HECO-1320 Textiles +
(3-3-1) Analysis of fibers, yarns, fabrics and finishes as related to end use, performance, and care of textile products.

HECO-1322 Nutrition and Diet Therapy +
(3-3-0) Study of the chemical, physical and sensory properties of food; nutritional quality; and food use and diet applications. Includes nutrient functions, food sources, digestion, absorption, and metabolism and application to normal and preventive nutrition needs. Nutrient intake analysis, energy expenditure evaluation, and diet planning included.

HECO-2311 Fashion Merchandising +
(3-3-0) Principles, techniques and practices for successful merchandising of fashion products. Overview of careers in the fashion industry, textiles, design and manufacturing processes, domestic and foreign markets, and retailing. Development of fashion industry vocabulary.

(HIST) HISTORY

HIST-1301 United States History to 1876 +
(3-3-0) American nation from pre-Columbian times to the close of Reconstruction.
Required Prerequisite: RDNG-0361 or RDNG-0363 with a grade of C plus achieve 11th grade level score on Nelson-Denny, or an approved alternative
This course may be taken for honors credit. Consult the department for information.

HIST-1302 United States History Since 1876 +
(3-3-0) American nation from the end of Reconstruction Era to present.
Required Prerequisite: RDNG-0361 or RDNG-0363 with a grade of C plus achieve 11th grade level score on Nelson-Denny, or an approved alternative
This course may be taken for honors credit. Consult the department for information.

HIST-2301 History of Texas +
(3-3-0) Political, economic, social, and intellectual development of Texas from the period of Spanish discovery to present.

HIST-2311 Western Civilization to 1660 +
(3-3-0) Development of ancient, medieval and early modern civilizations.
This course may be taken for honors credit. Consult the department for information.

HIST-2312 Western Civilization Since 1660 +
(3-3-0) Development of modern Western civilization.

HIST-2321 World Civilization I +
(3-3-0) Development of ancient, medieval and modern civilizations around the world.
This course may be taken for honors credit. Consult the department for information.

HIST-2322 World Civilization II +
(3-3-0) Development of early modern and modern civilizations around the world.
This course may be taken for honors credit. Consult the department for information.

HIST-2389 Becoming A Global Citizen +
(3-3-0) Integration of historical perspectives into contemporary global issues.

(HITT) HEALTH INFORMATION AND MEDICAL RECORDS TECHNOLOGY/TECHNICIAN#

HITT-1253 Legal and Ethical Aspects of Health Information
(2-2-0) Concepts of privacy, security, confidentiality, ethics, health-care legislation, and regulations relating to the maintenance and use of health information.

HITT-1401 Health Data Content and Structure
(4-3-3) Introduction to systems and processes for collecting, maintaining, and disseminating primary and secondary health-related information including content of health record, documentation requirements, registries, indices, licensing, regulatory agencies, forms, and screens.

HITT-1441 Coding and Classification Systems
(4-3-3) Basic coding rules, conventions, and guidelines using clinical classification systems.

HITT-1442 Ambulatory Coding
(4-3-3) Basic ambulatory coding rules, conventions and guidelines.

HITT-1445 Health Care Delivery Systems
(4-3-3) Introduction to organization, financing, and delivery of health-care services, accreditation, licensure, and regulatory agencies.

HITT-2260 Clinical - Health Information and Medical Records Technology/Technician
(2-0-12) A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional.

HITT-2261 Clinical - Health Information and Medical Records Technology/Technician
(2-0-12) A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional.

HITT-2331 Medical Terminology - Advanced
(3-3-0) A study of advanced terminology in various medical and surgical specialties.

HITT-2335 Coding and Reimbursement Methodologies
(3-3-0) Advanced coding techniques with emphasis on case studies, health records and federal regulations regarding prospective payment systems and methods of reimbursement.

HITT-2346 Advanced Medical Coding
(3-2-2) ICD and CPT coding rules, conventions, and guidelines in complex case studies. Investigation of government regulations and changes in health-care reporting.

HITT-2443 Quality Assessment and Performance Improvement
(4-3-3) Study of quality standards and methodologies in the health-information management environment. Topics include licensing, accreditation, compilation and presentation of data in statistical formats, quality management and performance improvement functions, utilization management, risk management, and medical staff data quality issues.

(HPRS) HEALTH PROFESSIONS AND RELATED SERVICES

HPRS-1206 Essentials of Medical Terminology
(2-2-0) A study of medical terminology, word origin, structure, and application.

HPRS-1271 Survey of Professions in Health Care
(2-2-0) A study of the current environment in health care and a survey of various jobs and professions in the health-care industry.

HPRS-2200 Pharmacology for Health Professions
(2-2-0) A study of drug classifications, actions, therapeutic uses, adverse effects, routes of administration, and calculation of dosages.

HPRS-2201 Pathophysiology
(2-2-0) Study of the pathology and general health management of diseases, and injuries across the life span. Topics include etiology, symptoms, and the physical and psychological reactions to diseases and injuries.

(HRPO) HUMAN RESOURCE MANAGEMENT AND PERSONNEL ADMINISTRATION, GENERAL

HRPO-1311 Human Relations
(3-3-0) Practical application of the principles and concepts of the behavioral sciences to interpersonal relationships in the business and industrial environment.

HRPO-1393 Special Topics in Organizational Behavior Studies
(3-3-0) Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the

professional development of the student. This course was designed to be repeated multiple times to improve student proficiency.

HRPO-2301 Human Resources Management
(3-3-0) Behavioral and legal approaches to the management of human resources in organizations.

(HUMA) HUMANITIES

HUMA-1301 Introduction to The Humanities +
(3-3-0) An interdisciplinary, multiperspective assessment of cultural, political, philosophical, and aesthetic factors critical to the formulation of values and the historical development of the individual and of society. Particular emphasis will be placed on the exploration of multicultural perspectives in the local community.
This course may be taken for honors credit. Consult the department for information.

HUMA-1305 Introduction to Mexican-American Studies +
(3-3-0) Introduction to the field of Mexican-American/Chicano studies from its inception to the present. Interdisciplinary survey designed to introduce students to the salient cultural, economic, educational, historical, political, and social aspects of the Mexican-American/Chicano experience.

HUMA-1315 Fine Arts Appreciation +
(3-3-0) In this course, the student will examine human contributions to the disciplines of music, art, architecture and theatre, developing a critical and analytical understanding of these arts.
This course may be taken for honors credit. Consult the department for information.

HUMA-2319 American Minority Studies +
(3-3-0) Historical, economic, social, and cultural development of minority groups. May include African-American, Mexican-American, Asian-American, and Native American issues.

(HYDR) HYDRAULICS TECHNOLOGY/TECHNICIAN

HYDR-1345 Hydraulics and Pneumatics
(3-2-3) Discussion of the fundamentals of hydraulics and pneumatics, components of each system, and the operations, maintenance, and analysis of each system.

(IFWA) INSTITUTIONAL FOOD WORKERS

IFWA-1491 Special Topics in Institutional Food Workers
(4-3-2) 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.

IFWA-2446 Quantity Procedures
(4-2-3) Exploration of the theory and application of quality procedures for the operation of commercial, institutional, and industrial food services. Emphasis on quantity cookery and distribution.
Required Prerequisite: Successful completion of MATH-0304 or or approved equivalent

(IMED) EDUCATIONAL AND INSTRUCTIONAL MEDIA DESIGN

IMED-1416 Web Design I
(4-3-3) Instruction in Web page design and related graphic design issues including mark-up languages, websites, and browsers.

IMED-2415 Web Design II
(4-3-3) A study of mark-up language and advanced layout techniques for creating web pages. Emphasis on identifying the target audience and producing websites according to accessibility standards, cultural appearance and legal issues.
Required Prerequisite: IMED-1416
Recommended Prerequisites: ARTC-1305 ARTC-1453 *and* ARTC-1402

(INDS) INTERIOR DESIGN

INDS-1341 Color Theory and Application
(3-3-0) A study of color theory and its application to interior design.

INDS-1449 Fundamentals of Space Planning
(4-3-2) The study of residential and light commercial spaces, including programming, codes, standards, space planning, drawings and presentations.

(INEW) WEB PAGE AND COMPUTER PROGRAMMER/PROGRAMMING, GENERAL

INEW-2434 Advanced Web Programming
(4-3-2) Web programming using industry-standard languages and data stores.

(INMT) MANUFACTURING TECHNOLOGY/TECHNICIAN

INMT-1445 Computer Numerical Controls
(4-3-3) Study of numerical controlled machine operations in a CAM/CIM environment. Emphasis on standard and computer numerical controlled (CNC) procedures for planning, preparing, and operating a computer-assisted machine.

INMT-2345 Industrial Troubleshooting
(3-2-3) Advanced study of 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.

(INTC) INSTRUMENTATION TECHNOLOGY/TECHNICIAN

INTC-2359 Distributed Control Systems
(3-2-3) Philosophy and application of distributed control systems. Includes hardware, firmware, software, configuration, communications, and networking systems required to implement a distributed control strategy.

(ITCC) SYSTEM, NETWORKING, AND LAN OR WAN MANAGEMENT/MANAGER - CISCO

ITCC-1401 Cisco Exploration 1 - Network Fundamentals
(4-3-2) 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.
Recommended Prerequisites: ITSC-1405 and ITSC-1424, or consent of Department Chair

ITCC-1404 Cisco Exploration 2 - Routing Protocols and Concepts
(4-3-2) 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. *Recommended Prerequisite:* ITCC-1401

ITCC-1409 Cisco Voice and Data Cabling
(4-3-2) Introduces the physical aspects of Cisco voice and data network cabling and installation, skills development in reading network design documentations, part list setup and purchase, pulling and mounting cable, cable management, choosing wiring closets and path patch panel installation and termination, installing jacks and testing cable.
Recommended Prerequisite: CPMT-1405

 ITCC-2408 Cisco Exploration 3 - LAN Switching and Wireless
(4-3-2) 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. *Recommended Prerequisite:* ITCC-1404

ITCC-2410 Cisco Exploration 4 - Accessing the WAN
(4-3-2) 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).
Recommended Prerequisite: ITCC-2408

ITCC-2432 CCNP 1: Advanced Routing
(4-3-2) A study of advanced network deployment issues and methods used to configure Cisco routers for effective LAN and WAN traffic management. Topics include designing scalable internetworks, managing traffic, configuring OSPF in single and multiple areas, configuring EIGRP, configuring and using interior and border gateway routing protocols, and techniques used for route filtering and route redirection.

Recommended Prerequisite: ITCC-1446, Cisco Certified Network Associate (CCNA) certification, or equivalent knowledge

ITCC-2436 CCNP 2: Remote Access
(4-3-2) Designing and building remote access networks with Cisco products. Includes assembling and cabling WAN components, configuring network connections via asynchronous modem, ISDA, X.25, broadband, Virtual Private Network (VPN), and frame relay architectures and associated protocols. *Recommended Prerequisite:* ITCC-2432

ITCC-2440 CCNP 3: Multilayer Switching
(4-3-2) This course instructs students about the deployment of the state-of-the-art campus LANs. The course focuses on the selection and implementation of the appropriate Cisco IOS services to build reliable scalable multilayer-switched LANs. Students will develop skills with VLANs, VTP, STP, inter-VLAN routing, multilayer switching, redundancy, Cisco AVVID solutions, Quality of Service (QoS) issues, campus LAN security, and emerging transparent LAN services. Key course stresses the design, implementation, operation, and troubleshooting of switched and routed environments.
Recommended Prerequisite: ITCC-2436

ITCC-2444 CCNP 4: Internetwork Troubleshooting
(4-3-2) This course focuses on documenting and baselining networks and Layer 1 through 4 troubleshooting. Topics include Cisco Troubleshooting Tools, diagnosing and correcting problems within TCP/IP, Frame Relay, and ISDN network connections.
Recommended Prerequisite: ITCC-2440

(ITNW) COMPUTER SYSTEMS NETWORKING AND TELECOMMUNICATIONS

ITNW-1408 Implementing and Supporting Client Operating Systems
(4-3-2) Skills development in the management of client as desktop operating systems.
Recommended Prerequisite: ITSC-1405

ITNW-1425 Fundamentals of Networking Technologies
(4-3-2) Instruction in networking technologies and their implementation. Topics include the OSI reference model, network protocols, transmission media, and networking hardware and software. *Recommended Prerequisite:* ITSC-1405

ITNW-1451 Fundamentals of Wireless LANs
(4-3-2) Design, plan, implement, operate and troubleshoot Wireless Local Area Networks (WLAN). Includes WLAN design, installation, and configuration; and WLAN security issues and vendor interoperability strategies. *Recommended Prerequisite:* ITNW-1425

ITNW-1454 Implementing and Supporting Servers
(4-3-2) Implement, administer, and troubleshoot information systems that incorporate servers in a networked computing environment. *Recommended Prerequisite:* ITNW-1408

ITNW-1471 Voice-Over-Internet Protocol (VOIP)
(4-2-3) Basic concepts used in voice-over-protocol (VOIP). The course focus is on the technology that integrates voice and data transmission in network communications.

ITNW-1491 Special Topics in Information Sciences and Systems
(4-3-2) Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. This course was designed to be repeated multiple times to improve student proficiency.

ITNW-1492 Special Topics in Computer Systems Networking and Telecommunications
(4-3-2) 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.
Recommended Prerequisite: Consent of Department Chairperson

ITNW-2473 Advanced Convergence Technology
(4-3-2) Advanced study of telecommunication convergence technologies including: telephone, LAN, WAN, wireless, voice, video, Internet protocol, and RFID.
Recommended Prerequisite: ITSW-1407

ITNW-2474 Advanced Voice-Over-Internet Protocol (VOIP)
(4-3-2) Advanced study of VOIP technology, protocols, implementation, and design. This course includes basic telephony fundamentals, packet voice technologies, the Internet Protocol (IP) along with other protocols and standards that define VoIP networks. Case studies will be conducted that provide a practical experience in VoIP networks.
Recommended Prerequisite: ITNW-1471

(ITSC) COMPUTER AND INFORMATION SCIENCES, GENERAL

ITSC-1405 Introduction to Personal Computer Operating Systems
(4-3-2) Introduction to personal computer operating systems including installation, configuration, file management, memory and storage management, control of peripheral devices, and use of utilities. *Recommended Prerequisite:* COSC-1401

ITSC-1407 UNIX Operating System I
(4-3-2) Introduction to the UNIX operating system including multiuser concepts, terminal emulation, use of system editor, basic UNIX commands, and writing script files. Includes introductory system management concepts. *Recommended Prerequisite:* ITSC-1405

ITSC-1425 Personal Computer Hardware
(4-3-2) Current personal computer hardware including assembly, upgrading, setup, configuration, and troubleshooting.

ITSC-1491 Special Topics in Computer and Information Sciences, General
(4-3-2) 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.
Recommended Prerequisite: Consent of Department Chair

(ITSE) COMPUTER PROGRAMMING

ITSE-1411 Beginning Web Programming
(4-3-2) Skill development in web page programming including mark-up and scripting languages. *Recommended Prerequisite:* COSC-1401

ITSE-1430 Introduction to C# Programming
(4-3-2) A study of C# syntax including data types, control structures, functions, syntax, and semantics of the language, classes, class relationships, and exception handling.
Recommended Prerequisite: COSC-1436

ITSE-1450 System Analysis and Design
(4-3-2) Introduction to the planning, design, and construction of computer information systems using the systems development life cycle and other appropriate design tools.
Recommended Prerequisite: COSC-1436

ITSE-1491 Special Topics in Computer Programming
(4-3-2) 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.
Required Prerequisite: Consent of Department Chairperson

ITSE-2402 Intermediate Web Programming
(4-3-3) Techniques for Web development. Includes server-side and client-side scripting.
Recommended Prerequisite: Competency in basic Web programming or Departmental Approval

ITSE-2405 Windows Programming
(4-3-2) Introduction to computer programming for Windows (Visual Basic). Emphasis on the fundamentals of structured design, development, testing, implementation, and documentation. Includes language syntax, data and file structures, input/output devices, and files. *Recommended Prerequisite:* COSC-1436

ITSE-2409 Database Programming
(4-3-2) Database development using database programming techniques emphasizing database structures, modeling, and database access.
Recommended Prerequisites: COSC-1436 and ITSW-1407

ITSE-2417 Java Programming
(4-3-2) Introduction to object-oriented Java programming including the fundamental syntax and semantics of Java for applications and Web applets.
Recommended Prerequisite: COSC-1436

(ITSW) DATA PROCESSING TECHNOLOGY/TECHNICIAN

ITSW-1407 Introduction to Database
(4-3-2) Introduction to database theory and the practical applications of a database.
Recommended Prerequisite: BCIS-1405 or COSC-1401

ITSW-1410 Introduction to Presentation Graphics Software
(4-3-2) Instruction in the utilization of presentation software to produce multimedia presentations. Graphics, text, sound, animation and/or video may be used in presentation development. *Recommended Prerequisite:* BCIS-1405 or COSC-1401

ITSW-1491 Special Topics in Data Processing Technology/Technician
(4-3-2) 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.

(ITSY) INFORMATION TECHNOLOGY/SECURITY

ITSY-1400 Fundamentals of Information Security
(4-3-2) 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.
Recommended Prerequisite: COSC-1401

ITSY-2400 Operating System Security
(4-3-2) Safeguard computer operating systems by demonstrating server support skills and designing and implementing a security system. Identify security threats and monitor network security implementations. Use best practices to configure operating systems to industry security standards. *Recommended Prerequisite:* ITSY-1400

ITSY-2401 Firewalls and Network Security
(4-3-2) 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. *Recommended Prerequisite:* ITSY-1400

ITSY-2417 Wireless Security Development
(4-3-2) Development of information security policies, standards, and guidelines for an organization. Includes Demilitarized Zone (DMZ), antivirus, Virtual Private Network (VPN), wireless communications, remote access, and other critical administrative and operational security policies. Identification of exposures and vulnerabilities and appropriate countermeasures are addressed. Emphasizes wireless security goals of availability, integrity, accuracy, and confidentiality in the design, planning, implementing, operating, and troubleshooting of wireless LAN along with appropriate planning and administrative controls.
Recommended Prerequisites: ITCC-2410 or ITNW-1451 and ITSY-1400

ITSY-2441 Security Management Practices
(4-3-2) In-depth coverage of security management practices, including asset evaluation and risk management; cyber law and ethics issues; policies and procedures; business recovery and business continuity planning; network security design; and developing and maintaining a security plan. *Recommended Prerequisites:* ITSY-2400 and ITSY-2401

ITSY-2443 Computer System Forensics
(4-3-2) 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. *Recommended Prerequisite:* ITSY-2442

ITSY-2459 Security Assessment and Auditing
(4-3-2) 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. *Recommended Prerequisites:* ITSY-2400 *and* ITSY-2401

(LBRA) LIBRARY TECHNICIAN

LBRA-1174 Practicum in Library Technology
(1-0-7) 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. *Required Co-Requisite:* LBRA-1375

LBRA-1371 Introduction to Library Technology
(3-3-0) Introduction to evolving roles of library information paraprofessionals, including historical and philosophical foundations of libraries, and overview of the professional setting, including types of libraries, information centers and professional organizations. Focus is on the comprehensive study of advanced communication skills for library assistants including techniques in reading, writing, listening and speaking. Covers types of information organizations and employers, role of the LTA, automation, history of the book, tools, and terminology, basic library philosophy, seeking a job, library vendors, conflict resolution, and dealing with change.

LBRA-1372 Organization of Information
(3-3-0) Introduction to cataloging systems (Library of Congress and Dewey Decimal), the acquisitions processes, bibliographic search tools, terminology, serials ordering, check-in and claims processes, and the US MARC coding.

LBRA-1373 Public Services
(3-3-0) Information access skills for print and electronic resources. Use of libraries and their structure, tools, and staff to identify, locate, evaluate and make effective and ethical use of information. Emphasizes critical thinking skills and on clear concise written and spoken communication; techniques for time management, prioritizing reading materials, and comprehending the main ideas and salient details of technical materials, including journals and reports, and other work related materials.

LBRA-1375 Information Sources and Services
(3-3-0) Covers reference philosophy, mission, major types of libraries, criteria to evaluate an information source, information sources available in all formats, the reference interview, search strategies, Boolean searching, and digital resources. Includes copyright laws and the role of professional associates in supporting library systems.
Required Co-Requisite: LBRA-1174

(LGLA) LEGAL ASSISTANT/PARALEGAL

LGLA-1303 Legal Research
(3-3-0) Law library techniques and computer-assisted legal research.
Required Co-Requisite: LGLA-1307

LGLA-1305 Legal Writing
(3-3-0) This course presents the fundamentals of legal writing techniques. Topics include case and fact analysis, citation formats, and legal writing styles.
Required Prerequisites or Co-Requisites: LGLA-1303 *and* LGLA-1307

LGLA-1307 Introduction to Law and the Legal Professions
(3-3-0) This course provides an overview of the law and the legal professions. Topics include legal concepts, systems, and terminology; ethical obligations and regulations; and professional trends and issues, with particular emphasis on the paralegal's role. Prerequisite to other legal assistant courses.

LGLA-1345 Civil Litigation
(3-3-0) This course presents fundamental concepts and procedures of civil litigation with emphasis on the paralegal's role. Topics include pretrial, trial, and post-trial phases of litigation. *Required Prerequisites or Co-Requisites:* LGLA-1303 *and* LGLA-1307

LGLA-1353 Wills, Trusts, and Probate Administration
(3-3-0) This course presents fundamental concepts of the law of wills, trusts, and probate administration with emphasis on the paralegal's role.
Recommended Prerequisites: LGLA-1305 *and* LGLA-1345

LGLA-1355 Family Law
(3-3-0) This course presents fundamental concepts of family law with emphasis on the paralegal's role. Topics include formal and informal marriages, divorce, annulment, marital property, and the parent-child relationship.
Recommended Prerequisites: LGLA-1305 *and* LGLA-1345

LGLA-1391 Special Topics in Legal Assistant/Paralegal
(3-3-0) Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the occupation and relevant to the professional development of the student.
Recommended Prerequisites: LGLA-1305 *and* LGLA-1345 or consent of Program Coordinator

LGLA-2281 Cooperative Education - Legal Assistant/Paralegal
(2-1-10) 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.

LGLA-2288 Internship - Legal Assistant/Paralegal
(2-0-10) 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. *Required Prerequisite:* LGLA-2281

LGLA-2303 Torts and Personal Injury Law
(3-3-0) This course presents fundamental concepts of tort law with emphasis on the paralegal's role. Topics include intentional torts, negligence, and strict liability.
Recommended Prerequisites: LGLA-1305 and LGLA-1345

LGLA-2311 Business Organizations
(3-3-0) Basic concepts of business organizations with emphasis on the paralegal's role. Includes law of agency, sole proprietorships, partnerships, corporations, and other emerging business entities.

LGLA-2380 Cooperative Education - Legal Assistant/Paralegal
(3-1-20) Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the College, employer, and student. Under the supervision of the College and the employer, the student combines classroom learning with work experience. Includes a lecture component.

(LTCA) HOSPITAL AND HEALTH-CARE FACILITIES ADMINISTRATION/MANAGEMENT

LTCA-1311 Introduction to Long Term Care Administration
(3-3-0) An overview of the long term care industry. Includes a survey of the history and philosophy of long term care administration. Provides an introduction to and application of regulatory standards.

LTCA-1312 Resident Care in the Long Term Care Facility
(3-3-0) A study of the delivery of quality services to residents of long term care facilities. Includes a presentation of philosophical and ethical considerations.

LTCA-1313 Organization and Management of Long Term Care Facilities
(3-3-0) An overview of the functional organizational structures common to long term health care facilities. Includes an examination of the role of the long term care facility administrator in the organization and management of long term care facilities.

LTCA-2314 Long Term Care Law
(3-3-0) An examination of the types and sources of law relating to the long term care industry. A study of federal, state, and local statutes and regulations affecting the long term care industry.

LTCA-2315 Financial Management of Long Term Care Facilities
(3-3-0) A study of the techniques used in the financial management of the long term care facility. Includes special accounting requirements of Medicare, Medicaid, and other third-party payer sources. Also covers strategies to promote financial viability such as risk management.

LTCA-2660 Clinical – Hospital and Health-Care Facilities Administration/Management
(6-0-31) A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional.

LTCA-2661 Clinical – Hospital and Health-Care Facilities Administration/Management
(6-0-31) A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional.

(MAIR) MAJOR APPLIANCE INSTALLER AND REPAIRER

MAIR-1449 Refrigerators, Freezers, Window Air Conditioners
(4-3-2) Theory, sequence of operation, components and repair, electrical schematics, and troubleshooting electronic components in air conditioning and refrigeration. Emphasis on safety for the electrical, mechanical, and sealed systems.
Required Prerequisites: HART-1401 and HART-1407

(MATH) MATHEMATICS

MATH-0101 Pre-Algebra Part One
(1-1-0) Content includes the evaluation of absolute values, performing operations with integers, identification of commutative, associative or distributive properties as well as solving algebraic equations, and basic geometry concept. *This is a developmental course and cannot be used to fulfill degree requirements.*

MATH-0102 Pre-Algebra Part Two
1-1-0) Course includes factoring composite numbers to find the greatest and least common factors, performing arithmetic operations with fractions, and solving problems involving fractions. *This is a developmental course and cannot be used to fulfill degree requirements.*

MATH-0103 Pre-Algebra Part Three
(1-1-0) Content includes arithmetic operations and problem-solving using decimals; conversions between fractions, decimals, and percents; statistical analysis of graphs; and computing the mean, median and mode. *This is a developmental course and cannot be used to fulfill degree requirements.*

MATH-0104 Beginning Algebra Part One
(1-1-0) Write, solve and graph linear equations. Graph using points, the slope and y-intercept, x and y-intercepts. Graph parallel and perpendicular lines. Write the equations of lines. *This is a developmental course and cannot be used to fulfill degree requirements.*

MATH-0105 Beginning Algebra Part Two
(1-1-0) Content includes writing and evaluating exponential expressions, using properties of integer exponents, evaluating algebraic polynomials, and performing arithmetic operations on polynomial expressions. Factoring topics include identification of common monomial factors, factoring polynomials, and solving polynomial equations. *This is a developmental course and cannot be used to fulfill degree requirements.*

MATH-0106 Beginning Algebra Part Three
1-1-0) A study of algebraic rational expressions including determining excluded values, evaluating, simplifying, performing arithmetic operations, and solving rational equations including applied problems. *This is a developmental course and cannot be used to fulfill degree requirements.*

MATH-0107 Intermediate Algebra Part One
(1-1-0) Identify functions, write functional notation, identify domain and range, solve and graph equations, inequalities, and systems of equations. *This is a developmental course and cannot be used to fulfill degree requirements.*

MATH-0108 Intermediate Algebra Part Two
(1-1-0) Simplify and perform arithmetic operations on radical expressions, convert between radical and exponential form. Solve quadratic equations by a variety of methods. Solve quadratic form equations. Find and use the discriminant. *This is a developmental course and cannot be used to fulfill degree requirements.*

MATH-0109 Intermediate Algebra Part Three
(1-1-0) Use transformations to graph functions, graph and write the equations for inverse functions, use the properties of logarithms to simplify and solve exponential and

logarithmic equations. Graph and find the equation of a circle. *This is a developmental course and cannot be used to fulfill degree requirements.*

MATH-0302 Pre-Algebra
(3-3-0) Basic arithmetic operations (whole numbers, fractions, decimals and signed numbers), percents and proportions, metric system, geometry of measurement, and statistical graphs. Computer software materials fee charged for some sections. *This is a developmental course and cannot be used to fulfill degree requirements.*

MATH-0304 Beginning Algebra
(3-3-0) Real number properties, polynomials, exponents, radicals, equations and graphs of lines. Computer software materials fee charged for some sections. *This is a developmental course and cannot be used to fulfill degree requirements.*
Required Prerequisite: MATH-0302 or satisfactory score on TCC placement test

MATH-0350 Intermediate Algebra
(3-3-0) Relations and functions, graphing, inequalities, factoring, polynomials, rational expressions and quadratics with an introduction to complex numbers, and exponential and logarithmic functions. Computer software materials fee charged for some sections. *This is a developmental course and cannot be used to fulfill degree requirements.*
Required Prerequisite: MATH-0304 or satisfactory score on TCC placement test

MATH-1314 Functional Approach to College Algebra +
(3-3-0) Study of quadratics; polynomial, rational, logarithmic, and exponential functions; systems of equations; sequences and series; and matrices. Computer software materials fee charged for some sections.
Required Prerequisite: MATH-0350 or satisfactory score on TCC placement test

MATH-1316 Functional Approach to College Trigonometry +
(3-3-0) Circular and trigonometric functions; trigonometric identities and equations; triangle trigonometry, vectors and complex numbers.
Required Prerequisite: MATH-0350 with a grade of B or better or MATH-1314

MATH-1324 College Algebra with Business Applications +
(3-3-0) Mathematical models and introduction to functions, equations and graphs of functions (linear, quadratic, exponential, and logarithmic). Systems of linear equations and inequalities, linear programming and matrix algebra.
Required Prerequisite: MATH-0350 or satisfactory score on TCC placement test
This course may be taken for honors credit. Consult the department for information.

MATH-1325 Mathematics of Business Analysis +
(3-3-0) Introduction to differential and integral calculus (with applications), probability, decision making and simulation.
Required Prerequisite: MATH-1324 or MATH -1314
This course may be taken for honors credit. Consult the department for information.

MATH-1332 Survey of Mathematics +
(3-3-0) A selection of mathematical topics of general interest and some applicability. May not be used as a prerequisite for other TCC mathematics courses.
Required Prerequisite: MATH-0350 or satisfactory score on TCC placement test

MATH-1342 Elementary Statistics +
(3-3-0) Probability; population sampling; collection, tabulation, and graphing of data; frequency distributions; mean and standard deviation; normal distribution; correlation and regression, and tests for significance.
Required Prerequisite: MATH-0350 or satisfactory score on TCC placement test

MATH-1350 Foundations of Mathematics for Middle Grades Teachers I +
(3-3-0) Concepts of sets, functions, numeration systems, number theory, and properties of the natural numbers, integers, rational, and real number systems with an emphasis on problem solving and critical thinking. This course is designed specifically for students who seek middle grade (4-8) teacher certification. *Required Prerequisite:* MATH-1314

MATH-1351 Foundations of Mathematics for Middle Grades Teachers II +
(3-3-0) Concepts of geometry, probability and statistics, as well as applications of the algebraic properties of real numbers to concepts of measurement with an emphasis on problem solving and critical thinking. This course is designed specifically for students who seek middle grade (4-8) teacher certification. *Required Prerequisite:* MATH-1350

MATH-2315 Calculus with Analytical Geometry III +
(3-3-0) Vectors, partial derivatives, multiple integrals, and introduction to differential equations. *Required Prerequisite:* MATH-2414*

MATH-2318 Linear Algebra +
(3-3-0) Matrix Properties: row operations, Gaussian elimination, determinants, eigenvalues, and eigenvectors. Finite dimensional vector spaces, linear transformations, and applications. *Required Prerequisite:* MATH-2414*

MATH-2320 Introduction to Differential Equations +
(3-3-0) First-order and linear differential equations, series solutions, systems of equations, and applications from science and engineering fields.
Required Prerequisite: MATH-2315*

MATH-2412 Pre-Calculus +
(4-4-0) The study of elementary functions, both algebraic and trigonometric, their graphs and applications. These functions include polynomial, rational, exponential, logarithmic and trigonometric.
Required Prerequisite: MATH-1316 or satisfactory score on TCC placement test*

MATH-2414 Calculus With Analytic Geometry II +
(4-4-0) Derivatives of inverse trigonometric, hyperbolic and inverse hyperbolic functions; integration of special forms (inverse trigonometric and inverse hyperbolic functions); techniques of integration; sequences and series; conics; and polar coordinates.
Required Prerequisite: MATH-2513*

MATH-2421 Differential Equations and Linear Algebra +
(4-4-0) Ordinary differential equations, vector spaces, linear transformations, matrix/vector algebra, eigenvectors, Laplace Transforms and systems of equations. *Required Prerequisite:* MATH-2414

MATH-2513 Calculus with Analytic Geometry I +
(5-5-0) Geometry of lines and circles; limits; continuity; and differentiation, antidifferentiation, and integration of algebraic, trigonometric, logarithmic, and exponential functions. Applications of differentiation and integration.
Required Prerequisite: MATH-2412 or satisfactory score on TCC placement test

(MCHN) MACHINE TOOL TECHNOLOGY/MACHINIST

MCHN-2403 Fundamentals of Computer Numerical Controlled (CNC) Machine Controls
(4-3-3) An introduction to G and M codes (RS274-D) necessary to program Computer Numerical Controlled (CNC) machines.

MCHN-2431 Operation of CNC Turning Centers
(4-3-3) A continuation of Fundamentals of CNC Machine Controls with an emphasis on turning centers.

MCHN-2434 Operation of CNC Machining Centers
(4-3-3) A continuation of Fundamentals of CNC Machine Controls with an emphasis on machining centers.

MCHN-2444 Computerized Numerical Control Programming
(4-3-3) Programming and operation of Computer Numerical Controlled (CNC) machine shop equipment.

(MRKG) MARKETING AND MARKETING MANAGEMENT, GENERAL

MRKG-1302 Principles of Retailing
(3-3-0) An introduction to the retailing environment, types of retailers, current trends, the employment of retailing techniques, and factors that influence retailing.

MRKG-1311 Principles of Marketing
(3-3-0) Introduction to the marketing mix functions and process. Includes identification of consumer and organizational needs and explanation of environmental issues.

MRKG-2333 Principles of Selling
(3-3-0) Overview of the selling process. Identification of the elements of the communication process between buyers and sellers. Examination of the legal and ethical issues of organizations which affect salespeople.

MRKG-2348 Marketing Research and Strategies
(3-3-0) Practical experiences in analyzing marketing studies using data-driven decision-making processes. Includes interrelationships among marketing price, place, promotion, and product responsibility.

MRKG-2349 Advertising and Sales Promotion
(3-3-0) Integrated marketing communications. Includes advertising principles and practices. Emphasizes multimedia of persuasive communication including buyer behavior, budgeting, and regulatory constraints.

(MUAP) APPLIED MUSIC

MUAP-1190 Private Music Lessons +
(1-.5-0) Piano, organ, voice, string, woodwind, brass and percussion instruments. Primarily for non-music majors. Students are required to participate in recital activities including attending performances and performing as assigned. Private music lesson fee charged. May be taken four times for credit.

MUAP-1191 Private Music Lessons +
(1-.5-0) Piano and voice at the beginning college level. Primarily for music majors to fulfill secondary instrument requirement. Students are required to participate in recital activities including attending performances and performing as assigned. Private music lesson fee charged. May be taken four times for credit.

MUAP-1290 Private Music Lessons +
(2-1-0) Piano, organ, voice, string, woodwind, brass and percussion instruments. Primarily for non-music majors. Students are required to participate in recital activities including attending performances and performing as assigned. Private music lesson fee charged. May be taken four times for credit.

MUAP-1291 Private Music Lessons +
(2-1-0) Piano, organ, voice, string, woodwind, brass and percussion instruments. For music majors to fulfill principal instrument requirement. Students are required to participate in recital activities including attending performances and performing as assigned. Private music lesson fee charged. May be taken four times for credit.

MUAP-1292 Private Music Lessons +
(2-1-0) Continuation of MUAP-1291. For music majors to fulfill principal instrument requirement. Students are required to participate in recital activities including attending performances and performing as assigned. Private music lesson fee charged. May be taken four times for credit. *Recommended Prerequisite:* MUAP 1291

MUAP-2291 Private Music Lessons +
(2-1-0) Piano, organ, voice, string, woodwind, brass and percussion instruments at the advanced level. For music majors to fulfill requirements in a principal instrument. Students are required to participate in recital activities including attending performances and performing as assigned. Private music lesson fee charged. May be taken four times for credit. *Recommended Prerequisite:* MUAP-1291

MUAP-2292 Private Music Lessons +
2-1-0) Continuation of MUAP 2291. Students are required to participate in recital activities including attending performances and performing as assigned. Private music lesson fee charged. May be taken four times for credit.
Recommended Prerequisite: MUAP-2192

(MUEN) MUSIC ENSEMBLE

MUEN-1121 Jazz Ensemble +
(1-0-3) Open to students with previous jazz band experience or those with instrumental skills and a desire for learning jazz and improvisation techniques.

MUEN-1122 Jazz Lab Band +
(1-0-3) Open to students with previous jazz band experience or those with instrumental skills desiring to perform in a jazz band.

MUEN-1132 Special Ensembles (Instrumental) +
(1-0-2) Small instrumental ensembles to meet special needs. Nature of ensemble determined by student interest and instrumentation. May be taken four times for credit.

MUEN-1133 Special Ensembles (Instrumental) +
(1-0-3) Small instrumental ensembles to meet special needs. Nature of ensemble determined by student interest and instrumentation.

MUEN-1141 Choral Ensembles +
(1-0-3) Performance of serious literature. All voice principals must enroll in one of these ensembles.
    A. Choir. Choral ensemble performing serious literature from all periods in music history. Open to all students without audition.
    B. Madrigal Singers. Select choral ensemble of 12-13 members performing music for madrigal repertory. Audition is by invitation of director.
    C. Chamber Singers. Select choral ensemble performing serious choral literature from all periods of music history. Membership by audition only.
    D. Concert Chorale. Evening chorus for students from community at large. Large-scale choral works from various periods of music history. Membership by audition only.

MUEN-1142 Choral Ensembles +
(1-0-3) Performance of music of light nature. Open to all students without audition.
    A. TCC Collegiate Chorale/Choral ensemble for general College students. Light choral music and choral arrangements of traditional and popular songs.
    B. TCC Singers. Choral ensemble performing music of light nature. Emphasis on Broadway show tunes, spirituals, and popular, folk, and patriotic music.

MUEN-2131 Keyboard Ensemble +
(1-0-3) Performing ensemble for keyboard majors and minors. Membership by audition. May be taken four times for credit.

(MUSI) MUSIC

MUSI-1157 Opera Workshop I +
(1-0-3) Performance of portions of or complete operas and the study of the integration of music, acting and staging of an opera.

MUSI-1160 Vocal Diction I +
(1-2-0) Phonetic sounds of Italian and English languages enhancing the ability to sing in these languages.

MUSI-1163 Jazz Improvisation I +
(1-2-0) Fundamentals of music theory as applied to jazz improvisation. Covers basic chord and scale relationships. Includes performance as well as classroom theory.

MUSI-1164 Jazz Improvisation II +
(1-2-0) A continuation of MUSI-1163. Covers more advanced harmonic structures and scales.

MUSI-1181 Class Piano I +
(1-2-1) Introduction to piano playing through use of simple pieces. For students with no knowledge of the keyboard and music reading, and for vocal and instrumental music majors with no piano background.

MUSI-1182 Class Piano II +
(1-2-1) Piano music reading development; major, minor and chromatic scales; chords; harmonization; improvisation; and transposition.
Recommended Prerequisite: MUSI-1181 or audition

MUSI-1183 Class Voice +
(1-2-1) Fundamentals of breathing, vocal productions, and placement. Primarily for instrumental and keyboard majors to fulfill secondary requirement in voice, and for non-music majors to learn fundamentals of vocal techniques.

MUSI-1192 Class Guitar +
(1-2-1) Music fundamentals and performance of the classical guitar.

MUSI-1193 Class Guitar II +
(1-1-3) Continuation of MUSI 1192. Music fundamentals and performance of the classical guitar.

MUSI-1211 Harmony I +
(2-3-0) Chord and melody structure, chord progression and part-writing as seen in music literature of all periods. Review of music fundamentals with emphasis on refinement of musical judgments. Direct application to the keyboard.

MUSI-1212 Harmony II +
(2-3-0) Continuation of MUSI-1211.

MUSI-1216 Ear Training I +
(2-3-0) Sight-singing, rhythmic, melodic and harmonic dictation parallel to study in Harmony I.

MUSI-1217 Ear Training II +
(2-3-0) Continuation of MUSI-1216. Concurrent with MUSI-1212.
Recommended Prerequisite: MUSI-1216

MUSI-1286 Music Composition I +
(2-2-0) The study of compositional techniques to compose short pieces for simple instrumentation.

MUSI-1287 Music Composition II +
(2-2-0) Continuation of MUSI-1286. Expansion to larger forms using more complex instrumentation.

MUSI-1301 Music Reading +
(3-3-0) Fundamentals of music reading and basic music terminology for the person who has little or no experience in music.

MUSI-1304 Basic Music for Classroom Teachers I +
(3-3-0) Experiences in music creativity for the college student majoring in elementary education and the "in-service" classroom teacher who has had little formal training in music.

MUSI-1306 Music Appreciation +
(3-3-0) Music for the college student. Historical evolutions of music with emphasis on major styles and types as revealed in music literature through the centuries.

MUSI-1308 Music Literature I +
(3-3-0) Historical development of music as an art with emphasis on listening.

MUSI-1390 Musical Instrument Digital Interface (MIDI) I +
(3-3-0) An overview of Musical Instrument Digital Interface (MIDI) systems and applications. Topics include the history and evolution of MIDI, the hardware requirements, computer numbering systems, channels and modes, the MIDI language, and typical implementation of MIDI applications in the studio environment using software-based sequencing and music notation programs.

MUSI-1391 Musical Instrument Digital Interface (MIDI) II +
(3-3-0) A continuation of MIDI I with emphasis on advanced sequencer operation, digital audio, and SMPTE-based synchronization in the interaction of multiple recording and playback systems.
Recommended Prerequisite: MUSI 1390 or consent of Department Chairperson

MUSI-2192 Class Guitar III +
(1-1-3) A continuation of MUSI-1193. Advanced performance skills of the classical guitar.

MUSI-2193 Class Guitar IV +
(1-1-3) Advanced performance skills of the classical guitar.

MUSI-2211 Harmony III +
(2-3-0) A continuation of MUSI-1212. *Recommended Prerequisite:* MUSI 1212

MUSI-2212 Harmony IV +
(2-3-0) A continuation of MUSI-2211. *Recommended Prerequisite:* MUSI-2211

MUSI-2216 Ear Training III +
(2-3-0) A continuation of MUSI-1217. *Recommended Co-Requisite:* MUSI-2211

MUSI-2217 Ear Training IV +
(2-3-0) A continuation of MUSI-2216. *Recommended Co-Requisite:* MUSI-2212

(OSHT) OCCUPATIONAL SAFETY AND HEALTH TECHNOLOGY/TECHNICIAN

OSHT-1305 OSHA Regulations - Construction Industry
(3-3-0) A study of Occupational Safety and Health Administration (OSHA) regulations pertinent to the construction industry.

OSHT-1313 Accident Prevention, Inspection and Investigation
(3-3-0) Provides a basis for understanding the nature of occupational hazard recognition, accident prevention, loss reduction, inspection techniques, and accident investigation analysis.

OSHT-1321 Fire Protection Systems
(3-3-0) Study of fire protection systems and their application with emphasis on the fire prevention codes and standards.

OSHT-1391 Special Topics in Occupational Safety and Health Technology/Technician
(3-3-0) Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. This course was designed to be repeated multiple times to improve student proficiency.

OSHT-2288 Internship - Occupational Safety and Health Technology/Technician
(2-0-6) 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 employer.

OSHT-2309 Safety Program Management
(3-3-0) Examine the major safety management issues that affect the workplace including safety awareness, loss control, regulatory issues, and human behavior modification.

OSHT-2320 Safety Training Presentation Techniques
(3-3-0) Principles of developing and presenting effective industrial and business training. Emphasis on instructor qualifications and responsibilities, principles of teaching including use of teaching aids and presentation skills.

OSHT-2401 OSHA Regulations - General Industry
(4-4-0) A study of Occupational Safety and Health Administration (OSHA) regulations pertinent to general industry.

OSHT-2405 Ergonomics and Human Factors in Safety
(4-4-0) The relationship of human behavior and ergonomics as applied to workplace safety.

(PBAD) PUBLIC ADMINISTRATION AND SERVICES

PBAD-1315 Postal Organization, Development and Management
(3-3-0) An overview of the history of written communication and merchandise delivery. Topics include current postal organization; postal philosophies, policies, procedures, rules and regulations; and principles of effective supervision.

PBAD-1345 Postal Customer Services, Processing and Distribution
(3-3-0) Fundamentals of mail delivery and collection systems within the U.S. Postal Service. Topics include postal and non-postal services, retail functions, and customer relations; revenue determination procedures; and flow characteristics involved in receipt, processing, and dispatch of all mail.

PBAD-1370 Mail Processing, Distribution, and Transportation
(3-3-0) A detailed account of the acceptance, mail processing, and transportation procedures of the U.S. Postal Service. Explains the current management structure as it

relates to processing and distribution; describes methods to determine scheduling and staffing requirements; defines classifications of mail and determines rates.

PBAD-1391 Special Topics in Public Administration and Services
(3-3-0) Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student.

PBAD-2341 Legal Aspects of Public Management
(3-3-0) A study of the organizational structure of the judicial systems, conducting legal research, and interpreting legal decisions. Topics include administrative law, contract law, civil procedures, and the regulatory process as it relates to the postal system.

PBAD-2345 Postal Finance and Labor Relations
(3-3-0) In-depth coverage of the internal workings of postal finance units and the regulations and procedures involved. Topics include laws and practices related to labor and management in the postal service. Emphasis will be on national and local agreements, bargaining units and associations, grievance procedures, and the National Labor Relations Board.

(PHED) PHYSICAL AND HEALTH EDUCATION

PHED-1101 Aerobic Dance - Beginning +
(1-0-3) Improves cardiovascular fitness, muscular endurance, strength, flexibility, and body composition. (Course is coeducational)

PHED-1102 Aerobic Fitness - Beginning +
(1-0-3) Improves cardiovascular fitness, muscular endurance/strength, flexibility, and body composition. (Course is coeducational)

PHED-1103 Basketball - Beginning +
(1-0-3) Instruction in the game of basketball with emphasis on the development and improvement of basic skills and strategies as well as an understanding of the rules of the game. (Course is coeducational)

PHED-1104 Bowling - Beginning +
(1-0-3) Develops the basic skills necessary to enjoy the lifetime sport of bowling. (Course is coeducational)

PHED-1105 Camping and Backpacking - Beginning +
(1-0-3) Develops the basic skills necessary to enjoy the lifetime sport of camping and backpacking. (Course is coeducational)

PHED-1106 Camping and Hiking - Beginning +
(1-0-3) Develops the basic skills necessary to enjoy the lifetime sport of camping and hiking. (Course is coeducational)

PHED-1107 Conditioning - Beginning +
(1-0-3) Improves cardiovascular-respiratory fitness, body composition, flexibility, and muscular endurance, and muscular strength. (Course is coeducational)

PHED-1109 Conditioning and Weight Control - Beginning +
(1-0-3) Provides the overweight student insight into the nutritional, psychological and exercise factors that influence the development of obesity.

PHED-1110 Cycling - Beginning +
(1-0-3) Stimulates interest and develops skills necessary for participation in bicycling for physical conditioning and recreation. Covers bicycle repairs, endurance and flexibility training. (Course is coeducational)

PHED-1111 Golf - Beginning +
(1-0-3) Develops and improves individual skills, and the understanding of the rules of golf. (Course is coeducational)

PHED-1112 Jogging - Beginning +
(1-0-3) Improves cardiovascular fitness, body composition and flexibility. (Course is coeducational)

PHED-1113 Kickboxing - Beginning +
(1-0-3) Improves cardiovascular fitness, muscular endurance/strength, flexibility and body composition. (Course is coeducational)

PHED-1115 Racquetball - Beginning +
(1-0-3) Develops and improves basic skills, strategies and rules for the game of racquetball. (Course is coeducational)

PHED-1116 Recreational Sports - Beginning +
(1-0-3) Develops and improves basic skills, strategies and rules of various recreational sports. (Course is coeducational)

PHED-1117 Sailing - Beginning +
(1-0-3) Learn to sail safely. Covers sailing tasks associated with points of sailing, nautical terms, boat rescue and/or recovery, and the operation and repair of sailing equipment. (Course is coeducational)

PHED-1118 Solo Canoeing - Beginning +
(1-0-3) Provides instruction in the sport of canoeing with progression from flat water to white water. (Course is coeducational)

PHED-1120 Step Aerobics - Beginning +
(1-0-3) Improves cardiovascular fitness, muscular endurance/strength, flexibility and body composition, and covers diet/weight management. (Course is coeducational)

PHED-1121 Swim Conditioning - Beginning +
(1-0-3) Improves cardiovascular fitness, muscular strength/endurance and body composition. (Course is coeducational)

PHED-1122 Swimming - Beginning +
(1-0-3) Develops good swimming technique, improves cardiovascular fitness level, and teaches water safety skills. (Course is coeducational)

PHED-1123 Swimming - Advanced Beginning +
(1-0-3) Develops good swimming technique, improves cardiovascular fitness level, and teaches water safety skills. (Course is coeducational)

PHED-1124 Tandem Canoeing - Beginning +
(1-0-3) Instruction in the sport of canoeing with progression from flat water to white water. (Course is coeducational)

PHED-1125 Tennis - Beginning +
(1-0-3) Develops and improves skills, strategies, and rules for the game of tennis. (Course is coeducational)

PHED-1126 Tennis - Advanced Beginning +
(1-0-3) Develops and improves skills, strategies, and rules for the game of tennis. (Course is coeducational)

PHED-1128 Volleyball - Beginning +
(1-0-3) Develops and improves basic skills, strategies and rules for the game of volleyball. (Course is coeducational)

PHED-1129 Walk or Jog - Beginning +
(1-0-3) Improves cardiovascular fitness, body composition and flexibility. (Course is coeducational)

PHED-1130 Walk - Beginning +
(1-0-3) Designed for the student who desires cardiovascular fitness of a low-impact nature through vigorous walking. (Course is coeducational)

PHED-1131 Water Aerobics - Beginning +
(1-0-3) Develops cardiovascular endurance, flexibility, and muscular endurance/strength through the resistance medium of water, and covers weight control. (Course is coeducational)

PHED-1132 Water Exercise - Beginning +
(1-0-3) Improves cardiovascular fitness, muscular strength/endurance, and flexibilty through water exercises, and covers a diet/weight management program. (Course is coeducational)

PHED-1133 Weight Training - Beginning +
(1-0-3) Improves muscular endurance and/or muscular strength. (Course is coeducational)

PHED-1134 Yoga - Beginning +
(1-0-3) Improves flexibility, muscular endurance/strength and mental well-being. (Course is coeducational)

PHED-1135 Adaptive Dance - Beginning +
(1-0-3) Experience a shift in the traditional forms of dance education. Explore dance as a community integration experienced through hands-on experience, lecture and presentation. (Course is coeducational)

PHED-1136 Ballet - Beginning +
(1-0-3) Experience classical ballet technique and discover historical connections between ballet and other dance forms. (Course is coeducational)

PHED-1137 Ballet - Intermediate +
(1-0-3) Experience classical ballet technique and discover historical connections between ballet and other dance forms. (Course is coeducational)

PHED-1138 Choreography - Beginning +
(1-0-3) Experience improvisation as a basic building block in dance making. (Course is coeducational)

PHED-1139 Country Western Dance - Beginning +
(1-0-3) Experience various styles of country-dance and swing and improve overall workout level, coordination, and strength/endurance. (Course is coeducational)

PHED-1140 Jazz - Beginning +
(1-0-3) Experience various styles of jazz dance, basic jazz terminology, and the historical connections between jazz dance, jazz music, and other dance forms. (Course is coeducational)

PHED-1141 Jazz - Intermediate +
(1-0-3) Experience various styles of jazz dance, basic jazz terminology, and the historical connections between jazz dance, jazz music and other dance forms. (Course is coeducational)

PHED-1142 Modern Dance - Beginning +
(1-0-3) Experience various aspects of dance through creative movement and develop a basic understanding of anatomy, proper body alignment, and discover historical connections between different styles of dance. (Course is coeducational)

PHED-1143 Modern Dance - Intermediate +
(1-0-3) Experience various aspects of dance through creative movement and develop a basic understanding of anatomy, proper body alignment, and discover historical connections between different styles of dance. (Course is coeducational)

PHED-1144 Performance Dance - Beginning +
(1-0-3) Enhances knowledge of dance. Perform at least one dance piece, attend specific rehearsals for the piece(s) that will be performed, record experiences in journal form, and participate in a self-evaluation. (Course is coeducational)

PHED-1145 Performance Dance - Intermediate +
(1-0-3) Enhances knowledge of dance. Perform at least one dance piece, attend specific rehearsals for the piece(s) that will be performed, record experiences in journal form, and participate in a self-evaluation. (Course is coeducational)

PHED-1146 Tap - Beginning +
(1-0-3) Embrace the art of tap dancing and explore "the who, what, when, where and why" of tap. (Course is coeducational)

PHED-1147 Tap - Intermediate +
(1-0-3) Embrace the art of tap dancing and explore "the who, what, when, where and why" of tap. (Course is coeducational)

PHED-1148 Pilates - Beginning +
(1-0-3) Covers basic concepts and skills in the Pilates method of conditioning, including core strength, muscle tone, coordination and flexibility. Non-impact mat exercises are modified to various fitness levels.

PHED-1164 Concepts of Physical Activity +
(1-1-2) Contemporary health fitness concepts as they pertain to the individual student.
1. Scientific information concerning values and preventive medical benefits of exercise.
2. Individual (personal) evaluations and experiments to determine present health fitness status.
3. Development of a personal exercise program based on student's needs.

PHED- 1251 Scuba - Beginning +
(2-1-2) This course includes instruction regarding skills and safety necessary for scuba and skin diving. In preparation for open water certification, it includes classroom and pool sessions with equipment.
Required Prerequisite: The student will demonstrate specific water competencies. The student must continuously swim a distance of 300 yards using any proficient stroke, perform a 10-minute survival swim, and perform an underwater swim of at least 60 feet.

PHED-1252 Scuba - Intermediate +
(2-1-2) This course includes advanced classroom and pool skills and instruction, in preparation for advanced open water diver certification.
Required Prerequisite: The student must provide proof of an international open water diving certification or have previously completed a beginning scuba course at TCC.

PHED-1304 Personal and Community Health +
(3-3-0) Scientific facts, basic principles, and desirable practices in relation to personal and community health. Emphasis on the development of functional attitudes and meaningful concepts for healthful living.

PHED-1306 First Aid and Safety +
(3-3-0) Designed to enable students to recognize and avoid hazards within their environment, to render intelligent assistance in case of accident or illness and to develop skills necessary for the immediate and temporary care of the victim. Successful completion of the course may enable the student to receive a certificate from a nationally recognized agency.

PHED-1308 Sports Officiating I +
(3-3-0) Instruction in rules, interpretation, and mechanics of officiating selected sports. Includes the sports of basketball, volleyball, baseball, softbal, and football. Other sports may be included as well. (Course is coeducational)

PHED-1338 Concepts of Lifetime Wellness +
(3-3-0) Introduces concepts of physical fitness, nutrition, health promotion and disease prevention. This course is designed to present information which will assist the student in making intelligent choices that contribute to a healthy lifestyle.
This course may not be substituted for PHED-1164 in the Core Curriculum.

PHED-2101 Aerobic Dance - Intermediate +
(1-0-3) Improves cardiovascular fitness, muscular endurance, strength, flexibility and body composition. (Course is coeducational)

PHED-2102 Aerobic Fitness - Intermediate +
(1-0-3) Improves cardiovascular fitness, muscular endurance/strength, flexibility and body composition. (Course is coeducational)

PHED-2103 Basketball - Intermediate +
(1-0-3) Instruction in the game of basketball with emphasis on the development and improvement of basic skills and strategies as well as an understanding of the rules of the game. (Course is coeducational)

PHED-2104 Bowling - Intermediate +
(1-0-3) Develops the basic skills necessary to enjoy the lifetime sport of bowling. (Course is coeducational)

PHED-2106 Camping and Hiking - Intermediate +
(1-0-3) Develops the basic skills necessary to enjoy the lifetime sport of camping and hiking. (Course is coeducational)

PHED-2107 Conditioning - Intermediate +
(1-0-3) Improves cardiovascular-respiratory fitness, body composition, flexibility and muscular endurance, and muscular strength. (Course is coeducational)

PHED-2110 Cycling - Intermediate +
(1-0-3) Stimulates interest and develops skills necessary for participation in bicycling for physical conditioning and recreation. Covers bicycle repairs, endurance and flexibility training. (Course is coeducational)

PHED-2111 Golf - Intermediate +
(1-0-3) Develops and improves individual skills, and the understanding of the rules of golf. (Course is coeducational)

PHED-2112 Jogging - Intermediate +
(1-0-3). Improves cardiovascular fitness, body composition, and flexibility. (Course is coeducational)

PHED-2113 Kickboxing - Intermediate +
(1-0-3) Improves cardiovascular fitness, muscular endurance/strength, flexibility and body composition. (Course is coeducational)

PHED-2115 Racquetball - Intermediate +
(1-0-3) Develops and improves basic skills, strategies and rules for the game of racquetball. (Course is coeducational)

PHED-2116 Recreational Sports - Intermediate +
(1-0-3) Develops and improves basic skills, strategies and rules of various recreational sports. (Course is coeducational)

PHED-2117 Sailing - Intermediate +
(1-0-3) Learn to sail safely. Covers sailing tasks associated with points of sailing, nautical terms, boat rescue and/or recovery, and the operation and repair of sailing equipment. (Course is coeducational)

PHED-2120 Step Aerobics - Intermediate +
(1-0-3) Improves cardiovascular fitness, muscular endurance/strength, flexibility and body composition, and covers diet/weight management. (Course is coeducational)

PHED-2121 Swim Conditioning - Intermediate +
(1-0-3) Improves cardiovascular fitness, muscular strength/endurance and body composition. (Course is coeducational)

PHED-2122 Swimming - Intermediate +
(1-0-3) Develops good swimming technique, improves cardiovascular fitness level and teaches water safety skills. (Course is coeducational)

PHED-2123 Swimming - Advanced +
(1-0-3) Develops good swimming technique, improves cardiovascular fitness level, and teaches water safety skills. (Course is coeducational)

PHED-2125 Tennis - Intermediate +
(1-0-3) Develops and improves skills, strategies and rules for the game of tennis. (Course is coeducational)

PHED-2126 Tennis - Advanced +
(1-0-3) Develops and improves skills, strategies and rules for the game of tennis. (Course is coeducational)

PHED-2128 Volleyball - Intermediate +
(1-0-3) Develops and improves basic skills, strategies and rules for the game of volleyball. (Course is coeducational)

PHED-2129 Walk or Jog - Intermediate +
(1-0-3) Improves cardiovascular fitness, body composition and flexibility. (Course is coeducational)

PHED-2130 Walk - Intermediate +
(1-0-3) Designed for the student who desires cardiovascular fitness of a low-impact nature through vigorous walking. (Course is coeducational)

PHED-2131 Water Aerobics - Intermediate +
(1-0-3) Develops cardiovascular endurance, flexibility, and muscular endurance/strength through the resistance medium of water, and covers weight control.
(Course is coeducational)

PHED-2132 Water Exercise - Intermediate +
(1-0-3) Improves cardiovascular fitness, muscular strength/endurance, flexibility through water exercises, and covers a diet/weight management program. (Course is coeducational)

PHED-2133 Weight Training - Intermediate +
(1-0-3) Improves muscular endurance and/or muscular strength. (Course is coeducational)

PHED-2134 Yoga - Intermediate +
(1-0-3) Improves flexibility, muscular endurance/strength and mental well-being. (Course is coeducational)

PHED-2135 Adaptive Dance - Intermediate +
(1-0-3) Experience a shift in the traditional forms of dance education. Explore dance as a community integration experienced through hands-on experience, lecture and presentation. (Course is coeducational)

PHED-2136 Ballet - Intermediate or Advanced +
(1-0-3) Experience classical ballet technique and discover historical connections between ballet and other dance forms. (Course is coeducational)

PHED-2137 Ballet - Advanced +
(1-0-3) Experience classical ballet technique and discover historical connections between ballet and other dance forms. (Course is coeducational)

PHED-2138 Choreography - Intermediate +
(1-0-3) Experience improvisation as a basic building block in dance making. (Course is coeducational)

PHED-2139 Country Western Dance - Intermediate +
(1-0-3) Experience various styles of country-dance and swing and improve overall workout level, coordination, and strength/endurance. (Course is coeducational)

PHED-2142 Modern Dance - Intermediate or Advanced +
(1-0-3) Experience various aspects of dance through creative movement and develop a basic understanding of anatomy, proper body alignment, and discover historical connections between different styles of dance. (Course is coeducational)

PHED-2144 Performance Dance - Intermediate or Advanced +
(1-0-3) Enhances knowledge of dance. Perform at least one dance piece, attend specific rehearsals for the piece(s) that will be performed, record experiences in journal form, and participate in a self-evaluation. (Course is coeducational)

PHED-2145 Performance Dance - Advanced +
(1-0-3) Enhances knowledge of dance. Perform at least one dance piece, attend specific rehearsals for the piece(s) that will be performed, record experiences in journal form, and participate in a self-evaluation. (Course is coeducational)

PHED-2146 Ballroom Dance I +
(1-0-3) Instruction and participation in ballroom dance technique.

PHED-2147 Ballroom Dance II +
(1-0-3) Instruction and participation in ballroom dance technique.

PHED-2148 Pilates - Intermediate +
(1-0-3) Covers basic concepts and skills in the Pilates method of conditioning, including core strength, muscle tone, coordination, and flexibility. Non-impact mat exercises are modified to various fitness levels.

(PHIL) PHILOSOPHY

PHIL-1301 Introduction to Philosophy +
(3-3-0) An introduction to the methods and content of philosophy as an organized discipline. Reasoned consideration of major concepts, questions, and schools of thought

about human existence; including topics such as knowledge, truth, self, freewill, divinity, good and evil, beauty, reality, happiness and meaning.

Required Prerequisite: RDNG-0361 or RDNG-0363 with a grade of C plus achieve 11th grade level score on Nelson-Denny, or an approved alternative

PHIL-1304 Great Religions of the World +
(3-3-0) History, beliefs, ethics, and practices of the major religions: Christianity, Judaism, Islam, Hinduism, Buddhism and Confucianism.

PHIL-1316 History of Biblical Religion I +
(3-3-0) History of biblical religion from beginnings to the first century of the Common Era, with concentration on Judaism and biblical literature (Bible/Tanak/Old Testament); consideration of relevance to Christianity and Islam, extra-biblical literature, and specialized themes may be included.

PHIL-1317 History of Biblical Religion II +
(3-3-0) History of biblical religion from the first to the fourth century of the Common Era, with concentration on Christianity and biblical literature (New Testament); consideration of Greek, Roman, and Jewish religious and cultural ideas; extra-biblical literature and specialized themes may be included.

PHIL-2303 Logic +
(3-3-0) An introduction to modes of modern logic, especially those appropriate to a computer information age. Definition of concepts. Fundamentals of sentential logic, first order predicate logic, traditional syllogistic logic, and the contrasting procedures of induction, probability and the scientific method.

PHIL-2306 Ethics +
(3-3-0) An introduction to the basic principles of moral philosophy and the good life. Critical examination of the bases for making ethical judgments, and of the principal theories of good and evil, justice, duty and freedom. Application of ethical norms to moral situations and pressing problems in contemporary society and development of an ideal ethic.
 This course may be taken for honors credit. Consult the department for information.

PHIL-2316 History of Classical and Modern Philosophy +
(3-3-0) Study of major philosophers and philosophical systems from ancient, through medieval, to modern times with emphasis on the contributions of mathematical and scientific thought to these systems.
This course may be taken for honors credit. Consult the department for information.

(PHTC) COMMERCIAL PHOTOGRAPHY

PHTC-1300 Photo Digital Imaging I
(3-2-4) An introduction to computer and software instruction for electronic imaging. Includes color, gray scale, image conversion, presentation, and ethics.
Recommended Prerequisite: ARTS-2356

PHTC-1343 Expressive Photography
(3-2-4). A study of formal, professional, and individual uses of photography by applying photographic technology to personalized needs. Emphasis on creative visual thinking, problem solving, and the exploration of personal vision. Portfolio development and presentation is also covered.

Recommended Prerequisite: ARTS-2356 or consent of instructor

PHTC-1353 Portraiture I
(3-2-4) Skill development in the photographic principles of portrait lighting, posing, and subject rapport. *Recommended Prerequisite:* ARTS-2356 or consent of the instructor

PHTC-2331 Architectural Photography
(3-2-4) Study of the equipment, processes, and the procedures necessary for the photography of building exteriors and interiors, dusk/night and night architectural landscapes, and construction progress.
Recommended Prerequisite: ARTS-2356 or consent of the instructor

PHTC-2343 Portfolio Development
(3-2-4) A culmination experience for the evaluation of the student's photographic competencies. Includes association with a professional photographic organization, skills in résumé creation, completion of portfolio, professional self-presentation, comprehensive exam, and seminars in areas of photographic interest.

PHTC-2349 Photo Digital Imaging II
(3-2-4) Advanced concepts in the use of the computer and software for photographic manipulation and output.

(PHYS) PHYSICS

PHYS-1401 College Physics I +
(4-3-3) The first semester of an Algebra/Trigonometry level physics sequence that involves the study of mechanics, heat, and sound.
Required Prerequisite: MATH-1314*
Required Co-Requisite: Laboratory PHYS-1401L

PHYS-1402 College Physics II +
(4-3-3) The second semester of an Algebra/Trigonometry level physics sequence that involves the study of electricity and magnetism, optics and light and modern physics.
Required Prerequisites: PHYS-1401 and MATH-1314*
Required Co-Requisite: Laboratory PHYS-1402L

PHYS-1403 Stars and Galaxies +
(4-3-3) Study of stars, galaxies, and the universe outside our solar system. Laboratory requires night observations. *Required Co-Requisite:* Laboratory PHYS-1403L

PHYS-1404 Solar System +
(4-3-3) Study of the sun and its solar system, including its origin. Laboratory requires night observations. *Required Co-Requisite:* Laboratory PHYS-1404L

PHYS-1405 Elementary Physics I +
(4-3-3) The first semester of a two-semester conceptual level survey of topics in physics intended for liberal arts, and other non-science majors. Topics include classical mechanics, atomic nature of matter and thermodynamics. The history of scientific developments and their impact on daily life are discussed. *Required Co-Requisite:* Laboratory PHYS-1405L

PHYS-1407 Elementary Physics II +
(4-3-3) The second semester of a two-semester conceptual level survey of topics in physics intended for liberal arts and other non-science majors. Topics include mechanical waves and acoustics, electricity and magnetism, light, atom and nuclear physics and relativity. *Required Prerequisite:* PHYS-1405   *Required Co-Requisite:* Laboratory PHYS-1407L

PHYS-1415 Physical Science I +
 (4-3-3) Concepts of physical science with emphasis on physics and astronomy. For non-science majors. *Required Co-Requisite:* Laboratory PHYS-1415L

PHYS-2425 University Physics I +
(4-3-3) The first semester of a Calculus level physics sequence that involves the study of mechanics, heat and wave motion. For majors in science, mathematics and engineering. *Required Co-Requisites:* MATH-2513* and Laboratory PHYS-2425L

PHYS-2426 University Physics II +
(4-3-3) The second semester of a Calculus level physics sequence that involves the study of electricity and magnetism, light and optics. For majors in science, mathematics and engineering. *Required Prerequisite:* PHYS-2425
Required Co-Requisites: MATH-2414* and Laboratory PHYS-2426L

(POFI) INFORMATION PROCESSING/DATA ENTRY TECHNICIAN

POFI-1449 Spreadsheets
(4-3-2) Spreadsheet software for business applications.
Recommended Prerequisite: POFT-1127 or equivalent

POFI-2401 Word Processing
(4-3-2) Word processing software focusing on business applications.
Recommended Prerequisite: POFT-1127 or equivalent

POFI-2431 Desktop Publishing
(4-3-2) 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.
Recommended Prerequisite: POFT-1329 or proficiency in word processing software

(POFT) ADMINISTRATIVE ASSISTANT/SECRETARIAL SCIENCE, GENERAL

POFT-1127 Introduction to Keyboarding
(1-0-3) Skill development in keyboarding techniques. Emphasis on the development of acceptable speed and accuracy. *Placement test available.*

POFT-1309 Administrative Office Procedures
(3-3-0) Study of current office procedures, duties, and responsibilities applicable to an office environment.

POFT-1319 Records and Information Management
(3-3-0) Introduction to basic records information management filing systems including manual and electronic filing.

POFT-1321 Business Mathematics
(3-3-0) Fundamentals of business mathematics including analytical and critical thinking skills.

POFT-1329 Beginning Keyboarding
(3-2-2) Skill development keyboarding techniques. Emphasis on development of acceptable speed and accuracy levels and formatting basic documents. *Placement test available.*

POFT-1331 Business Machine Applications
(3-3-0) Skill development in operation of office equipment.

POFT-1392 Special Topics in Administrative Assistant/Secretarial Science, General
(3-3-0) Topics address recently identified current events, skills, knowledge, and attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. This course may be repeated two times for credit.

POFT-2301 Intermediate Keyboarding
(3-2-2) A continuation of keyboarding skills emphasizing acceptable speed, and accuracy levels and formatting documents.

POFT-2312 Business Correspondence and Communication
(3-3-0) Development of writing and presentation skills to produce effective business communications.

(PSTR) BAKING AND PASTRY ARTS

PSTR-1401 Fundamentals of Baking
(4-2-4) Fundamentals of baking including doughs, quick breads, pies, cakes, cookies, tarts, and doughnuts. Instructions in flours, fillings, and ingredients. Topics include baking terminology, tool and equipment use, formula conversions, functions of ingredients, and the evaluation of baked products.

PSTR-2331 Advanced Pastry Shop
(3-2-3). A study of classical desserts, French and international pastries, hot and cold desserts, ice creams and ices, chocolate work, and decorations. Emphasis on advanced techniques.

(PSYC) PSYCHOLOGY

PSYC-1110 Orientation to College
(1-1-0) Facilitates adjustment to college. Standardized tests and counseling offered to provide personal, vocational, educational development.

PSYC-1300 Learning Framework +
(3-3-0) A study of the 1) research and theory in the psychology of learning, cognition, and motivation, 2) factors that impact learning, and 3) application of learning strategies. Theoretical models of strategic learning, cognition, and motivation serve as the conceptual basis for the introduction of college-level student academic strategies. Students will

identify their own strengths and weaknesses as strategic learners. Students are expected to integrate and apply learning skills discussed and become effective and efficient learners and teachers. Students may NOT earn credit for both PSYC-1300 and EDUC-1300.

PSYC-2301 Introduction to Psychology +
(3-3-0) Methods and content of the science of psychology.
Required Prerequisite: RDNG-0361 or RDNG-0363 with a grade of C plus achieve 11th grade level score on Nelson-Denny, or an approved alternative
This course may be taken for honors credit. Consult the department for information.

PSYC-2302 Applied Psychology +
(3-3-0) Survey of the application of psychological knowledge and methods in such fields as business, industry, education, medicine, law enforcement, social work, and government work.

PSYC-2306 Human Sexuality +
(3-3-0) Designed to provide students an opportunity to develop knowledge and understanding of human sexuality.

PSYC-2308 Child Growth and Development +
(3-3-0) Overview of child development from conception through early adolescent period. Normal developmental trends emphasized with attention to retardation and emotional disturbances. *Recommended Prerequisite:* PSYC-2301

PSYC-2314 Life Span Growth and Development +
(3-3-0) The processes of growth and development will be dealt with from the prenatal beginning to the end of the life span. Course activities will emphasize cognitive, emotional, moral, social, and mental developmental tasks for each period of the life span. The use of analysis and critical thinking based on an understanding of developmental theories and concept application will be emphasized.
Recommended Prerequisite: PSYC-2301

PSYC-2315 Psychology of Adjustment and Human Relations +
(3-3-0) Study of the process involved in adjustment of individuals to their personal and social environments.

PSYC-2316 Psychology of Personality +
(3-3-0) Survey of contemporary theories of personality with emphasis on personality dynamics. Individual personality trends stressed with attention to group interaction.
Recommended Prerequisite: PSYC-2301

PSYC-2319 Social Psychology +
(3-3-0) Individual behavior in social situations, human relations, group effectiveness, conflicts among people, motivation, and attitudes within society. A student may NOT earn credit for both PSYC-2319 and SOCI-2326.
Recommended Prerequisite: PSYC-2301 or SOCI-1301

(PSYT) CLINICAL AND COUNSELING PSYCHOLOGY

PSYT-1393 Special Topics in Clinical Psychology
(3-3-0) 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.

PSYT-2165 Practicum - Clinical Psychology
(1-0-10) Practical general training supported by an individualized learning plan developed by the employer, College, and student. The guided external experiences may be for pay or no pay.
Prerequisite: Consent of Department Chairperson *Required Co-Requisite:* DAAC-1343

PSYT-2301 Psychology of Group Dynamics
(3-3-0) A study of the patterns and dynamics of group interactions. Topics include a psychosocial approach to group behavior, structure, types, stages, roles, leadership, and facilitation.

PSYT-2321 Crisis Intervention
(3-3-0) A study of the principles and theories in assisting the individual in a crisis situation. Topics include coping skills to increase potential reinstatement of equilibrium to an individual's lifestyle and suicide prevention.

PSYT-2331 Abnormal Psychology
(3-3-0) The study of the symptoms, etiology, and treatment procedures of functional and organic mental disorders.

PSYT-2339 Counseling Theories
(3-3-0) An examination of evidenced-based and contemporary theories which may include psychodynamic, cognitive, behavioral and humanistic.

PSYT-2345 Principles of Behavior Management and Modification
(3-3-0) A study of behavior management and cognitive theories and techniques with emphasis on their applications.

PSYT-2370 Laws and Standards Affecting Mental Health
(3-3-0) This course provides the student with a comprehensive understanding of the laws affecting treatment and care of the mentally ill, mentally retarded, and chemically dependent individual.

(PTHA) PHYSICAL THERAPIST ASSISTANT#

PTHA-1201 The Profession of Physical Therapy
(2-2-0) Introduction to the profession of physical therapy and the role of the physical therapist assistant.

PTHA-1260 Clinical - Physical Therapist Assistant
(2-0-8) A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. This is an introductory level course.

PTHA-1321 Pathophysiology
(3-3-0) Study of the pathophysiology of diseases and conditions commonly encountered in physical therapy. *Enrollment in this course is restricted to students accepted to the Physical Therapist Assistant program. It does not replace HPRS-2201.*

PTHA-1325 Communication in Health Care
(3-3-0) Communication theories and principles for optimal delivery of health care.

PTHA-1405 Basic Patient Care Skills
(4-3-4) The application of basic patient handling, functional skills, communication, and selected data collection techniques.

PTHA-1413 Functional Anatomy
(4-3-4) The relationship of the musculoskeletal and neuromuscular systems to normal and abnormal movement.

PTHA-1431 Physical Agents
(4-3-4) Biophysical principles, physiological effects, intervention efficacy and application of physical agents.

PTHA-2201 Essentials of Data Collection
(2-1-4) Data collection techniques used to prepare the physical therapist assistant to assist in patient/client management.

PTHA-2239 Professional Issues
(2-2-0) A Capstone course which engages the student in the discussion of professional issues and behaviors related to clinical practice and which prepares the student for transition into the workforce.

PTHA-2260 Clinical - Physical Therapist Assistant
(2-0-12) A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional.

PTHA-2261 Clinical - Physical Therapist Assistant
(2-0-12) A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional.

PTHA-2363 Clinical - Physical Therapist Assistant
(3-0-18) A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. *This is the Capstone clinical experience.*

PTHA-2409 Therapeutic Exercise
4-3-4) Concepts, principles, and application of techniques related to therapeutic exercise and functional training.

PTHA-2431 Management of Neurological Disorders
(4-3-4) Advanced course integrating previously learned and new skills/techniques into the comprehensive rehabilitation of selected neurological disorders.

PTHA-2435 Rehabilitation Techniques
(4-3-4) Advanced course integrating previously learned and new skills and techniques into the comprehensive rehabilitation of selected musculoskeletal, neuromuscular, cardiopulmonary, and integumentary disorders.

(PTRT) PETROLEUM TECHNOLOGY/TECHNICIAN

PTRT-1307 Recovery and Production Methods
(3-2-3) Petroleum recovery and production methods.

PTRT-1313 Industrial Safety
(3-2-3) An overview for petroleum and manufacturing workers of state and federal regulations and guidelines which require industrial safety training. Topics include the 29 C.F.R. 1910, 1926 standards.

PTRT-1317 Natural Gas Processing I
(3-2-3) An overview of natural gas processing operations. Topics include fundamentals of gas processing, the scientific principles and how they apply to the process, processing equipment, and procedures.

PTRT-1324 Petroleum Instrumentation
(3-2-3) A study of instruments, instrument systems, terminology, process variables, and control coops as used in a petroleum environment.

PTRT-2323 Natural Gas Production
(3-2-3) An overview of the aspects of natural gas and oil production including various aspects of hydrocarbon production, processing equipment, and gas compression and transportation systems.

(RADR) RADIOLOGIC TECHNOLOGY#

RADR-1201 Introduction to Radiography
(2-2-0) An overview of the historical development of radiography, basic radiation protection, an introduction to medical terminology, ethical and legal issues for health-care professionals, and an orientation to the program and the health-care system.

RADR-1203 Patient Care
(2-2-0) An introduction in patient assessment, infection control procedures, emergency and safety procedures, communication and patient interaction skills, and basic pharmacology.

RADR-1266 Practicum - Radiologic Technology/Science - Radiographer
(2-0-16) Practical, general workplace training supported by an individualized learning plan developed by the employer, College, and student.

RADR-1267 Practicum - Radiologic Technology/Science - Radiographer
(2-0-16) Practical, general workplace training supported by an individualized learning plan developed by the employer, College, and student.

RADR-1311 Basic Radiographic Procedures
(3-2-3) An introduction to radiographic positioning terminology, the proper manipulation of equipment, positioning and alignment of the anatomical structure and equipment, and evaluation of images for proper demonstration of basic anatomy.

RADR-1313 Principles of Radiographic Imaging I
(3-3-0) Radiographic image quality and the effects of exposure variables.

RADR-1366 Practicum - Radiologic Technology/Science - Radiographer
(3-0-24) Practical, general workplace training supported by an individualized learning plan developed by the employer, College, and student.

RADR-2213 Radiation Biology and Protection
(2-2-0) Effects of radiation exposure on biological systems. Includes typical medical exposure levels, methods for measuring and monitoring radiation, and methods for protecting personnel and patients from excessive exposure.

RADR-2217 Radiographic Pathology
(2-2-0) Disease processes and their appearance on radiographic images.

RADR-2235 Radiologic Technology Seminar
(2-2-0) A Capstone course focusing on the synthesis of professional knowledge, skills, and attitudes in preparation for professional employment and lifelong learning.

RADR-2301 Intermediate Radiographic Procedures
(3-2-3) A continuation of the study of the proper manipulation of radiographic equipment, positioning and alignment of the anatomical structure and equipment, and evaluation of images for proper demonstration of anatomy.

RADR-2305 Principles of Radiographic Imaging II
(3-3-0) Radiographic imaging technique formulation. Includes equipment quality control, image quality assurance, and the synthesis of all variables in image production.

RADR-2309 Radiographic Imaging Equipment
(3-3-0) Equipment and physics of X-ray production. Includes basic X-ray circuits. Also examines the relationship of conventional and digital equipment components to the imaging process.

RADR-2331 Advanced Radiographic Procedures
(3-2-3) Continuation of positioning; alignment of the anatomical structure and equipment, evaluation of images for proper demonstration of anatomy and related pathology.

RADR-2333 Advanced Medical Imaging
(3-3-0) Specialized imaging modalities. Includes concepts and theories of equipment operations and their integration for medical diagnosis.

RADR-2366 Practicum - Radiologic Technology/Science Radiographer
(3-0-24) Practical, general workplace training supported by an individualized learning plan developed by the employer, College, and student.

RADR-2367 Practicum - Radiologic Technology/Science Radiographer
(3-0-24) Practical, general workplace training supported by an individualized learning plan developed by the employer, College, and student.

(RBTC) ROBOTICS TECHNOLOGY/TECHNICIAN

RBTC-1351 Robotic Mechanisms
(3-2-3) The application of principles and the calculation of practical problems involving four bar linkages, cams, gears, and gear trains. Topics include vector quantities, angular displacement, motion concepts, velocities, and motions.

Recommended Prerequisite: MATH-1332

RBTC-1401 Programmable Logic Controllers
(4-3-3) A study of programmable controllers (PLC). Topics include processor units, numbering systems, memory organization, relay type devices, timers, counters, data manipulators, and programming.

RBTC-1447 Electro-Mechanical Devices
(4-3-3) A study of electro-mechanical devices found in robotic systems. Includes transformers, switches, and solid-state relays. *Recommended Prerequisite:* CETT-1409

RBTC-2445 Robot Application, Set-Up and Testing
(4-3-3) A Capstone course that provides the student with laboratory experience in the installation, set-up, and testing of robotic cells. Topics include maintenance.

(RDNG) READING

RDNG-0160 College Study Skills
(1-1-0) Improvement of study systems, time management, effective listening, and note taking. Underlining, outlining texts, learning through media, concentration, retention of information, and taking examinations. Placement is based on scores on ACCUPLACER or another approved test.
This is a developmental course and cannot be used to fulfill degree requirements.

RDNG-0361 Reading Techniques I
(3-3-0) Improvement of basic reading skills through individualized development of comprehension, vocabulary, study skills, critical reasoning, and relationships among ideas in written material. Placement based on reading score on ACCUPLACER or another approved test. May be repeated as many times as needed for remediation.
This is a developmental course and cannot be used to fulfill degree requirements.

RDNG-0363 Reading Techniques II
(3-3-0) Further development of the reading skills described in Reading Techniques I with individual emphasis given to those areas requiring remediation. Placement based on ACCUPLACER or another approved test. May be taken as many times as needed for remediation. *Recommended Prerequisite:* RDNG-0361
This is a developmental course and cannot be used to fulfill degree requirements.

(RELE) REAL ESTATE

RELE-1303 Real Estate Appraisal
(3-3-0) The central purposes and functions of an appraisal, social and economic determinants of value, appraisal case studies, cost, market data and income approaches to value estimates, final correlations, and reporting.

RELE-1307 Real Estate Investments
(3-3-0) Characteristics of real estate investments. Includes techniques of investment analysis, time-valued money, discounted and non-discounted investment criteria, leverage, tax shelters, depreciation, and applications to property tax.

RELE-1311 Law of Contracts
(3-3-0) Elements of a contract, offer and acceptance, statute of frauds, specific performance and remedies for breach, unauthorized practice of law, commission rules relating to use of adopted forms, and owner disclosure requirements.

RELE-1315 Property Management
(3-3-0) The role of the property manager, landlord policies, operational guidelines, leases, lease negotiations, tenant relations, maintenance, reports, habitability laws, and the Fair Housing Act.

RELE-1319 Real Estate Finance
(3-3-0) Monetary systems, primary and secondary money markets, sources of mortgage loans, federal government programs, loan applications, processes and procedures, closing costs, alternative financial instruments, equal credit opportunity laws affecting mortgage lending, Community Reinvestment Act, and the state housing agency.

RELE-1325 Real Estate Mathematics
(3-3-0) Basic arithmetic skills. Includes mathematical logic, percentages, interest, time value of money, depreciation, amortization, proration, and estimation of closing statements.

RELE 1406 Real Estate Principles
(4-4-0) A complete overview of licensing as a broker or saleperson. Includes ethics of practice as a license holder, titles to and conveyance of real estate, legal descriptions, deeds, encumbrances and liens, distinctions between personal and real property, appraisal, finance and regulations, closing procedures, and real estate mathematics. Covers at least three hours of classroom instruction on federal, state, and local laws relating to housing discrimination, housing credit discrimination, and community reinvestment. Fulfills the 60-hour requirement for salesperson license.

RELE-2301 Law of Agency
(3-3-0) Law of agency including principal-agent and master-servant relationships, the authority of an agent, the termination of an agent's authority, the fiduciary and other duties of an agent, employment law, deceptive trade practices, listing or buying representation procedures, and the disclosure of an agency.

(RNSG) NURSING#

RNSG-1105 Nursing Skills I
(1-0-3) Study of the concepts and principles essential for demonstrating competence in the performance of nursing procedures. Topics include knowledge, judgment, skills, and professional values within a legal and ethical framework. Focus is on holistic human needs. Associate degree nurse role assimilation is facilitated through the development of identified learner processes. The TCC nursing practice model is the framework for teaching and learning the roles of the nurse. Credit by examination is available for Fast Track Option.
Required Prerequisites: CHEM-1406, BIOL-2401, BIOL-2402, BIOL-2420, and MATH-0350 or mathematical competency
Required Co-Requisites: RNSG-1413 and RNSG-1460

RNSG-1193 Special Topics A - Registered Nursing/Registered Nurse
(1-1-0) Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the

professional development of the student. This course was designed to be repeated multiple times to improve student proficiency.
Required Prerequisites: RNSG-1413, RNSG-1460, and RNSG-1105

RNSG-1293 Special Topics B - Registered Nursing/Registered Nurse
(2-2-0) Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. This course was designed to be repeated multiple times to improve student proficiency.
Required Prerequisites: RNSG-1413, RNSG-1460 RNSG-1105, RNSG-1441, RNSG-1461, RNSG-1193, RNSG-2213, RNSG-2263, RNSG-2208, RNSG-2260 ,RNSG-2201 and RNSG-2261
Required Prerequisites/Co-Requisites: ENGL-1301 PSYC-2301, PHED-1164 ENGL-1302 OR PSYC-2314, SPCH-1311 OR SPCH-1315 OR SPCH-1321, and Humanities or Fine Arts elective

RNSG-1413 Foundations for Nursing Practice
(4-4-0) Introduction to the role of the professional nurse as a provider of care, coordinator of care, and member of the profession. Topics include but are not limited to the fundamental concepts of nursing practice, history of professional nursing, a systematic framework for decision-making, mechanisms of disease, the needs and problems that nurses help patients manage, and basic psychomotor skills. Emphasis on knowledge, judgment, skills, and professional values within a legal/ethical framework. Focus is on holistic human needs. Associate degree nurse role assimilation is facilitated through the development of major concepts. The TCC nursing practice model is the framework for teaching and learning the roles of the nurse. Credit by examination is available for Fast Track Option. *Required Prerequisites:* CHEM-1406, BIOL-2401, BIOL-2402, BIOL-2420, MATH-0350 or mathematical competency, and official acceptance into the Nursing program *Required Co-Requisites:* RNSG-1105 and RNSG-1460

RNSG-1441 Common Concepts of Adult Health
(4-4-0) Study of the general principles of caring for selected adult clients and families in structured settings with common medical-surgical health-care needs related to each body system. Emphasis on knowledge, judgment, skills, and professional values within a legal and ethical framework. Focus is on holistic human needs. Associate degree nurse role assimilation is facilitated through the development of major concepts. The TCC nursing practice model is the framework for teaching and learning the roles of the nurse.
Required Prerequisites: RNSG-1413, RNSG-1460, and RNSG-1105
Required Co-Requisite: RNSG-1461

RNSG-1443 Complex Concepts of Adult Health
(4-4-0) Integration of previous knowledge and skills related to common adult health needs into the continued development of the professional nurse as a provider of care, coordinator of care, and member of a profession in the care of adult clients/families in structured health care settings with complex medical-surgical health-care needs associated with each body system. Emphasis on knowledge, judgments, skills, and professional values within a legal and ethical framework. Test fee charged.
Required Prerequisites: RNSG-1413, RNSG-1460, RNSG-1105, RNSG-1441, RNSG-1461, RNSG-1193, RNSG-2213, RNSG-2263, RNSG-2208, RNSG-2260, RNSG-2201, and RNSG-2261
Required Co-Requisites: ENGL-1301, PSYC-2301, PHED-1164, ENGL-1302 or PSYC-2314, SPCH-1311 or SPCH-1315 or SPCH-1321, and Humanities/Fine Arts elective

Required Co-Requisite: RNSG-2461

RNSG-1460 Clinical - Foundations Nursing Practice
(4-0-12) A basic type of health professions work-based instruction that helps students synthesize new knowledge, apply previous knowledge, or gain experience managing the workflow. Practical experience is simultaneously related to theory. Close and/or direct supervision is provided by the clinical professional (faculty or preceptor), generally in a clinical setting. Clinical education is an unpaid learning experience. Focus is on holistic human needs. Associate degree nurse role assimilation is facilitated through the development of major concepts. The TCC nursing practice model is the framework for teaching and learning the roles of the nurse. Credit by examination is available for Fast Track Option.
Required Prerequisites: CHEM-1406, BIOL-2401, BIOL-2402, BIOL-2420, MATH-0350 or mathematical competency, and official acceptance into the Nursing program
Required Co-Requisites: RNSG-1105 and RNSG-1413

RNSG-1461 Clinical - Common Concepts of Adult Health
(4-0-12) An intermediate type of health professions work-based instruction that helps students synthesize new knowledge, apply previous knowledge, or gain experience managing the workflow. Practical experience is simultaneously related to theory. Close and/or direct supervision is provided by the clinical professional (faculty or preceptor), generally in a clinical setting. Clinical education is an unpaid learning experience. Focus is on holistic human needs. Associate degree nurse role assimilation is facilitated through the development of major concepts. The TCC nursing practice model is the framework for teaching/learning the roles of the nurse.
Required Prerequisitse: RNSG-1413 RNSG-1460 and RNSG-1105
Required Co-Requisite: RNSG-1441

RNSG-2201 Care of Children and Families
(2-2-0) Study of concepts related to the provision of nursing care for children and their families, emphasizing judgment and professional values within a legal and ethical framework. Focus is on holistic human needs. Associate degree nurse role assimilation is facilitated through the development of identified learner processes. The TCC nursing practice model is the framework for teaching and learning the roles of the nurse. Testing fee charged.
Required Prerequisites: RNSG-1413, RNSG-1460, RNSG-1105, RNSG-1193, RNSG-1441, RNSG-1461, RNSG-2213, and RNSG-2263
Required Co-Requisite: RNSG-2261

RNSG-2208 Maternal and Newborn Nursing and Women's Health
(2-2-0) Study of concepts related to the provision of nursing care for normal childbearing families and those at risk, as well as women's health issues; competency in knowledge, judgment, skill, and professional values within a legal and ethical framework, including a focus on normal and high-risk needs for the childbearing family during the preconception, prenatal, intrapartum, neonatal, and postpartum periods; and consideration of selected issues in women's health. Focus in on holistic human needs. Associate degree nurse role assimilation is facilitated through the development of identified learner processes. The TCC nursing practice model is the framework for teaching and learning the roles of the nurse. Testing fee charged.
Required Prerequisites: RNSG-1413, RNSG-1460, RNSG-1105, RNSG-1193, RNSG-1441 RNSG-1461, RNSG-2213, and RNSG-2263
Required Co-Requisite: RNSG-2260

RNSG-2213 Mental Health Nursing
(2-2-0) Principles and concepts of mental health, psychopathology, and treatment modalities related to the nursing care of clients and their families. Focus is on holistic human needs. Associate degree nurse role assimilation is facilitated through the development of major concepts. The TCC nursing practice model is the framework for teaching and learning the roles of the nurse.
Required Prerequisites: RNSG-1413, RNSG-1460, and RNSG-1105
Required Co-Requisite: RNSG-2263

RNSG-2260 Clinical - Maternal and Newborn Nursing and Women's Health
(2-0-6) An intermediate type of health professions work-based instruction that helps students synthesize new knowledge, apply previous knowledge, or gain experience managing the workflow. Practical experience is simultaneously related to theory. Close and/or direct supervision is provided by the clinical professional (faculty or preceptor), generally in a clinical setting. Clinical education is an unpaid learning experience.
Focus is on holistic human needs. Associate degree nurse role assimilation is facilitated through the development of major concepts. The TCC nursing practice model is the framework for teaching/learning the roles of the nurse.
Required Prerequisites: RNSG-1413, RNSG-1460, RNSG-1105, RNSG-1193, RNSG-1441, RNSG-1461, RNSG-2213, RNSG-2263
Required Co-Requisite: RNSG-2208

RNSG-2261 Clinical - Care of Children and Families Nursing
(2-0-6) An intermediate type of health professions work-based instruction that helps students synthesize new knowledge, apply previous knowledge, or gain experience managing the workflow. Practical experience is simultaneously related to theory. Close and/or direct supervision is provided by the clinical professional (faculty or preceptor), generally in a clinical setting. Clinical education is an unpaid learning experience. Focus is on holistic human needs. Associate degree nurse role assimilation is facilitated through the development of major concepts. The TCC nursing practice model is the framework for teaching and learning the roles of the nurse.
Required Prerequisites: RNSG-1413, RNSG-1460, RNSG-1105, RNSG-1193, RNSG-1441, RNSG-1461, RNSG-2213, and RNSG-2263
Required Co-Requisite: RNSG-2201

RNSG-2263 Clinical - Mental Health Nursing
(2-0-6) An intermediate type of health professions work-based instruction that helps students synthesize new knowledge, apply previous knowledge, or gain experience managing the workflow. Practical experience is simultaneously related to theory. Close and/or direct supervision is provided by the clinical professional (faculty or preceptor), generally in a clinical setting. Clinical education is an unpaid learning experience. Focus is on holistic human needs. Associate degree nurse role assimilation is facilitated through the development of major concepts. The TCC nursing practice model is the framework for teaching and learning the roles of the nurse.
Required Prerequisites: RNSG-1413, RNSG-1460, and RNSG-1105
Required Co-Requisite: RNSG-2213

RNSG-2461 Clinical - Complex Concepts of Adult Health
(4-0-12) An intermediate type of health professions work-based instruction that helps students synthesize new knowledge, apply previous knowledge, or gain experience managing the workflow. Practical experience is simultaneously related to theory. Close and/or direct supervision is provided by the clinical professional (faculty or preceptor), generally in a clinical setting. Clinical education is an unpaid learning experience. Focus is

on holistic human needs. Associate degree nurse role assimilation is facilitated through the development of major concepts. The TCC nursing practice model is the framework for teaching and learning the roles of the nurse.

Required Prerequisites: RNSG-1413, RNSG-1460, RNSG-1105, RNSG-1193, RNSG-1441, RNSG 1461 RNSG 2213 RNSG 2263 RNSG 2208 RNSG 2260 RNSG 2201 and RNSG-2261

Required Co-Requisite: RNSG-1443

(RSPT) RESPIRATORY CARE#

RSPT-1101 Introduction to Respiratory Care
(1-0-3) An introduction to the field of respiratory care. Topics include the history of respiratory care, hospital organization, medical malpractice, ethics, vital signs, body mechanics, basic cardiopulmonary assessment, infection control, and cardiopulmonary resuscitation (CPR). *Recommended Co-Requisite:* RSPT-1166

RSPT-1141 Respiratory Home Care and Rehabilitation
(1-1-0) A study of respiratory home care and rehabilitation equipment, procedures, and patient education. Emphasizes treatment of patients in home care and alternate settings. *Recommended Prerequisites:* RSPT-2210 and RSPT-2405

RSPT-1166 Practicum - Respiratory Care Therapy/Therapist
(1-0-7) Practical, general workplace training supported by an individualized learning plan developed by the employer, College, and student.
Recommended Co-Requisite: RSPT-1101

RSPT-1207 Cardiopulmonary Anatomy and Physiology
(2-2-0) An introduction to the anatomy and physiology of the cardiovascular and pulmonary systems. *Recommended Prerequisites:* RSPT-1101 and RSPT-1419

RSPT-1266 Practicum - Respiratory Care Therapy/Therapist
(2-0-14) Practical, general workplace training supported by an individualized learning plan developed by the employer, College, and student.
Recommended Prerequisites: RSPT-1101 and RSPT-1166

RSPT-1267 Practicum - Respiratory Care Therapy/Therapist
(2-0-14) Practical, general workplace training supported by an individualized learning plan developed by the employer, College, and student.
Recommended Prerequisite: RSPT-1266

RSPT-1331 Respiratory Care Fundamentals II
(3-2-3) Provides a continuation of knowledge and skills for respiratory care including lung expansion therapy, bronchial hygiene therapy, artificial airways, manual resuscitation devices, suctioning, pulse oximetry, bedside spirometry, arterial sampling techniques, and blood gas analysis and interpretation. *Recommended Prerequisite:* RSPT-1429

RSPT-1429 Respiratory Care Fundamentals I
(4-3-3) Provides an introduction to the knowledge and skills for respiratory care including history, medical terms and symbols, medical/legal, infection control, vital signs, physical assessment, chest x-ray interpretation, medical gas therapy, oxygen analyzers, and humidity/aerosol therapy. *Recommended Co-Requisites:* RSPT-1101 and HPRS-1206

RSPT-2131 Simulations in Respiratory Care
(1-1-0) Theory of clinical simulation examinations. Includes construction types, scoring, and mechanics of taking the computerized simulation examination.
Recommended Prerequisites: RSPT-2210 and RSPT-2405

RSPT-2133 Respiratory Care Case Management
(1-1-0) Investigation, organization, and presentation of case studies.
Recommended Co-Requisite: RSPT-2266 or RSPT-2267

RSPT-2139 Advanced Cardiac Life Support
(1-1-0) Advanced Cardiac Life Support (ACLS) with an emphasis on airway management. Designed to develop skills for resuscitation of the adult. Includes strategies for managing and stabilizing the cardiopulmonary arrested patient. May include certification.
Recommended Prerequisites: RSPT-1207 and RSPT-1323

RSPT-2147 Specialties in Respiratory Care
1-1-0) Emerging and specialty practices in respiratory care.
Recommended Prerequisites: RSPT-2210 and RSPT-2405

RSPT-2210 Cardiopulmonary Disease
(2-2-0) Etiology, pathogenesis, pathology, diagnosis, history, prognosis, manifestations, treatment, and detection of cardiopulmonary diseases.
Recommended Prerequisites: RSPT-2139 and RSPT-2414

RSPT-2266 Practicum - Respiratory Care Therapy/Therapist
(2-0-14) Practical, general workplace training supported by an individualized learning plan developed by the employer, College, and student.
Recommended Prerequisite: RSPT-1267 *Recommended Co-Requisite:* RSPT-2133

RSPT-2267 Practicum - Respiratory Care Therapy/Therapist
(2-0-14) Practical, general workplace training supported by an individualized learning plan developed by the employer, College, and student.
Recommended Prerequisite: RSPT-2266 *Recommended Co-Requisite:* RSPT-2133

RSPT-2353 Neonatal and Pediatric Cardiopulmonary Care
(3-2-3) A study of acute care, monitoring, and management of the neonatal/pediatric patient. *Recommended Prerequisites:* RSPT-2210 and RSPT-2405

RSPT-2405 Pulmonary Diagnostics
(4-3-3) Theories and techniques involved in pulmonary function testing, blood gas analysis, quality control, and noninvasive monitors.
Recommended Prerequisites: RSPT-2139 and RSPT-2414

RSPT-2414 Mechanical Ventilation
(4-3-3) The study of mechanical ventilation with emphasis on ventilator classification, methods, principles, and operational characteristics. Includes indications, complications, and physiologic effects and principles of mechanical ventilation. Emphasizes initiation, management, and weaning of ventilatory support.
Recommended Prerequisites: RSPT-1207 and RSPT-1323

(RSTO) FOOD AND BEVERAGE/RESTAURANT OPERATIONS MANAGER

RSTO-1204 Dining Room Service
(2-1-2) Introduces the principles, concepts, and systems of professional table service. Topics include dining room organization, scheduling, and management of food-service personnel.

RSTO-1306 Facilities Layout and Design
(3-2-2) Overview of the planning, development, and feasibility aspects of building or renovating a food service facility. Application of principles of work and flow analysis, spatial relationships, and equipment selection as they relate to the overall layout and design.

RSTO-1325 Purchasing for Hospitality Operations
(3-3-0) Study of purchasing and inventory management of foods and other supplies to include development of purchase specifications, determination of order quantities, formal and informal price comparisons, proper receiving procedures, storage management, and issue procedures. Emphasis on product cost analysis, yields, pricing formulas, controls, and record keeping at each state of the purchasing cycle. *(Licensure/Certification Agency: American Culinary Federation Educational Institute, Council on Hotel, Restaurant, and Institutional Education)*

(RTVB) RADIO AND TELEVISION BROADCASTING TECHNOLOGY/TECHNICIAN

RTVB-1150 Radio Experience I
(1-0-3) Laboratory experience in radio operation and announcing by broadcasting on a radio station.

RTVB-1355 Radio and Television Announcing
(3-3-0) Radio and television announcing skills such as voice quality, articulation, enunciation, and pronunciation. Includes preparation for on air and voiceover positions.

RTVB-1402 Computer Applications for Media Production
(4-3-3) Computer applications for audio, video, graphics, budgets, and scripts in media productions.

RTVB-1405 Introduction to Television Technology
(4-3-2) Identifications and operation of current television production equipment. Includes digital and analog signal concepts and use.

RTVB-1409 Audio and Radio Production I
(4-3-3) Concepts and techniques of sound production including basic recording, mixing, and editing techniques.

RTVB-1421 TV Field Production
(4-3-3) Pre-production, production, and post-production process involved in field television production. Topics include field camera setup and operation, field audio, television directing, and in-camera or basic continuity editing with an emphasis on underlying principles of video technology.

RTVB-1425 TV Studio Production
(4-3-3) Basic television production and planning techniques including video, audio, and lighting equipment commonly used in a studio.

RTVB-1447 Audio and Radio Production II
(4-3-3) Audio production theories regarding multitrack recording, studio live production and equipment operation.

RTVB-2250 Radio Experience II
(2-1-2) Advanced laboratory experience in radio operation and announcing by broadcasting on a radio station. *Required Prerequisite:* RTVB-1409

RTVB-2265 Practicum - Radio and Television
(2-0-14) Practical, general workplace training supported by an individualized learning plan developed by the employer, College, and student.
Required Prerequisite: RTVB 1405 or Consent of Coordinator

RTVB-2347 Management and Operation of Electronic Media Facilities
(3-3-0) An analysis of management principles of production companies, broadcast stations, cable companies, and emerging technologies.

RTVB-2430 Film and Video Editing
(4-3-3) Film and broadcast editing for the preparation and completion of shorts, trailers, documentaries, and features. *Required Prerequisite:* RTVB-1402 or FLMC-1431

RTVB-2487 Internship - Radio and Television
(4-0-14) 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. *Required Prerequisite:* RTVB 1405 or Consent of Coordinator

(SCWK) SOCIAL WORK

SCWK-2305 Special Problems of Youth
(3-3-0) Examination of the particular problems of youth and their implications for social service workers delivering services to this population.

(SLNG) SIGN LANGUAGE INTERPRETER

SLNG-1211 Fingerspelling and Numbers
(2-1-2) Development of expressive and receptive skills in fingerspelling and numbers. Receptive skills focus on whole word phrase recognition and fingerspelling and number comprehension in context. Expressive skills focus on the development of speed, clarity, and fluency.

SLNG-1215 Visual and Gestural Communication
(2-2-0) Development of skills in nonverbal communications. Emphasizes the use and understanding of facial expression. gestures, pantomime, and body language.

SLNG-1291 Special Topics in Sign Language Interpreter
(2-2-0) 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.

SLNG-1321 Introduction to the Interpreting Profession
(3-3-0) An overview of the field of American Sign Language (ASL)/English interpretation. Provides an historical framework for the current principles, ethics, roles, responsibilities, and standard practices of the interpreting profession.

SLNG-1347 Deaf Culture
(3-3-0) Historical and contemporary perspective of American deaf culture using a sociocultural model. Includes cultural identity and awareness, values, group norms, communication, language, and significant contributions made by deaf people to the world.

SLNG-1350 Sign-to-Voice
(3-2-2) Skill development in interpreting and transliterating from American Sign Language and other modes of communication to English and analysis of increasingly complex tasks utilizing simulated interpreting experiences including skills analysis and peer evaluation.

SLNG-1404 American Sign Language (ASL) I
(4-3-2) An introduction to the basic skills in production and comprehension of American Sign Language (ASL). Includes the manual alphabet and numbers. Develops conversational abilities, culturally appropriate behaviors, and exposes students to ASL grammar.

SLNG-1405 American Sign Language (ASL) II
(4-3-2) Develops receptive and expressive ability and allows recognition and demonstration of more sophisticated grammatical features of American Sign Language (ASL). Increases fluency and accuracy in fingerspelling and numbers. Encourages opportunities for interaction with the deaf community.

SLNG-1444 American Sign Language (ASL) III
(4-3-2) Integrates and refines expressive and receptive skills in American Sign Language (ASL), including recognition of sociolinguistic variation. A practice oriented approach to language acquisition.

SLNG-1445 American Sign Language (ASL) IV
(4-3-2) Integration of expressive and receptive skills in American Sign Language (ASL) with emphasis on grammar, linguistics, literature, and discourse styles at an intermediate level. Provides students with information on linguistic and cultural variations.

SLNG-2166 Practicum I – Sign Language Interpretation and Translation
(1-0-7) Practical, general workplace training supported by an individualized learning plan developed by the employer, College, and student.

SLNG-2167 Practicum II – Sign Language Interpretation and Translation
(1-0-7) Practical, general workplace training supported by an individualized learning plan developed by the employer, College and student.

SLNG-2303 Transliterating
3-3-0) A practice oriented course designed to develop skills necessary for rendering spoken English to a signed English format and signed English to spoken English.

SLNG-2401 Interpreting I
(4-3-2) An overview of the interpreting process and models of interpretation. Introduces the skills necessary to achieve dynamic message equivalence in interpreting American Sign Language (ASL) to English and English to ASL.

SLNG-2402 Interpreting II
(4-3-2) Continued development of discourse analysis and interpreting skills for increasingly complex tasks. Utilization of consecutive and simultaneous interpreting scenarios including monologues and dialogues. Emphasizes skill development, self-analysis, and peer evaluation.

SLNG-2431 Interpreting III
(4-3-2) A practice-oriented course to strengthen skills in the integration and application of interpreting using complex source materials. Continued exposure to simulated interpreting and transliterating experiences.

(SLPS) SECURITY AND LOSS PREVENTION SERVICES

SLPS-1371 Introduction to Security Management
(3-3-0) An exploration of topics, which form the foundation of knowledge necessary in the field of security management. Specific content areas include: the history of private security, loss prevention, prevention programs, risk assessment, vulnerability assessment, and countermeasure selection. Other topics include internal and external relations, and financial management.

SLPS-1391 Special Topics in Security and Loss Prevention Services
(3-3-0) Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student.

SLPS-2288 Internship - Security and Loss Prevention Services
(2-0-7) 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.

SLPS-2371 Fundamentals of Physical Security
(3-3-0) Basic concepts of facilities protection and control, to include: facility planning, perimeter boundaries, alarms, barriers, lighting, security surveys, materials control, emergency planning, employee and visitor control, and issues regarding parking, communications, and transportation.

(SOCI) SOCIOLOGY

SOCI-1301 Introduction to Sociology +
(3-3-0) Nature of human society, cultural heritage, collective behavior, community and social organization, nature of social change, and methods and processes of social control.
Required Prerequisite: RDNG-0361 or RDNG-0363 with a grade of C plus achieve 11th grade level score on Nelson-Denny, or an approved alternative
This course may be taken for honors credit. Consult the department for information.

SOCI-1306 Contemporary Social Problems +

(3-3-0) Inquiry into select groups of current social problems with specific reference to their origin, development, and suggested solutions.
This course may be taken for honors credit. Consult the department for information.

SOCI-2301 Marriage and the Family +

(3-3-0) Sociological analysis of marriage and family relations based on concepts introduced in SOCI-1301. Includes origin and development of family, the family in transition, organization and disorganization of the family, and adjustment mechanisms.

SOCI-2319 History of Selected Minority Cultures in the United States +

(3-3-0) Roles of selected minority cultures in the development of the American nation from colonial times to present.

SOCI-2326 Social Psychology +

(3-3-0) Individual behavior in social situations, human relations, group effectiveness, conflicts among people, motivation, and attitudes within society. Students may NOT earn credit for both SOCI-2326 and PSYC-2319.
Recommended Prerequisite: SOCI-1301 or PSYC-2301

SOCI-2336 Introduction to Criminology +

(3-3-0) Social dimensions of crime as a form of deviant behavior; nature and extent of crime; past and present theories; the role of the police and the courts; group and community-oriented programs, with evaluation of prevention, control, and treatment programs.

(SOCW) SOCIAL WORK

SOCW-2361 Introduction to Social Work +

(3-3-0) Development of the philosophy and practice of social work in the United States, survey of the fields, and techniques of social work.

SOCW-2362 Social Welfare as a Social Institution +

(3-3-0) Introduction to the study of modern social work, the underlying philosophy and ethics of social work, and the major divisions and types of social work together with their methods and objectives. *Required Prerequisite:* SOCW-2361

(SPAN) SPANISH

SPAN-1100 Beginning Spanish Conversation I +

(1-0-2) Consists of the following options for developing good conversational skills in Spanish. A total of six courses under the numbers SPAN-1100, SPAN-1110, and SPAN-2106 may be taken for elective credit as the topic varies.
   A. Oral Expression. Practice in oral expression, including comprehension, control of structure, vocabulary building, and pronunciation for production of the spoken language. One hour of scheduled classroom lab and one hour of arranged independent study lab per week.
   B. Listening Comprehension. Practice in comprehension of the spoken language for the development of better conversational skills. Independent study lab course with practice developing listening skills from sources such as audio, video, radio, film, and the Internet.

C. Grammar I. Review of novice-mid grammar for better control in production of the spoken language. Independent study lab course with self-correcting format.
D. Vocabulary Building I. Reading of novice-mid level Spanish language texts for building vocabulary to be used in the oral expression of ideas in Spanish. Includes oral reading for fluency practice. Independent study lab course.
E. Culture Topics. Study of Hispanic culture topics through research and discussion for the production of the spoken language in the expression and comparison of ideas.

SPAN-1110 Beginning Spanish Conversation II +
(1-0-2) Consists of the following options for developing good conversational skills in Spanish. A total of six courses under the numbers SPAN-1100, SPAN-1110, and SPAN-2106 may be taken for elective credit as the topic varies.

A. Oral Expression. Practice in oral expression, including comprehension, control of structure, vocabulary building, and pronunciation for production of the spoken language. One hour of scheduled classroom lab and one hour of arranged independent study lab per week.
B. Listening Comprehension. Practice in comprehension of the spoken language. Independent study lab course with practice developing listening skills from sources such as audio, video, radio, film, and the Internet.
C. Grammar II. Review of novice-high grammar for better control in production of the spoken language. Independent study lab course with self-correcting format.
D. Vocabulary Building II. Reading of novice-high level Spanish language texts for building vocabulary to be used in the oral expression of ideas in Spanish. Includes oral reading for fluency practice. Independent study lab course.
E. Culture Topics. Study of Hispanic culture topics through research and discussion for the production of the spoken language in the expression and comparison of ideas.

SPAN-1411 Elementary Spanish I +
(4-3-2) Fundamentals of Spanish.Acquisition of language functions, vocabulary, structures, and culture through contextualized presentations, interactive activities, and extensive laboratory practice.

SPAN-1412 Elementary Spanish II +
(4-3-2) Continuation of SPAN-1411 with emphasis on conversation.
Recommended Prerequisite: SPAN-1411

SPAN-2106 Intermediate Spanish Conversation +
(1-0-2). Consists of the following options for developing good conversational skills. A total of six courses under the numbers SPAN-1100, SPAN-1110, and SPAN-2106 may be taken for elective credit as the topic varies.
Recommended Prerequisite: SPAN-1412
A. Oral Expression. Practice in oral expression on a variety of topics of global interest including comprehension, control of structure, vocabulary building, and pronunciation for production of the spoken language. One hour of scheduled classroom lab and one hour of arranged independent study lab per week.
B. Listening Comprehension. Practice in comprehension of the spoken language. Independent study lab course with practice developing listening skills from sources such as audio, video, radio, film, and the Internet.

C. Grammar III. Review of intermediate-mid grammar for better control in production of the spoken language. Independent study lab course with self-correcting format.
D. Grammar IV. Review of intermediate-high grammar for better control in production of the spoken language. Independent study lab course with self-correcting format.
E. Vocabulary Building III. Reading of intermediate-mid level Spanish language texts for building vocabulary to be used in the development and oral expression of ideas in Spanish. Includes oral reading for fluency practice. Independent study lab course.
F. Vocabulary Building IV. Reading of intermediate-high level Spanish language texts for building vocabulary to be used in development and oral expression of ideas in Spanish. Includes oral reading for fluency practice. Independent study lab course.
G. Culture Topics. Study of Hispanic culture topics through research and discussion for the production of the spoken language in the expression and comparison of ideas.

SPAN-2311 Intermediate Spanish I +
(3-3-0) The finer points of Spanish grammar. Conversational practice based on selected readings and dialogues. Directed composition. Class conducted largely in Spanish.
Recommended Prerequisite: SPAN-1412

SPAN-2312 Intermediate Spanish II +
(3-3-0) Continuation of SPAN-2311. *Recommended Prerequisite:* SPAN-2311

(SPCH) SPEECH

SPCH-1144 Forensic Activities I +
(1-0-2) This is an activity course for students participating in one or more of the following speech activities: debate or individual events such as persuasion, informational speaking, parliamentary debate, or oral interpretation.

SPCH-1145 Forensic Activities II +
(1-0-2) This is an activity course for second semester students participating at an advanced level in one or more of the following speech activities: debate, individual events, or oral interpretation.

SPCH-1311 Fundamentals of Speech Communication +
(3-3-0) Communication theories applied to speech; practical communicative experiences ranging from interpersonal communication and small group process to preparation and delivery of platform speeches.
This course may be taken for honors credit. Consult the department for information.

SPCH-1315 Public Speaking +
(3-3-0) Public speaking situations; emphasis on content, organization, and delivery of speeches for various occasions.

SPCH-1318 Interpersonal Communication +
(3-3-0) Theory and practice in person-to-person communication with focus on development, maintenance, and termination of relationships.

SPCH-1321 Business and Professional Communication +
(3-3-0) Techniques of oral communication with applications to business and professional situations.
This course may be taken for honors credit. Consult the department for information.

SPCH-1342 Voice and Diction +
(3-3-0) Training in effective use of the voice and body. Vocal mechanism and the phonetic alphabet; improvement of enunciation, pronunciation, and articulation.

SPCH-2144 Forensic Activities III +
(1-0-2) This is an activity course for third semester students participating at an advanced level in one or more of the following speech activities: debate, individual events, or oral interpretation.

SPCH-2145 Forensic Activities IV +
(1-0-2) This is an activity course for fourth semester students participating at an advanced level in one or more of the following speech activities: debate, individual events, or oral interpretation.

SPCH-2333 Discussion and Small Group Communication +
(3-3-0) Small-group theory relating to group process and interaction. Leadership and effective participation, group behavior, problem solving, and resolution of conflict.
Recommended Prerequisite: SPCH-1311 or SPCH-1321

SPCH-2341 Oral Interpretation +
(3-3-0) Oral presentation of literature forms, analysis of thought, development of imagination, communication of emotional values, and individual projects in interpretative reading.

(SRGT) SURGICAL TECHNOLOGY#

SRGT-1266 Practicum - Surgical Technology/Technologist
(2-0-14) Practical, general workplace training supported by an individualized learning plan developed by the employer, College, and student.

SRGT-1267 Practicum - Surgical Technology/Technologist
(2-0-16) Practical, general workplace training supported by an individualized learning plan developed by the employer, College, and student.

SRGT-1405 Introduction to Surgical Technology
(4-4-0) Orientation to surgical technology theory, surgical pharmacology and anesthesia, technological sciences, and patient-care concepts.

SRGT-1409 Fundamentals of Perioperative Concepts and Techniques
(4-4-0) In-depth coverage of perioperative concepts such as aseptic/sterile principles and practices, infectious processes, wound healing, and creation and maintenance of the sterile field.

SRGT-1441 Surgical Procedures I
(4-4-0) Introduction to surgical procedures and related pathologies. Emphasis on surgical procedures related to general, obstetrics/gynecology, genitourinary, otorhinolaryngology and orthopedic surgical specialties incorporating instruments, equipment, and supplies required for perioperative patient care.
Required Prerequisites: SRGT-1405, SRGT-1409, and SRGT-1266

SRGT-1442 Surgical Procedures II
(4-4-0) Introduction to surgical procedures and related pathologies. Emphasis on surgical procedures related to thoracic, peripheral vascular, plastic/reconstructive, ophthalmology, cardiac, and neurological surgical specialties incorporating instruments, equipment, and supplies required for perioperative patient care.
Required Prerequisites: SRGT-1405, SRGT-1409, and SRGT-1266

SRGT-2130 Professional Readiness
(1-1-0) Transition into the professional role of the Surgical Technologist. Includes professional readiness for employment, attaining certification, and maintaining certification status. A capstone experience may be included.

SRGT-2266 Practicum - Surgical Technology/Technologist
(2-0-16) Practical, general workplace training supported by an individualized learning plan developed by the employer, College, and student.

(SRVY) SURVEY TECHNOLOGY/SURVEYING

SRVY-1301 Introduction to Surveying
(3-2-2) An overview of the surveying profession. History of surveying and its impact on the world. Review of the mathematics used in surveying. Introduction to basic surveying equipment with emphasis on measurements. Instruction on surveying procedures and the limitation of errors. Calculation to determine precision and error of closure.

(STSC) STUDENT SUCCESS

STSC-0111 Transition to College Success
(1-1-0) Psychology of learning and success. Examines factors that underlie learning, success, and personal development in higher education. Topics covered include information processing, memory, strategic learning, self-regulation, goal setting, motivation, education and career planning and learning styles. Techniques of study such as time management, listening and note taking, text marking, library and research skills, preparing for examinations, and utilizing learning resources are covered. Skills will apply to all disciplines. *This is a developmental course and cannot be used to fulfill degree requirements.*

(TECA) EARLY CHILDHOOD EDUCATION

TECA-1303 Family, School and Community +
(3-2-2) A study of the child, family, and schools, including parent education as well as education and involvement, family and community lifestyles, child abuse, and current family life issues. The course is aligned with State Board for Educator Certification Pedagogy and Professional Responsibilities Standards. This course requires students to participate in field experiences with children from infancy through age 12 in a variety of

settings with varied and diverse populations. Criminal background check required prior to enrolling. This course includes a 16-hour field laboratory experience.

TECA-1311 Educating Young Children +
(3-2-2) An introduction to the education of the young child, including developmentally appropriate practices and programs, theoretical and historical perspectives, ethical and professional responsibilities, and current issues. The course content is aligned with State Board for Educator Certification Pedagogy and Professional Responsibilities Standards. This course requires students to participate in field experiences with children from infancy through age 12 in a variety of settings and diverse populations. This course includes a 16-hour field laboratory experience. Criminal background check required prior to enrolling.

TECA-1318 Wellness of The Young Child +
(3-2-2) This course is a study of the factors that impact the well-being of the young child including healthy behavior, food, nutrition, fitness, and safety practices. Focus is on local and national standards and legal implications of relevant policies and regulations. The course content is aligned with State Board for Educator Certification Pedagogy and Professional Responsibilities Standards. This course requires students to participate in field experiences with children from infancy through age 12 in a variety of settings with

varied and diverse populations. This course requires a 16-hour field laboratory experience. Criminal background check required prior to enrolling.

TECA-1354 Child Growth and Development +
(3-3-0) This course is a study of the physical, emotional, social, and cognitive factors impacting growth and development of children through adolescence.

(TRVM) TOURISM AND TRAVEL SERVICES MANAGEMENT

TRVM-1201 Customer Sales and Service
(2-2-0) Practical information and techniques to create excellent customer sales and service unique to the travel public.

TRVM-1327 Special Events Design
(3-3-0) The development of a special event from the conceptual stage through completion. Emphasis on industry terminology, factors to consider when planning a special event, and contingency plans.

(WIND) WIND ENERGY

WIND-2459 Wind Power Delivery System
(4-3-3) Components, equipment, and infrastructure used in the production and transmission of electricity as related to wind turbine power.

(WLDG) WELDER/WELDING TECHNOLOGY

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

WLDG-1417 Introduction to Layout and Fabrication
(4-3-3) A fundamental course in layout and fabrication related to the welding industry. Major emphasis on structural shapes and use in construction.

WLDG-1428 Introduction to Shielded Metal Arc Welding (SMAW)
(4-3-3) An introduction to Shielded Metal Arc Welding processes. Emphasis placed on power sources, electrode selection, oxy-fuel cutting, and various joint designs. Instruction provided in SMAW fillet welding in various positions.

WLDG-1430 Introduction to Gas Metal Arc Welding (GMAW)
(4-3-3) Principles of Gas Metal Arc Welding, setup and use of GMAW equipment, and safe use of tools/equipment. Instruction in various joint designs.

WLDG-1434 Introduction to Gas Tungsten Arc Welding (GTAW)
(4-3-3) Principles of Gas Tungsten Arc Welding (GTAW), including setup and use of GTAW equipment. Instruction in various positions and joint designs.

WLDG-1435 Introduction to Pipe Welding
(4-3-3) An introduction to welding of pipe using the Shielded Metal Arc Welding (SMAW) process, including electrode selection, equipment setup, and safe shop practices. Emphasis on weld positions 1G and 2G using various electrodes.
Required Prerequisites: WLDG-1428 and WLDG-1430 or approval of Program Coordinator

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

WLDG-2453 Advanced Pipe Welding
(4-3-3) Advanced topics involving welding of pipe using the Shielded Metal Arc Welding (SMAW) process. Topics include electrode selection, equipment setup, and safe shop practices. Emphasis on weld positions 5G and 6G using various electrodes.